City of West Linn	**INVITATION FOR BID** CONSTRUCTION PROJECT	**Public Works Department** 22500 Salamo Road West Linn, Oregon 97068 Telephone: (503) 722-5500 Fax: (503) 656-4106

City of West Linn

Plans and Bid Documents

Project Number: **PW-14-04**

Project Description: **Rosemont Reservoir Safety and Maintenance Improvements**

Prospective Bidders' Conference: August 12, 2014 10:00 a.m., local time

Due Date: August 20, 2014 2:00 p.m., local time

Plans and Specifications are available for download at no charge from the City's website at http://westlinnoregon.gov/rfps

Alternately, copies may be reviewed or picked-up for a $25.00 fee per set at:

Public Works Department
Engineering Division
22500 Salamo Road
West Linn, Oregon 97068

PROSPECTIVE BIDDERS' CONFERENCE

ATTENDANCE IS REQUIRED

It is highly encouraged that Contractors and Subcontractors visit the site.

Contractors currently qualified for inclusion in the Bid Proposal as the Metal Fabricator and the Painting Contractor are listed in the Technical Special Provisions Section 01100-1.37. **Metal Fabricators and Painting Contractors** that are not listed and who desire to be qualified for bidding shall submit a Statement of Qualifications Form to the ENGINEER no later than **August 8, 2014.**

TABLE OF CONTENTS

GENERAL

APPENDIX A

FORMS REQUIRED FOR SUBMITTAL WITH BID
(In addition to Notice of Invitation to Bid and Contract and any addenda)

1. BID FORM
2. BID BOND
3. NONCOLLUSION AFFADAVIT
4. THREE YEAR EXPERIENCE RECORD
5. FIRST-TIER SUBCONTRACTOR DISCLOSURE (WH-179)
   Submit within 2 hours of bid closing.

FORMS NOT REQUIRED AT TIME OF BID

1. PERFORMANCE BOND
2. PAYMENT BOND
3. CONTRACTOR'S AFFADAVIT, SETTLEMENT OF CLAIMS
4. PUBLIC WORKS FEE INFORMATION FORM (WH-39)
   To be completed and paid by City upon award
5. NOTICE OF PUBLIC WORKS (WH-81)
   To be completed by City upon award.
6. PUBLIC WORKS FEE ADJUSTMENT FORM (WH-40)
   To be completed by City after final completion of project.
7. PAYROLL INSTRUCTIONS (WH-38A)
8. PAYROLL/CERTIFIED STATEMENT FORM (WH-38)
9. CURRENT PREVAILING WAGE RATE COVER AND AMENDMENTS
   The complete prevailing wage rate documents can be downloaded from the Oregon Bureau of Labor and Industries website at http://www.oregon.gov/boli/WHD/PWR/pages/pwr_state.aspx

APPENDIX B

TECHNICAL SPECIAL PROVISIONS

APPENDIX C

PLANS

City of West Linn, Oregon

Notice of Invitation for Bid and Contract

Project Number:	**PW-14-04**	Bid Due Date:	**August 20, 2014**
Project Name:	Rosemont Reservoir Safety and Maintenance Improvements	Bid Due Time:	2:00 p.m.
		Contact:	Jim Whynot
Bid Opening Location:	City of West Linn – City Hall Council Chambers 22500 Salamo Rd., West Linn, OR 97068	Title:	Operations Supervisor
Time of Completion:	June 15, 2015	Phone:	(503) 742-8615
Project Description:	The project generally includes reservoir safety, security, and cathodic protection improvements, miscellaneous metal fabrication, and maintenance painting.		

Sealed bids for the project identified and described above will be received by the City of West Linn at the specified location above until the date and time cited above. Bids received by the correct date and time shall be publicly opened and the bid price read. Bids shall be in the actual possession of the identified bidding department on or prior to the exact date and time indicated above. Late bids will not be considered, except as provided in the City of West Linn Procurement Policy. ***Bids shall be submitted in a sealed envelope with the Invitation for Bid Project Number, Project Description, and the bidder's name and address clearly indicated on the front of the envelope***. All bids shall be completed in ink or typewritten. This Bid is for a public works project subject to ORS 279C.800 to 279C.870. Bidders are strongly encouraged to carefully read the ***entire*** Invitation for Bid Package.

BIDDER

To the City of West Linn:

The undersigned hereby Bids and agrees to furnish materials and/or services in compliance with all terms, conditions, specifications and addenda in the Notice of Invitation for Bid except for any written exceptions in the Bid. The signature below also certifies his or her understanding and compliance with The City of West Linn Standard Terms and Conditions.

Is the Bidder a "Resident" Bidder per ORS 279A.120? _____
Construction Contractors Board Yes/No

Registration Number: _____

Federal Employer
Identification Number: _____

For clarification of this Bid contact:

Name: _____

Telephone: _____

_____
Company Name

_____
Address

_____
City State Zip Code

_____
Authorized Signature for Bidder

_____
Printed Name

_____
Title

ACCEPTANCE OF BID AND CONTRACT AWARD (For City of West Linn Use Only)

Your bid is hereby accepted. The Contractor is now bound to sell the materials and/or services listed by the attached award notice based upon the solicitation, including all terms, conditions, specifications, plans, addendum, amendments, etc., and the Contractor's Bid as accepted by the City.

Approved as to form:

_____
Megan Thornton
Assistant City Attorney

City of West Linn, Oregon.

Awarded on _____, _____.

_____
Chris Jordan, City Manager

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

1. **PREPARATION OF BID:**

   a. All bids shall be submitted on the forms provided in this *Invitation to Bid* package. It is permissible to copy these forms if required. Telegraphic (facsimile), electronic or mailgram bids will not be considered.

   b. The Bid and Contract Award document shall be submitted with an original ink signature by a person authorized to sign the Bid.

   c. Erasures, interlineations, or other modifications in the bid shall be initialed in original ink by the authorized person signing the Bid.

   d. If price is a consideration and in case of error in the extension of prices in the bid, the unit price shall govern. No bid shall be altered, amended, or withdrawn after the specified bid due date and time.

   e. Periods of time, stated as a number of days, shall be calendar days.

   f. Bid due date and time is stated as local Oregon time.

   g. The following items must be completed as part of the Bid submittal; Notice of Invitation for Bid and Contract (indicating Oregon Construction Contractors Board License Number), Bid Form, Bid Guaranty (Bond), Non-Collusion Affidavit, Three-Year Experience, and Addenda. Within two (2) hours of the Bid submittal, or with the Bid submittal, the First Tier Subcontractor Disclosure Form must be submitted if the bid is greater than $100,000.

   h. It is the responsibility of all Bidders to examine the entire *Invitation For Bid* package and seek clarification of any item or requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a Bid confers no right of withdrawal after bid due date and time.

2. **INQUIRIES:** Any question related to the *Invitation For Bid* (*IFB*) shall be directed to the Buyer whose name appears as the Contact on the *IFB*. The Bidder shall not contact or ask questions of the department for which the requirement is being procured. Questions should be submitted in writing when time permits. The Buyer may require any and all questions be submitted in writing at the Buyer's sole discretion. Any correspondence related to an *Invitation For Bid* should refer to the appropriate *IFB* number, page, and paragraph number. All requests for additional information or interpretation of the *IFB* shall be submitted to the Buyer no later than five (5) calendar days before the deadline for submission of bids. If, in the opinion of the City, additional information or clarification is required, an addendum will be issued to all plan holders on record. Any addenda issued by the City seventy-two (72) hours or more before the scheduled closing time for filing bids shall be binding upon the Bidder. Addenda may be downloaded from the City's website. Bidders shall frequently check the City's website until closing including at least daily the week of the closing. Failure of the Bidder to receive or obtain such addenda shall not excuse them from compliance therewith if they are awarded the contract. Oral instructions or information given by City Officers, employees or agents to Bidders concerning this *IFB* or the work in general shall not bind the City.

3. **PROSPECTIVE BIDDERS CONFERENCE (REQUIRED):** A prospective Bidders conference will be held. If scheduled, the date and time of this conference will be indicated on the cover page of this document. The purpose of this conference will be to clarify the contents of this *Invitation For Bid* in order to prevent any misunderstanding of the City's position. Any doubt as to the requirements of this *Invitation For Bid* or any apparent omission or discrepancy should be presented to the City at this conference. The City will then determine if any action is necessary and may issue a written addendum to the *IFB*.

4. **LATE BIDS:** Late Bids received after the scheduled bid due date and time will be returned to the Bidder unopened.

5. **WITHDRAWAL OF BID:** At any time prior to the specified bid due date and time, a Bidder (or designated representative) may withdraw the bid.

6. **ADDENDUM OF BID:** Receipt of Addendum shall be acknowledged by signing and returning the document with the Bid at the specified bid due date and time.

7. **CONSTRUCTION CONTRACTORS REGISTRATION:** A person shall not submit a bid or proposal to work as a construction contractor unless that person is first registered with the Construction Contractors Board as required by ORS 701.021 or licensed by the State Landscape Contractor's Board as required by ORS 671.530. Bids from persons who fail to comply with this requirement shall be deemed non-responsive and be rejected.

8. **AWARD OF CONTRACT:**

   a. Notwithstanding any other provision of this *Invitation For Bid*, The City expressly reserves the right to: waive any immaterial defect or informality, reject any bids that do not comply with the prescribed public contracting procedures (including the requirement to demonstrate the bidder's responsibility under ORS 279C.375 (3)(b)), reject all bids for good cause if in the public interest, or reissue an *Invitation For Bid*.

   b. A response to an *Invitation For Bid* is a Bid to contract with the City based upon the terms, conditions and specifications contained in the City's *Invitation For Bid* and the written addenda thereto, if any. Bids do not become contracts unless and until they are accepted and executed by the **City Local Contract Review Board, City Manager or Department Director** in accordance with the City of West Linn Procurement Policy. A contract is formed when written notice of award(s) is provided to the successful Bidder(s). The contract has its inception in the award document, eliminating a formal signing of a separate contract. For that reason, all of the terms and conditions of the procurement contract are contained in the *Invitation For Bid*; unless modified by an Addendum.

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

THE FOLLOWING TERMS AND CONDITIONS ARE AN EXPLICIT PART OF THE SOLICITATION AND ANY RESULTANT CONTRACT.

1. **APPLICABLE LAW:** In the performance of this agreement, contractors shall abide by and conform to any and all laws of the United States, State of Oregon and City of West Linn including but not limited to federal and state executive orders providing for equal employment and procurement opportunities, the Federal Occupational Safety and Health Act and any other federal or state laws applicable to this agreement.

   Attention is called to the requirements of Oregon Revised Statutes (O.R.S.) Chapter 279A, 279B, and 279C. This contract shall be governed by the laws of the State of Oregon. Any action or suits pertaining to this contract may be brought only in courts in the Circuit Court of Clackamas County or the U.S. District Court in Portland. Each and every provision of law and any clause required by law to be in the contract will be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the contract will forthwith be physically amended to make such insertion or correction.

   The City may cancel this contract without penalty or further obligations by the City or any of its departments or agencies if any person significantly involved in initiating, negotiating, securing, drafting or creating the contract on behalf of the City or any of its departments or agencies, is at any time while the contract or any extension of the contract is in effect, an employee of any other party to the contract in any capacity or a consultant to any other party of the contract with respect to the subject matter of the contract.

2. **AMERICANS WITH DISABILITIES ACT, DISCRIMINATION & AFFIRMATIVE ACTION:** Bidders agree that if awarded a contract, the successful Bidder will comply with all applicable provisions of the Americans with Disabilities Act of 1990, 42 UFC Section 12101 et seq. If any Bidder requires special assistance or auxiliary aids during the bidding process, please notify the City of West Linn, 503-657-0331 or TDD 503-657-7845 at least two (2) business days prior to the required assistance. To the extent applicable, the Contractor represents that it will comply with Executive Order 11246 as amended, Executive Order 11141, Section 503 of the Vocational Rehabilitation Act of 1973 as amended and the Age Discrimination Act of 1975, and all rules and regulations issued pursuant to the Acts. It is the policy of the City of West Linn that suppliers of goods or services to the City adhere to a policy of equal employment opportunity and demonstrate an affirmative effort to recruit, hire, and promote regardless of race, color, religion, gender, national origin, age or disability. By submitting the first tier subcontractor disclosure form, Bidder certifies that it has complied with ORS 279A.110(1), which states that a bidder may not discriminate against a subcontractor in awarding a subcontract because the subcontractor is a minority, women or emerging business enterprise certified under ORS 200.055 or a business enterprise that is owned or controlled by, or that employs a disabled veteran.

3. **BUSINESS LICENSE:** A current business license is required before doing business with the City. Information related to complying with the business license requirements is available by contacting the City Finance Department at 503-657-0331 or online at https://westlinnoregon.gov/finance/online-business-license-registration.

4. **CONSTRUCTION AND LANDSCAPE CONTRACTORS BOARDS:** Construction contractors must be licensed with the State of Oregon Construction Contractors Board in accordance with O.R.S. 701.005 and any other specialty licensing as required in the bid specification prior to submitting a bid to the City. For information contact:

   CONSTRUCTION CONTRACTORS BOARD
   700 Summer St. NE, Suite #300, Salem, OR 97310
   (503) 378-4621 (website) http://www.ccb.state.or.us

   A Landscape Contractors Board license is required in accordance with O.R.S. 671.510 if the bid specification includes landscape work as defined by O.R.S. 671.510. For information contact:

   LANDSCAPE CONTRACTORS BOARD
   2111 Front St. NE, Suite #2-101, Salem, OR 97310
   (503) 378-5909 (website) http://www.oregon.gov/LCB/

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

5. **LEGAL REMEDIES:** All claims and controversies shall be subject to resolution according to the terms of the City of West Linn Procurement Policy.

6. **BID GUARANTY:** All construction contracts shall be accompanied by a bid guaranty. No bid for construction will be considered unless accompanied by a certified check, cashier's check, or a bid bond for an amount not less than ten percent (10%) of the aggregate amount of the bid by a surety company authorized to issue such bonds in the State of Oregon. It shall be payable to the City of West Linn as a guaranty that the bid shall be irrevocable for a period of sixty (60) calendar days, unless otherwise specified, after the bid opening date and time and as liquidated damages should the Bidder fail or neglect to furnish the required performance bond and insurance and execute a contract within ten (10) calendar days after receiving said contract from the City for execution. The City will hold all bid security during the evaluation process. As soon as is practical after the completion of the evaluation, the City will issue a contract award notice for those Bids accepted by the City and return all checks to those who have not been issued a contract award notice.

   All bid security from contractors who have been issued an award notice shall be held until the successful execution of all required contractual documents and bonds (performance bond, insurance, etc.). If the contractor fails to execute the required contractual documents and bonds within the time specified, or ten (10) days after notice of award if no period is specified, the contractor may be found to be in default and the contract terminated by the City. In case of default, the City reserves all rights inclusive of, but not limited to, the right to purchase material and/or to complete the required work in accordance with the City of West Linn Procurement Policy and to recover any actual excess costs from the contractor. Collection against the bid security shall be one of the measures available toward the recovery of any excess costs.

7. **CONFLICT OF INTEREST:** A Bidder submitting a bid hereby certifies that no officer, agent or employee of the City who has a pecuniary interest in this bid has participated in the contract negotiations on the part of the City, that the bid is made in good faith without fraud, collusion, or connection of any kind with any other Bidder of the same Invitation for Bids, and that the Bidder is competing solely in its own behalf without connection with, or obligation to, any undisclosed person or firm. No bid will be considered unless accompanied by the notarized Non-Collusion Affidavit form included in the Invitation for Bid.

8. **PRE-BID REQUIREMENTS:** Before submitting a bid, each Bidder shall carefully examine the Drawings, read the Specifications and all Addenda and visit the work site, if applicable. Each Bidder shall fully inform themselves prior to submitting a bid as to all existing conditions and limitations under which the Work is to be performed, and shall include in the bid a sum to cover all costs of all items necessary to perform the Work as set forth in the Bid Documents. No allowance will be made to any Bidder because of lack of such examination or knowledge. Submission of a bid will be construed as conclusive evidence that the Bidder has made such examination.

9. **LOCAL BUSINESS PREFERENCE:** ORS 279A.120 requires that, in all public contracts, the public contracting agency shall prefer good or services that have been manufactured or produced in this State if price, fitness, availability and quality are otherwise equal. As such the City desires to employ local businesses in the purchase, lease, or sale of any personal property, public improvements or services that have been manufactured or produced by a local business if price, fitness, availability and quality are otherwise equal. When a public contract is awarded to a nonresident bidder and the contract price exceeds $10,000, the bidder shall promptly report to the Department of Revenue on forms provided by the department all information as required by ORS 279A.120(3).

10. **COST OF BID/PROPOSAL PREPARATION:** The City shall not reimburse the cost of developing, presenting, or providing any response to this solicitation. Bids submitted for consideration should be prepared simply and economically, providing adequate information in a straightforward and concise manner. The Invitation For Bid does not commit the City to pay any costs incurred by a Bidder in the submission of their bid, or in making any necessary studies or designs for the preparation thereof.

11. **CONTRACT:** The contract between the City and the Contractor shall consist of (1) the Invitation for Bid, including instructions, all terms and conditions, specifications, scopes of work, attachments, price sheet(s) and any amendments thereto, and (2) the Bid submitted by the Contractor in response to the Invitation for Bid (IFB). In the event of a conflict in

language between the IFB and the Bid, the provisions and requirements in the IFB shall govern. However, the City reserves the right to clarify, in writing, any contractual terms with the concurrence of the Contractor, and such written contract shall govern in case of conflict with the applicable requirements stated in the IFB or the Vendor's Bid. The IFB shall govern in all other matters not affected by the written contract. The contract, if awarded, will be made to the lowest, responsive and responsible Bidder offering the lowest unit price base bid. Determination of the lowest responsive, responsible bid is subject to review by the City. Adversely affected or aggrieved bidders shall have seven calendar days after notice of award to submit to the City a written protest of the notice of award. Any written protest must be submitted in accordance with the adopted City Local Contract Review Board Rules.

12. **CONTRACT AMENDMENTS:** This contract may be modified only by a written Contract Amendment signed by persons duly authorized to enter into contracts on behalf of the City and the Contractor.

13. **CONTRACT APPLICABILITY:** The Bidder shall substantially conform to the terms, conditions, specifications and other requirements found within the text of this IFB. All previous agreements, contracts, or other documents, which have been executed between the Bidder and the City are not applicable to this IFB or any resultant contract.

14. **DRUG TESTING PROGRAM:** Pursuant to O.R.S. 279.505 (2) (1), the Contractor awarded the contract shall demonstrate that an employee drug-testing program is in place. The Contractor demonstrates that a drug-testing program is in place by signing of the contact. The drug testing program will apply to all employees and will be maintained for the duration of the Contract awarded. Failure to maintain a program shall constitute a material breach of contract.

15. **RELATIONSHIP TO PARTIES:** It is clearly understood that each party will act in its individual capacity and not as an agent, employee, partner, joint venturer, or associate of the other. An employee or agent of one party shall not be deemed or construed to be the employee or agent of the other for any purpose whatsoever. The Contractor is advised that taxes or Social Security payments will not be withheld from any City payments issued hereunder and that the Contractor should make arrangements to directly pay such expenses, if any.

16. **INTERPRETATION-PAROL EVIDENCE:** This contract represents the entire agreement of the Parties with respect to its subject matter, and all previous agreements, whether oral or written, entered into prior to this contract are hereby revoked and superseded by this contract. No representations, warranties, inducements or oral agreements have been made by any of the Parties except as expressly set forth herein, or in any other contemporaneous written agreement executed for the purposes of carrying out the provisions of this contact. This contract may not be changed, modified or rescinded except as provided for herein, absent a written agreement signed by both Parties. Any attempt at oral modification of this contract shall be void and of no effect.

17. **SUBCONTRACTS – ASSIGNMENT & DELEGATION:** Contractor shall submit a list of Subcontractors for approval by the City, and Contractor shall be fully responsible for the acts or omissions of any Subcontractors and of all persons employed by them, and neither the approval by City of any Subcontractor nor anything contained herein shall be deemed to create any contractual relation between the Subcontractor and City.

    This agreement, and all of the covenants and conditions hereof, shall inure to the benefit of and be binding upon the City and the Contractor respectively and their legal representatives. Contractor shall not assign any rights nor delegate any duties incurred by this contract, or any part hereof without the written consent of City, and any assignment or delegation in violation hereof shall be void.

18. **APPROVAL OF SUBSTITIONS:** The materials, products, and equipment described in the Documents and Addenda establish a standard or required function, dimension, appearance, and quality to be met by any proposed substitution. No substitute will be considered unless written request for approval has been received by the City or its representative at least five (5) days prior to the scheduled closing time for receipt of bids. Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including any drawings, cuts, performance, and test data and any other information necessary for evaluation of the substitute. If a substitute is approved, the approval shall be acknowledged in writing. Bidder shall not consider approvals made in any other manner.

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

19. **RIGHTS AND REMEDIES:** No provision in this document or in the vendor's Bid shall be construed, expressly or by implication, as waiver by the City of any existing or future right and/or remedy available by law in the event of any claim of default or breach of contract. The failure of the City to insist upon the strict performance of any term or condition of the contract or to exercise or delay the exercise of any right or remedy provided in the contract, or by law, or the City's acceptance of and payment for materials or services, shall not release the Contractor from any responsibilities or obligations imposed by this contract or by law, and shall not be deemed a waiver of any right of the City to insist upon the strict performance of the Contract.

20. **INDEMNIFICATION:** Contractor warrants that all its work will be performed in accordance with generally accepted professional practices and standards as well as the requirements of applicable federal, state and local laws, it being understood that acceptance of a contractor's work by City shall not operate as a waiver or release.

    Contractor agrees to indemnify and defend the City, its officers, agents and employees and hold them harmless from any and all liability, causes of action, claims, losses, damages, judgments or other costs or expenses including attorney's fees and witness costs and (at both trial and appeal level, whether or not a trial or appeal ever takes place) that may be asserted by any person or entity which in any way arise from, during or in connection with the performance of the work described in this contract, except liability arising out of the sole negligence of the City and its employees. If any aspect of this indemnity shall be found to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this indemnification. The amount and type of insurance coverage requirements set forth herein will in no way be construed as limiting the scope of the indemnity in this paragraph.

21. **EARLY TERMINATION:** This agreement may be terminated without cause prior to the expiration of the agreed upon term by mutual written consent of the parties and for the following reasons:

    a. If work under the Contract is suspended by an order of a public agency for any reason considered to be in the public interest other than by a labor dispute or by reason of any third party judicial proceeding relating to the work other than a suit or action filed in regard to a labor dispute; or

    b. If the circumstances or conditions are such that it is impracticable within a reasonable time to proceed with a substantial portion of the Contract.

    Payment of Contractor shall be as provided by ORS 279C.660 and shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Contractor against City under this Contract. Termination under any provision of this paragraph shall not affect any right, obligation, or liability of Contractor or City which accrued prior to such termination.

22. **CANCELLATION WITH CAUSE:** City may terminate this Contract effective upon delivery of written notice to Contractor, or at such later date as may be established by City, under any of the following conditions:

    a. If City funding from federal, state, local, or other sources is not obtained and continued at levels sufficient to allow for the purchase of the indicated quantity of services. This Contract may be modified to accommodate a reduction in funds,

    b. If Federal or State regulations or guidelines are modified, changed, or interpreted in such a way that the services are no longer allowable or appropriate for purchase under this Contract,

    c. If any license or certificate required by law or regulation to be held by Contractor, its subcontractors, agents, and employees to provide the services required by this Contract is for any reason denied, revoked, or not renewed,

    d. If Contractor becomes insolvent, if voluntary or involuntary petition in bankruptcy is filed by or against Contractor, if a receiver or trustee is appointed for Contractor, or if there is an assignment for the benefit of creditors of Contractor, or

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

e. If Contractor fails to maintain reasonable relations with the public. Verbal abuse, threats, or other inappropriate behavior towards members of the public constitutes grounds for termination.

Any such termination of this agreement under this section shall be without prejudice to any obligations or liabilities of either party already accrued prior to such termination.

City, by written notice of default (including breach of contract) to Contractor, may terminate the whole or any part of this Contract:

f. If Contractor fails to provide services called for by this Contract within the time specified herein or any extension thereof, or

g. If Contractor fails to perform any of the other provisions of this Contract, or so fails to pursue the work as to endanger performance of this Contract in accordance with its terms, and after receipt of written notice from City, fails to correct such failures within ten (10) days or such other period as City may authorize.

The rights and remedies of City provided in the above clause related to defaults (including breach of contract) by Contractor shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Contract.

If City terminates this Contract per clause f or g above, Contractor shall be entitled to receive as full payment for all services satisfactorily rendered and expenses incurred, an amount which bears the same ratio to the total fees specified in this Contract as the services satisfactorily rendered by Contractor bear to the total services otherwise required to be performed for such total fee; provided, that there shall be deducted from such amount the amount of damages, if any, sustained by City due to breach of contract by Contractor. Damages for breach of contract shall be those allowed by Oregon law, reasonable and necessary attorney fees, and other costs of litigation at trial and upon appeal.

23. **SEVERABILITY:** In the event any provision or portion of this Contract is held to be unenforceable or invalid by any court of competent jurisdiction, the remainder of this Contract shall remain in full force and effect and shall in no way be affected or invalidated thereby.

24. **FORCE MAJEURE:** Neither City nor Contractor shall be considered in default because of any delays in completion of responsibilities hereunder due to causes beyond the control and without fault or negligence on the part of the party so disenabled, including, but not restricted to, an act of God or of a public enemy, volcano, earthquake, fire, flood, epidemic, quarantine, restriction, area-wide strike, freight embargo, unusually severe weather or delay of Subcontractor or suppliers due to such cause; provided that the party so disenabled shall within ten (10) days from the beginning of such delay, notify the other party in writing of the causes of delay and its probable extent. Such notification shall not be the basis for a claim for additional compensation. Each party shall, however, make all reasonable efforts to remove or eliminate such a cause of delay or default and shall, upon cessation of the cause, diligently pursue performance of its obligation under Contract.

25. **RIGHT TO ASSURANCE:** Whenever one party to this contract in good faith has reason to question the other party's intent to perform he may demand that the other party give a written assurance of this intent to perform. In the event that a demand is made and no written assurance is given within five (5) days, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

26. **RIGHT TO ACCESS RECORDS:** City shall have access to such books, documents, papers and records of Contractor and Subcontractors as are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts.

27. **WARRANTIES:** All work shall be guaranteed by the Contractor for a period of 18 months after the date of final acceptance of the work by the Owner. Contractor warrants that all practices and procedures, workmanship, and materials shall be the best available unless otherwise specified in the profession. Neither acceptance of the work nor payment

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

therefore shall relieve Contractor from liability under warranties contained in or implied by this contract. Additional warranty requirements may be set forth in the solicitation.

28. **TITLE AND RISK OF LOSS:** The title and risk of loss of material and/or service shall not pass to the City until the City actually receives the material or service at the point of delivery, unless otherwise provided within this Contract.

29. **CONFLICT BETWEEN TERMS:** It is expressly agreed by and between the parties hereto that should there be any conflict between the terms of this instrument and the bid of the Contractor, this instrument shall control and nothing herein shall be considered as an acceptance of the said terms of said bid conflicting herewith.

30. **NONWAIVER:** The failure of the City to insist upon or enforce strict performance by Contractor of any of the terms of this contract or to exercise any rights hereunder shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon such terms or rights on any future occasion.

31. **LIENS:** All materials, service or construction shall be free of all liens, and if the City requests, a formal release of all liens shall be delivered to the City.

32. **LICENSES:** Contractor shall have at the time of bid submittal, and shall maintain in current status, all Federal, State and Local licenses and permits required for the operation of the business conducted by the Contractor as applicable to this Contract. The conclusion of the issuing authority in each case is to be deemed conclusive for the purposes of complying with this provision. By submitting a bid for this public contract, you agree that, with respect to the contract, substantial compliance does not meet the minimum requirements of this or any provision hereof, or of any applicable law or other authority, and that strict compliance alone is adequate to meet those requirements, unless the City consents to such substantial compliance in writing at the time of bid submittal. The determination shall be made by the City.

33. **ATTORNEY'S FEES:** In case suit or action is instituted to enforce the provisions of this contract, the parties agree that the losing party shall pay such sum as the Court may adjudge reasonable attorney's fees and court costs including attorney's fees and court costs on appeal.

34. **PUBLIC RECORD:** All Bids submitted in response to this solicitation shall become the property of the City and shall become a matter of public record available for review, subsequent to the award notification, in accordance with the City's Procurement Policy.

35. **WORK IS PROPERTY OF THE CITY:** All work performed by Contractor under this Contract shall be the property of the City.

36. **ADVERTISING:** Contractor shall not advertise or publish information concerning this Contract, without prior written consent of the City.

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

1. **DEFINITIONS**: The terms, as used in or pertaining to the contract, are defined as follows:

   CITY: The word *"City"* shall refer to the City of West Linn, Oregon.

   CONTRACTOR: The word *"Contractor"* is defined as the person, firm or corporation with whom the contract is made by the City.

   CONTRACT: The word *"Contract"* will include; the Invitation to Bid Notice and Contract, Instructions to Bidders, Bid Form, Bid Guaranty, Performance Bond, Payment Bond, Notice of Award, Notice to Proceed, Change Order, Certificate of Insurance, Certificate of Completion, Contractor's Affidavit Regarding Settlement of Claims, Contractor's Affidavit Certifying Non-Collusion in Bidding, Standard Terms & Conditions, General Terms & Conditions, Special Terms & Conditions, Technical Provisions, Plans and Addenda thereto.

   ENGINEER: The word *"Engineer"* is defined as the person, firm or corporation duly authorized by the City to act as agent in providing professional services including studies, planning, engineering design and construction administration services, inspecting materials and construction, and interpreting plans and specifications.

   MATERIALS: The word *"Materials"* will include, in addition to materials incorporated in the project, equipment and other material used and/or consumed in the performance of the work.

   SUBCONTRACTOR: The word *"Subcontractor"* is defined as those persons or groups of persons having a direct contract with the contractor and those who furnish material worked to a special design according to the plans and/or specifications for this work, and includes those who merely furnish materials not so worked.

   WORK: The word *"Work"* shall include all labor necessary to accomplish the construction required by the Contract and all materials and equipment incorporated or to be incorporated in said construction.

2. **REFERENCE STANDARDS**:

   a. The "2010 City of West Linn Public Works Standards" which are sponsored and distributed by the City of West Linn Engineering Division, and which are hereinafter referred to as the *"COWL Specifications,"* are hereby adopted as part of these contract documents.

   b. If any contradiction exists between "COWL Specifications" and this solicitation document, the solicitation language shall prevail.

3. **LAWS AND REGULATIONS**: The Contractor shall keep himself fully informed of all existing and future City and County ordinances and regulations and state and federal laws and Occupational Safety and Health Standards (OSHA) in any manner affecting the work herein specified. He shall at all times observe and protect and indemnify the City of West Linn, Oregon, and its officers and agents against any claim or liability arising from or based on the violation of any such ordinances, regulations or laws. It is the responsibility of the Contractor to obtain any and all information regarding the laws and regulations which may be referenced in the Specifications.

4. **RIGHTS OF WAY:** The Contractor shall not enter or occupy with workers, tools, equipment or materials any private ground outside the property or easement right of the City of West Linn, without the consent of the owner.

   The Contractor, at his own expense, is responsible for the acquisition of any additional easements or rights-of-way that he may desire to complete the work of this contract.

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

5. **PROPOSAL QUANTITIES**: It is expressly understood and agreed by the parties hereto that the quantities of the various classes of work to be done and the material to be furnished under this Contract, which have been estimated as stated in the Bids, are only approximate and are to be used solely for the purpose of comparing, on a consistent basis, the bids for the work under this Contract. The Contractor further agrees that the City of West Linn will not be held responsible if any of the quantities shall be found incorrect; and the Contractor will not make any claim for damages or for loss of profits because of a difference between the quantities of the various classes of work as estimated and the work actually done. If any error, omission, or misstatement is found to occur in the estimated quantities, the same shall not invalidate this Contract or the whole or any part of the work in accordance with the Specifications and Plans herein mentioned, and for the prices herein agreed upon and fixed therefore, or excuse him from any of the obligations or liabilities hereunder, or entitle him to any damage or compensation except as may be provided in this contract.

6. **PREVAILING WAGE RATE DETERMINATION**: The Contractor shall pay the applicable prevailing wage rates that are in effect at the time the Contract is bid. If the contract price exceeds $50,000 and is not otherwise exempt, workers shall be paid not less than the specified minimum hourly rate of wage in accordance with ORS 279C.838 and ORS 279C.840. Hard copies of the prevailing wage rates publication may be obtained by contacting the Oregon Bureau of Labor and Industries via telephone at: (971) 673-0839. The applicable prevailing wage rates may be accessed via the internet at: http://www.oregon.gov/BOLI/WHD/PWR/pwr_book.shtml. If the Project is subject to the Davis-Bacon Act and the state prevailing rate of wage is higher than the federal prevailing rate of wage, the contractor and every subcontractor on the Project shall pay at least the state prevailing rate of wage as determined under ORS 279C.815.

   The Contractor and all subcontractors must have a public works bond filed with the Oregon Construction Contractors Board before starting work on the Project, unless exempt under ORS 279C.836(4), (7), (8) or (9). If the contractor fails to pay for labor or services, the City can pay and withhold these amounts from payments due the contractor in accordance with ORS 279C.515. Daily, weekly, weekend, and holiday overtime will be paid as required in ORS 279C.540. The Contractor shall provide workers with a written schedule showing the number of hours per day and days per week the employee may be required to work in accordance with ORS 279C.520. Contractor must promptly pay for any medical services they have agreed to pay per ORS 279C.530.

   The City will not receive or consider a bid unless the bid contains a statement by the bidder that the bidder will comply with ORS 279C.838, ORS 279C.840, or 40 U.S.C. 3141. By signing and submitting the Bid, the Contractor agrees to comply with ORS 279C.838 or 279C.840 and/or 40 U.S.C. 3141 et seq. for a public works project subject to the state prevailing wage rates under ORS 279C.800 to 279C.870, the federal prevailing wage rates under the Davis-Bacon Act (40 U.S.C. 3141 et seq.) or both.

   For contracts $50,000 or greater, the City shall pay a fee to the Bureau of Labor and Industries and shall be mailed or otherwise delivered to the Bureau in accordance with Form WH-81 & WH-39.

7. **PAYMENTS TO CONTRACTOR**: City agrees to pay Contractor for performance of those services provided hereunder, which payment shall be based upon the following applicable terms:

   a. Payment: Payment shall be based upon the unit prices bid by the Contractor, as listed in attached bid. Contractor shall prepare and submit each month to the Buyer identified in the Invitation for Bid at the address listed, a statement of services rendered, (indicating the description of each service used in the bid and the dollar amount of each service completed through the stated date), together with a request for payment duly verified by the Contractor's Representative.

      Payment by the City shall release the City from any further obligation for payment to Contractor for services performed or expenses incurred as of the date of the statement of services. Payment of installments shall not be considered acceptance or approval of any work or waiver of any defects therein. City certifies that sufficient funds are available and authorized for expenditure to finance costs of this contract. Contractor shall include proof of payment to any and all

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

subcontractors and suppliers with each statement submitted to the City. The City shall retain the right to withhold payments if required proof of payment to subcontractor and suppliers is not included with a statement.

b. Timing of Payments: Progress payments, less a five percent retainage as authorized by ORS 279C.555, shall be made to the Contractor within twenty (20) days of the City's receipt of the statement of services.

c. Final Payment: The Contractor shall notify the City in writing when the Contractor considers the project complete, and the City shall, within 15 days after receiving the written notice, either accept the work or notify the Contractor of work yet to be performed on the contract. If accepted by the City, the remaining balance due to the Contractor, including the retained percentage, shall be paid to the Contractor by the City within 30 days after the date of said acceptance.

The City shall pay to the Contractor interest at the rate of one and one-half percent per month on the final payment due the Contractor, to commence 30 days after the work under the Contract has been completed and accepted and to run until the date when final payment is tendered to the Contractor. If the City does not, within 15 days after receiving written notice of completion, notify the Contractor of work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run 30 days after the end of the 15-day period.

As a further condition of final acceptance, the City may require the Contractor to submit evidence, satisfactory to the City's Representative, that all payrolls, material bills, and other indebtedness connected with the project have been paid. If any indebtedness or liens are in dispute, the Contractor may submit a surety bond satisfactory to the City guaranteeing payment of all such disputed amounts if such payment has not already been guaranteed by surety bond.

All notices, bills and payments shall be made in writing and may be given by personal delivery or by mail. Notices, bills and payments sent by mail should be addressed to the attention of the Buyer and/or Authorized Bidder at the addresses identified in the Invitation for Bid and shall be deemed given upon deposit in the United States mail, postage paid. In all other instances, notices, bills and payments shall be deemed given at the time of actual delivery. Changes may be made in the names and addresses of the person to whom notices, bills, and payments are to be given by giving written notice pursuant to this paragraph.

8. **LIQUIDATED DAMAGES:** The Contractor agrees that the "Time of Completion" is defined in the Bid and agrees to complete the work by said date. The Contractor and City agree that the City will suffer damages each day the work remains uncompleted after the Time of Completion and that the amounts of those damages are difficult to calculate. Contractor and City agree that a reasonable amount of damages for late completion is **$500 per calendar day** and Contractor agrees to pay such amounts as liquidated damages if the work is not completed by the Time of Completion. Contractor agrees that the liquidated damages specified herein are a fair way of ascertaining damages to the City and are not a penalty for late completion.

9. **STATUS OF CONTRACTOR AS INDEPENDENT CONTRACTOR:** Contractor certifies that:

a. Contractor acknowledges that for all purposes related to this Agreement, Contractor is and shall be deemed to be an Independent Contractor as defined by ORS 670.600 and not an employee of City, shall not be entitled to benefits of any kind to which an employee of City is entitled and shall be solely responsible for all payments and taxes required by law. Furthermore, in the event that Contractor is found by a court of law or any administrative agency to be an employee of City for any purpose, City shall be entitled to offset compensation due, or to demand repayment of any amounts paid to Contractor under the terms of this Agreement, to the full extent of any benefits or other remuneration Contractor receives (from City or third party) as a result of said finding and to the full extent of any payments that City is required to make (to Contractor or to a third party) as a result of said finding.

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

b. The Contractor hereby represents that no employee of the City, or any partnership or corporation in which a City employee has an interest, has or will receive any remuneration of any description from Contractor, either directly or indirectly, in connection with the letting or performance of this Agreement, except as specifically declared in writing.

c. If payment is to be charged against Federal funds, Contractor certifies that he or she is not currently employed by the Federal Government and the amount charged does not exceed his or her normal charge for the type of service provided.

d. Contractor and its employees, if any, are not active members of the Oregon Public Employees Retirement System and are not employed for a total of 600 hours or more in the calendar year by any public employer participating in the Retirement System.

e. Contractor certifies that it currently has a City business license or will obtain one prior to delivering services under this Agreement.

f. Contractor is not an officer, employee, or agent of the City as those terms are used in ORS 30.265.

10. **CERTIFIED PAYROLL:** The Contractor shall make payment promptly, as due, to all persons supplying to such Contractor labor or material for the performance of the work provided for in this contract. The Contractor will pay all contributions or amounts due the Industrial Accident Fund under the Worker's Compensation Law from such Contractor or Subcontractor incurred in the performance of this contract. The Contractor will pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. The Contractor shall not permit any lien or claim to be filed or prosecuted against the City of West Linn on account of any labor or material furnished.

The Contractor or the Contractor's Surety and every Subcontractor or the Subcontractor's Surety shall file certified statements with the City in writing on a form prescribed by the Commissioner of the Bureau of Labor and Industries, certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed upon such public work, and further certifying that no worker employed upon such public work has been paid less than the prevailing rate of wage or less that 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 Contractor's Surety or Subcontractor or the Subcontractor's Surety that the Contractor or Subcontractor has read such statement and certificate and knows the contents thereof and that the same is true to the Contractor's or Subcontractor's knowledge.

a. The certified statements shall set out accurately and completely the payroll records, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, and the gross wages the worker earned during each week identified in the certified statement.

b. Each certified statement required herein shall be delivered or mailed by the Contractor or Subcontractor to the City. A true copy of the certified statements shall also be filed at the same time with the Commissioner of the Bureau of Labor and Industries. Certified statements shall be submitted as set forth in ORS 279C.845.

c. The City shall retain 25 percent of any amount earned by Contractor until the certified statements as required by this section have been filed. City shall pay Contractor the amount retained under this subsection within 14 days after Contractor files the certified statements as required by this section, regardless of whether a subcontractor has failed to file certified statements as required by this section. City is not required to verify the truth of the contents of certified statements filed by Contractor.

The Contractor agrees that if the Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor or a Subcontractor by any person in connection with this contract as such claim becomes due, the proper office of the City of West Linn may pay such claim to the person furnishing the labor or services and charge the amount of the payment against funds due or to become due to the Contractor by reason of such contract. Payment of a

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

claim in this manner shall not relieve the Contractor or the Contractor's Surety from obligation with respect to any unpaid claims.

Contractor agrees that no person shall be employed 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 when public policy absolutely requires it, and in such cases the laborer shall be paid at least time and a half pay for all overtime in excess of eight (8) hours in any one day or forty (40) hours in any one week when the workweek is five consecutive days, Monday through Friday, or ten (10) hours in any one day and or forty (40) hours in any one week when the workweek is four consecutive days, Monday through Friday and for all work performed on Saturday and on any legal holiday as specified in ORS 279C.540.

Contractor agrees to pay promptly as due, 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 Contractor's employees, of all sums which the Contractor agreed to pay for such services and all money and sums which the Contractor collected or deducted from employee wages pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

11. **PRE-CONSTRUCTION CONFERENCE:** Within 30 days of the issuance of the Notice of Award, the Contractor is required to attend a Pre-construction Conference. The City will contact the Contractor to schedule a specific date, time and location for the Pre-construction conference. The purpose of the meeting is to outline specific construction items and procedures and to address items which require special attention on the part of the Contractor. The Contractor may also present proposed variations in procedures which the Contractor believes may improve constructability of the project, reduce cost, or will reduce inconvenience to the public. Any necessary coordination and procedures for Construction inspection and staking will be addressed during the Pre-construction Conference. The Contractor will be required to provide the following information at the Pre-construction Conference:

    a. Names and emergency telephone numbers of key personnel involved in the project.

    b. Names and telephone numbers of all subcontractors proposed for use on the project.

    c. A construction progress schedule showing the estimated time for start and completion of the major items of work.

    d. A written proposal outlining the intended plans for maintaining continuous access to residences and businesses along the construction site, and traffic control.

    e. An itemized list of all required shop drawings, material and equipment submittals and a schedule indicating the dates each of these items will be transmitted to the City for review.

    Each of the above items is subject to the review and approval by the City.

12. **INSURANCE REQUIREMENTS:** The Contractor, at Contractor's own expense, shall purchase and maintain the herein stipulated minimum insurance with companies licensed to do business in the State of Oregon with policies and forms satisfactory to the City. The City reserves the right to reject all or any insurance carrier(s) with an unacceptable financial rating. All insurance required herein shall be maintained in full force and effect until all work required to be performed under the terms of the Contract is satisfactorily completed and formally accepted; failure to do so may, at the sole direction of the City, constitute a material breach of this Contract. The Contractor's insurance shall be primary insurance, and any insurance or self insurance maintained by the City shall not contribute to it.

    Any failure to comply with the claim reporting provisions of the policies or any breach of an insurance policy warranty shall not affect coverage afforded under the policy to protect the City. The insurance policies shall contain a waiver of transfer

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

rights of recovery (subrogation) against the City, its agents, representatives, directors, officers, and employees for any claims arising out of the Contractor's work or service.

The City reserves the right to request and to receive, within 10 working days, certified copies of any or all of the herein required insurance policies and/or endorsements. The City shall not be obligated, however, to review same or to advise Contractor of any deficiencies in such policies and endorsements, and such receipt shall not relieve Contractor from, or be deemed a waiver of the City's right to insist on, strict fulfillment of Contractor's obligations under this Contract.

The insurance policies required by this Contract shall name the City, its agents, representatives, officers, directors, officials and employees as Additional Insured with respect to this contract. All Liability Insurance policies will be endorsed to show this additional coverage. A cross-liability clause or separation of insured clause will be included in general liability policy.

The policy or policies of insurance maintained by the Contractor and its subcontractors shall provide at least the following limits and coverage:

a. Commercial General Liability Insurance: Includes all liability including all major divisions of coverage, but not limited to, Premises/Operations, Completed Operations, Independent Contractors' Protective, Products-Completed Operations, Contractual Liability (including coverage for the Contractor's indemnity obligations and other contractual indemnity obligations assumed by the Contractor), Personal Injury, and Broad Form Property Damage (including coverage for Explosion, Collapse, and Underground Hazards). The following insurance will be carried:

   Employer's Liability Insurance
   $ 2,000,000.00 Each Occurrence
   $ 2,000,000.00 Disease Each Employee
   $ 2,000,000.00 Disease – Policy

   Commercial General Liability insurance
   $ 2,000,000.00 Each Occurrence Limit
   $ 3,000,000.00 General Aggregate
   $ 3,000,000.00 Products/Completed Operations Aggregate
   $ 3,000,000.00 Personal and Advertising Injury
   $ 2,000,000.00 Limited Job Site Pollution Occurrence Sub-Limit

   Comprehensive Automobile Liability Insurance including coverage for all owned, hired and non-owned vehicles
   $ 2,000,000.00 Each Occurrence Combined Single Limit
   $ 3,000,000.00 Aggregate Bodily Injury & Property Damage
   or
   $ 2,000,000.00 Each Person Bodily Injury
   $ 2,000,000.00 Each Occurrence Bodily Injury
   $ 2,000,000.00 Each Occurrence Property Damage
   $ 2,000,000.00 Each Occurrence Pollution Occurrence Sub-Limit

b. "All risk" Builder's Risk Insurance (including earthquake and flood) covering the real and personal property of others in the care, custody, and control of the contractor, if applicable. Coverage shall include theft and damage to building interiors, exterior, in transit and offsite storage. The minimum amount of coverage to be carried shall be equal to the full amount of the contract.

The policy shall be endorsed to have the General Aggregate apply to this Project Only.

The insurance policies may provide coverage which contains deductibles or self-insured retentions. Such deductible and/or self insured retentions shall not be applicable with respect to the coverage provided to the City under such policies. The

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

Contractor shall be solely responsible for deductible and/or self insured retention and the City, at its option, may require the Contractor to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.

Certificates of Insurance: Prior to commencing Services under this Contract, Contractor shall furnish the City with Certificates of Insurance, or formal endorsements as required by the Contract, issued by Contractor's insurer(s), as evidence that policies providing the required coverage, conditions and limits required by this Contract are in full force and effect. Certificates of Insurance should read "Insurance certificate pertaining to (this contract). The City of West Linn, its officers, directors and employees shall be added as additional insured with respects to this contract. Insured coverage is primary" in the description portion of the certificate.

If a policy does expire during the life of the contract, a renewal certificate must be sent to the City ten (10) days prior to the expiration date. Insurance required herein shall not expire, be canceled, or materially changed without thirty (30) days prior written notice to the City. The procuring of such required insurance shall not be construed to limit contractor's liability hereunder. Notwithstanding said insurance, Contractor shall be obligated for the total amount of any damage, injury, or loss caused by negligence or neglect connected with this Contract.

13. **PERFORMANCE BOND:** The contractor shall be required to furnish non-revocable security binding the contractor to provide faithful performance of the contract in the amount of 100% of the total contract price payable to the City of West Linn.

    Performance security shall be in the form of a performance bond, certified check or cashier's check. This security must be in the possession of the City within the time specified or ten (10) days after notice of award if no period is specified. If the contractor fails to execute the security document as required, the contractor may be found in default and the contract terminated by the City. In case of default the City reserves all rights.

    All performance bonds shall be executed on the Performance Bond form included in the Bid Document, duly executed by the Bidder as Principal and having as Surety thereon a Surety company approved by the owner and holding a Certificate of Authority to transact surety business in the State of Oregon, by the Oregon Department of Insurance. Individual sureties are unacceptable. All Insurers and Sureties shall have at the time of submission of the proposal an A.M. Best's Key Rating Guide of "A-" or better as currently listed in the most recent Best Key Guide, published by the A.M. Best Company, payable without condition to the Owner.

14. **PAYMENT BOND:** The contractor shall be required to furnish non-revocable security for the protection of all persons supplying labor and material to the contractor or any subcontractor for the performance of any work related to the contract. Payment security shall be in the amount of 100% of the total contract price and be payable to the City of West Linn. Payment security shall be in the form of a payment bond, certified check or cashier's check.

    All payment bonds shall be executed on the Payment Bond form included in the Bid Document, duly executed by the Bidder as Principal and having as Surety thereon a Surety company approved by the owner and holding a Certificate of Authority to transact surety business in the State of Oregon, by the Oregon Department of Insurance. Individual sureties are unacceptable. All Insurers and Sureties shall have at the time of submission of the proposal and A.M. Best's Key Rating Guide of "A-" or better as currently listed in the most recent Best Key Guide, published by the A.M. Best Company, payable without condition to the Owner.

15. **NOTICE TO PROCEED**: Within 45 days of the issuance of the Notice of Award the City may issue a written Notice to Proceed. The Notice to Proceed shall stipulate the actual contract start date, the contract duration and the contract completion date. The time required for the Contractor to obtain permits, licenses and easements shall be included in the contract duration and shall not be justification for a delay claim by the Contractor. The time required for the Contractor to

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

prepare, transmit and obtain approval of applicable submittals shall be included in the contract duration and shall not be justification for a delay claim by the Contractor.

No work shall be started until after all required permits, licenses, and easements have been obtained.

No work shall be started until all applicable submittals have been submitted and returned approved by the City's Representative.

16. **PROTECTION OF FINISHED OR PARTIALLY FINISHED WORK**: The Contractor shall properly guard and protect all finished or partially finished work, and shall be responsible for the same until the entire contract is completed and accepted by the City Engineer. The Contractor shall turn over the entire work in full accordance with these Specifications before final settlement shall be made.

17. **CHANGE ORDERS**: The City may at any time, and without notice, issue a written Change Order requiring additional work within the general scope of this Contract, or any amendment thereto, or directing the omission of or variation in work. If such Change Order results in a material change in the amount or character of the work, an equitable adjustment in the Contract price and other provisions of this Contract as may be affected may be made. Any claim by Contractor for an adjustment under this section shall be asserted in writing within thirty (30) days from the date of receipt by Contractor of the notification of change or the claim will not be allowed. Whether made pursuant to this section or by mutual agreement, no change shall be binding upon City until a Change Order is executed by the Authorized Representative of City, which expressly states that it constitutes a Change Order to this Contract. The issuance of information, advice, approvals, or instructions by City's Representative or other City personnel shall not constitute an authorized change pursuant to this section. Nothing contained in this section shall excuse the Contractor from proceeding with the prosecution of the work in accordance with the Contract, as changed.

18. **STOCKPILE OF MATERIALS**: The Contractor may, if approved by the City Engineer, place or stockpile materials in the public right-of-way provided they **do not** prevent access to adjacent properties or prevent compliance with traffic regulations. Traffic shall not be required to travel over stockpiled materials, and proper dust control shall be maintained.

19. **EXCESS MATERIALS**: When excavations are made, resultant loose earth shall be utilized for filling by compacting in place or disposed of off the site. Excess or unsuitable material, broken asphaltic concrete and broken portland cement concrete excavated from the right-of-way shall be removed from the project and disposed of by the Contractor.

    Waste material shall not be placed on private property without express permission of the property owner.

    The Contractor shall at all times keep the premises free from accumulation of waste materials or rubbish caused by his operations. At the completion of the work, he shall remove all equipment, tools and surplus materials, and shall completely clean the premises, removing and disposing of all debris and rubbish, and cleaning all stains, spots, marks, dirt, smears, etc. When work premises are turned over to the City, they shall be thoroughly clean and ready for immediate use.

    Clean-up shall include removal of all excess pointing mortar materials within pipes and removal of oversized rocks and boulders left after finish grading. The Contractor shall provide for the legal disposal of all waste products debris, etc., and shall make necessary arrangements for such disposal.

20. **ENVIRONMENTAL POLLUTION**: As provided by ORS 279C.525, all applicable provisions of federal, state or local statutes, ordinances and regulations dealing with the prevention of environmental pollution and the preservation of natural resources that affect the work under this contract are by reference incorporated herein to the same force and affect as if set forth herein in full. If the Contractor must undertake additional work due to the enactment of new or the amendment of existing statutes, ordinances or regulations occurring after the submission of the successful bid, the City shall issue a Change Order setting forth the additional work that must be undertaken. The Change Order shall not invalidate the Contract and

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

there shall be, in addition to a reasonable extension, if necessary, of the contract time, a reasonable adjustment in the contract price, if necessary, to compensate the Contractor for all costs and expenses incurred, including overhead and profits, as a result of the delay or additional work.

21. **SALVAGE, COMPOSTING OR MULCHING**: If this is a contract for demolition work, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective. If this is a contract for lawn and landscape maintenance, Contractor shall compost or mulch yard waste material at an approved site, if feasible and cost-effective.

22. **LOSSES AND DAMAGES**: All loss or damage arising out of the nature of the work to be done or from the action of the elements or from any unforeseen circumstances in the prosecution of the same, or from any unusual obstructions or difficulties which may be encountered in and/or during the prosecution of the work, or from any casualty whatsoever of every description, shall be sustained and borne by the Contractor at his own cost and expense.

23. **CHARACTER AND STATUS OF WORKMEN**: Only skilled foremen and workmen shall be employed on work requiring special qualifications. When required by the City, the Contractor shall discharge any person who is, in the opinion of the City Engineer, disorderly, dangerous, insubordinate, incompetent, or otherwise objectionable. The Contractor shall keep the City harmless from damages or claims for compensation that may occur in the enforcement of this section.

24. **WORK METHODS:** The methods, equipment and appliances used on the work shall be such as will produce a satisfactory quality of work, and shall be adequate to complete the contract within the time limit specified.

    Except as is otherwise specified, the Contractor's procedure and methods of construction may, in general, be of his own choosing, provided they follow best general practice and are calculated to secure results which will satisfy the requirements of the specifications and the supervision of the work.

    The work covered by this Contract shall be carefully laid out in advance and performed in a manner to minimize interference with normal operation and utilization of the roads. The Contractor shall exercise caution during the course of this construction work to avoid damage to all known existing or possible unknown existing underground utilities. He shall conduct his construction operations in such a manner as to avoid injury to his personnel and to avoid damage to all utilities. Any damage done will be repaired without delay and at the expense of the Contractor.

25. **INSPECTION:** All material and/or services are subject to inspection and acceptance by the City. Materials and/or services failing to conform to the specifications of this Contract will be held at Contractor's risk and may be returned to the Contractor. If so returned, all costs are the responsibility of the Contractor. The City may elect to do any or all of the following per written determination:

    a. Waive the non-conformance.

    b. Stop the work immediately.

    c. Bring material into compliance.

26. **TRAFFIC REGULATIONS**: All traffic affected by this construction shall be regulated in accordance with the *Oregon Temporary Traffic Control Handbook,* latest edition, as prepared by the Oregon Department of Transportation and any questions shall be referred to the City of West Linn City Engineer for interpretation.

    At the time of the pre-construction conference, the Contractor shall designate an employee who is well qualified and experienced in construction traffic control and safety to be responsible for implementing, monitoring and altering traffic control measure, as necessary. At the same time the City will designate a representative who will be responsible to see that

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

all traffic control and any alterations are implemented and monitored to the extent that traffic is carried through the work area in an effective manner and that motorists, pedestrians, bicyclists and workers are protected from hazard and accidents.

a. All traffic control devices required for this project shall be the responsibility of the Contractor. The Contractor shall place advance warnings signs in accordance with the Traffic Control Handbook.

b. The Contractor shall provide, erect and maintain all necessary flashing arrow boards, barricades, suitable and sufficient warning lights, signals and signs, and shall take all necessary precautions for the protection of the work and safety of the public. The Contractor shall provide, erect and maintain acceptable and adequate detour signs at all closures and along detour routes.

c. All barricades and obstructions shall be illuminated at night, and all safety lights shall be kept burning from sunset until sunrise. All barricades and signs used by the Contractor shall conform to the standard design, generally accepted for such purposes, and payment for all such services and materials shall be considered as included in the other pay items of the Contract unless specifically listed and identified.

d. The Contractor shall insure that all existing traffic signs are erect, clean and in full view of the intended traffic at all times. Street name signs at major street intersections shall be maintained erect at all times. If these signs should interfere with construction, the Contractor shall notify the Inspector at least forty eight (48) hours in advance for City personnel to temporarily relocate said signs. The City will re-set all traffic and street name signs to permanent locations when notified by the Contractor that construction is complete unless otherwise stated in the specifications.

e. When construction activities or traffic hazards at the construction site require the use of flagmen, it shall be the Contractor's responsibility to provide adequate personnel including flagmen to direct traffic safely.

f. Equipment used and/or directed by the Contractor shall travel with traffic at all times. Supply trucks shall travel with traffic except when being spotted. Provide a flagman to assist with this operation.

g. During construction, it may be necessary to alter traffic control. Alterations shall be in accordance with the Traffic Control Handbook.

h. **NO STREET WITHIN THIS PROJECT MAY BE CLOSED TO THROUGH TRAFFIC OR TO LOCAL EMERGENCY TRAFFIC WITHOUT THE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER PER DIRECTION OF THE CITY MANAGER OF THE CITY OF WEST LINN.** Written approval may be given if sufficient time exists to allow for notification of the public at least two (2) days in advance of such closing. Partial closure of streets within the project shall be done in strict conformity with written directions to be obtained from the City Engineer.

i. The Contractor shall address how local access to adjacent properties will be handled in accordance with the specification herein.

j. Where crossings of existing pavements occur, no open trenches shall be permitted overnight, but plating may be permitted if conditions allow as determined by the City Engineer or his authorized representative. If plates cannot be used, crossings shall be appropriately back-filled to provide a safe smooth travelling surface.

27. **OUTDOOR CONSTRUCTION RESTRICTIONS:** Outdoor construction is restricted to the times listed below in the following table:

	Weekdays (Mon.-Fri.)	**Weekends (Sat.-Sun.), Holidays**
All Outdoor Construction Work	7:00 a.m. to 7:00 p.m.	9:00 a.m. to 5:00 p.m.

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

Holidays include: New Year's Day, Martin Luther King Jr. Birthday, Washington's Birthday/President's Day, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day, and Christmas Day.

28. **FIRST TIER SUBCONTRACTOR DISCLOSURE:** If a Bid for the Project is greater than $100,000, within two working hours of the date and time the Bids are due, the Bidder must submit a written disclosure for all First Tier Subcontractors furnishing labor or labor and materials whose subcontracts are equal to or greater in value than 5% of the total Project Bid or $15,000, whichever is greater, or $350,000 regardless of the percentage of the total project bid in accordance with ORS 279C.370. The Bidder must disclose the following information about their first-tier subcontracts either in its Bid submission or within two (2) working hours after the date and time of the deadline when bids are due:

    a. The subcontractor's name, address, Construction Contractor's Board Number (as applicable), and

    b. The dollar value of the subcontract, and

    c. The category of work that the subcontractor will be performing.

    If the bidder will not be using any subcontractors that are subject to the above disclosure requirements, the bidder is required to indicate "NONE" on the accompanying form. Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award. It is the Bidder's responsibility to determine all the documents are must be submitted to the City.

29. **USE OF EQUALS:** When the specifications for materials, articles, products, and equipment state "or equal", Contractor may bid upon, and use materials, articles, products, and equipment which will perform equally the duties imposed by the general design. The Engineer will have the final approval of all materials, articles, products, and equipment proposed to be used as an "equal." It shall not be purchased or installed without prior written approval from the City or its representative.

30. **HAZARDOUS MATERIALS**: The Contractor shall supply the City with a list of any and all hazardous substances used in performance of this Contract. That list shall identify the location of storage and use of all such hazardous substances and identify the amounts stored and used at each location. Contractor shall provide City with material safety data sheets for all hazardous substances brought onto City property, created on City property or delivered to City pursuant to this Contract. For the purpose of this section, "hazardous substance" means hazardous substance as defined by ORS 453.307(5). Contractor shall complete the State Fire Marshall's hazardous substance survey as required by ORS 453.317 and shall assist City to complete any such survey that it may be required to complete because of substances used in the performance of this Contract.

31. **HAZARDOUS WASTE**: If, as a result of performance of this Contract, Contractor generates any hazardous wastes, Contractor shall be responsible for disposal of any such hazardous wastes in compliance with all applicable federal and state requirements. Contractors shall provide City with documentation, including all required manifests, demonstrating proper transportation and disposal of any such hazardous wastes. Contractor shall defend, indemnify, and hold harmless City for any disposal or storage of hazardous wastes generated pursuant to this Contract and any releases or discharges of hazardous materials.

32. **TEMPORARY SANITARY FACILITIES**: The Contractor shall provide facilities for the use of workmen employed on the work site in accordance with the requirements of ORS 654.150, (Sanitary facilities at construction projects; standards, exemptions) and the rules adopted pursuant thereto. Whether or not ORS 654.150 is applicable to the project is the sole responsibility of the Contractor. Contractor shall be responsible for all costs that may be incurred in complying with or in securing exemption or partial exemption from the requirements as incidental to this contract.

33. **ELECTRIC POWER, WATER AND TELEPHONE**: Unless otherwise specified, the Contractor shall make his own arrangements for electric power, water and telephone. Subject to the convenience of the utility, he may be permitted to

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

connect to existing facilities where available, but he shall meter and bear the cost of such power or water, and installation and disconnect of such power, water and telephone services.

34. **UTILITIES AND ELECTRICAL POWER LINES**: The electric utility company may maintain energized aerial electrical power lines in the immediate vicinity of this project. Do not consider these lines to be insulated. Construction personnel working in proximity to these lines are exposed to an extreme hazard from electrical shock. Contractors, their employees and all other construction personnel working on this project must be warned of the danger and instructed to take adequate protective measure, including maintaining a minimum ten (10) feet clearance between the lines and all construction equipment and personnel. (see: OSHA Std. 1926.550 (a) 15).

    Electrical utility companies may maintain energized underground electrical power lines in the immediate vicinity of this project. These power lines represent an extreme hazard of electrical shock to any construction personnel or equipment coming in contact with them. Contractors, their employees, and all other personnel working near any underground power lines must be warned to take adequate protective measure. (see: OSHA Std. 1926-651 (A)).

    Oregon law requires all parties planning excavations in public rights-of-way to contact utilities for locations of their underground facilities in accordance with the 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 (503) 232-1987.

35. **COOPERATIVE PURCHASING**: Any publicly funded city, county, district, agency or similar entity shall have the authority to purchase specified goods/services directly from the contractor under the terms and conditions of this contract as indicated below:

    a. The bidder agrees to extend identical pricing to local public agencies for the same terms. Quantities listed in this document reflect the City of West Linn's estimated usage only.

    b. Each contracting agency will execute a separate contract with the successful bidder for its requirements.

    c. Any bidder, by written notification at the time of the bid due date and time, may decline to extend the prices and terms of this bid to any, and/or all other public agencies.

    d. Additional costs may be incurred by the successful bidder in contracting with another public agency. All demonstrable costs (shipping, etc.) may be passed on to that public agency.

    Contractor shall provide information regarding total usage of contract upon request of the City of West Linn.

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

Purpose: The City of West Linn intends to establish a contract for the **Rosemont Reservoir Safety and Maintenance Improvements Project**. For the Technical Special Provisions of this contract see Appendix B.

1. **Prospective Bidders Conference:** Prospective bidders are required to attend a conference to be held at the City of West Linn City Hall:

   ADDRESS: 22500 Salamo Road
   West Linn, Oregon 97068
   Bolton Conference Room

   DATE/TIME: AS INDICATED ON INVITATION FOR BID

   The purpose of this conference will be to clarify the contents of this Invitation For Bid in order to prevent any misunderstanding of the City's position. Any doubt as to the requirements of this Invitation For Bid or any apparent omission or discrepancy should be presented to the City at this conference. The City will then determine the appropriate action necessary, if any, and issue a written addendum to the Invitation For Bid. Oral statements or instructions shall not constitute an amendment to the Invitation For Bid.

2. **Bid Acceptance Period:** In order to allow for an adequate evaluation, the City requires a Bid in response to this Solicitation to be valid and irrevocable for sixty (60) days after the opening time and date.

3. **Time of Completion:** The Contractor shall commence work for this project on or before the fifth (5) day following the project start date indicated on the "Notice to Proceed" issued by the City of West Linn and shall fully complete all work under the project within the "Time of Completion" stated on the "Notice of Invitation to Bid and Contract." The Contractor shall, at all times, during the continuance of the Contract, prosecute the work with such force and equipment as is sufficient to complete all work within the time specified.

4. **Plans and Specifications to Successful Bidder:** The successful Bidder may obtain five (5) sets of Plans and Specifications for this project from the City at no cost.

5. **City of West Linn Permit:** As a City project, the Contractor is not required to obtain a City Public Works Construction, Improvement, Blasting, or Erosion Control permit. The Contractor will be responsible for any other required agency permits.

6. **Key Personnel:** It is essential that the Contractor provide adequate experienced personnel, capable of and devoted to the successful accomplishment of work to be performed under this contract. The Contractor must agree to assign specific individuals to the key positions.

   b. The Contractor agrees that, once assigned to work under this contract, key personnel shall not be removed or replaced without written notice to the City.

   c. If key personnel are not available for work under this contract for a continuous period exceeding 30 calendar days, or are expected to devote substantially less effort to the work than initially anticipated, the Contractor shall immediately notify the City, and shall, subject to the concurrence of the City, replace such personnel with personnel of substantially equal ability and qualifications.

Appendix A

FORMS

BID FORM

Solicitation Number: PW-14-04

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

Item	Spec. Reference	Description of material and/or services	Quantity	Unit	Unit Price	Total Amount
1	00210	Mobilization	1	LS	$	$
2	TSP 05500, 11900	Furnish and install reservoir safety and ventilation improvements, and repairs	1	LS	$	$
3	TSP 05500	Furnish and install cable shaft with rooftop entry shroud	1	LS	$	$
4	TSP 05500	Furnish and install pedestal penetrations, and welded antenna and cable mounts	1	LS	$	$
5	TSP 16010, 16100, 17000	Furnish and install electrical, instrumentation and controls improvements	1	LS	$	$
6	TSP 16640	Furnish and install cathodic protection system improvements	1	LS	$	$
7	TSP 09879	Interior wet area surface preparation and coating	1	LS	$	$
8	TSP 09879	Interior dry area surface preparation and coating	1	LS	$	$
9	TSP 09879	Exterior surface preparation and coating	1	LS	$	$
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
		Total Bid:				$_____

BID BOND

Solicitation Number: PW-14-04

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

KNOW ALL PERSONS BY THESE PRESENTS:

That we, _____, as "Principal,"
(Name of Principal)

and _____, an _____ Corporation,
(Name of Surety)
authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto the City of West Linn ("Obligee") the sum of ($_____) _____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document for the project identified in the Solicitation Number indicated above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document and ORS 279C.365(4) for competitive bidding or 279C.400(5) for competitive proposals.

NOW, THEREFORE, if the proposal or bid submitted by Principal is accepted, and if a contract pursuant to the proposal or bid is awarded to Principal, and if Principal enters into and executes such contract within the time specified in the procurement document and executes and delivers to Obligee its good and sufficient performance and payment bonds required by Obligee, as well as any required proof of insurance, within the time fixed by Obligee, then this obligation shall be void; otherwise, it shall remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____day of _____, 20__.

PRINCIPAL: _____

By_____
Signature

_____
Official Capacity

Attest: _____
Corporation Secretary

SURETY: _____

BY ATTORNEY-IN-FACT:

_____
Name

_____
Signature

_____
Address

_____
City State Zip

_____ _____
Phone Fax

	FORMS	**Public Works Department** 22500 Salamo Road West Linn, Oregon 97068 Telephone: (503) 722-5500 Fax: (503) 656-4106
	Solicitation Number: PW-14-04	

NONCOLLUSION AFFIDAVIT

I, (Type/Print Name)_____**,** state that I am **(Position Title)** _____of **(Name of Firm)**_____ and that I am authorized to make this affidavit on behalf of my firm, and its owners, directors, and, officers. I am the person responsible in my firm for the price(s) and the amount of this bid.

I state that:

1. The price(s) and the amount of this bid have been arrived at independently and without consultation, communication or agreement with any other contractor, bidder or potential bidder.

2. Neither the price(s) nor the amount of this bid, and neither the approximate price(s) nor approximate amount of this bid, have been disclosed to any other firm or person who is a bidder or potential bidder, and they will not be disclosed before bid opening.

3. No attempt has been made or will be made to induce any firm or person to refrain from bidding on this contract, or to submit a bid higher than this bid, or to submit any intentionally high or noncompetitive bid or other form of complementary bid.

4. The bid of my firm is made in good faith and not pursuant to any agreement or discussion with, or inducement from, any firm or person to submit a complementary or other noncompetitive bid.

5. **(Name of Firm)**_____**,** its affiliates, subsidiaries, officers, directors, and employees are not currently under investigation by any governmental agency and have not in the last four (4) years been convicted or found liable for any act prohibited by state or federal law in any jurisdiction, involving conspiracy or collusion with respect to bidding on any public contract, except as follows:

I state that **(Name of Firm)**_____ understands and acknowledges that the above representations are material and important, and will be relied on by **THE CITY OF WEST LINN, OREGON** in awarding the contract(s) for which this bid is submitted. I understand and my firm understands that any misstatement in this affidavit is and shall be treated as fraudulent concealment from **THE CITY OF WEST LINN, OREGON** of the true facts relating to the submission of bids for this contract.

_____
(Signature) (Signatory's Name)

_____
(Signatory's Title)

STATE OF _____)
)§
COUNTY OF _____)

SWORN TO AND SUBSCRIBED BEFORE ME THIS _____DAY OF _____**, 20**____

_____
Notary Public

My Commission Expires _____

THREE YEAR EXPERIENCE RECORD

Recent projects first

#1 (Project Name, Location, Contract Cost)

_____

Project description: _____

_____

_____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#2 (Project Name, Location, Contract Cost)

_____

Project description: _____

_____

_____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#3 (Project Name, Location, Contract Cost)

_____

Project description: _____

_____

_____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#4 (Project Name, Location, Contract Cost)

_____

Project description: _____

_____

_____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

#5 (Project Name, Location, Contract Cost)

_____

Project description: _____

_____

_____

Project completion date: (contract) _____ (actual) _____

Contact name: _____

Telephone: _____

Attach additional sheets if needed.

FIRST-TIER SUBCONTRACTOR DISCLOSURE

PROJECT NAME: _____

BID #: _____

BID CLOSING: Date: _____Time:_____

This form must be submitted at the location specified in the Invitation to Bid on the advertised bid closing date and within two working hours after the advertised bid closing time.

List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work that the subcontractor will be performing and the dollar value of the subcontract. Enter "NONE" if there are no subcontractors that need to be disclosed. (ATTACH ADDITIONAL SHEETS IF NEEDED.)

NAME	DOLLAR VALUE	CATEGORY OF WORK
(1) _____	$ _____	_____
(2) _____	$ _____	_____
(3) _____	$ _____	_____
(4) _____	$ _____	_____
(5) _____	$ _____	_____
(6) _____	$ _____	_____
(7) _____	$ _____	_____
(8) _____	$ _____	_____
(9) _____	$ _____	_____

Failure to submit this form by the disclosure deadline will result in a non-responsive bid. A non-responsive bid will not be considered for award.

Form submitted by (bidder name):_____

Contact name: _____ Phone no.: ( ) _____

ORS 279C.370 First-tier subcontractor disclosure. (1)(a) Within two working hours after the date and time of the deadline when bids are due to a contracting agency for a public improvement contract, a bidder shall submit to the contracting agency a disclosure of the first-tier subcontractors that:

(A) Will be furnishing labor or will be furnishing labor and materials in connection with the public improvement contract; and

(B) Will have a contract value that is equal to or greater than five percent of the total project bid or $15,000, whichever is greater, or $350,000 regardless of the percentage of the total project bid.

(b) For each contract to which this subsection applies, the contracting agency shall designate a deadline for submission of bids that has a date on a Tuesday, Wednesday or Thursday and a time between 2 p.m. and 5 p.m., except that this paragraph does not apply to public contracts for maintenance or construction of highways, bridges or other transportation facilities.

(c) This subsection applies only to public improvement contracts **("projects")** with a value, estimated by the contracting agency, of more than **$100,000**.

(d) This subsection does not apply to public improvement contracts that have been exempted from competitive bidding requirements under ORS 279C.335 (2).

(2) The disclosure of first-tier subcontractors under subsection (1) of this section must include the name of each subcontractor, the category of work that each subcontractor will perform and the dollar value of each subcontract. The information shall be disclosed in substantially the following [above] form:

(3) A contracting agency shall accept the subcontractor disclosure. The contracting agency shall consider the bid of any contractor that does not submit a subcontractor disclosure to the contracting agency to be a non-responsive bid and may not award the contract to the contractor. A contracting agency is not required to determine the accuracy or the completeness of the subcontractor disclosure.

(4) After the bids are opened, the subcontractor disclosures must be made available for public inspection.

(5) A contractor may substitute a first-tier subcontractor under the provisions of ORS 279C.585.

(6) A subcontractor may file a complaint under ORS 279C.590 based on the disclosure requirements of subsection (1) of this section.

WH-179 (08-10-10)

PERFORMANCE BOND

Solicitation Number: PW-14-04

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

KNOW ALL MEN BY THESE PRESENTS, that we, _____
(Official Name & Form of Organization)

Whose address is: _____
(Street Address) *(City)* *(State)* *(Zip)*

as Principal, and, _____
(Name of Surety) *(Print - Agent / Contact Name)* *(Phone Number)*

_____
(Street Address of Surety) *(City)* *(State)* *(Zip)*

a corporation duly authorized to conduct a general surety business in the State of Oregon, as Surety, are jointly and severally held and bound unto the City of West Linn, Oregon, a municipality of the State of Oregon, hereinafter called Obligee, in the sum of _____ and ____/100 DOLLARS ($_____),*(The Contract Price, Both in Words & Figures)* lawful money of the United State of America, for the payment of which we, as Principal, and as Surety, jointly and severally bind ourselves, our successors and assigns firmly by these presents,

TERMS AND CONDITIONS

On the _____ *(Day)* of _____*(Month)*, _____*(Year)*, _____
(Name of Contractor)

Principal, entered into a contract with the City of West Linn, Oregon, Obligee, to construct certain public improvements and to provide material, labor and equipment for the construction of those improvements. The public improvements and work to be performed by Principal are more fully described in the contract documents between Principal and Obligee. Those contract documents are incorporated herein by reference.

In the event that Principal fails to complete the work as required under the contract, Surety shall either complete the work or pay Obligee the costs of completion of the work. Work is only complete when it meets the standards required by the Contract and applicable City standards. Surety's obligation shall remain in effect until the work is accepted by Obligee, but shall terminate on acceptance by Obligee. The total amount of the Surety's liability to Obligee under this bond shall in no event exceed the amount stated above.

Surety agrees that no change, extension of time, alternation, or addition to the terms of the contract, or to the work to be performed thereunder or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in _____, Oregon, this ____ *(Day)* of _____*(Month)*, _____*(Year)*.

_____
Contractor

_____
Principal Signature

Witnesses:

_____ _____
Principal Printed Name

_____ _____
Surety

(A true copy of the Power of Attorney must be attached to the original of this bond)

Countersigned: _____
Surety Attorney of Fact

_____
Resident Agent

PAYMENT BOND

Solicitation Number: PW-14-04

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

KNOW ALL MEN BY THESE PRESENTS, that we, _____
(Official Name & Form of Organization)

Whose address is: _____
(Street Address) *(City)* *(State)* *(Zip)*

as Principal, and, _____
(Name of Surety) *(Print - Agent / Contact Name)* *(Phone Number)*

_____
(Street Address of Surety) *(City)* *(State)* *(Zip)*

a corporation duly authorized to conduct a general surety business in the State of Oregon, as Surety, are jointly and severally held and bound unto the City of West Linn, Oregon, a municipality of the State of Oregon, hereinafter called Obligee, in the sum of _____ and _____/100 DOLLARS ($_____),*(The Contract Price, Both in Words & Figures)* lawful money of the United State of America, for the payment of which we, as Principal, and as Surety, jointly and severally bind ourselves, our successors and assigns firmly by these presents,

TERMS AND CONDITIONS

On the _____ *(Day)* of _____*(Month)*, _____*(Year)*, _____
(Name of Contractor)

Principal, entered into a contract with the City of West Linn, Oregon, Obligee, for the construction of certain public improvements. As part of the contract, Principal is required to furnish materials, labor, and equipment to construct the improvements. The contract documents between Principal and Obligee are incorporated herein by this reference.

In the event that Principal fails to make payments when due to suppliers of labor, equipment or materials, Surety shall pay the suppliers the amounts they are due. In the event that Obligee pays any amounts to suppliers that Principal was required to pay, Surety shall reimburse Obligee for those payments. In the event that Principal permits any lien or claim to be filed or prosecution against the City on account of any labor or material furnished, Surety shall take such steps as are necessary to clear the lien, claim or prosecution. In the event that Principal fails to (1) promptly pay all contributions or amounts due the State Unemployment Compensation Trust Fund incurred to the performance of the contract, (2) promptly, as due, make payments to the person, co-partnership, association, or corporation entitled thereto of the money and sums mentioned in Section 279C.600 of the Oregon Revised Statutes, or (3) promptly pay to the Oregon State Tax Commission all sums required to be deducted and retained from wages of employees of the Principal and his sub-Contractors, pursuant to the Section 316.711, Oregon Revised Statues, Surety shall make the required payments. Surety's obligations under this bond shall terminate when all payments required of Principal described in this paragraph are made in full.

The total amount of the Surety's liability under this bond both to the Obligee and to the persons furnishing labor or materials, provisions and goods to any person or persons, shall in no event exceed the amount stated above.

Surety agrees that no change, extension of time, alternation, or addition to the terms of the contract, or to the work to be performed there under or the specifications accompanying the same shall in anywise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the contract or to the work or the specifications.

IN WITNESS WHEREOF, the parties hereto have caused this Bond to be executed in _____, Oregon, this ____ *(Day)* of _____*(Month)*, _____*(Year)*.

_____
Contractor

_____
Principal Signature

Witnesses:

_____ _____
Principal Printed Name

_____ _____
Surety

(A true copy of the Power of Attorney must be attached to the original of this bond)

Countersigned: _____
Surety Attorney of Fact

_____
Resident Agent

CONTRACTOR'S AFFIDAVIT
SETTLEMENT OF CLAIMS

DATE:_____

PROJECT: Rosemont Reservoir Safety and Maintenance Improvements

TO: City of West Linn

Persons:

This is to certify that all lawful claims for materials, rental of equipment, and labor used in connection with the construction of the above, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of $_____, as set forth in the final pay estimate, as full and complete payment under the terms of the contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of this project. The undersigned further agrees to indemnify and hold harmless _____against any and all liens, claims of liens, suits, actions, damages, charges and expenses whatsoever, which _____ may suffer arising out of the failure of the undersigned to pay for all labor performance and materials furnished for the performance of said project.

Signed at _____, this _____ day of _____, 20_____

_____
(CONTRACTOR)

BY:_____

STATE OF _____)
)§
COUNTY OF _____)

The foregoing instrument was subscribed and sworn to before me this _____ day of _____, 20___

_____
Notary Pubic

My Commission Expires:_____

CONTRACT FEE SECTION
PREVAILING WAGE RATE UNIT
BUREAU OF LABOR AND INDUSTRIES
800 N.E. OREGON ST., #1045
PORTLAND, OR 97232-2180
PHONE: (971) 673-0852
FAX: (971) 673-0769

For Office Use Only:

Project DB #:_____

PUBLIC WORKS FEE INFORMATION FORM

For use by public agencies that have contracted with a contractor on a public works project regulated by ORS 279C.800 to 279C.870, in compliance with ORS 279C.825. Also for use by public agencies that are a party to a public works project pursuant to ORS 279C.800(6)(a)(B) or (C).

PUBLIC AGENCIES: Please complete and mail this form to BOLI at the above address, along with the public works fee of one-tenth of one percent of the contract price (contract amount x .001), payable to BOLI. **The minimum fee is $250.00; the maximum fee is $7,500.00.** Without the following completed information, the bureau may be unable to properly credit you for payment received.

PUBLIC AGENCY: _____ **AGENCY #:** _____

AGENCY MAILING ADDRESS: _____

CITY, STATE, ZIP _____

AGENCY CONTACT PERSON: _____ **PHONE: ( )** _____

PROJECT MANAGER NAME: _____ **PHONE: ( )** _____

PROJECT NAME: _____

CONTRACT NAME (if part of larger project): _____

PROJECT LOCATION: _____

PROJECT NO: _____ **DATE CONTRACT FIRST ADVERTISED:** _____

DATE CONTRACT AWARDED: _____ **CONTRACTOR CCB#:** _____

CONTRACTOR BUSINESS NAME (DBA): _____

CONTRACTOR ADDRESS: _____

CITY, STATE ZIP _____

CONTRACT AMOUNT: $ _____ **FEE AMOUNT DUE/PAID: $** _____

If less than $50K is it part of a larger project? ☐**yes** ☐**no**

Contract amount x .001 = fee due

(Please duplicate this form for future use.)

BUREAU OF LABOR AND INDUSTRIES
NOTICE OF PUBLIC WORKS

(For use by public agencies in complying with ORS 279C.835)

For Office Use Only:
Project DB #:

NOTE: ORS 279C.835 requires that public contracting agencies include with this form a copy of the disclosure of first-tier subcontractors submitted pursuant to ORS 279C.370.

PUBLIC AGENCY INFORMATION

Agency Name: _____ Agency Number (if known): _____

Address: _____ Agency Division: _____

City, State, Zip: _____

Agency Representative: _____ Phone: _____

SECTION A: To be completed when a public agency awards a contract to a contractor for a public works project, including CM/GC projects. (See reverse for public works projects in which no public agency awards a contract to a contractor.)

CONTRACT INFORMATION:

Project Name: _____ Project Number: _____

Contract Name (if part of larger project): _____ Contract Number: _____

Project Manager Name: _____ Phone #: _____ Fax #: _____

Project Location (Street(s), City): _____ Project County: _____

Contract Amount: $_____ If under $50,000, is this contract part of a larger project? YES____ NO____

If yes, total project amount: $_____

Will project use federal funds that require compliance with the Davis-Bacon Act? YES____ NO____

Date Contract Specifications First Advertised for Bid (if not advertised, date of RFP or first contact with contractor): _____

If CM/GC Contract, Date Contract Became a Public Works Contract (see OAR 839-025-0020(6)): _____

Date Contract Awarded: _____ Date Work Expected to Begin: _____

Date Work Expected to be Complete: _____

PRIME CONTRACTOR INFORMATION:

Name: _____

Address: _____

City, State Zip: _____ Phone: _____

Construction Contractors Board Registration Number: _____

Name of Bonding Company: _____

Address: _____

Agent Name and Phone Number: _____

Payment Bond Number: _____

☐ Copy of first-tier subcontractors attached (**see NOTE above**).

THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.

SECTION B: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(B) (a project for the construction, reconstruction, major renovation or painting of a privately owned road, highway, building, structure or improvement of any type that uses funds of a private entity and $750,000 or more of funds of a public agency) and no public agency awards a contract to a contractor.

CONTRACT INFORMATION:

Name of Project Owner:_____ Phone #: _____ Fax #: _____

Project Name: _____ Project Number:_____

Project Location (Street(s), City): _____ Project County:_____

Total Project Amount: $_____ Amount of Public Funds Provided for the project: $_____

Name(s) of Public Agency (ies) Providing Public Funds: _____

Date the public agency or agencies commit to the provision of funds for the project: _____

Will project use federal funds that require compliance with the Davis-Bacon Act? YES____NO____

Date Work Expected to Begin: _____

Date Work Expected to be Complete: _____

SECTION C: To be completed when a project is a public works pursuant to ORS 279C.800(6)(a)(C) (a project for the construction of a privately owned road, highway, building, structure or improvement of any type that uses funds of a private entity and in which 25 percent or more of the square footage of the completed project will be occupied or used by a public agency) and no public agency awards a contract to a contractor.

CONTRACT INFORMATION:

Name of Project Owner: _____ Phone #: _____ Fax #: _____

Project Name: _____ Project Number:_____

Project Location (Street(s), City): _____ Project County: _____

Total Project Amount: $_____ Amount of Public Funds Provided for the project: $_____

Name(s) of Public Agency(ies) Providing Public Funds: _____

Total square footage of privately owned road, highway, building, structure or improvement: _____

Percent of total square footage of the completed project that will be occupied or used by a public agency: _____

Date the public agency or agencies entered into an agreement to occupy or use the completed project: _____

Will project use federal funds that require compliance with the Davis-Bacon Act? YES____NO____

Date Work Expected to Begin: _____

Date Work Expected to be Complete: _____

THIS FORM WILL BE RETURNED TO THE PUBLIC AGENCY FOR CORRECTION AND RESUBMITTAL IF INCOMPLETE.

Signature of agency representative completing form: _____

Printed Name: _____ Phone #: _____ Date:_____

RETURN THIS COMPLETED FORM TO:
Prevailing Wage Rate Unit • Bureau of Labor and Industries • 800 NE Oregon Street, #1045 • Portland, OR 97232-2180
Telephone (971) 673-0852 • FAX (971) 673-0769 • pwremail@boli.state.or.us

CONTRACT FEE SECTION
PREVAILING WAGE RATE UNIT
BUREAU OF LABOR AND INDUSTRIES
800 N.E. OREGON ST., #1045
PORTLAND, OR 97232-2180
PHONE: (971) 673-0852
FAX: (971) 673-0769

For Office Use Only:

Project DB #:_____

PUBLIC WORKS FEE ADJUSTMENT FORM

THIS FORM TO BE USED FOR RECONCILIATION OF FEES UPON COMPLETION OF PUBLIC WORKS PROJECTS

(As required by ORS 279C.825 and OAR 839-025-0210)

PUBLIC AGENCIES: Complete and mail this form to BOLI at the above address after completion of the public work project and not less than 30 days after the final progress payment is made to the contractor. Public agencies are required to determine the final contract price, including all change orders or other adjustments to the original contract price, and to calculate the adjusted prevailing wage rate fee based on the revised contract price. Documentation must be included to support the final contract price. Documentation of the final contract price may consist of change orders or other contract documents substantiating the amount of the contract. The prevailing wage rate fee of one-tenth of one percent (.001) shall be applied to the final contract price, with credit taken for fees already submitted. The public agency must submit any additional fee payable to BOLI, or submit any request for refund, with this adjustment form. **THE MINIMUM FEE IS $250.00; THE MAXIMUM FEE IS $7,500.00. NO ADDITIONAL FEE IS REQUIRED TO BE PAID, AND REFUNDS WILL NOT BE MADE, IF THE BALANCE DUE OR THE REFUND DUE IS LESS THAN $100.00.**

PUBLIC AGENCY: _____ **AGENCY #:** _____

AGENCY CONTACT PERSON: _____ **PHONE :(___)** _____

MAILING ADDRESS: _____

PROJECT NAME: _____

CONTRACT NAME (if part of larger project): _____

PROJECT NUMBER: _____ **PROJECT LOCATION:** _____

CONTRACTOR/BUSINESS NAME (DBA): _____

CONTRACTOR CCB#: _____ **DATE AWARDED:** _____

FINAL CONTRACT/PROJECT AMOUNT: _____ **FINAL FEE DUE:** _____
(Include all change orders and adjustments to the contract price) **(Final Contract amount X .001)**

ORIGINAL CONTRACT AMOUNT: _____ **INITIAL FEE PAID:** _____
(Original Contract amount X .001)

TOTAL ADJUSTMENT: _____ **BALANCE DUE*:** _____
or
REFUND DUE*: _____
***Final contract fee less initial fee paid**

Sample Calculation:			
Final Contract Amount:	$ 400,000.00	Final Fee Due:	$ 400.00
Original Contract Amount:	- 300,000.00	Initial Fee Paid:	- 300.00
Total Adjustment:	$ 100,000.00	Additional Amount Due:	$ 100.00

(Please duplicate this form for future use)

BUREAU OF LABOR AND INDUSTRIES, PREVAILING WAGE RATE UNIT

INSTRUCTIONS FOR COMPLETING THE PREVAILING WAGE RATE PAYROLL/CERTIFIED STATEMENT FORM (WH-38)

The Payroll/Certified Statement form (WH-38) may be used by contractors for reporting their payroll as required by ORS 279C.845 on public works projects subject to the Prevailing Wage Rate (PWR) Law. Although this form has not been officially approved by the U.S. Department of Labor (US DOL), it is designed to meet the requirements of the federal Davis-Bacon Act. For projects associated with the U.S. Department of Housing and Urban Development (HUD), contact the public agency (owner) associated with the project for assistance with payroll reporting.

Contractors are not required to use the WH-38 form in reporting their payroll; however, the contractor must provide all of the information contained in the form, including the certified statement on page two. The certified statement must be signed by the contractor, certifying the accuracy of the information reported on the payroll, including representations pertaining to the provision of fringe benefits to employees by third parties, and must be submitted with each weekly payroll report. Detailed instructions concerning the preparation of the form follow:

Complete the top third of the form. Be sure to enter the date the contract was first advertised for bid. If you are not sure of this date, contact the public agency (owner) associated with the project. The "Payroll No." is a US DOL requirement and represents the week number for the reporting period.

Column 1 – NAME AND ADDRESS: The employee's full name must be shown on each payroll submitted. The employee's address must also be shown on the first payroll submitted. The address need not be shown on subsequent payrolls submitted unless the address changes. The US DOL requires an employee identification number for each individual employee, on each payroll submitted. This number may be, but does not have to be, the last four digits of the employee's social security number.

Column 2 – CLASSIFICATION: For assistance in determining the correct classification, use the Bureau of Labor and Industries' publication "Definitions of Covered Occupations for Public Works Contracts in Oregon." On the WH-38, list the classification that is most descriptive of the work actually performed by the employee. Give the group number for those classifications that include such information. Indicate which workers are apprentices, if any, and give their current percentage, classification, and group number when applicable. If an employee works in more than one classification, use the highest rate for all hours worked, or use separate line entries to show hours worked and hourly rates for each classification.

Column 3 – DAY AND DATE: Enter the day of the week (M, T, W, Th, F, S, and Sn) in the top row of boxes, and the corresponding date below.

HOURS WORKED EACH DAY: Enter the total number of straight time hours worked in the row marked "ST." Generally, hours worked over 8 in a day or work performed on Saturdays, Sundays, and legal holidays should be entered as overtime ("OT") hours worked. Contractors who have adopted and followed a written work schedule of four consecutive ten-hour days (Monday through Thursday or Tuesday through Friday) may enter hours worked over 10 in a day as overtime hours. For more information on overtime requirements, see the Contractor Responsibilities section of the Bureau of Labor and Industries' publication "Prevailing Wage Rate Laws" handbook.

Column 4 – TOTAL HOURS: Enter separately the total number of straight time and overtime hours worked by the employee (in each classification, if applicable) on the PWR project during the week. The total number of straight time hours worked should be entered in the lower box ("ST"); the total number of overtime hours worked should be entered in the top box ("OT").

Column 5 – HOURLY BASE RATE: Enter the hourly base rate (plus zone pay, if any) and the hourly overtime rate (plus zone pay, if any) paid to the employee in the appropriate straight time and overtime boxes. (Payment of not less than one and one half times the base rate of pay, including zone pay but not

including fringe benefits, is required to be paid for overtime hours pursuant to ORS 279C.540). Generally, use the appropriate prevailing wage rates in effect at the time the contract was first advertised for bid by the public agency. If this date is not known, or if the project was not advertised for bid, contact the public agency (owner) associated with the project for assistance with applicable rates.

Column 6 – HOURLY FRINGE BENEFIT AMOUNT PAID AS WAGES TO THE EMPLOYEE: Enter hourly fringe benefit amounts paid directly to the employee as wages. (For overtime hours worked, it is not necessary to pay time and one half for the fringe benefit portion of the prevailing wage rate.)

Column 7 – GROSS AMOUNT EARNED: Enter the gross amount earned for work on the PWR project during the week. If part of the employee's wages for the pay period were earned on projects other than the project described on the WH-38, or if the employee is paid less often than on a weekly basis, enter in column 7 first the gross amount earned on the PWR project for the week, then the total gross amount earned for the pay period. For example: $567.84 / $1,267.27.

Column 8 – ITEMIZED DEDUCTIONS, FICA, FED, STATE, ETC.: Enter deductions withheld from wages for the pay period. All deductions must be in accordance with the provisions of ORS 652.610 (and as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. Stat. 967, 76 Stat. 357; 40 U.S.C 276c) on projects subject to Davis-Bacon Act). For projects subject to the Davis-Bacon Act, itemize the deductions.

Column 9 – NET WAGES PAID: Enter the total amount of net wages actually paid to the employee for the pay period. This figure can be calculated by subtracting the total deductions reported in Column 8 from the gross amount of wages for the pay period reported in the bottom portion of Column 7.

Column 10 – HOURLY FRINGE BENEFITS PAID TO BENEFITS PARTY, PLAN, FUND OR PROGRAM: Enter the hourly amount of fringe benefits paid to each individually approved party, plan, fund, or program, for each employee. List these amounts separately on the lines provided. Any contractor who is making payments to approved parties, plans, funds or programs in amounts less than the required hourly fringe benefit is obligated to pay the difference directly to the employee as wages in lieu of fringe benefits, and to show that amount in Column 6 of this form. For information on how to calculate hourly fringe benefit credits, see Appendix A in the Bureau of Labor and Industries' publication "Prevailing Wage Rate Laws" handbook.

Column 11 – NAME OF BENEFIT PARTY, PLAN, FUND OR PROGRAM: Enter the name of the party, plan, fund, or program that corresponds to the amount paid as an hourly fringe benefit in Column 10.

CALCULATION CHECK

In order to determine whether the wages and fringe benefits paid are sufficient to meet prevailing wage rate requirements, the following check may be performed:

1. For each classification listed in column 2, compute the sum of:
   a) the hourly base rate of pay shown in Column 5,
   b) the hourly fringe benefit amount paid as wages to employee shown in Column 6, and
   c) the hourly fringe benefits paid to benefit party, plan, fund or program shown in Column 10.

2. This sum must equal or exceed the total of the hourly base rate (including zone pay) and the hourly fringe benefit rate for that classification as listed in the appropriate issue of the Bureau of Labor and Industries publications Prevailing Wage Rates for Public Works Contracts in Oregon.

IF YOU HAVE QUESTIONS REGARDING COMPLETION OF THIS FORM, CONTACT THE PREVAILING WAGE RATE UNIT OF THE BUREAU OF LABOR AND INDUSTRIES AT (971) 673-0838.

NOTE: PAYROLL/CERTIFIED STATEMENTS ARE ONLY REQUIRED TO BE SUBMITTED TO THE PUBLIC AGENCY ASSOCIATED WITH THE PROJECT.

CERTIFIED PAYROLL AND OTHER FORMS ARE AVAILABLE ON OUR WEBSITE: WWW.OREGON.GOV/BOLI

BUREAU OF LABOR AND INDUSTRIES
WAGE AND HOUR DIVISION

PAYROLL/CERTIFIED STATEMENT FORM WH-38
FOR USE IN COMPLYING WITH ORS 279C.845*

PRIME CONTRACTOR ☐ SUBCONTRACTOR ☐ PAYROLL NO.

Business Name (DBA): Phone: ( ) CCB Registration Number:

Project Name: Project Number: Type of Work:

Street Address: Project Location:

Mailing Address: Project County:

Date Pay Period Began: Date Pay Period Ended:

THIS SECTION FOR PRIME CONTRACTORS ONLY

Public Contracting Agency Name:
Phone: ( )
Date Contract Specifications First Advertised for Bid:
Contract Amount:

THIS SECTION FOR SUBCONTRACTORS ONLY

Subcontract Amount:
Prime Contractor Business Name (DBA):
Prime Contractor Phone: ( )
Prime Contractor's CCB Registration Number:
Date You Began Work on the Project:

(1)	(2)		(3) DAY AND DATE	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
NAME , ADDRESS AND EMPLOYEE'S IDENTIFICATION NUMBER	CLASSIFICATION (INCLUDE GROUP # AND APPRENTICESHIP STEP IF APPLICABLE)		HOURS WORKED EACH DAY	TOTAL HOURS	HOURLY BASE RATE	HOURLY FRINGE BENEFIT AMOUNTS PAID AS WAGES TO EMPLOYEE	GROSS AMOUNT EARNED (see directions)	ITEMIZED DEDUCTIONS FICA, FED, STATE, ETC.	NET WAGES PAID	HOURLY FRINGE BENEFITS PAID TO BENEFIT PARTY, PLAN, FUND, OR PROGRAM	NAME OF BENEFIT PARTY, PLAN, FUND, OR PROGRAM
		OT									
		ST									
		OT									
		ST									
		OT									
		ST									
		OT									
		ST									
		OT									
		ST									

*Although this form has not been officially approved by the U.S. Department of Labor, it is designed to meet the requirements of both the state PWR law and the federal Davis-Bacon Act.

THIS FORM CONTINUED ON REVERSE

CERTIFIED STATEMENT

Date: _____

I, _____, _____
(NAME OF SIGNATORY PARTY) (TITLE)
do hereby state:
(1) That I pay or supervise the payment of the persons employed by:

_____
(CONTRACTOR, SUBCONTRACTOR OR SURETY)
on the _____; that during the payroll period
(BUILDING OR WORK)
commencing on the _____ day of _____, _____, and ending the _____ day
(MONTH) (YEAR)
of _____, _____, all persons employed on said project have been paid the
(MONTH) (YEAR)
full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said _____
(CONTRACTOR, SUBCONTRACTOR OR SURETY)
from the full weekly wages earned by any person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions as specified in ORS 652.610, and as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 948, 63 Stat. 108, 72 Stat. 967; 76 Stat. 357; 40 U.S.C. 276c), and described below:

_____

(2) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete; that the wage rates for workers contained therein are not less than the applicable wage rates contained in any wage determination incorporated into the contract; that the classifications set forth therein for each worker conform with work performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a state apprenticeship agency recognized by the Bureau of Apprenticeship and Training, United States Department of Labor, or if no such recognized agency exists in a state, are registered with the Bureau of Apprenticeship and Training, United States Department of Labor.

I HAVE READ THIS CERTIFIED STATEMENT, KNOW THE CONTENTS THEREOF AND IT IS TRUE TO MY KNOWLEDGE:

_____
(NAME AND TITLE)

_____
(SIGNATURE AND DATE)

In addition to completing sections (1) - (3), if your project is subject to the federal Davis-Bacon Act requirements, complete the following section as well:

(4) That:
(a) WHERE FRINGE BENEFITS ARE PAID TO APPROVED PLANS, FUNDS OR PROGRAMS

☐ - In addition to the basic hourly wage rates paid to each laborer or mechanic listed in the above referenced payroll, payments of fringe benefits as listed in the contract have been or will be made to appropriate programs for the benefit of such employees, except as noted in Section 4(c) below.

(b) WHERE FRINGE BENEFITS ARE PAID IN CASH

☐ - Each laborer or mechanic listed in the above referenced payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as listed in the contract, except as noted in Section 4(c) below.

(c) EXCEPTIONS:

EXCEPTION (CRAFT)	EXPLANATION

REMARKS:

NAME AND TITLE SIGNATURE

THE WILLFUL FALSIFICATION OF ANY OF THE ABOVE STATEMENTS MAY SUBJECT THE CONTRACTOR OR SUBCONTRACTOR TO CIVIL OR CRIMINAL PROSECUTION. SEE SECTION 1001 OF TITLE 18 AND SECTION 231 OF TITLE 31 OF THE UNITED STATES CODE.

FILE THIS FORM WITH THE PUBLIC AGENCY ASSOCIATED WITH THE PROJECT
NOTE TO CONTRACTORS: YOU MUST ATTACH COPIES OF THIS FORM TO EACH OF YOUR PAYROLL SUBMISSIONS ON THIS PROJECT.
INSTRUCTIONS AND ADDITIONAL FORMS ARE AVAILABLE ON OUR WEBSITE: WWW.OREGON.GOV/BOLI.

PREVAILING WAGE RATES

for

Public Works Contracts in Oregon

OREGON BUREAU OF LABOR AND INDUSTRIES

Brad Avakian
Commissioner
Bureau of Labor and Industries

Effective: July 1, 2014

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Asbestos Worker/Insulator	See Appendix	See Appendix
Boilermaker	See Appendix	See Appendix
Bricklayer/Stonemason	See Appendix	See Appendix
Bridge & Highway Carpenter (See Carpenter Group 5)	See Appendix	See Appendix
Carpenter Group 1 & 2	See Appendix	See Appendix
Cement Mason	See Appendix	See Appendix
Diver	See Appendix	See Appendix
Diver Tender	See Appendix	See Appendix
Dredger	$34.21	$9.69
Drywall, Lather, Acoustical Carpenter & Ceiling Installer	See Appendix	See Appendix
Drywall Taper (See Painter & Drywall Taper)	See Appendix	See Appendix
Electrician	See Appendix	See Appendix
Elevator Constructor, Installer and Mechanic	See Appendix	See Appendix
Fence Constructor (Non-metal)	$23.44	$9.10
Fence Erector (Metal)	$20.50	$5.09
Flagger (See Laborer Group 3)	See Appendix	See Appendix
Glazier	See Appendix	See Appendix
Hazardous Materials Handler/Mechanic	$18.03	$5.96
Highway and Parking Striper	$26.11	$8.20
Ironworker	See Appendix	See Appendix
Laborer Group 1	See Appendix	See Appendix
Laborer Group 2	See Appendix	See Appendix
Laborer Group 3	See Appendix	See Appendix
Landscape Laborer/Technician	$16.94	$4.00
Limited Energy Electrician	See Appendix	See Appendix
Line Constructor	See Appendix	See Appendix
Marble Setter	See Appendix	See Appendix
Millwright Group 1 & 2	$29.32	$10.68
Painter	See Appendix	See Appendix
Piledriver (See Carpenter Group 6)	See Appendix	See Appendix
Plasterer and Stucco Mason	See Appendix	See Appendix
Plumber/Pipefitter/Steamfitter	See Appendix	See Appendix
Power Equipment Operator Group 1	See Appendix	See Appendix
Power Equipment Operator Group 1A	See Appendix	See Appendix
Power Equipment Operator Group 1B	See Appendix	See Appendix
Power Equipment Operator Group 2	See Appendix	See Appendix
Power Equipment Operator Group 3	See Appendix	See Appendix
Power Equipment Operator Group 4	See Appendix	See Appendix
Power Equipment Operator Group 5	See Appendix	See Appendix
Power Equipment Operator Group 6	See Appendix	See Appendix

Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

OCCUPATION	BASIC HOURLY RATE	FRINGE RATE
Roofer	See Appendix	See Appendix
Sheet Metal Worker	See Appendix	See Appendix
Soft Floor Layer	See Appendix	See Appendix
Sprinkler Fitter	See Appendix	See Appendix
Tenders to Mason Trades (Brick and Stonemason, Mortar Mixer, Hod Carrier)	See Appendix	See Appendix
Tender to Plasterer and Stucco Mason	$17.35	$12.74
Testing, Adjusting, and Balancing (TAB) Technician	$27.53	$8.18
Tilesetter/Terrazzo Worker: Hard Tilesetter	See Appendix	See Appendix
Tile, Terrazzo, and Marble Finisher	See Appendix	See Appendix
Truck Driver	$19.80	$6.11

JULY 1, 2014 APPENDIX

The Appendix rates are Collectively Bargained Rates to be used ONLY for Regions/Trades specified in pages 6 through 33. Refer to pages 6 through 33 BEFORE using rates in this section. Using the booklet, Definitions of Covered Occupations, find the definition that most closely matches the actual work being performed by the worker.

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

ASBESTOS WORKER/INSULATOR **41.27** **19.02**

FIRESTOP/CONTAINMENT WORKERS **27.73** **12.29**

BOILERMAKER **36.44** **28.00**

BRICKLAYER/STONEMASON

(This trade is tended by "Tenders to Mason Trades")

Area 1 **33.88** **17.02**

Reference Counties Area 1

Baker	Grant	Marion	Umatilla
Benton (a)	Harney	Morrow	Union
Clackamas	Hood River	Multnomah	Wallowa
Clatsop	Lincoln (a)	Polk	Wasco (a)
Columbia	Linn (a)	Sherman	Washington
Gilliam	Malheur	Tillamook	Yamhill

(a) North Half

(Add $1.00 per hour to Fringe for Refractory repair work)

Area 2 **32.68** **16.65**

Reference Counties Area 2

Benton (b)	Deschutes	Jefferson	Lincoln (b)
Coos	Douglas	Klamath	Linn (b)
Crook	Jackson	Lake	Wasco (b)
Curry	Jefferson	Lane	Wheeler

(b) South Half

(Add $1.00 per hour to Fringe for Refractory repair work)

CARPENTER

Zone 1 (Base Rate)

Group 1	**33.94**	**14.83**
Group 2	**34.09**	**14.83**
Group 3	**34.44**	**14.83**
Group 4	**34.59**	**14.83**
Group 5	**34.44**	**14.83**
Group 6	**34.94**	**14.83**

CARPENTER (continued)

Group 1 (Carpenter Group-I)

Group 2 (Carpenter Group-II)

Group 3 (Millwright Group-I)

Group 4 (Millwright Group-II)

Group 5 (Bridge & Highway Carpenter)

Group 6 (Piledriver)

Zone Differential for Carpenters
(Add to Zone 1 Base Rate)

Zone 2	**.85**
Zone 3	**1.25**
Zone 4	**1.70**
Zone 5	**2.00**
Zone 6	**3.00**
Zone 7	**5.00**

Zone 1: Projects located within 30 miles of the respective city hall of the cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 60 miles.
Zone 5: More than 60 miles but less than 70 miles.
Zone 6: More than 70 miles but less than 100 miles.
Zone 7: More than 100 miles.

Reference Cities for Group 1 and 2 Carpenters

Albany	Goldendale	Madras	Roseburg
Astoria	Grants Pass	Medford	Salem
Baker City	Hermiston	Newport	The Dalles
Bend	Hood River	Ontario	Tillamook
Brookings	Klamath Falls	Pendleton	Vancouver
Burns	La Grande	Portland	
Coos Bay	Lakeview	Port Orford	
Eugene	Longview	Reedsport	

Zones for Groups 3 and 4 Carpenter are determined by the distance between the project site and **either**

1) The worker's residence; ***or***

2) City Hall of a reference city listed for the appropriate group shown, whichever is closer

Reference Cities for Group 3 and 4 Carpenters

Eugene	Medford	Portland	Vancouver
Longview	North Bend	The Dalles	

CARPENTER (continued)

Zones for Groups 5 and 6 Carpenter are determined by the distance between the project site and **either**

1) The worker's residence; ***or***

2) City Hall of a reference city listed for the appropriate group shown, whichever is closer

Reference Cities for Group 5 and 6 Carpenters

Bend	Longview	North Bend
Eugene	Medford	Portland

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

Welders receive $.75/hour above their group's rate.

When working with creosote and other toxic, treated wood and steel material, workers shall receive $.25/hour premium pay for minimum of eight (8) hours.

When working in sheet pile coffer dams or cells up to the external water level, Group 6 workers shall receive $.15/hour premium pay for minimum of eight (8) hours.

CEMENT MASON

(This trade is tended by "Concrete Laborer")

Zone 1 (Base Rate)

Group 1	**29.98**	**17.79**
Group 2	**30.58**	**17.79**
Group 3	**30.58**	**17.79**
Group 4	**31.18**	**17.79**

Zone Differential for Cement Mason
(Add to Zone 1 Base Rate)

Zone 2	**.65**
Zone 3	**1.15**
Zone 4	**1.70**
Zone 5	**3.00**

CEMENT MASON (continued)

Zone 1: Projects located within 30 miles of the respective city hall of the reference cities listed.
Zone 2: More than 30 miles, but less than 40 miles.
Zone 3: More than 40 miles, but less than 50 miles.
Zone 4: More than 50 miles, but less than 80 miles.
Zone 5: More than 80 miles.

Reference Cities for Cement Mason

Bend	Eugene	Portland	The Dalles
Corvallis	Medford	Salem	Vancouver

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time-best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

DIVER & DIVER TENDER

Zone 1 (Base Rate)

DIVER	**81.06**	**14.83**
DIVER TENDER	**38.43**	**14.83**

1) For those workers who reside within a reference city below, their zone pay shall be computed from the city hall of the city wherein they reside.

2) For those workers who reside nearer to a project than is the city hall of any reference city below, the mileage from their residence may be used in computing their zone pay differential.

3) The zone pay for all other projects shall be computed from the city hall of Portland.

Zone Differential for Diver/Diver Tender
(Add to Zone 1 Base Rate)

Zone 2	**.85**
Zone 3	**1.25**
Zone 4	**1.70**
Zone 5	**2.00**
Zone 6	**3.00**
Zone 7	**5.00**

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

DIVER & DIVER TENDER (continued)

Zone 1: Projects located within 30 miles of city hall of the reference cities listed.
Zone 2: More than 30 miles, but less than 40 miles.
Zone 3: More than 40 miles, but less than 50 miles.
Zone 4: More than 50 miles, but less than 60 miles.
Zone 5: More than 60 miles, but less than 70 miles.
Zone 6: More than 70 miles, but less than 100 miles.
Zone 7: More than 100 miles from the city hall of employee's home local.

Reference Cities for Diver/Diver Tender

Astoria	Klamath Falls	Newport	Roseburg
Bend	Longview	North Bend	Salem
Eugene	Medford	Portland	The Dalles

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

Depth Pay and Enclosure Pay are added to the Divers' Basic Hourly Rate to obtain the Total Hourly Rate for the Diver.

Basic Hourly Rate Pay	+	Hourly Depth Pay	+	Hourly Enclosure Pay	=	Diver Total Hourly Rate

Diver Depth Pay:

Depth of Dive	Hourly Depth Pay
50-100 ft.	$1.00 per foot over 50 feet
101-150 ft.	$1.50 per foot over 100 feet
151-200 ft.	$2.00 per foot over 150 feet

Depth shall be figured from the surface to the actual depth where the diving work is being performed.

DIVER & DIVER TENDER (continued)

Diver Enclosure Pay (working without vertical escape):

Distance Traveled In the Enclosure	Hourly Enclosure Pay
5-50ft.	$.50/hr. up to $4.00 maximum per day
50-100ft.	$1.13/hr. up to $9.00 maximum per day
100-150ft.	$2.13/hr. up to $17.00 maximum per day
150-200ft.	$4.63/hr. up to $37.00 maximum per day
200-300ft.	$4.63/hr. up to $37.00 maximum per day, plus $.40 per foot traveled in enclosure.
300-450ft.	$4.63/hr. up to $37.00 maximum per day, plus $.80 per foot traveled in enclosure.
450-600ft.	$4.63/hr. up to $37.00 maximum per day, plus $1.60 per foot traveled in enclosure.

DREDGER

Zone A (Base Rate)

Leverman (Hydraulic & Clamshell)	**44.64**	**13.85**
Assistant Engineer (Watch Engineer, Mechanic Machinist)	**41.73**	**13.85**
Tenderman (Boatman Attending Dredge Plant) Fireman	**40.38**	**13.85**
Fill Equipment Operator	**39.30**	**13.85**
Assistant Mate	**36.78**	**13.85**

Zone Differential for Dredgers
(Add to Zone A Base Rate)

Zone B	**3.00**
Zone C	**6.00**

Zone mileage based on road miles:

Zone A: Center of jobsite to no more than 30 miles from the city hall of Portland.
Zone B: More than 30 miles but not more than 60 miles.
Zone C: Over 60 miles.

DRYWALL, LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER

Zone 1 (Base Rate)

1. DRYWALL INSTALLER	**34.23**	**14.54**

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

DRYWALL, LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER (continued)

2. LATHER, ACOUSTICAL CARPENTER & CEILING INSTALLER	**34.23**	**14.54**

Zone Differential for Drywall, Lather, Acoustical Carpenter & Ceiling Installer
(Add to Zone 1 Base Rate)

Zone mileage based on road miles:

Zone 2	31-40 miles	**.85**
Zone 3	41-50 miles	**1.25**
Zone 4	51-60 miles	**1.70**
Zone 5	61-70 miles	**2.00**
Zone 6	71-100 miles	**3.00**
Zone 7	101 or more	**5.00**

The correct transportation allowance shall be based on road mileage from the City Hall of the local union having jurisdiction of the job or other transportation reference cities herein listed.

Reference Cities for Drywall, Lather, Acoustical Carpenter & Ceiling Installer

Albany	Coquille	Medford	Roseburg
Astoria	Eugene	Newport	Salem
Baker	Grants Pass	North Bend	Seaside
Bandon	Hermiston	Pendleton	The Dalles
Bend	Klamath Falls	Portland	Tillamook
Brookings	Kelso-Longview	Reedsport	Vancouver

ELECTRICIAN

Area 1

Electrician	**27.70**	**12.14**
Cable Splicer	**30.47**	**12.28**

Reference Counties Area 1

Malheur

Area 2

Electrician	**38.05**	**17.82**
Cable Splicer	**39.95**	**17.88**

Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

ELECTRICIAN (continued)

Area 3

Electrician	**34.00**	**14.77**

Reference Counties Area 3

Coos	Douglas (a)	Lincoln
Curry	Lane (a)	

(a) Those portions of Lane and Douglas lying **west** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

Area 4

Electrician	**37.41**	**16.70**
Cable Splicer	**41.15**	**16.81**
Lighting Maintenance/ Material Handlers	**17.64**	**8.43**

Reference Counties Area 4

Benton	Jefferson	Marion
Crook	Lane (b)	Polk
Deschutes	Linn	Yamhill (c)

(b) That portion of Lane County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

(c) South half

Area 5

Electrician	**38.75**	**20.31**
Electrical Welder	**42.63**	**20.43**
Material Handler/ Lighting Maintenance	**22.09**	**13.14**

Reference Counties Area 5

Clackamas	Hood River	Tillamook	Yamhill (d)
Clatsop	Multnomah	Wasco	
Columbia	Sherman	Washington	

(d) North Half

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

ELECTRICIAN (continued)

Zone Pay for Area 5 **Electrician and Electrical Welder**
(Add to Basic Hourly Rate)

Zone mileage based on air miles:

Zone 1	31-50 miles	**1.50**
Zone 2	51-70 miles	**3.50**
Zone 3	71-90 miles	**5.50**
Zone 4	Beyond 90	**9.00**

There shall be a 30-mile free zone from downtown Portland City Hall and a similar 15-mile free zone around the following cities:

Astoria	Seaside	Tillamook
Hood River	The Dalles	

Further, the free zone at the Oregon coast shall extend along Hwy 101 west to the ocean Hwy 101 east 10 miles if not already covered by the above 15-mile free zone.

Area 6

Electrician	**30.27**	**15.21**
Cable Splicer	**30.27**	**15.21**
Lighting Maintenance and Material Handlers	**16.22**	**8.39**

Reference Counties Area 6

Douglas (e)	Jackson	Klamath
Harney	Josephine	Lake

(e) That portion of Douglas County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

ELEVATOR CONSTRUCTOR, INSTALLER AND MECHANIC

Area 1

Mechanic	**47.76**	**32.08**

Reference Counties Area 1

Baker	Umatilla	Union	Wallowa

ELEVATOR CONSTRUCTOR, INSTALLER AND MECHANIC (Continued)

Area 2

Mechanic	**47.95**	**32.44**

Reference Counties Area 2

All remaining Counties

GLAZIER	**33.27**	**16.42**

(Add $1.00 to base rate if safety belt is required by State safety regulations)

(Add $4.00 to base rate for work done from a non-motorized single-man bosun chair)

HAZARDOUS MATERIALS HANDLER

	21.50	**10.06**

HIGHWAY/PARKING STRIPER

	33.41	**10.36**

IRONWORKER

Zone 1 (Base Rate):	**34.12**	**21.35**

Zone Differential for Ironworker
(Add to Basic Hourly Rate)

Zone 2	**3.75** hr. or $30.00 maximum per day
Zone 3	**6.88** hr. or $55.00 maximum per day
Zone 4	**9.38** hr. or $75.00 maximum per day

Zone 1: Projects located within 45 miles of city hall in the reference cities listed below.
Zone 2: More than 45 miles, but less than 60 miles.
Zone 3: More than 60 miles, but less than 100 miles.
Zone 4: More than 100 miles.

Note: Zone pay for Ironworkers shall be determined using AAA road mileage computed from the city hall of the reference cities listed below **or** the residence of the employee, whichever is nearer to the project.

Reference Cities

Medford Portland

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

LABORER

Zone 1 (Base Rate):

Group 1	**26.43**	**13.10**
Group 2	**27.44**	**13.10**
Group 3	**22.86**	**13.10**

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Hazardous Waste Site. A Group 1 base rate is used for General Laborer on such a site. For further information on this, call the Prevailing Wage Rate Coordinator at (971) 673-0839.

Zone Differential for Laborers
(Add to Zone 1 Base Rate)

Zone 2	**.65**
Zone 3	**1.15**
Zone 4	**1.70**
Zone 5	**2.75**

Zone 1: Projects located within 30 miles of city hall in the reference cities listed below.
Zone 2: More than 30 miles but less than 40 miles.
Zone 3: More than 40 miles but less than 50 miles.
Zone 4: More than 50 miles but less than 80 miles.
Zone 5: More than 80 miles.

Reference Cities

Albany	Burns	Hermiston	Roseburg
Astoria	Coos Bay	Klamath Falls	Salem
Baker City	Eugene	Medford	The Dalles
Bend	Grants Pass	Portland	

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time, best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

LIMITED ENERGY ELECTRICIAN

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

Area 1 — **18.90** — **8.20**

Reference Counties Area 1

Malheur

Area 2 — **28.75** — **14.96**

Reference Counties Area 2

Baker	Grant	Umatilla	Wallowa
Gilliam	Morrow	Union	Wheeler

Area 3 — **25.95** — **13.03**

Reference Counties Area 3

Coos	Douglas (a)	Lincoln
Curry	Lane (a)	

(a) Those portions of Lane and Douglas lying **west** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

Area 4 — **27.39** — **12.97**

Reference Counties Area 4

Benton	Jefferson	Marion
Crook	Lane (b)	Polk
Deschutes	Linn	Yamhill (c)

(b) That portion of Lane County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

(c) South half

Area 5 — **29.75** — **15.69**

Reference Counties Area 5

Clackamas	Hood River	Tillamook	Yamhill (d)
Clatsop	Multnomah	Wasco	
Columbia	Sherman	Washington	

(d) North Half

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

LIMITED ENERGY ELECTRICIAN (continued)

Area 6	**24.90**	**11.65**

Reference Counties Area 6

Douglas (e)	Jackson	Klamath
Harney	Josephine	Lake

(e) That portion of Douglas County lying **east** of a line running North and South from the NE corner of Coos County to the SE corner of Lincoln County.

LINE CONSTRUCTOR

Area 1

Group 1	**52.99**	**15.84**
Group 2	**46.87**	**15.63**
Group 3	**26.62**	**10.26**
Group 4	**40.31**	**12.16**
Group 5	**35.15**	**11.40**
Group 6	**31.31**	**11.35**
Group 7	**15.91**	**8.52**

Reference Counties Area 1
All counties except Malheur County

Group 1	Group 2
Cable Splicer	Heavy Line Equipment Man
Leadman Pole Sprayer	Journeyman Lineman Welder
	Journeyman Lineman
	Pole Sprayer

Group 3	Group 4
Tree Trimmer	Line Equipment man

Group 5	Group 6
Head Groundman	Groundman
Jackhammer Man	
Powderman	**Group 7**
	Tree Trimmer Groundman

Area 2

Cable Splicer	**45.27**	**13.88**
Journeyman Lineman	**41.01**	**13.49**
Line Equip. Operator	**34.14**	**12.74**
Groundman	**24.31**	**10.58**

Reference County Area 2
Malheur County

MARBLE SETTER **34.88** **17.02**

(This trade is tended by "Tile, Terrazzo, & Marble Finishers")

PAINTER & DRYWALL TAPER

COMMERCIAL PAINTING	**20.47**	**9.36**
INDUSTRIAL PAINTING	**21.67**	**9.36**
BRIDGE PAINTING	**25.47**	**9.36**

Add $0.75 to base rate for work over 60 ft. high on swing stage, mechanical climber, spider or bucket truck for both commercial and industrial painting.

DRYWALL TAPER	**33.57**	**13.00**

PLASTERER AND STUCCO MASON

(This trade is tended by "Tenders to Plasterers")

Nozzleman	**29.86**	**16.55**
Swinging Scaffold	**28.86**	**16.55**
All Other Work	**27.86**	**16.55**

PLUMBER/PIPEFITTER/STEAMFITTER

Area 1	**26.00**	**13.57**

Reference Counties Area 1

Baker	Harney (a)	Malheur

(a) Except that portion which lies North and West of a North-South line drawn from the town of John Day to a point five miles east of the town of Burns and three miles South of Burns thence on an airline through the town of Wagontire West to the county line.

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

PLUMBER/PIPEFITTER/STEAMFITTER (continued)

Add $2.21 per hour to basic hourly rate if it is possible for worker to fall 30 ft. or more, or if required to wear a fresh-air mask or similar equipment for 2 hours or more.

Zone Differential for Area 1
Plumbers/Pipefitters/Steamfitters
(Add to Base Rate)

Zone 1	**2.50** per hour
Zone 2	**3.50** per hour
Zone 3	**5.00** per hour

Zone mileage based on road miles:

Zone 1: Forty (40) to fifty five (55) miles from City Hall in Boise, Idaho.
Zone 2: Fifty five (55) to one hundred (100) miles from City Hall in Boise, Idaho.
Zone 3: Over one hundred (100) miles from City Hall in Boise, Idaho.

There shall be a maximum of ten (10) hours of zone pay per workday.

Area 2	**48.72**	**27.29**

Reference Counties Area 2

Grant	Umatilla	Wallowa
Morrow	Union	

Zone Differential for Area 2
(Add to Base Rate)

Zone 2 **10.62/**hr. not to exceed $80.00 day.

Zone mileage based on road miles:

Zone 2: Eighty (80) miles or more from City Hall in Pasco, Washington.

Area 3	**39.71**	**22.37**

Reference Counties Area 3

All Remaining Counties

POWER EQUIPMENT OPERATOR

Zone 1 (Base Rate)

Group 1	**38.25**	**13.70**
Group 1A	**40.16**	**13.70**
Group 1B	**42.08**	**13.70**
Group 2	**36.56**	**13.70**
Group 3	**35.54**	**13.70**
Group 4	**34.56**	**13.70**
Group 5	**33.43**	**13.70**
Group 6	**30.34**	**13.70**

Note: A Hazardous Waste Removal Differential must be added to the base rate if work is performed inside the boundary of a Federally Designated Waste Site. For information on this differential, call the Prevailing Wage Rate Coordinator at (971) 673-0839.

Zone Pay Differential
(Add to Zone 1 Base Rate)

Zone 2	**3.00**
Zone 3	**6.00**

For projects in the following metropolitan counties:

Clackamas	Marion	Washington
Columbia	Multnomah	Yamhill

See map on page 50 for Zone 1 of this classification

(A) All jobs or projects located in Multnomah, Clackamas and Marion counties, West of the western boundary of Mt. Hood National Forest and West of Mile Post 30 on Interstate 84 and West of Mile Post 30 on State Hwy 26 and West of Mile Post 30 on Hwy 22 and all jobs located in Yamhill County, Washington County and Columbia County shall receive Zone 1 pay for all classifications.

(B) All jobs or projects located in the area outside the *identified boundary* above, but less than 50 miles from the Portland City Hall shall receive Zone 2 pay for all classifications.

(C) All jobs or projects located more than 50 miles from the Portland City Hall, but outside the identified border above, shall receive Zone 3 pay for all classifications.

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

POWER EQUIPMENT OPERATOR (continued)

Reference cities for projects in all remaining counties:

Albany	Coos Bay	Grants Pass	Medford
Bend	Eugene	Klamath Falls	Roseburg

(A) All jobs or projects located within 30 miles of the respective city hall of the above mentioned cities shall receive Zone 1 pay for all classifications.

(B) All jobs or projects located more than 30 miles and less than 50 miles from the respective city hall of the above mentioned cities shall receive Zone 2 for all classifications.

(C) All jobs or projects located more than 50 miles from the respective city hall of the above mentioned cities shall receive Zone 3 pay for all classifications.

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time-best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

ROOFER

Area 1*

Roofer	**28.03**	**12.76**
Handling coal tar pitch	**30.83**	**12.76**
Remove fiberglass insulation	**30.83**	**12.76**

Reference Counties Area 1

Baker	Gilliam	Multnomah	Washington
Clackamas	Grant	Sherman	Wheeler
Clatsop	Hood River	Tillamook	
Columbia	Jefferson	Wasco	

*On all jobs on which coal tar pitch is the basic roofing material or where the old roof being removed is composed of coal tar based material, a rate of pay ten percent (10%) greater than the basic rate of pay shall be paid for all work performed.

ROOFER (continued)

*All employees engaged in removing fiberglass insulation shall receive a rate of pay ten percent (10%) greater than the employee's basic rate of pay.

Area 2

Roofer	**24.19**	**12.48**
Handling coal tar pitch	**26.19**	**12.48**
Remove fiberglass insulation	**25.69**	**12.48**

Reference Counties Area 2

Benton	Douglas	Lake	Marion
Coos	Harney	Lane	Polk
Crook	Jackson	Lincoln	Yamhill
Curry	Josephine	Linn	
Deschutes	Klamath	Malheur	

(Add $2.00 to basic hourly rate for application, spudding and cutting or removal of coal tar products)

(Add $0.50 per hour to base hourly rate for application, spudding and cutting or removal of fiberglass insulation)

Area 4

Roofers	**25.57**	**10.22**

Reference Counties Area 4

Umatilla Union Wallowa

(Add $2.00 to basic hourly rate for employees working with irritable bituminous materials)

(Add $2.00 to basic hourly rate for employees removing fiberglass insulation)

Area 5

Roofers	**25.38**	**10.27**

Reference County for Area 5

Morrow

(Add $3.00 to basic hourly rate for employees working with irritable and pitch bituminous materials)

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

SHEET METAL WORKER

Area 1 **37.13** **18.60**

Reference Counties Area 1

Benton	Grant	Multnomah	Washington
Clackamas	Hood River	Polk	Wheeler
Clatsop	Lincoln	Sherman	Yamhill
Columbia	Linn	Tillamook	
Gilliam	Marion	Wasco	

(Add $1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add $1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

Area 2 **23.69** **15.68**

Reference Counties Area 2

Baker Malheur

Area 3 **33.33** **19.46**

Reference Counties Area 3

Morrow Umatilla Union Wallowa

(Add $1.00 per hour to base rate for work where it is necessary to wear a chemically activated type face mask)

Area 4 **31.17** **16.70**

Reference Counties Area 4

Douglas Lane

(Add $1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add $1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

SHEET METAL WORKER (continued)

Area 5 **30.99** **17.75**

Reference Counties Area 5

Coos

(Add $1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add $1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

Area 6 **26.56** **15.87**

Reference Counties Area 6

Curry	Jackson	Klamath
Harney	Josephine	Lake

(Add $1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add $1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

Area 7 **28.98** **15.67**

Reference Counties Area 7

Crook Deschutes Jefferson

(Add $1.00 to base rate for work performed on any swinging platform, swinging chair or swinging ladder)

(Add $1.00 to base rate for work where a worker is exposed to resins, chemicals or acid)

SOFT FLOOR LAYER **26.21** **14.31**

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

SPRINKLER FITTER

Area 1 **33.74 20.20**

Reference Counties Area 1

Benton	Deschutes	Klamath	Polk
Clackamas	Douglas	Lake	Sherman
Clatsop	Harney	Lane	Tillamook
Columbia	Hood River	Lincoln	Wasco
Coos	Jackson	Linn	Washington
Crook	Jefferson	Marion	Wheeler
Curry	Josephine	Multnomah	Yamhill

Area 2 **30.15 20.10**

Reference Counties Area 2

Baker	Grant	Morrow	Union
Gilliam	Malheur	Umatilla	Wallowa

TENDERS TO MASON TRADES (Brick and Stonemason, Mortar Mixer, Hod Carrier)

28.13 13.10

(Add $0.50 to base rate for Refractory work)

(Add to base rate an amount equal to that received for safety belt requirements or other unusual job conditions by the mechanic this worker is tending)

TENDER TO PLASTERER AND STUCCO MASON

28.48 13.50

TESTING AND BALANCING (TAB) TECHNICIAN

Air-Handling Equipment, Ductwork

See SHEET METAL WORKER

Water Distribution Systems

See PLUMBER/PIPEFITTER/STEAMFITTER

TILESETTER/TERRAZZO WORKER: Hard Tilesetter

29.99 15.45

(This trade is tended by "Tile, Terrazzo, & Marble Finisher")

(Add $1.00 to base rate when working with a safety belt)

(Add $1.00 to base rate if work involves epoxy, furnane, alkor or acetylene black grouting)

TILE, TERRAZZO, AND MARBLE FINISHER

1. TILE, TERRAZZO FINISHER
22.36 11.69

(Add $1.00 to base rate when working with a safety belt)

(Add $1.00 to base rate if work involves epoxy, furnane, alkor or acetylene black grouting)

2. BRICK AND MARBLE FINISHER
22.36 11.82

(Add $1.00 to base rate for Refractory work)

TRUCK DRIVER

Zone A (Base Rate):

Group 1	**26.90**	**13.75**
Group 2	**27.02**	**13.75**
Group 3	**27.15**	**13.75**
Group 4	**27.41**	**13.75**
Group 5	**27.63**	**13.75**
Group 6	**27.79**	**13.75**
Group 7	**27.99**	**13.75**

For the Following Cities:

Albany	Eugene	Madras	Reedsport
Astoria	Goldendale	Medford	Roseburg
Baker	Grants Pass	McMinnville	Salem
Bend	Hermiston	Newport	The Dalles
Bingen	Hood River	Ontario	Tillamook
Brookings	Klamath Falls	Oregon City	Vancouver
Burns	LaGrande	Pendleton	
Coos Bay	Lakeview	Portland	
Corvallis	Longview	Port Orford	

TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE	TRADE	BASIC HOURLY RATE	HOURLY FRINGE RATE

TRUCK DRIVER (continued)

Zone differential for Truck Drivers
(Add to Zone A Base Rate)

Zone B	**.65**
Zone C	**1.15**
Zone D	**1.70**
Zone E	**2.75**

Zone A: Projects within 30 miles of the cities listed.
Zone B: More than 30 miles but less than 40 miles.
Zone C: More than 40 miles but less than 50 miles.
Zone D: More than 50 miles but less than 80 miles.
Zone E: More than 80 miles.

Note: All job or project locations shall be computed (determined) on the basis of road miles and in the following manner. A mileage measurement will start at the entrance to the respective city hall, facing the project (if possible), and shall proceed by the normal route (shortest time-best road) to the geographical center on the highway, railroad, and street construction projects (end of measurement). On all other project contracts, the geographical center where the major portion of the construction is located, shall be considered the center of the project (end measurement).

Power Equipment Operator

ZONE 1

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

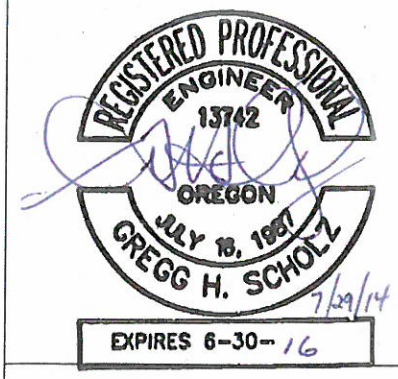
Appendix B

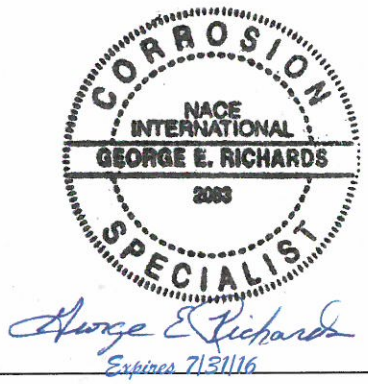
SEE ATTACHED
TECHNICAL SPECIAL PROVISIONS

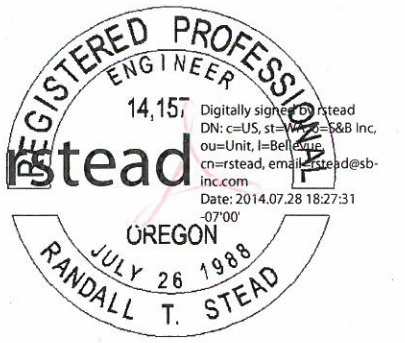
CITY OF WEST LINN, OREGON
PROJECT NUMBER: PW-14-04
ROSEMONT RESERVOIR SAFETY AND MAINTENANCE IMPROVEMENTS

TECHNICAL SPECIAL PROVISIONS

Seal w/signature  EXPIRES 12-31-15	I certify the Technical Special Provision Section(s) listed below are applicable to the design for the subject project for painting and maintenance to an existing elevated reservoir. Modified Technical Special Provisions were prepared by me or under my supervision. Technical Special Provisions Sections 01100, 01200, 01210, 01211, 01300, 01652, 05500, 09870, 11000, 11900
Date Signed: 7/28/14	

Seal w/signature  	I certify the Technical Special Provision Section(s) listed below are applicable to the design for the subject project for electrical improvements to an existing elevated reservoir. Modified Technical Special Provisions were prepared by me or under my supervision. Technical Special Provisions Sections 16010, 16100
Date Signed: July 29, 2014	

Seal w/signature  George E Richards Expires 7/31/16	I certify the Technical Special Provision Section(s) listed below are applicable to the design for the subject project for cathodic protection system improvements to an existing elevated reservoir. Modified Technical Special Provisions were prepared by me or under my supervision. Technical Special Provisions Sections 16640
Date Signed: 7/28/14	

 RENEWAL DATE: 6/30/16	I certify the Technical Special Provision Section(s) listed below are applicable to the design for the subject project for instrumentation/control and telemetry system improvements to an existing elevated reservoir. Modified Technical Special Provisions were prepared by me or under my supervision. Technical Special Provisions Sections 17000
Date Signed: July 28, 2014	

APPENDIX B – TECHNICAL SPECIAL PROVISIONS

TABLE OF CONTENTS

SUPPLEMENTARY INFORMATION

A. Rosemont Reservoir Shop Drawings, Pitt-Des Moines, Inc., dated December 3, 1990.

B. Map of existing structures and locations of reservoir roof, dated November 15, 2012.

C. Drawings for antenna mounts to reservoir roof (at&t).

D. Preliminary Drawing for antenna mounts to reservoir pedestal (Verizon/Lexcom).

SECTION 01100

SPECIAL PROVISIONS

PART 1 GENERAL

These Special Provisions supplement the City of West Linn Public Works Standards. The City of West Linn Public Works Standards shall apply except as modified herein. These Special Provisions and additional technical specifications may contain occasional requirements not pertinent to the project. However, these specifications shall apply in all particulars insofar as they are applicable to this project.

1.1 Definitions

Wherever used in these Special Provisions or other Technical Special Provisions the following terms have the meanings indicated which are applicable to both the singular and plural thereof.

OWNER:
Refers to City of West Linn, a municipal corporation of the State of Oregon, with whom CONTRACTOR has entered into the Contract and for whom the work is to be performed. OWNER is also hereinafter referred to as CITY.

CITY:
Refers to City of West Linn, a municipal corporation of the State of Oregon, with whom CONTRACTOR has entered into the Contract and for whom the work is to be performed. CITY is also hereinafter referred to as OWNER.

CONTRACTOR:
Refers to person, firm or corporation with whom the OWNER has entered into the construction and installation Contract.

ENGINEER:
Refers to Murray, Smith & Associates, Inc. 121 SW Salmon, Suite 900, Portland, Oregon 97204, (503) 225-9010, by whom the Project has been designed.

1.2 Applicable Standard Specifications

City of City of West Linn Public Work Standards shall apply except as may be modified by these Special Provisions and Technical Special Provisions. In the case of discrepancy, unless noted otherwise herein, the more restrictive provisions shall apply.

1.3 Scope of Work

The work to be performed under these Specifications and Drawings consists of furnishing all labor, materials, services and equipment necessary for the reservoir safety, security, and cathodic protection improvements, miscellaneous metal fabrication and maintenance painting for the City of West Linn, Oregon.

The above general outline of principal features of the work does not in any way limit the responsibility of the CONTRACTOR(s) to perform all work and furnish all equipment, labor and materials required by the specifications and drawings. The drawings and specifications shall be considered and used together. Anything appearing as a requirement of either shall be accepted as applicable to both even though not so stated therein or shown.

No attempt has been made in these specifications or drawings to segregate work covered by any trade or subcontract under one specification. Such segregation and establishment of subcontract limits will be solely a matter of specific agreement between the CONTRACTOR and its subcontractors and shall not be based upon any inclusion, segregation or arrangement in or of these specifications.

1.4 Coordination of Plans and Specifications

The plans and specifications are intended to describe and provide for a complete work. Any requirement in one is as binding as if stated in all. The CONTRACTOR shall provide any work or materials clearly implied in the Contract Documents even if the Contract Documents do not mention it specifically.

Dimensions shown on the drawings or that can be computed shall take precedence over scaled dimensions. Notes on drawings are part of the drawings and govern in the order described above. Notes on drawings shall take precedence over drawing details.

The intent of the drawings and specifications is to prescribe the details for the construction and completion of the work which the CONTRACTOR undertakes to perform according to the terms of the Contract. Where the drawings or specifications describe portions of the work in general terms, but details are incomplete or silent, it is understood that only the best general practice is to prevail and that only materials and workmanship of the best quality are to be used. Unless otherwise specified, the CONTRACTOR shall furnish all labor, materials, tools, equipment, and incidentals, and do all the work involved in executing the Contract in a manner satisfactory to the ENGINEER.

The contract plans are designated by general title, sheet number and sheet title. When reference is made to the drawings, the "Sheet Number" of the drawing will be used. Each drawing bears the ENGINEER's File No. 14-1537.201 and the general title:

CITY OF WEST LINN, OREGON
ROSEMONT RESERVOIR SAFETY AND MAINTENANCE IMPROVEMENTS

1.5 Code Requirements

All work shall be done in strict compliance with the requirements of:

A. International Building Code
B. Oregon Mechanical Specialty Code
C. Oregon Plumbing Specialty Code
D. National Electric Code
E. National Electric Safety Code
F. Oregon State Bureau of Labor and Industries
G. City of West Linn
H. Clackamas County

In case of disagreement between codes or these specifications, the more restrictive shall prevail.

1.6 Sequence of Construction Requirements

A. The following general construction sequence is provided as general information to CONTRACTOR(s) to illustrate the basic sequencing outline and shall not be considered to be complete in detail in all respects nor, shall this plan be interpreted as direction to the CONTRACTOR with respect to means or methods. As part of this contract's provisions, the construction contractor is required to submit a detailed construction schedule. This schedule shall incorporate sequencing requirements and present the CONTRACTOR's proposed detailed program for accomplishing work. The CONTRACTOR's construction program shall be presented in such detail to facilitate thorough evaluation of constructability of the program.

B. This project requires certain sequencing and phasing of project elements due to requirements for temporary water system shut down and interim constant pressure booster pumping operations. The temporary water system shutdown will only be permitted between October 1, 2014 and January 31, 2015.

The following is a general outline of construction sequence:

1. Coordinate with ENGINEER and OWNER to drain the existing 400,000 gallon reservoir.

2. Complete all metalwork and associated welding of items to tank. Coordinate with ENGINEER to accommodate installation of proposed cellular antenna equipment and relocation of existing equipment on tank by others.

3. Complete security system, telemetry and fall prevention system upgrades.

4. Complete interior coating work.

5. Complete cathodic protection system improvements.

6. Test and disinfect reservoir by January 31, 2015

7. Complete exterior coating work by May 15, 2015.

8. The project work shall be substantially complete when the ENGINEER and OWNER agree that the OWNER is able to take possession of and have full operational use of the reservoir.

9. All other work not defined or included in the above construction sequence shall be subject to final completion date.

1.7 Coordination With Other Contractors and With OWNER

Certain work within this contract may require connection to and coordination with the work of other contractors and OWNER. The CONTRACTOR under these specifications shall cooperate fully with all other contractors and OWNER and carefully fit its own work to such other work as may be directed by the ENGINEER. The CONTRACTOR shall not commit or permit any act to be committed which will interfere with the performance of work by any other contractor or the OWNER.

CELLULAR ANTENNA EQUIPMENT - CONTRACTOR shall coordinate with ENGINEER to accommodate installation of proposed cellular antenna equipment and relocation of existing equipment on tank by others. Photos, drawings and maps of locations of existing equipment and proposed equipment have been included in the Supplementary Information for reference. Work by others will include routing and connecting cables to the tank exterior and interior dry area, new cable shaft and tank roof exterior, as well as attaching antennas to the new antenna mounting brackets and guardrail, and other miscellaneous work. Contractor shall coordinate with ENGINEER and cellular equipment installers for locations of new welded antenna

mounts and Nelson studs to be furnished and installed by the CONTRACTOR as identified in specification Section 05500 and as shown in the plans and Supplementary Information. Existing cellular equipment and the new welded attachments on the exterior of the reservoir shall be painted by the CONTRACTOR. Painting of proposed cellular equipment will be completed by others.

1.8 Access to Work

Access to the work shall be provided as may be required by the OWNER or its representatives, and all authorized representatives of the state and federal governments and any other agencies having jurisdiction over any phase of the work, for inspection of the progress of the work, the methods of construction or any other required purposes.

1.9 Site Investigation and Physical Data

The CONTRACTOR acknowledges that it is satisfied as to the nature and location of the work and the general and local conditions, including but not limited to those bearing upon transportation, disposal, handling and storage of materials, availability of water, roads, groundwater, access to the sites, coordination with other contractors, and conflicts with pipelines, structures and other contractors. Information and data furnished or referred to herein is furnished for information only. Any failure by the CONTRACTOR to become acquainted with the available information and existing conditions will not be a basis for relief from successfully performing the work and will not constitute justification for additional compensation.

The CONTRACTOR shall verify the locations and elevations of existing pipelines, structures, grades and utilities, prior to construction. The OWNER assumes no responsibility for any conclusions or interpretations made by the CONTRACTOR on the basis of the information made available.

1.10 Temporary Utilities for Construction Purposes

The CONTRACTOR shall make all arrangements necessary to provide all temporary utilities for construction purposes and shall pay all costs associated those temporary utilities. Water for construction purposes will be furnished by the OWNER at no cost. The CONTRACTOR shall furnish all valves, hoses, connections and other devices as necessary to obtain sufficient water for construction and for filling and testing of water lines as required. Fire hydrant use is allowed only by permission of the utility owner. Backflow protection is required on all connections to potable water systems.

1.11 Field Service by Manufacturer's Representative

The CONTRACTOR shall furnish the services of a manufacturer's or material supplier's representative for all major equipment and materials furnished by the CONTRACTOR or OWNER under this contract, to check, place in operation and test the installation, and train operating personnel. The manufacturer's representative shall be qualified and authorized to perform repairs and maintenance on the equipment. The above gives a general scope of the services desired from the manufacturer's representative. It will be the responsibility of the CONTRACTOR and the equipment manufacturer to determine detailed requirements. Costs for services of the manufacturer's representative shall be included in the proposal of the CONTRACTOR. The operator training mentioned above shall include sufficient time during the CONTRACTOR's operation and testing period to fully explain to the operating personnel the features of the equipment and maintenance thereof.

1.12 Operation and Maintenance Instructions

Before acceptance of the installation, the CONTRACTOR shall submit four (4) copies of complete operation and maintenance instructions for all equipment supplied. Submit items in 8-1/2 x 11-inch heavy-duty three-ring binders when appropriate, or in 8-1/2 x 11-inch file folders. The equipment manufacturer may furnish instruction manuals prepared specifically for the equipment furnished or standard manuals may be used if statements like "if your equipment has this accessory..." or listings of equipment not furnished are eliminated. Poorly reproduced copies are not acceptable. Operation and maintenance instructions shall contain the following as a minimum:

A. Approved shop drawings and submittal data

B. Model, type, size and serial numbers of equipment furnished

C. Equipment and driver nameplate data

D. List of parts showing replacement numbers

E. Recommended list of spare parts

F. Complete operating instructions including start-up, shutdown, adjustments, cleaning, etc.

G. Maintenance and repair requirements including frequency and detailed instructions

H. Name, address and phone numbers of local representative and authorized repair service

1.13 Construction Within Public Right-of-Way

When the work contemplated is wholly or partly within the right-of-way of a public agency such as a city, county or state, the OWNER will obtain from these agencies any right-of-way and street opening permits and all other necessary permit(s) required for the work. The CONTRACTOR shall abide by all regulations and conditions stipulated in the permit(s). Such conditions and requirements are hereby made a part of these specifications, as fully and completely as though the same were fully set forth herein. The CONTRACTOR shall examine the permit(s) granted to the OWNER by any city, county, state and federal agencies. Failure to do so will not relieve the CONTRACTOR from compliance with the requirements stated therein.

The CONTRACTOR shall obtain all construction permits and pay all fees or charges and furnish any bonds and insurance coverages as necessary to insure that all requirements of the city, county, state or federal agencies will be observed and the roadway and ditches are restored to their original condition or one equally satisfactory. A copy of all permits shall be kept on the work site for use of the ENGINEER

1.14 Private Roads and Driveways

Bridges at entrances to business properties where vehicular traffic is necessary shall be provided and maintained. Bridges shall be adequate in width and strength for the service required. No private road or driveway may be closed without approval of the ENGINEER unless written authority has been given by the owner whose property has been affected. Driveways shall be left open and ready for use at the end of the work shift. All expenses involved in providing for construction, maintenance, and use of private roads or driveways, shall be borne by the CONTRACTOR and the amount thereof absorbed in the unit prices of the CONTRACTOR's bid.

1.15 Disposal/Dechlorination of Chlorinated Water

Any discharge of chlorinated water shall either be through an approved connection to a public sanitary sewer system or shall include dechlorination to limits acceptable by the Oregon State Department of Environmental Quality (DEQ) for discharge into the existing storm drainage system. No chlorinated water shall be discharged into the storm drainage system prior to approved dechlorination treatment.

1.16 Limits of the Work and Storage of Spoils

The limits of the site which may be used for construction, storage, materials handling, parking of vehicles and other operations related to the project include the project site as shown on the drawings and adjacent public rights-of-way subject to permission of the public owner of that right-of-way. The limits of work also include rights of access

obtained by the CONTRACTOR, subject to all public laws and regulations and rights of access by utility companies and other holders of easement rights.

1.17 Existing Water System Shutdown

If the project involves the need to shut down an existing water system, the CONTRACTOR shall coordinate the work to insure a minimum of shutdown time. The CONTRACTOR shall submit a written shutdown schedule to the ENGINEER for approval. The CONTRACTOR shall provide 72-hour notice preceding each shutdown.

1.18 Field Changes, Alignment and Grade

Changes of alignment and grade shall be made during the course of work in order to avoid interference with unforeseen obstructions. The CONTRACTOR shall locate existing utilities to be crossed, by potholing ahead of the pipe installation, of sufficient distance to avoid conflicts through pipe joint deflection if possible. All costs for minor field changes of alignment and grade shall be borne by the CONTRACTOR. The ENGINEER will endeavor to make prompt decisions on such matters. CONTRACTOR shall anticipate a minimum of 72 hours for any decision requiring significant piping change.

1.19 Testing and Operation of Facilities

It is the intent of the OWNER to have a complete and operable facility. All of the work under this contract will be fully tested and inspected in accordance with the specifications. Upon completion of the work, the CONTRACTOR shall operate the completed facilities as required to test the equipment under the direction of the ENGINEER. During this period of operation by the CONTRACTOR, the new facilities will be tested thoroughly to determine their acceptance.

1.20 Protection of Existing Structures and Work

The CONTRACTOR must take all precautions and measures necessary to protect all existing structures and work. Any damage to existing structures and work shall be repaired by removing the damaged structure or work, replacing the work and restoring to original condition satisfactory to the ENGINEER.

1.21 Salvage and Debris

Unless otherwise indicated on the drawings or in the specifications, all castings, pipe, equipment, demolition debris, spoil or any other discarded material or equipment shall become the property of the CONTRACTOR and shall be disposed of in a manner compliant with applicable Federal State and local laws and regulations governing

disposal of such waste products. No burning of debris or any other discarded material will be permitted.

1.22 Safety Standards and Accident Prevention

The CONTRACTOR shall be solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The required and/or implied duty of the ENGINEER to conduct construction review of the CONTRACTOR's performance does not, and is not intended to, include review of the adequacy of the CONTRACTOR's safety measures in, on, or near the construction site.

The CONTRACTOR shall comply with the safety standards provisions of applicable laws and building and construction codes. The CONTRACTOR shall exercise every precaution at all times for the prevention of accidents and protection of persons, including employees, and property. During the execution of the work the CONTRACTOR shall provide and maintain all guards, railing, lights, warnings, and other protective devices which are required by law or which are reasonably necessary for the protection of persons and property from injury or damage.

1.23 Competent Person Designation

CONTRACTOR shall designate a qualified and experienced “competent person” at the site whose duties and responsibilities shall include enforcement of Oregon - OSHA regulations regarding excavations, the prevention of accidents, and the maintenance and supervision of construction site safety precautions and programs.

1.24 Emergency Maintenance Supervisor

The CONTRACTOR shall submit to the ENGINEER the names, addresses and telephone numbers of at least two employees responsible for performing emergency maintenance and repairs when the CONTRACTOR is not working. These employees shall be designated, in writing by the CONTRACTOR, to act as its representatives and shall have full authority to act on its behalf. At least one of the designated employees shall be available for a telephone call any time an emergency arises.

1.25 Prevailing Wage Rates for Public Works Contracts in Oregon

The CONTRACTOR shall abide by ORS 279C.800 through 279C.870 which relate to the prevailing wage rates for the building and construction trades in the State of Oregon. These prevailing wage rates are shown in the Bureau of Labor and Industries document which is included elsewhere in these contract documents.

1.26 Protection of Water Quality

A portion of the work to be performed involves connections to an existing potable water system. The CONTRACTOR shall take such precautions as are necessary or as may be required to prevent the contamination of the water. Such contamination may include but shall not be limited to deleterious chemicals such as fuel, cleaning agents, paint, demolition and construction debris, sandblasting residue, etc. In the event contamination does occur, the CONTRACTOR shall, at his own expense, perform such work as may be necessary to repair any damage or to clean the affected areas of the water mains to a condition satisfactory to the ENGINEER.

1.27 Sanitary Facilities

The CONTRACTOR shall provide and maintain sanitary facilities for his employees and his subcontractors' employees that will comply with the regulations of the local and State Departments of Health and as directed by the ENGINEER.

1.28 Street Cleanup

The CONTRACTOR shall clean daily all dirt, gravel, construction debris and other foreign material resulting from his operations from all streets and roads.

1.29 Vehicle Parking

The vehicles of the CONTRACTOR’s and subcontractor's employees shall be parked in accordance with local parking ordinances.

1.30 "Or Equal" Clause

In order to establish a basis of quality, certain processes, types of machinery and equipment or kinds of material may be specified on the plans or herein by designating a manufacturer's name and referring to his brand or product designation. It is not the intent of these specifications to exclude other processes, equipment or materials of a type and quality equal to those designated. When a manufacturer's name, brand or item designation is given, it shall be understood that the words "or equal" follow such name or designation, whether in fact they do so or not. If the CONTRACTOR desires to furnish items of equipment by manufacturers other than those specified, he shall secure the approval of the ENGINEER prior to placing a purchase order.
No extras will be allowed the CONTRACTOR for any changes required to adopt the substitute equipment. Therefore, the CONTRACTOR's proposal for an alternate shall include all costs for any modifications to the plans, such as structural and foundation changes, additional piping or changes in piping, electrical changes or any other modifications which may be necessary or required for approval and adoption of the proposed alternate equipment. Approval of alternate equipment by the ENGINEER

before or after proposal closing does not guarantee or imply that the alternate equipment will fit the design without modifications.

1.31 Surveys

Based upon the information provided by the ENGINEER, the CONTRACTOR shall develop and make all detail surveys necessary for layout and construction, including exact component location, working points, lines and elevations. Prior to construction, the field layout shall be approved by the OWNER's representative. The CONTRACTOR shall have the responsibility to carefully preserve bench marks, reference points and stakes, and in the case of destruction thereof by the CONTRACTOR or resulting from his negligence, the CONTRACTOR shall be charged with the expense and damage resulting therefore and shall be responsible for any mistakes that may be caused by the unnecessary loss or disturbance of such bench marks, reference points and stakes.

1.32 Work Hour Limitations

All work shall be conducted between the hours of 7:00 a.m. and 6:00 p.m. on weekdays only. No weekend work will be allowed. Requests for variations in work hours shall be made in writing and shall be approved by the ENGINEER. CONTRACTOR shall reimburse OWNER for any construction inspection overtime work performed by representatives of the OWNER or ENGINEER, due to the CONTRACTOR's weekend work.

1.33 Dust Prevention

All unpaved streets, roads, detours, haul roads or other areas where dust may be generated shall receive an approved dust-preventive treatment or be routinely watered to prevent dust. Applicable environmental regulations for dust prevention shall be strictly enforced. Dust emissions from reservoir construction activities including sandblasting and painting shall be controlled to be within applicable environmental regulations. The CONTRACTOR shall be responsible for cleaning and repair of properties near the reservoir site which may become damaged by sandblasting or painting emissions.

1.34 Record Drawings

CONTRACTOR shall maintain at the site one set of specifications, full size drawings, shop drawings, equipment drawings and supplemental drawings which shall be corrected as the work progresses to show all changes made. Drawings shall be available for inspection by the ENGINEER. Upon completion of the contract and prior to final payment, specifications and drawings shall be turned over to the ENGINEER.

1.35 Oregon Products

CONTRACTOR's attention is directed to the provisions of Oregon Law, ORS 279A.120 regarding the preference for products that have been grown, manufactured or produced in Oregon. CONTRACTORs must use Oregon-produced or manufactured materials with respect to common building materials such as cement, sand, crushed rock, gravel, plaster, etc., in all cases where proposal prices of such materials are no greater than those of similar materials produced or manufactured outside the state.

1.36 Contamination of Existing Piping or Water Storage Tank

The CONTRACTOR must take all precautions and necessary measures to prevent deleterious material and contaminants from entering piping connected to water storage tanks or the water storage tank. Any failure to do so shall be remedied by the CONTRACTOR to the satisfaction of the ENGINEER at no cost to the OWNER.

1.37 Prequalification of Contractors

Special minimum experience qualifications apply to portions of this project. The Metal Fabricator and Installer (abbreviated as METAL FABRICATOR) and PAINTING CONTRACTOR must be qualified by the ENGINEER prior to bidding. Only METAL FABRICATORS and PAINTING CONTRACTORS who have received qualification prior to bidding may be named in the Proposal.

METAL FABRICATORS and PAINTING CONTRACTORS who desire to be qualified for bidding shall submit a Statement of Qualifications Form (Specification Section 01210 and 01211, respectively) to the ENGINEER no later than August 8, 2014. The ENGINEER will notify any Bidder or Proposer of its decision with respect to the qualification of any such supplier and/or erector by addendum issued no later than one week prior to bid opening. Such submissions will be evaluated against the responsibility criteria listed at ORS 279C.375 and ORS 279C.430. See Sections 00210 and 00211 for special minimum qualifications for the METAL FABRICATORS and PAINTING CONTRACTORS, respectively. Prospective METAL FABRICATORS and PAINTING CONTRACTORS will not be considered for qualification if the required information is not submitted.

The ENGINEER shall have the right to require a prospective METAL FABRICATORS and PAINTING CONTRACTORS to clarify any portion of its Statement of Qualifications Form. Response to such a request must be made in writing and shall become a part of the Statement of Qualifications Form. Failure to respond to such a request shall be cause for rejection of the Statement of Qualifications Form. METAL FABRICATORS and PAINTING

CONTRACTORS who have not successfully completed the qualification process as evidenced by the addendum will not be accepted on this project.

Contractors qualified for inclusion in the Bid Proposal as the Metal Fabricator are:

A. Western Tank and Pipe, Gresham, OR

B. CB&I Services, Inc., Everett, WA

C. T Bailey, Inc., Anacortes, WA

Contractors qualified for inclusion in the Bid Proposal as the Painting Contractors are:

A. Coatings Unlimited, Inc., Kent, WA
B. S & K Painting, Inc., Oregon City, OR
C. J & L Co. Northeast, Inc., Spokane, WA
D. HCI Industrial & Marine Coatings, Inc., Brush Prairie, WA
E. Long Painting Company, Portland, OR
F. Purcell Painting & Coatings, Vancouver, WA
G. Dennis Harding Painting, Portland, OR

END OF SECTION

SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 GENERAL

Measurement and payment will be on a lump sum and unit price basis for all work in accordance with the prices set forth in the proposal for the individual work items. Lump sum payment under all items shall cover all particular elements of the project as above generally outlined, whether or not specifically or specially indentified, as specified herein and as shown on the plans, except for work included separately under other unit price bid items.

1. Mobilization Payment for mobilization shall be in conformance with Section 00210 of the Standard Specifications.

2. Furnish and install reservoir safety and ventilation improvements, and repairs: Measurement and payment for all project work required other than as provided for under separate unit prices, will be made on a single lump sum basis. For purposes of evaluating monthly partial payments, this lump sum work is broken down as follows:

    a) Shop drawings and approvals

    b) Fall prevention systems

    c) Vented Roof access hatch

    d) Roof perimeter safety guardrail

    e) Seal weld / plate patch holes in reservoir roof

    f) Reservoir access door replacement with integral ventilation louver

    g) Pedestal Access Hatch replacement with integral ventilation louver

    Lump sum payment under this item shall cover all particular elements of the project as above generally outlined, whether or not specifically or specially identified, as specified herein and as shown on the plans, except for work included separately under other unit price bid items.

3. Furnish and install cable shaft with rooftop entry shroud: Payment for 36-inch square fabricated steel cable shaft through the existing wet-well will be made on a lump sum basis. Payment includes, but is not limited to, metal fabrication and welding of the

cable shaft, seal welding the shaft to the top and bottom of the wet-well inside and outside, furnishing and installing the rooftop entry shroud system, and connection of the rooftop hood entry system to the cable shaft as shown on the drawings and as described in Division 5 of these specifications will be made on a lump sum basis.

4. Furnish and install pedestal penetrations, and welded antenna and cable mounts: Payment for furnishing and installing cable penetrations in reservoir pedestal base and pedestal; and welded steel antenna and cable mounts as shown on the drawings and as described in Division 5 of these specifications will be made on a lump sum basis.

5. Furnish and install electrical, instrumentations and controls improvements: Measurement and payment for all instrumentation and controls improvements will be made on a single lump sum basis. Bid price shall include services and materials provided the Owner's I&C Consultant/Integrator (S&B, Inc.) and conduit and wiring between all devices and equipment is to be provided by the Contractor. For purposes of evaluating monthly partial payments, this lump sum work is broken down as follows:

    a) Shop drawings and approvals

    b) Rooftop obstruction light, complete

    c) Hatch limit switches, complete

    d) Doorway security system, complete

    e) Reservoir Overflow Level Switch, complete

6. Furnish and install cathodic protection system improvements: Payment for cathodic protection system improvements will be made on a lump sum basis. Cathodic protection system improvements include, but are not limited to, furnishing professional services, labor, equipment, and materials necessary to remove some portions of an existing automatic impressed current type cathodic protection (CP) system used to control corrosion of the submerged steel surfaces of the subject water tank and replacing some portions of the CP system including furnishing and installing a rectifier/power unit, reference electrodes, wire, and wire connectors, re-installation of existing anodes, and all other materials and services required for a complete and operable impressed current cathodic protection system.

7. Interior wet area surface preparation and coating: Payment for surface preparation and furnishing and installing interior wet-well coating system for the welded steel reservoir with a 400,000 gallon storage capacity will be made on a lump sum basis. Surface preparation includes, but not limited to, abrasive blasting all interior coatings to SSPC-10 (near white), and disposal of all waste. Furnish and installing interior

coating system includes applying prime coat, intermediate coat, and top coat as specified. Payment shall include moisture control using dehumidification equipment as specified and reservoir disinfection.

8. Interior dry area surface preparation and coating: Payment for surface preparation and furnishing and installing interior dry area coating system touch up for the welded steel reservoir will be made on a lump sum basis. Surface preparation includes, but not limited to, abrasive blasting or hand tool cleaning any compromised surfaces, and disposal of all waste. Furnish and installing interior coating system includes spot priming all exposed base metal, applying prime coat, and top coat as specified. Payment shall include moisture control using dehumidification equipment as specified.

9. Exterior surface preparation and coating : Payment for surface preparation and furnishing and installing exterior coating system for the elevated welded steel reservoir with a 400,000 gallon storage capacity will be made on a lump sum basis. Surface preparation includes, but not limited to, wetting reservoir exterior with a 50% bleach solution, pressure washing reservoir exterior with a minimum of 3,000 psi to remove loose coating, hand and/or power tooling reservoir exterior to remove loose coating and rust, collection and disposal of all waste. Furnishing and installing coating system includes spot priming all exposed base metal, applying prime coat, and applying top coat as specified.

END OF SECTION

SECTION 01210

METAL FABRICATOR AND INSTALLER
STATEMENT OF QUALIFICATIONS FORM
FOR
ROSEMONT RESERVOIR SAFETY IMPROVEMENTS
FOR
CITY OF WEST LINN

The City of West Linn requires a statement to be completed and submitted by contractors bidding on the Rosemont Reservoir Safety Improvements project regarding their financial ability, equipment, and experience in relation to the proposed elevated steel potable water storage tank metal fabrication and installation work. The Metal Fabricator and Installer (Metal Fabricator) must be qualified by the ENGINEER prior to bidding. Only Metal Fabricators who have received qualification prior to bidding may be named in the Proposal.

Refer to Section 01100 Special Provisions for Pre-qualification requirements and a list of pre-qualified Metal Fabricators.

This Statement of Qualifications Form shall be completed and submitted by 5:00 PM on Friday, August 8, 2014 to:

Submitted to: MURRAY, SMITH & ASSOCIATES, INC.

Address: 121 SW Salmon, Suite 900, Portland, Oregon 97204

Attention: Justin H. Ford, P.E.

To qualify for this project the prospective Metal Fabricator must complete the following information:

METAL FABRICATOR AND INSTALLER INFORMATION

Submitted By: _____ A Corporation / A Partnership / An Individual
(TANK CONTRACTOR)

Type of Work: _____

Principal Office: _____

Contractor's Bank and Local Contact: _____

EXPERIENCE QUESTIONNAIRE

1. How many years has your organization been in business as a contractor under your present business name? _____

2. Have you ever failed to complete any work awarded to you? _____.

   If so, where and why? _____

   _____

3. List below the contracts which you, or your company, or corporation were party, during the previous 10 years which contracts where involved in litigation of any type:

   _____

   _____

   _____

4. Name the Surety Company, and the name and address of the local agent you expect to use in the event this Contract is awarded to you. Please note that the Metal Fabricator's Surety Company shall be prepared to provide a three (3) year maintenance bond for the reservoir. The Metal Fabricator's surety is to be A.M. Best A or higher.

   _____

   _____

5. Name the field superintendent(s) who will be in direct charge of the metal fabrication and installation work if awarded this Contract and state the relevant, successful experience. A qualified field superintendent will be required to be on the project site in responsible charge, full-time, during all metal fabrication and installation work activities. The proposed superintendent(s) shall be currently employed by the Metal Fabricator and shall have been the Metal Fabricator superintendent on no less than two (2) projects, one of which must have included work associated with a welded steel elevated potable water storage reservoir during the last five (5) years. The Metal Fabricator superintendent(s) shall have been in the direct employment of the Metal Fabricator on both of the projects listed. Indicate the owner of projects referenced. Provide the name(s) of at least two (2) projects successfully completed by all of the superintendents listed by the Metal Fabricator, which shall include one elevated steel potable water reservoir description, the name and address of the owner, and the approximate completion date of each project.

Superintendent Name(s)		
Project Completed: Owner Project Name Year Completed		
Project Completed: Owner Project Name Year Completed		

6. List the names, addresses and telephone numbers of the owners and project engineers, and completion dates and location of at least five (5) projects involving similar metal fabrication and installation to the scope and materials for the specified project, including at least two (2) with work associated with welded steel elevated potable water storage reservoirs located within the United States which have been successfully constructed by the Metal Fabricator during the last ten (10) years. In order to meet the experience requirements, at least two (2) of the projects listed below shall include metal welding and installation work at least 60 feet above the adjacent ground surface.

Project Name, Owner, Maximum Height & Type of Structure	Year Completed	Name & Address of Owner Contact Person and Phone Number	Name & Address of Engineer Contact Person and Phone Number

The information submitted in this form will be regarded as confidential to the extent of the law.

The undersigned hereby declares that the foregoing statements are true and that the foregoing financial statement is a true and accurate statement of the financial condition of said firm.

Dated at _____ this_____ day of _____, 2014

By_____

Title_____

Date_____

SECTION 01211

PAINTING CONTRACTOR
STATEMENT OF QUALIFICATIONS FORM
FOR
ROSEMONT RESERVOIR SAFETY IMPROVEMENTS
FOR
CITY OF WEST LINN

The City of West Linn requires a statement to be completed and submitted by contractors bidding on the Rosemont Reservoir Safety Improvements project regarding their financial ability, equipment, and experience in relation to the proposed elevated steel potable water storage tank painting work. The Painting Contractor must be qualified by the ENGINEER prior to bidding. Only Painting Contractors who have received qualification prior to bidding may be named in the Proposal.

Refer to Section 01100 Special Provisions for Pre-qualification requirements and a list of pre-qualified Painting Contractors.

This Statement of Qualifications Form shall be completed and submitted by 5:00 PM on Friday, August 8, 2014 to:

Submitted to: MURRAY, SMITH & ASSOCIATES, INC.

Address: 121 SW Salmon, Suite 900, Portland, Oregon 97204

Attention: Justin H. Ford, P.E.

To qualify for this project the prospective Painting Contractor must complete the following information:

PAINTING CONTRACTOR INFORMATION

Submitted By: _____ A Corporation / A Partnership / An Individual
(PAINTING CONTRACTOR)

Type of Work: _____

Principal Office: _____

Contractor's Bank and Local Contact: _____

EXPERIENCE QUESTIONNAIRE

1. How many years has your organization been in business as a contractor under your present business name? _____

2. Have you ever failed to complete any work awarded to you? _____.

   If so, where and why? _____

   _____

3. List below the contracts which you, or your company, or corporation were party, during the previous 10 years which contracts where involved in litigation of any type:

   _____

   _____

   _____

4. Name the Surety Company, and the name and address of the local agent you expect to use in the event this Contract is awarded to you. Please note that the Painting Contractor's Surety Company shall be prepared to provide a three (3) year maintenance bond for the reservoir. The Painting Contractor's surety is to be A.M. Best A or higher.

   _____

   _____

5. Name the field superintendent(s) who will be in direct charge of the reservoir painting work if awarded this Contract and state the relevant, successful experience. A qualified field superintendent will be required to be on the project site in responsible charge, full-time, during all reservoir painting work activities. The proposed superintendent(s) shall be currently employed by the Painting Contractor and shall have been the Painting Contractor superintendent on no less than two (2) steel reservoir painting projects during the last ten years. The Painting Contractor superintendent(s) shall have been in the direct employment of the Painting Contractor for both of the steel reservoir painting projects listed. Indicate the owner of projects referenced. Provide the name(s) of at least two (2) steel reservoir painting projects successfully completed by all of the superintendents listed by the Painting Contractor, which shall include a reservoir description, the name and address of the owner, and the approximate completion date of each reservoir.

Superintendent Name(s)		
Project Completed: Owner Project Name Year Completed		
Project Completed: Owner Project Name Year Completed		

6. List the names, addresses and telephone numbers of the owners and project engineers, and completion dates and location of at least five (5) steel reservoir painting projects located within the United States which have been successfully constructed by the Painting Contractor during the last ten (10) years. In order to meet the experience requirements, the five (5) steel reservoir painting projects shall be similar in size and scope to the specified reservoir and at least 100,000 gallons in volume.

Project Name, Owner & Reservoir Size	Year Completed	Name & Address of Owner Contact Person and Phone Number	Name & Address of Engineer Contact Person and Phone Number

The information submitted in this form will be regarded as confidential to the extent of the law.

The undersigned hereby declares that the foregoing statements are true and that the foregoing financial statement is a true and accurate statement of the financial condition of said firm.

Dated at _____ this_____ day of _____, 2014

By_____

Title_____

Date_____

SECTION 01300

SUBMITTALS

PART 1 GENERAL

The CONTRACTOR shall provide submittals including shop drawings, schedules, drawings, and such other information as may be necessary for the prosecution of the work in the shop and in the field as required by the contract documents or the ENGINEER's instruction. There may be other submittals required elsewhere in these Specifications that are not necessarily included or mentioned in this Section.

Within fourteen (14) days after award of the contract, the CONTRACTOR shall submit to the ENGINEER a proposed list of manufacturers, suppliers, and subcontractors and a schedule of specific target dates for the submission and return of shop drawings required by the contract documents. The list and schedule shall be updated and re-submitted when requested by the ENGINEER. All shop drawings for interrelated items shall be scheduled for submission at the same time. Not less than one (1) week shall be allocated to each submittal for processing by the ENGINEER. **It is the preference of the ENGINEER that all submittals are provided electronically, in PDF format, via email.** Should the CONTRACTOR opt to submit information in hard copy format, at least six (6) copies of all submittals shall be provided to the ENGINEER. Four (4) copies of all submittals will be kept by the ENGINEER. If the CONTRACTOR requests that more than two (2) copies be returned, then the CONTRACTOR shall submit the appropriate quantity of submittals.

The ENGINEER will review shop drawings to determine compliance with the design concept of the project and return them to the CONTRACTOR within the period established in the shop drawings schedule. The ENGINEER may hold shop drawings in cases where partial submission cannot be reviewed until the complete submission has been received or where shop drawings cannot be reviewed until correlated items affected by them have been received. When such shop drawings are held, the ENGINEER will advise the CONTRACTOR in writing that the shop drawing submitted will not be reviewed until shop drawings for all related items have been received.

The CONTRACTOR shall submit to the ENGINEER, for review, six (6) copies each of such shop drawings, electrical diagrams and catalog information for fabricated items and manufactured items required for construction. The ENGINEER will review the submitted data and shop drawings, and will make notations thereon indicating "No Exception Taken", "Make Corrections Noted", "Rejected", "Revise and Resubmit", or "Submit Specified Item". The ENGINEER will then return two copies of the submitted data and shop drawings to the CONTRACTOR. The ENGINEER’s review

of submittals and shop drawings is not a check of any dimension or quantity, and will not relieve the CONTRACTOR from responsibility for errors of any sort in the submittals and shop drawings.

When shop drawings and/or submittals are required to be revised or corrected and resubmitted, the CONTRACTOR shall make such revisions and/or corrections and resubmit those items or other materials in the same manner as specified above.

Submitted data shall be sufficient in detail for determination of compliance with the Contract Documents. Color samples for all items for which colors are to be selected shall be submitted at the same time. No equipment or material for which listings, drawings, or descriptive material is required shall be installed until the CONTRACTOR has received review from the ENGINEER.

Regardless of corrections made in or review given to the drawings by the ENGINEER, the CONTRACTOR shall be responsible for the accuracy of such drawings and for their conformity to the drawings and specifications. The CONTRACTOR shall check all submittals before submitting them to the ENGINEER and shall stamp its approval on all copies of the shop drawing documents. Any submittals received by the ENGINEER which do not bear the CONTRACTOR's approval shall be returned without review. If more than two (2) submissions are required to meet the project specifications, the cost of reviewing these additional submissions may be charged directly against the CONTRACTOR and the OWNER may withhold the funds necessary to cover these costs.

Materials and equipment shall be ordered a sufficient time in advance to allow time for reviews, and shall be available on the job when needed. Last minute review will not be given for inferior substitutes for material or equipment.

Required submittals include items listed below. This list is provided for CONTRACTOR's convenience only and may not be complete in all respects. CONTRACTOR shall provide all submittals required, whether or not specifically listed herein.

A. Schedules -- The CONTRACTOR shall prepare and submit to the ENGINEER, within fifteen (15) days after notice to proceed, a practicable schedule showing the order in which the CONTRACTOR proposes to carry out the work, the dates on which the important features of the work will start, and the contemplated dates for completing same. In addition to a time-scaled bar chart schedule depicting the project critical path, the CONTRACTOR shall submit a detailed CPM logic diagram. The CPM diagram and time-scaled bar chart shall include the following:

- Construction activities
- Submittal and approval of material samples and shop drawings
- Procurement of critical materials
- Fabrication, installation, and testing of special material and equipment
- Duration of work, including completion times of all stages and their sub-phases

The activities shall be separately identifiable by coding or use of sub-networks or both. The duration of each activity shall be verifiable by manpower and equipment allocation, in common units of measure, or by delivery dates and shall be justifiable by the CONTRACTOR upon the request of the ENGINEER.

Detailed subnetworks will include all necessary activities and logic connectors to describe the work and all restrictions to it. In the restraints, include those activities from the project schedule which initiated the subnetwork as well as those restrained by it.

Include a tabulation of each activity in the computer mathematical analysis of the network diagram. Furnish the following information as a minimum for each activity:

- Event (node) number(s) for each activity
- Activity description
- Original duration of activities (in normal workdays)
- Estimated remaining duration of activities (in normal workdays)
- Earliest start date or actual start date (by calendar date)
- Earliest finish date or actual finish date (by calendar date)
- Latest start date (by calendar date)
- Latest finish date (by calendar date)
- Slack or float time (in workdays)

Computer printouts shall consist of at least a node sort and an "early start/total-float" sort.

CONTRACTOR'S attention is drawn to typical local climatic weather patterns and the CONTRACTOR shall coordinate work accordingly.

B. Breakdown of Contract Price -- The CONTRACTOR shall, at the preconstruction meeting, submit a complete breakdown of all lump sum bid items showing the value assigned to each part of the work including an allowance for profit and overhead adding up to the total lump sum contract price. Breakdown of lump sum bids shall be coordinated with the items in the

schedule. Preparatory work, bonds, and insurance required in setting up the job will be allowed as a separate entry on the cost breakdown but shall not exceed 5 percent of the total base bid. Upon acceptance of the breakdown of the contract price by the ENGINEER, it shall be used as the basis for all requests for payment.

C. Shop Drawings, Schedules and Drawings -- The CONTRACTOR shall provide shop drawings, schedules and such other drawings and information as may be necessary for the prosecution of the work in the shop and in the field as required by the contract documents and/or ENGINEER's instruction. Shop drawings shall be provided to scale and printable at 22”x34” size.

D. Design Submittals -- Design submittals as may be required for equipment and systems elsewhere in these Specifications.

E. Erosion and Sedimentation Control Plan

F. Materials Lists

G. CONTRACTOR Contact Persons

H. Material Safety Data Sheets

I. Traffic Control and Protection Plan -- Traffic Control and Protection Plans for each segment of proposed detour shall be submitted to ENGINEER and local jurisdictions one month in advance to provide for two weeks review, as well as two weeks of advanced notice for motorists.

J. Miscellaneous Materials and Other Submittals as Required Elsewhere in the Specifications

K. Operation and Maintenance Instructions

Before acceptance of the installation, the CONTRACTOR shall submit four (4) copies of complete operation and maintenance instructions for all equipment supplied. Submit items in 8-1/2 x 11-inch heavy-duty three-ring binders when appropriate, or in 8-1/2 x 11-inch file folders. All binders and folders shall have clear plastic pockets on the front of the cover and the spine to allow for insertion of identifying information. The equipment manufacturer may furnish instruction manuals prepared specifically for the equipment furnished or standard manuals may be used if statements like "if your equipment has this accessory..." or listings of equipment not furnished are eliminated. Poorly reproduced copies are not acceptable. Operation and maintenance instructions shall contain the following as a minimum:

1. Approved shop drawings and submittal data

2. Model, type, size and serial numbers of equipment furnished

3. Equipment and driver nameplate data

4. List of parts showing replacement numbers

5. Recommended list of spare parts

6. Complete operating instructions including start-up, shutdown, adjustments, cleaning, etc.

7. Maintenance and repair requirements including frequency and detailed instructions

8. Name, address and phone numbers of local representative and authorized repair service

END OF SECTION

SECTION 01652

RESERVOIR DISINFECTION

PART 1 GENERAL

1.1 Description

A. This section covers disinfection of new and existing potable water storage reservoirs, complete. All costs for labor and materials necessary to conduct the disinfecting procedures specified herein shall be borne by the CONTRACTOR.

B. Following painting of existing potable water facilities, those portions of the facilities which will be in contact with the water delivered to users shall be disinfected with chlorine before they are placed into service.

C. For reservoirs and tanks, disinfection by chlorination shall be accomplished in accordance with AWWA Standard C652 and as described below, whichever is most restrictive:

1. Spray or brush a solution of 200 mg/L available chlorine directly on the surfaces of all parts of the storage facility that will be in contact with water when the storage facility is full to the overflow elevation.

2. The solution shall thoroughly coat all surfaces to be treated, including the inlet and outlet piping and shall be applied to any separate drain piping such that it will have available chlorine of not less than 10 mg/L when filled with water.

3. The disinfected surfaces shall remain in contact with the strong chlorine solution for at least 30 min.

Following the completion of the chlorination procedure, potable water shall be admitted, the drain piping purged of the 10 mg/L chlorinated water, and the storage facility shall be filled to its overflow level. A sample shall be taken by the OWNER for microbiological analysis. It will not be necessary to flush the reservoir or tank after the chlorine solution is applied by spraying or brushing providing a passing microbiological test is achieved. Microbiological analysis must indicate that the water is free of coliform organisms before the facility can be put into service.

The CONTRACTOR shall contact the OWNER representative to arrange for samples to be taken for microbiological analysis.

D. Any superchlorinated water shall be discharged through an approved connection to the public sanitary sewer system or shall be dechlorinated to limits acceptable by the Oregon State Department of Environmental Quality (DEQ) for discharge into the existing storm drainage system. If superchlorinated water is to be discharged into the public sanitary sewer system, the CONTRACTOR shall notify the sewage treatment plant notifying the planned time, location, and quantity of discharge. No superchlorinated water shall be discharged into the storm drainage system or natural drainage way prior to approved dechlorination treatment.

END OF SECTION

SECTION 05500

METAL FABRICATIONS

PART 1 GENERAL

1.1 Description

A. The extent of metal fabrications work is shown on the drawings and includes items fabricated from iron, steel, stainless steel and aluminum shapes, plates, bars, sheets, strips, tubes, pipes and castings which are not a part of structural steel or other metal systems in other sections of these specifications.

B. Items to be fabricated and installed on the reservoir include, but are not limited to, the following:

1. Rooftop guardrail with kick plate
2. Vented roof access hatch structure at top of 48-inch diameter drywell tube (replace existing)
3. Reservoir access door with louver (replace existing)
4. 24-inch diameter pedestal access hatch with louver (replace existing)
5. 36-inch square cable shaft and vented rooftop entry shroud
6. Reinforced penetrations through reservoir pedestal base, including enclosure shroud
7. Reinforced penetrations through reservoir pedestal shell near existing painter's rails
8. Antenna mounts to reservoir pedestal, cable shaft and rooftop
9. Plate patch and seal weld all existing bolted tank penetrations
10. Miscellaneous framing, fabrication and supports
11. Rough hardware
12. All other fabrication and repairs as shown and specified

1.2 Reference Specifications, Codes, and Standards

A. Codes and Standards -- Comply with the provisions of the following codes, standards and specifications, except as otherwise shown and specified:

1. AISC -- "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings", including "Commentary of the AISC Specifications"

2. AISC -- "Specifications for the Design of Cold-Formed Steel Structural Members"

3. SSINA – “Stainless Steel Fabrication”

4. AWS -- “Structural Welding Code”

5. Standard Specifications for Metal Bar Grating in the “Metal Bar Grating Manual”, National Association of Architectural Metal Manufacturers (NAAMM), 1981

B. Qualification for Welding Work -- Qualify welding processes and welding operators in accordance with AWS 1.1 “Standard Qualification Procedure”

C. Welding of Aluminum -- Conduct in accordance with Section 10 of the “Specifications for the Design and Construction of Structural Supports for Highway Luminaries”, AASHTO, 1971. Welding method shall be either gas tungsten arc or gas metal arc. Rods shall be 4043.

D. Field Measurements -- Take field measurements prior to preparation of shop drawings and fabrication. Do not delay job progress; allow for trimming and fitting where taking field measurements before fabrication.

E. Shop Assembly -- Preassemble items in the shop to the greatest extent possible, so as to minimize field splicing and assembly of units at the project site. Disassemble units only to the extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

1.3 Special Provisions for Fabrication of Major Items

A. General

These special provisions cover requirements for the fabrication of major items for the Rosemont Reservoir as listed herein and as shown on the drawings.

B. Approved Metal Fabricators and Installers

The Metal Fabricator and Installer Contractor shall be as specified in the Special Provisions section of these Specifications, Section 01100. C. Design

Drawing details provided on the plans are for conceptual purposes only with approximate dimensions shown. Fabricator and installer shall develop detailed shop drawings using details shown on the plans; criteria, materials and hardware specified under “Products” within this section; record drawings; and field measurements.

C. Submittals

Detailed shop drawings and welder certifications shall be submitted for review as specified herein.

1.4 Submittals during Construction

A. Manufacturer's Data -- Miscellaneous Metal, General - For information only, submit copies of manufacturer's specifications, load tables, dimension diagrams, anchor details and installation instructions for products to be used in miscellaneous metal work, including paint products.

B. Shop Drawings -- Miscellaneous Metal, General -- Submit copies of shop drawings for the fabrication and erection of all assemblies of miscellaneous metal work which are not completely shown by the manufacturer's data sheets. Include plans, elevations and details of sections and connections and fabricators proposed shop coat paint or galvanizing specifications. Show anchorage and accessory items. Furnish setting drawings, diagrams, templates, instructions, and directions for installation of anchorages, such as concrete inserts, anchor bolts, and miscellaneous items having integral anchors, which are to be embedded in concrete construction.

C. Samples, Miscellaneous Metal, General -- Submit two (2) sets of representative samples of materials and finished products as may be requested by the ENGINEER. ENGINEER's review will be for color, texture, style and finish only.

1.5 Delivery, Handling and Storage

Delivery, handling and storage of metal fabrications shall be in accordance with manufacturer's requirements.

PART 2 PRODUCTS

2.1 General

For the fabrication of miscellaneous metal work items which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names, roughness and defects which impair strength, durability and appearance. Remove such blemishes by grinding or by welding and grinding prior to cleaning, treating and application of surface finishes including zinc coatings.

2.2 Materials

A. Steel Plates, Shapes and Bars -- ASTM A 36

B. Steel Plates to be Bent or Cold Formed -- ASTM A 283, Grade C

C. Steel Tubing -- Hot formed, welding or seamless, ASTM A 500, Grade B

D. Steel Bars and Bar-Size Shapes -- ASTM A 36

E. Cold-Finished Steel Bars -- ASTM A 108, grade as selected by fabricator

F. Cold-Rolled Carbon Steel Sheets -- ASTM A 366

G. Galvanized Carbon Steel Sheets -- ASTM A 526, with ASTM A 525, G 90 zinc coating

H. Gray Iron Castings -- ASTM A 48, Class 30

I. Malleable Iron Castings -- ASTM A 47, grade as selected

J. Steel Pipe -- ASTM A 53, Type E or S; Grade A; galvanized standard weight (Schedule 40), unless otherwise indicated

K. Structural Aluminum Shapes and Plates -- ASTM B 308, Alloy 6061-T6, Anodic Coating Class I, AA-C22-A41, anodized after fabrication

L. Non-shrink Nonferrous Grout -- CE CRD C588

2.3 Fasteners

Provide zinc-coated fasteners with galvanizing complying with ASTM A 153 or stainless steel as noted on drawings and elsewhere in the specifications. Select fasteners for the type, grade and class required for the installation of miscellaneous metal items. Where stainless steel bolts are in contact with dissimilar metals, glass epoxy insulating sleeves and washers shall be used to electrically isolate the bolts. Fasteners to be as follows:

A. Standard Bolts and Nuts -- ASTM A 307, Grade A, regular hexagon head

B. Stainless Steel Bolts, Nuts and Washers -- 316 SS

C. High Strength Bolts -- ASTM A 325, regular hexagon head

D. Lag Bolts -- FS FF-B-561, hex head type

E. Machine Screws -- FS FF-S-92

F. Wood Screws -- FS FF-S-111, flat head carbon steel

G. Plain Washers -- FS FF-W-92, round, general assembly grade carbon steel

H. Lock Washers -- FS FF-W-84, helical spring type carbon steel

I. Toggle Bolts -- Tumble-wing type: FS FF-B-588, type class and style as required

J. Masonry Anchorage Devices -- Expansion shields, FS FF-S-325

2.4 Paint

A. Metal Primer Paint -- Primer paint selected must be compatible with the required finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in Division 9 of these specifications. At locations in contact with potable water, use only primer approved for potable water use.

B. Galvanizing Repair -- Comply with ASTM - A780, A1. Repair Using Zinc-Based Alloys (heat and stick method).

C. Protection of All Aluminum -- Aluminum materials in contact with concrete, other metals or other masonry materials shall have surfaces coated with one coat of Koppers 654 Epoxy Primer 1 to 2 mils dry film (D.F.), followed by 2 coats of Koppers Bitumastic No. 300-M 6 to 8 mils D.F., or one coat of Porters 7650 Epoxy Primer 1 to 2 mils D.F., followed by 2 coats of Porters Tarset C-200 6 to 8 mils D.F., or equal.

2.5 Fabrication, General

A. Workmanship -- Use materials of the size and thicknesses shown or if not shown, of the required size and thickness to produce adequate strength and durability in the finished product for the intended use as approved by the ENGINEER. Work to the dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use the type of materials shown or specified for the various components of work.

Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise shown. Form bent-metal corners to the smallest

radius possible without causing grain separation or otherwise impairing the work.

B. Weld corners and seams continuously and in accordance with the recommendations of AWS. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.

C. Form exposed connections with hairline joints, which are flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of the type shown or, if not shown, use Phillips flathead (countersunk) screws or bolts.

1. Provide the anchorage of the type shown, coordinated with the supporting structure and the progress schedule. Fabricate and space anchoring devices to provide adequate support for the intended use of the work.

2. Cut, reinforce, drill and tap miscellaneous metal work indicated to receive finish hardware and similar items of work.

D. Galvanizing -- Provide a zinc coating for galvanizing for all steel using the hot-dip process after fabrication, unless otherwise specified.

ASTM A 153 for galvanizing of iron and steel hardware

ASTM A 123 for galvanizing of rolled, pressed and forged steel shapes, plates, bars and strip 1/8-inch thick and heavier

ASTM A 385 for providing high quality zinc coatings (Hotdip)

ASTM A 386 for galvanizing of assembled steel products

E. Shop Painting (when allowed)

1. Shop paint miscellaneous metal work in accordance with Section 09900 and these specifications, except those members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded and galvanized surfaces unless otherwise indicated.

2. Remove scale, rust and other deleterious materials before the shop coat of paint is applied. Clean off heavy rust and loose mill scale in accordance with SSPC SP-7 “Brush-off Blast Cleaning”. Remove oil, grease and similar contaminates in accordance with SSPC SP-1 “Solvent Cleaning”.

3. Apply one shop coat of metal primer paint to fabricated metal items, except apply two (2) coats of paint to surfaces which are inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.

4. Immediately after surface preparation, brush or spray on metal primer paint, applied in accordance with the manufacturer's instructions.

F. Loose Bearing and Leveling Plates -- Provide loose bearing and leveling plates for steel items bearing on masonry or concrete construction, made flat, free from warps or twists, and of required thickness and bearing area. Drill plates to receive anchor bolts and for grouting as required. Galvanize after fabrication.

G. Miscellaneous Steel Trim -- Provide shapes and sizes for profiles shown. Except as otherwise indicated, fabricate units from structural steel shapes and plates and steel bars, with continuously welded joints and smooth exposed edges. Use concealed field splices wherever possible. Provide cutouts, fittings and anchorages as required for coordination of assembly and installation with other work.

2.6 Vented Roof Access Hatch from Drywell

A. General – A new painted steel access hatch shall be fabricated and installed through the drywell for access to the reservoir roof. The hatch shall be a custom fabricated steel weatherproof apparatus fabricated to fit on the existing 36-inch diameter curb complete with a hinge, pneumatic or spring lift assist, handles on inside and outside, and adjustable louvers. The hatch shall be installed where shown on the drawings.

B. Provide 36-inch diameter steel hatch, ¼-inch thick. The hatch shall be circular where it is hinge connected to the existing curb riser, and be fabricated with an 18-inch square by 18-inch high vent riser "penthouse" for the louvers. The hinge shall be composed of ¼-inch tabs welded to the existing curb and to the custom fabricated hatch, connected by a cylindrical bar. The handle shall be easily accessible by a person accessing the roof from the interior ladder.

C. Vents – The hatch shall include four 12-inch square steel adjustable drainable louvers, as specified elsewhere in this section.

D. Pneumatic or Spring Lift Assist – The lift assist shall be installed so as to ensure smooth, easy opening and closing of the hatch from the inside. The lift assist shall allow for the hatch to stay in the vertical position when opened, and be easily returned to the horizontal position when desired. The hatch shall include a chain backup restraint in the event that the lift assist is inoperable.

2.7 Guardrails and Railings

A. General – Maximum spacing between members shall be as directed by local code and OSHA requirements unless otherwise noted on plans.

B. Provide 3 foot 6-inch high steel guardrail, 2 inches outside diameter for top and vertical segments, 1-1/2 inches all others, with a 4-inch tall kick plate. The guardrail shall be 26 foot minimum in diameter. Construction of the guardrail shall be just outside of the existing 3-inch tall, ¼-inch thick angle in place on the rooftop. The existing angle shall be retained for use by the equipment mounted to it.

1. Top corners of guardrail are to be bent to the smallest radius possible without causing grain separation or otherwise impairing the work.

2. Radius Sections -- Roll to radii shown on plans

3. Vertical segments of guardrail are to be set plumb and mount as shown on plans or as otherwise specified.

4. Spacing between vertical segments will be according to drawings.

C. Welded Connections

1. Cope intersections of rails and posts, weld joints of tailings or use welding connectors, at fabricator's option. Other methods of welding may be used when acceptable to the ENGINEER.

2. Weld corners and seams continuously and in accordance with the recommendations of AWS. Grind exposed welds smooth and flush, to match and blend with adjoining surfaces. Discoloration of finished surfaces and sharp edges will not be acceptable.

D. Primer coat and finishes shall be in accordance with Division 9, Finishes.

2.8 Cable Shaft and Vented Rooftop Entry Shroud

A. General – A new painted steel square cable shaft shall be fabricated and installed through the wet-well for cabling, conduits, and other non-human related access through the reservoir interior to the roof. The shaft shall include a custom fabricated aluminum weatherproof shroud on the reservoir roof with a hinged access hatch. The shaft and shroud shall be installed where shown on the drawings.

B. Provide 36-inch square steel cable shaft, ¼-inch thick. The shaft shall be seal welded to the wet-well top and bottom, inside and outside. On the interior, the shaft shall be flush with the wet-well floor. At the rooftop, the shaft shall protrude above the roof 6-inches minimum and include a welded steel flange for connection to the weatherproof shroud, described below. The shaft shall be installed such that it functions as an additional drywell tube through the wet-well. The shaft shall be painted in accordance with Section 09870.

C. The rooftop entry shroud shall be weatherproof and be fabricated from minimum 6-gauge aluminum. The shroud and flanged steel curb shall be joined with gasketed separation to avoid contact between the different metals and insulated bolts and washers. The shroud shall be furnished with three of the four vertical sides containing aluminum cable entry panels with minimum four rows of four 4-inch diameter holes. The shroud top shall include a hinged lid for access which opens completely and is held in the open position when opened by mechanical means. The hatch shall be 36-inch square, and shall include an 18-inch square by 18-inch high vent riser "penthouse" for the louvers. The vent riser shall include four 12-inch square aluminum adjustable drainable louvers, as specified elsewhere in this section. The shroud shall be painted in accordance with Division 9 of these Specifications.

2.9 Reservoir Access Door Replacement

A. General – The existing 30-inch by 72-inch pedestal access door shall be removed and replaced, complete with a 12-inch by 24-inch integral louver as specified elsewhere in this Section.

B. Furnish and install a steel door matching the size, shape and thickness of the existing door, and using the existing mounting methodology.

2.10 Pedestal Access Hatch Replacement

A. General – The existing 24-inch diameter painter's access manway shall be removed and replaced, complete with a 12-inch square integral louver as specified elsewhere in this Section.

B. Furnish and install a steel manway matching the size, shape and thickness of the existing door, and using the existing mounting methodology.

2.11 Reinforced Cable Penetrations through Reservoir Structure

A. General – The existing reservoir structure shall be penetrated as shown on the drawings in two locations to allow for cabling to enter / exit the structure.

B. Furnish and install reinforced cable penetrations in the following locations, as detailed on the drawings:

1. Through the reservoir pedestal base cone, approximately 6 feet above grade, on the north side of the tank. This penetration shall include a single cutout and a "doghouse" weatherproof structure for cabling and conduit to enter the reservoir pedestal base from the exterior, which shall be hinged at the top and mounted to welded tabs on each side.

2. Through the reservoir pedestal near the painter's rings, approximately 58.5 feet above grade. These penetrations shall include four independent cutouts for cabling and conduit to exit the reservoir pedestal from the interior.

2.12 Modifications to Existing Reservoir Accessories

The fabrication and installation of all modifications to reservoir accessories shown on the drawings and described herein shall be designed and constructed in accordance with all applicable Federal, State and local codes and standards.

A. "Nelson" Stud Welds – Standard 3/8-inch, by 6-inch long carbon steel bolts ("studs") shall be welded to the tank at locations identified in the field by the ENGINEER. The studs shall be suitable for unistrut connection by others, and spaced at 8-inches apart and 16-inches on center for new conduit/cabling runs. Approximately 150 studs at locations to be determined in the field.

B. Plate patch / seal weld existing bolt holes through reservoir shell or roof – Locations identified by the ENGINEER where bolt penetrations through the reservoir have been constructed and cause a compromise in coating integrity shall be plate patched and seal welded. Approximately 10, 3-inch diameter patches at locations to be determined in the field.

C. Antenna mounts to reservoir roof – 12 total mounting sleeves (three sets of four sleeves) shall be fabricated and welded to the reservoir roof for antenna mounting by others. ½-inch thick base plates (six 9-inch square and six 12-inch by 18-inch) shall be fabricated to match the reservoir roof radius. The antenna mounts shall be fabricated and installed similar to Sheet S2.0, Water Tank Plan, and Details 1, 4, and 5 on Sheet S3.0, Antenna Frame Details, included in Supplementary Information (Drawings by Technology Associates, at&t, GPA Architects, and WDY). The location of the base plates and mounting sleeves shall be field-verified during construction.

D. Antenna mounts to reservoir pedestal near painter's rings – 16 total mounting braces (four sets of four braces) shall be fabricated and welded to the reservoir pedestal for antenna mounting by others. 3/8-inch thick plates (6-inch by 6-inch) shall be fabricated to match the reservoir pedestal radius. The antenna

mounts shall be fabricated and installed similar to Sheet S2.0, Antenna Mounting Plan and Frame Details, Details 1, 2, and 3, included in Supplementary Information (Preliminary Drawings by Lexcom, GPA Architects, and WDY). Nelson studs shall be provided for the unistrut mounting per Detail 4 of the same drawing and as described above. The location of the plates and braces shall be field-verified during construction, but in general shall be near the top of the pedestal, centered on the reinforced penetrations detailed elsewhere in the Drawings.

2.13 Miscellaneous Framing and Supports

A. Provide miscellaneous steel framing and supports required to complete the work.

B. Fabricate miscellaneous units to the sizes, shapes and profiles shown or, if not shown, of the required dimensions to receive adjacent grating, plates doors, or other work to be retained by the framing. Except as otherwise shown, fabricate from structural steel shapes and plates and steel bars, of all welded construction using mitered corners, welded brackets and splice plates and a minimum number of joints for field connection. Cut, drill and tap units to receive hardware and similar items to be anchored to the work.

C. Equip units with integrally welded anchors for casting into concrete, bolting to structural steel or building into masonry. Furnish inserts if units must be installed after concrete is placed.

2.14 Rough Hardware

A. Furnish bent or otherwise custom fabricated bolts, plates, anchors, hangers, dowels and other miscellaneous steel and iron shapes as required for framing and supporting systems. Acceptable manufacturers are Simpson, or approved equal.

B. Manufacture or fabricate items of sizes, shapes and dimensions required. Furnish malleable iron washers for heads and nuts which bear on wood structural connections; elsewhere furnish galvanized steel washers.

2.15 Miscellaneous Fabrications

A. Prepare miscellaneous fabrications of the sizes, shapes and profiles shown. Except as otherwise shown, fabricate from structural steel shapes, bars and plates of all welded construction using metered corners, welded brackets and splice plates and a minimum of joints for field connection.

B. Galvanize all miscellaneous fabrications unless otherwise noted.

2.16 Non-Shrink Grout

Where required for anchoring, patching, or sealing, grouting and sealing compounds shall conform to the requirements of Section 04100 (if included).

2.17 Intake and Exhaust Louvers

A. Reservoir Access Door

The newly furnished replacement door shall be delivered to the jobsite with an integral 16 gauge steel frame and 12-inch wide by 24-inch high 18 gauge steel adjustable blade intake louver. Louver shall be provided with 1/2-inch steel mesh bird screen. The louvers and door exterior protective coating schedule and finish color shall match the finish color of the tank exterior, as selected by the OWNER. Louver shall be Ruskin Model LM375D adjustable drainable steel louver or approved equal.

B. Pedestal Access Hatch

The newly furnished replacement 24-inch diameter manway shall be delivered to the jobsite with an integral 16 gauge steel frame and 12-inch square 18 gauge steel adjustable blade intake louver. Louver shall be provided with 1/2-inch steel mesh bird screen. The louver and manway door exterior protective coating schedule and finish color shall match the finish color of the tank exterior, as selected by the OWNER. Louver shall be Ruskin Model LM375D adjustable drainable steel louver or approved equal.

C. Vented Roof Access Hatch from Drywell

The newly furnished custom fabricated roof access hatch from the drywell shall be delivered to the jobsite with four integral 12-inch square 18 gauge steel adjustable blade intake louvers. Louvers shall be provided with 1/2-inch steel mesh bird screen. The louvers and roof access hatch exterior protective coating schedule and finish color shall match the finish color of the tank exterior, as selected by the OWNER. Louvers shall be Ruskin Model LM375D adjustable drainable steel louver or approved equal.

D. Vented Rooftop Entry Shroud from Cable Shaft

The newly furnished custom fabricated roof entry shroud from the cable shaft shall be delivered to the jobsite with four integral 12-inch square extruded aluminum adjustable blade intake louvers. Louvers shall be provided with

3/4"-inch aluminum mesh bird screen. The louvers and roof access hatch exterior protective coating schedule and finish color shall match the finish color of the tank exterior, as selected by the OWNER. Louvers shall be Ruskin Model ELM811D adjustable drainable extruded aluminum louver or approved equal.

PART 3 EXECUTION

3.1 Preparation

Furnish setting drawings, diagrams, templates, instructions and directions for the installation of anchorages, such as concrete inserts, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry construction. Coordinate the delivery of such items to the project site.

3.2 Installation

A. Fastening to In-Place Construction -- Provide anchorage devices and fasteners where necessary for securing miscellaneous metal items to in-place construction, including threaded fasteners for concrete and masonry inserts, toggle bolts, through-bolts, lag bolts, wood screws and other connectors as required.

B. Cutting, Fitting and Placement

1. Perform cutting, drilling and fitting required for the installation of the miscellaneous metal items. Set the work accurately in location, alignment and elevation, plumb, level, true and free of rack, measured from established lines and levels. Provide temporary bracing or anchors in form work for items which are to be built into concrete, masonry of similar construction.

2. Fit exposed connections accurately together to form tight hairline joints. Weld connections, which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind joints smooth and touch-up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.

C. Field Welding -- Comply with AWS Code for the procedures of manual shielded metal-arc welding, the appearance and quality of welds made and the methods used in correcting welding work.

D. Touch-up Painting, Prepainted Items -- Immediately after erection, clean field welds, bolted connections, and abraded areas of the shop paint, and paint all exposed areas with the same material as used for shop painting. Apply by brush or spray to provide a minimum dry film thickness of the original coating thickness.

E. Galvanizing Repair -- Repair any damaged areas by heat and stick method as may be required.

END OF SECTION

SECTION 09870

SURFACE PREPARATION AND COATING SYSTEMS FOR STEEL WATER STORAGE TANKS AND APPURTENANCES (MAINTENANCE PAINTING)

PART 1 GENERAL

1.1 Scope

A. Furnish and install protective paint systems suitable for contact with potable water storage tanks.

B. The extent of painting work is as specified herein and includes surface preparation and application of protective paint systems to the entire interior and exterior steel surface. The CONTRACTOR shall note special specifications relating to nuisance dust and moisture control equipment requirements for interior blasting and painting. The CONTRACTOR shall also note that the water storage tank to be coated is equipped with an interior painter rail and that any modification of the rail or attachment of temporary scaffolding supports for the purpose of completing the work specified herein will be at the CONTRACTOR’s sole expense.

C. Surface preparation and application of specified coatings systems are in addition to shop-priming and surface treatment that may be specified under other sections of the work or furnished with manufactured equipment.

D. "Paint" as used herein means all coating systems materials, including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or topcoat.

E. Paint all exposed surfaces whether or not colors are designated in "schedules", except where the natural finish of the material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint these the same as adjacent similar materials or areas. If color or finish is not designated, the ENGINEER will select these from standard colors available for the materials systems specified.

F. Related Work Specified in Other Sections - Shop coatings and/or factory finishes on fabricated or manufactured equipment may be specified in other divisions. Some items with factory finishes, or corrosion resistant finishes may be scheduled or directed to be painted by the ENGINEER to unify a finish or color scheme, at the ENGINEER'S discretion.

G. Exclusions - Do not paint the following surfaces unless specified or directed elsewhere: Stainless steel, aluminum, copper, brass, bronze and other corrosion-resistant material (except for valve bodies and piping); multiple coated factory finished baked enamel or porcelain products; concealed areas such as ducts, piping, conduits and items specified elsewhere for special linings and coatings. Do not paint any surfaces scheduled for special coating or waterproofing systems in other sections of the specifications.

H. Damaged Factory Finish - If directed by the ENGINEER, refinish the entire exposed surfaces of equipment chipped, scratched or otherwise damaged in shipment or installation.

I. All paint coming in contact with potable water shall be NSF approved.

1.2 Reference Specifications, Codes and Standards

A. General - Without limiting the general aspects or other requirements of this Specification, work and equipment shall conform to applicable requirements of municipal, state and federal codes, laws and ordinances governing the work, and manufacturer's printed instructions. The ENGINEER'S decision shall be final as to interpretation and/or conflict between any of the referenced codes, laws, ordinances, specifications and standards contained herein.

B. "Architectural Specification Manual" by the Painting and Decorating Contractors of America (PDCA), 333 Taylor Avenue North, Seattle, Washington 98109.

C. "Painting Steel Water Storage Tanks" AWWA Standard D102.

D. "Systems and Specifications" - Volume 2 of Steel Structures Painting Council (SSPC).

E. National Sanitation Foundation (NSF) Standard No. 61.

1.3 Manufacturer

A. Provide the paints and coatings specified herein as manufactured by Tnemec, or equal. Paint application shall be in strict accordance with the manufacturer's printed instructions.

B. Paint Products - No request for substitution shall be approved which decreases the film thickness designated or the number of coats to be applied, or which offers a change from the generic type of coating specified. Painting shall be done at such times as the CONTRACTOR and ENGINEER may agree upon in

order that dust-free and neat work be obtained. All painting shall be in strict accordance with the manufacturer's instructions and shall be performed in a manner satisfactory to the ENGINEER.

C. Manufacturer's Representative - Require paint manufacturer's representative to be at job site when the first day's painting is in progress and periodically during progress of the work.

D. Paint Labels - Deliver to the job site in the original sealed containers with manufacturer's name, product name, type of product, manufacturer's specification or catalog number or federal specification number, and instructions for reducing where applicable.

E. Paint Colors - Colors will be selected from manufacturer's standard colors as reviewed by ENGINEER and approved by the OWNER. Colors for special coatings that are limited in their availability and color selection will be chosen on the basis of manufacturer's standard colors, provided that the manufacturer's product line represents a color range comparable to similar products of other manufacturers.

1.4 Acceptable Painting Contractors

The reservoir Painting Contractor shall be one of the approved Contractors on the list included in the Special Provisions Section 01100 of these Specifications.

1.5 Submittals

A. Materials List - Submit list of materials and manufacturer's standard color chart and manufacturers technical information including analysis and application instruction for each material proposed for use, federal specification number, and cross referenced to the specifications. Clearly label each paint system with designated specification number, and within each system, label the product designated for first coat, and each additional coat. Submit 6 copies of all systems in one submittal, in loose-leaf binders. Provide two sets of standard color range, and when requested by the ENGINEER, provide 3 color chips 2 inches square of each final color selected. Also provide various color chips as may be requested by others for related work on the job.

B. Manufacturer's Application Instructions and Surface Preparation Recommendations - Submit manufacturer's instructions for use and reference at the job site.

C. Material Safety Data Sheets (MSDS) - Submit MSDS for all solvents, thinners and mineral spirits to be used for degreasing, surface preparation and thinning

of specified paint systems for review by the ENGINEER and approval by the paint manufacturer's representative. Applicable MSDS shall be kept on-site for the entire time such products are on-site.

D. Certificate - Submit manufacturer's certificate of compliance with the specifications and standards signed by a representative in the manufacturer's employ.

E. Samples

1. Provide painted surface areas at the job for approval of main color selections, or submit sample on 12-inch sample of substrate using required finish system at ENGINEER'S discretion.

2. Provide representative sample of sand to be used for non-skid surface.

1.6 Delivery, Handling and Storage

A. Deliver in labeled containers as specified above and store in a locked room accessible for inspection. Comply with fire and health regulations.

B. Provide adequate heat and forced mechanical ventilation for health, safety and drying requirements. Use explosion proof equipment. Provide face masks.

C. Protect adjacent surfaces with suitable masking and drop cloths as required. Remove cloths or waste from the project daily.

1.7 Safety and Health Requirements

A. Ventilation, electrical grounding, and care in handling coatings, paints, solvents and equipment are important safety precautions during coating and painting projects. CONTRACTOR shall conform with safety requirements set forth by regulatory agencies applicable to the construction industry and manufacturer's printed instructions and appropriate technical bulletins and manuals. The CONTRACTOR shall provide and require use of personal protective life saving equipment for persons working in or about the project site.

B. All ladders, scaffolding and rigging shall be designed for their intended uses. Ladders and scaffolding shall be erected where requested by ENGINEER to facilitate inspection and be moved by the CONTRACTOR to locations requested by the ENGINEER.

C. Where ventilation is used to control hazardous exposure, all equipment shall be explosion-proof. Ventilation shall reduce the concentration of air contaminant to the degree a hazard does not exist by educting air, vapors, etc. from the confined space. Air circulation and exhausting of solvent vapors shall be continued until coatings have fully cured. Forced air eduction during blast cleaning and coating application operations is mandatory.

D. The CONTRACTOR shall provide for the duration of the coating/painting operations, suitable personal breathing apparatus, protective clothing and safety gear for the use of the on-site ENGINEER representative. All such equipment shall be provided and maintained in excellent working order and shall be available at all times during painting and coating operations.

E. Blasting, spray and air hoses shall be grounded to prevent accumulation of charges of static electricity.

F. Illumination: Sparkproof artificial lighting shall be provided for all work in confined spaces. Light bulbs shall be guarded to prevent breakage. Lighting fixtures and flexible cords shall comply with the requirements of NFPA 70 "National Electric Code" for the atmosphere in which they will be used. Whenever required by the ENGINEER, the CONTRACTOR shall provide additional illumination and necessary supports to cover all areas to be inspected. The level of illumination for inspection purposes shall be determined by the ENGINEER.

G. The solvents used with specified protective coatings are explosive at low concentrations and are highly toxic. Because of toxicity, the maximum allowable concentration of vapor shall be kept below the maximum safe concentration for eight-hour exposure, plus L.E.L. must be strictly adhered to. If existing coatings or paints to be removed contain lead or other hazardous materials, all regulations related to safety of personnel and handling of such materials shall be strictly adhered to.

H. Coating and paint materials may be irritating to the skin and eyes. When handling and mixing coatings and paints, workmen shall wear gloves and eye shields.

I. During mixing and application of coatings and paints, all flames, welding and smoking shall be prohibited in the vicinity. Appropriate type fire extinguishers shall be provided by CONTRACTOR and kept at the jobsite during all operations.

J. Whenever the occupational noise exposure exceeds the maximum allowable sound levels, the CONTRACTOR shall provide and require the use of approved ear protective devices.

K. The CONTRACTOR shall comply with all applicable Oregon OSHA, EPA, and DEQ regulations relating to painting/coating preparation, application and all associated activities.

1.8 Quality Assurance

A. Quality assurance procedures and practices shall be utilized to monitor all phases of surface preparation, application and inspection throughout the duration of the project. Procedures or practices not specifically defined herein may be utilized provided they meet recognized and acceptable professional standards and are approved by the ENGINEER.

B. All materials furnished and all work performed under the Contract shall be subject to inspection by the ENGINEER. The CONTRACTOR shall be held strictly to the true intent of the Specifications in regard to quality of materials, workmanship, and diligent execution of the Contract.

C. Except as otherwise provided herein, the cost of inspection will be paid by the OWNER.

D. The ENGINEER will make, or have made, such tests as may be deemed necessary to assure the work is being accomplished in accordance with the requirements of the Contract. Unless otherwise specified, the cost of such testing will be borne by the OWNER. In the event such tests reveal non-compliance with the requirements of the Contract, the CONTRACTOR shall bear the cost of such corrective measures deemed necessary by the ENGINEER, as well as the cost of subsequent retesting. It is understood and agreed the making of tests shall not constitute an acceptance of any portion of the work, nor relieve the CONTRACTOR from compliance with the terms of the Contract.

E. The CONTRACTOR shall provide all instruments required for testing atmospheric conditions and shall during painting/coating operations perform all measurements in the company of the ENGINEER. As a minimum the CONTRACTOR shall measure and record temperature, relative humidity and dew point daily prior to beginning any painting/coating operations and again at mid-day. Records shall be maintained on forms approved by the ENGINEER.

F. Thickness of coatings and paint shall be checked with a non-destructive, magnetic type thickness gauge. An instrument such as a Tooke Gage shall be

used if a destructive tester is deemed necessary. Coating integrity of all coated surfaces shall be tested with an approved inspection device. All pinholes shall be marked, repaired in accordance with the manufacturer's printed recommendations and retested. No pinholes or other irregularities will be permitted in the final coating.

G. CONTRACTOR shall furnish, until final acceptance of coating and painting, inspection devices in good working condition for detection of holidays and measurement of dry-film thickness of coatings and paints. They shall also furnish U.S. Department of Commerce, National Bureau of Standards certified thickness calibration plates to test accuracy of thickness gauges. Dry film thickness (D.F.T.) gauges and holiday detectors shall be available at all times until final acceptance of application. Inspection devices shall be operated by, or in the presence of the ENGINEER with location and frequency basis determined by the ENGINEER. The ENGINEER is not precluded from furnishing his own inspection devices and rendering decisions based solely upon their tests.

H. Acceptable devices for ferrous metal surfaces include, but are not limited to Tinker-Rasor Models AP and AP-W holiday detectors and "Inspector" or "Positest" units for dry film thickness gauging. Inspection devices shall be operated in accordance with the manufacturer's instructions.

I. A warranty inspection will be conducted between the tenth and twelfth months following completion and acceptance of all coating and painting work. All defective work shall be repaired in strict accordance with this specification and to the satisfaction of the ENGINEER. The OWNER, the ENGINEER, the CONTRACTOR shall be present at this inspection.

1. The OWNER shall establish the date for the inspection and shall notify the CONTRACTOR at least 30 days in advance.

2. The entire interior coating systems, as installed by this contract, shall be visually inspected. If additional inspection is deemed necessary by the ENGINEER, such inspection shall be accomplished as directed in accordance with the applicable provisions of this section. All defective coating as well as damaged or rusting spots of the reservoir shall be satisfactorily repaired by and at the sole expense of the CONTRACTOR. All repaired areas shall then be electrically tested as specified in the above-mentioned section. The entire exterior paint system, as installed by this contract, shall be visually inspected. If additional inspection if deemed necessary by the ENGINEER, such inspection shall be accomplished as directed in accordance with the application provisions of this section, 1.7 Quality Assurance. All

defective, damaged or rusting areas shall be satisfactorily repaired by and at the sole expense of the CONTRACTOR.

3. The ENGINEER will prepare and deliver to the CONTRACTOR an inspection report covering the first anniversary inspection, setting forth the number and type of failures observed, the percentage of the surface area where failure has occurred, and the names of the persons making the inspection.

4. Upon completion of inspection and receipt of Inspection Report as noted herein, OWNER shall establish a date for CONTRACTOR to proceed with remedial work. Any delay on part of CONTRACTOR to meet schedule established by OWNER shall constitute breach of this Contract and OWNER may proceed to have defects remedied as outlined under General Provisions.

5. Any location where coating or paint has peeled, bubbled, or cracked and any location where rusting is evident shall be considered to be a failure of the system. The CONTRACTOR shall make repairs at all points where failures are observed by removing the deteriorated coating or paint, cleaning the surface, and recoating or repainting with the same system. If the area of failure exceeds 25 percent of the total coated or painted surface, the entire coating or paint system may be required to be removed and recoated or repainted in accordance with the original specification.

6. All costs for said warranty inspection and all costs for repair shall be borne by the CONTRACTOR and in figuring his bid, the CONTRACTOR shall include an appropriate amount for inspection, testing and repair as no additional allowance will be paid by the OWNER for said inspection and repair.

J. Notification to Public: The CONTRACTOR shall notify all adjoining property owners within 24 hours of any and all on-site surface preparation and/or painting activities.

K. The paint/coating manufacturer's representative shall make periodic site visits throughout the course of painting/coating preparation and application of the work. The paint/coating manufacturer's representative shall schedule all site visits with the ENGINEER and shall prepare and submit written reports to the ENGINEER directly following each site visit. This report shall identify the representative's observations relative to the quality of painting/coating work and shall address any conditions observed which have the potential to adversely impact the finished painting/coating system's integrity and

performance. Any such findings shall be immediately remedied by the CONTRACTOR. As a minimum, the paint manufacturer's representative shall:

1. Inspect typical shop and field steel preparation prior to primer applications.

2. Inspect finished primer applications prior to application of intermediate coats.

3. Inspect each intermediate coat prior to application of subsequent finish coats.

4. Inspect final coats and report to the ENGINEER an assessment of the paint system's suitability and acceptability for intended service.

The above-described service of the paint/coating manufacturer's representative shall be provided at no additional expense to the OWNER. The reports of the paint manufacturer's representative shall not preclude the ENGINEER from making independent assessments of the quality of work. The ENGINEER will make the final decision as to the acceptability of the paint/coating system.

L. Applicable environmental regulations for dust prevention shall be strictly enforced. Emissions from reservoir construction activities including abrasive blasting and painting shall be controlled to be within applicable environmental regulations.

Where a reservoir may be located in close proximity to existing residential commercial or industrial development, the CONTRACTOR shall conduct all operations so as to confine abrasive blasting debris and paint overspray to within the bounds of the site. The CONTRACTOR shall take all precautions necessary to prevent adverse off-site consequences of painting operations. Any complaints delivered to the CONTRACTOR. The CONTRACTOR shall immediately halt painting work and shall take whatever corrective action is required to mitigate any such problems. All costs associated with protection of off-site properties and/or correction of damage to property as a result of painting operations shall be borne directly by the CONTRACTOR at no additional expense to the Owner.

PART 2 PRODUCTS

2.1 Colors and Finishes

A. Paint systems, surface treatments, and finishes are indicated in the "schedules" of the contract documents or described herein. Prior to beginning work, the ENGINEER will furnish color schedule for surfaces to be painted. Vary undercoats slightly from color of next coat. Color schedule will consist of colors as selected by the OWNER and approved by the ENGINEER and from approved submittals, at the ENGINEER'S discretion.

B. Color Pigments - Pure, non-fading, applicable to the substrates and service indicated. Pigments shall be lead free.

C. Paint Coordination - Provide topcoats which are compatible with prime coats used or which are compatible with existing topcoats on existing facilities. Review other sections of these Specifications in which prime coats are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify the ENGINEER in writing of any anticipated problems using specified coating systems with substrates primed by others or on existing finishes.

2.2 Materials General

A. Provide the best quality grade of the various types of coatings as regularly manufactured by acceptable paint materials manufacturers. Materials not displaying the manufacturer's identification as a standard, best-grade product will not be acceptable.

B. Proprietary names used to designate colors or materials or equipment are not intended to imply that products of the named manufacturer's are required to the exclusion of equivalent products, materials, equipment and equal color ranges of other manufacturers.

C. Federal Specifications where used, establish the minimum acceptable quality for paint materials. Provide a written certification from the paint manufacturer that materials provided, meet or exceed these minimums.

D. Use only thinners approved by the paint manufacturer, and only within recommended limits.

2.3 Surface Preparation Materials

A. High pressure wash solutions shall consist of a 5% concentration of trisodium phosphate (TSP).

B. Abrasives used in blast cleaning operations shall be clean, well graded, non-metallic and free of contaminants which would interfere with adhesion of the coatings to the substrate material. Selection of abrasive size and type shall be based upon the type, grade and surface condition of the steel to be cleaned and on the finished surface to be produced for the subsequent paint system. Blast cleaning abrasives shall meet or exceed the following minimum criteria:

Description	**Criteria**
Hardness (Mohr Scale)	Angular
Shape	8
Specific Gravity	3.3
Bulk Density (1lbs/cu.ft.)	110
Free Silica (% by wt.)	0

Blast cleaning abrasive particle size shall be that which will produce a 2.0 mil (.002 inch) anchor profile on the substrate metal, or in accordance with recommendations of the manufacturers of the specified coating system to be applied, subject to approval by the ENGINEER.

Blast cleaning abrasives shall be copper slag as manufactured by Kleen Blast, or approved equal.

C. Surface preparation will be based upon comparison with: "Pictorial Surface Preparation Standards for Painting Steel Surfaces", SSPC-Vis 1, "Standard Method of Evaluating Degree of Rusting on Painted Surfaces", SSPC-Vis 2/ASTM-D610, ASTM Designation D2200, and as described below:

Anchor profile for prepared surfaces shall be measured by using a non-destructive instrument such as a Keane-Tator Surface Profile Comparator or Testex Press-O-Film System as provided by the CONTRACTOR. Temperature and dewpoint requirements noted in Section 3.4, paragraph L herein shall apply to all surface preparation operations, except low and high temperature limits shall be determined at the Pre-Job Conference.

2.4 Interior Wet Area Paint Systems

A. Interior paint systems for wet surfaces of the tank must have been approved by the National Sanitation Foundation (NSF) under Standard 61 for indirect additives. They shall conform to regulations and applicable requirements of

local, State and Federal air pollution regulatory agencies. Products containing perchloroethylene will not be permitted.

B. Interior paint systems shall consist of an organic zinc/epoxy system. Coating and sequences of application shall be as described below:

1. Prime coat for ceiling and down to the elevation of the overflow pipe shall be equal to Tnemec Series 91-H20 Hydro-Zinc Aromatic Urethane, Zinc-Rich primer at 2.5 to 3.5 mils D.F.T.

2. Prime coat for remainder of interior wet-well surfaces shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox Plus at 3.0-5.0 mils D.F.T. Color shall be "White".

3. Intermediate coat for all primed surfaces shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox at 4.0-6.0 mils D.F.T. All weld seams and pitted areas shall be back-rolled or brushed with intermediate coat. Color shall be "Beige".

4. Finish coat for all interior surfaces shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox at 4.0-6.0 mils D.F.T. Color shall be "White".

Finished system on ceiling and walls down to overflow shall be 10.5 to 15.5 mils D.F.T. minimum. All other interior surfaces below the overflow shall be 11.0 to 17.0 mils D.F.T. minimum.

Fast cure versions of the paint products specified above may be substituted upon approval from the ENGINEER.

2.5 Interior Dry Area Paint Systems

A. Interior paint systems for surfaces not in contact with potable water (dry areas) shall consist of an epoxy/epoxy system. Coating and sequences of application shall be as described below:

1. Prime coat for all spot-prepared surfaces in need of repair shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox Plus at 3.0-5.0 mils D.F.T. Color shall be "Beige".

2. Finish coat for all repaired surfaces shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox Plus at 5.0 to 7.0 mils D.F.T. Color shall be "White".

All interior non-wetted surfaces repaired shall be 8.0 to 12.0 mils D.F.T. minimum.

Fast cure versions of the paint products specified above may be substituted upon approval from the ENGINEER.

2.6 Exterior Paint Systems

A. Exterior paint systems shall consist of a moisture-cured high solids sealer/urethane system and conform to the regulations and applicable requirements of local, State and Federal air pollution regulatory agencies.

1. Exterior spot primer shall be equal to Tnemec Series 91-H20 Hydro-Zinc Aromatic Urethane, Zinc-Rich primer at 2.5 to 3.5 mils D.F.T.

2. Intermediate coat shall be equal to polyamide epoxy Tnemec Series 20 Pota-Pox at 3.0 to 5.0 mils. D.F.T. All weld seams and pitted areas shall be back-rolled or brushed with intermediate coat. Color shall be "Beige" (1255).

3. Finish coat shall be equal or similar to Tnemec 740 Endura-Shield UVX Polyfunctional Hybrid Urethane. D.F.T. shall be between 3.0 and 5.0 mils. Color shall be as selected by the OWNER. Confirm color with OWNER prior to ordering.

Finished coating system over existing exterior surface and appurtenances coating shall be 5.5 to 8.5 mils D.F.T. Finished coating system on spot primed areas shall be 8.5 to 13.5 mils D.F.T.

Compatible accelerators may be used as recommended by manufacturer and as approved by ENGINEER. All such accelerators must be produced by the same manufacturers as the paint products.

B. Non-Skid Surface

1. The non-skid surface shall consist of clean sand broadcasted over a wet coat of the finish coating specified herein. After coating/sand mixture has cured, non-skid surface area shall be top coated with the same finish coating. The non-skid surface shall be provided in all foot traffic areas on the reservoir roof, within the boundaries of the new handrail perimeter.

2. Sand for the non-skid surface shall be natural, clean sand, free of soil and other deleterious material, having hard, durable grains with 100%

passing the No. 4 sieve. Sand for the non-skid surfacing shall be approved by the ENGINEER prior to application.

C. All exposed or unprimed metal shall be protected with adequate surface preparation and prime coat to protect from wet weather prior to finish coat application.

2.7 Exterior Paint Systems for Existing Communications and Cellular Equipment

A. Painting work shall include existing communication and cellular equipment and the new welded attachments on the exterior of the reservoir. Photos, drawings and maps of locations of existing equipment have been included in the Supplementary Information for reference. Painting of proposed cellular equipment will be completed by others.

B. Cellular Equipment Supports and Mounting Hardware - Exterior paint for use on the cellular equipment supports shall be the same as described in paragraph 2.6 Exterior Paint Systems. Confirm color with OWNER prior to ordering.

C. Cellular Cables - Exterior paint for use on the cellular cables shall be the same as the finish coat described in paragraph A.3 of 2.6 Exterior Paint Systems. Confirm color with OWNER prior to ordering.

D. Cellular Antennas - Exterior paint for use on the cellular antennas shall be KRYLON Fusion for Plastic, as manufactured by Krylon Products Group Cleveland, OH 44115. Paint shall have less than 1% of metallic additives. Confirm color with OWNER prior to ordering.

2.8 Access Manway Gaskets and Hardware

A. Replace gaskets and hardware for access manway into wet-well from upper platform and reservoir vent from roof into wet-well.

B. Furnish and install ¾-inch x 4-inch long, 304 stainless steel (SSTL) bolts, nuts and washers. Regular hexagon-head bolts per ASTM F 593 and nuts per ASTM F 594.

C. Glass epoxy insulating washers shall be used to electrically isolate the SSTL bolts and washers from the carbon steel flange. Provide two insulating washers and two SSTL washers for each bolt. Insulating washers to be 3mm (1/8-inch) thick G-10 epoxy glass as manufactured by Accurate Plastics, Inc., or approved equal.

D. Gaskets shall be full-face gaskets which are NSF-61 approved, molded fluoroelastomer, 1/8-inch thickness, Garlock Stress Saver XP or approved equal.

E. Contractor to field verify all dimensions before ordering materials.

2.9 Moisture Control Equipment

Moisture control equipment shall be used on this project to complete the specified interior surface preparation and coating as specified in Part 3, Execution. Portable electric generators used for operating moisture control equipment shall be propane powered and shall be strategically located on the site to minimize the noise impact to the surrounding community. The CONTRACTOR's attention is directed to Section 01100, Special Provisions, regarding noise limitations.

PART 3 EXECUTION

3.1 Inspection

A. CONTRACTOR and ENGINEER shall jointly inspect surfaces to receive finishes and correct defects prior to application of coatings systems specified herein.

B. Painting over the work of other trades does not constitute acceptance of previous work and surfaces by ENGINEER.

3.2 Field Quality Control

A. Field Inspection - Notify ENGINEER when painting work is to be in progress in time for ENGINEER to check atmospheric conditions, surface preparation, mixing and thinning procedures, materials and thickness with wet film thickness gauge at frequent intervals and varied locations during the course of painting work.

B. Wet Film Thickness - CONTRACTOR shall use wet film thickness gauges to ensure proper application rate to prevent over-thick coatings and curing difficulties.

C. Additional Coats - Provide additional coats of paint when mil thickness specified has not been obtained by the above tests, at no additional cost to the OWNER.

D. The CONTRACTOR's coating and painting equipment shall be designed for application of materials specified and shall be maintained in first class working condition. Compressors shall have suitable traps and filters to remove water and oils from the air. Blotter tests shall be performed at each start-up period and as deemed necessary by the ENGINEER. CONTRACTOR's equipment shall be subject to approval of the ENGINEER.

E. A pre-job conference will be held with the OWNER, CONTRACTOR, ENGINEER, and paint manufacturers' representative to review minimum acceptable atmospheric conditions under which the specified paint systems can be applied.

F. Prevailing atmospheric conditions, within or outside the storage tank which are determined to be outside the established minimums shall be cause to discontinue paint application operations.

G. Moisture control equipment shall be employed to maintain conditions within the tank interior which allow extended blasting and painting schedules.

3.3 Surface Preparation

A. Unless specified otherwise herein, all surface preparation, coating and paint application shall conform to applicable standards of the Steel Structures Painting Council (SSPC), The Painting and Decorating Council of America (PDCA), the American Water Works Association, and the manufacturer's printed instruction. All painting work shall be conducted in accordance with "Good Painting Practices" as published by SSPC, and all workmanship shall be "excellent quality" as described by the PDCA.

B. All work shall be performed by skilled craftsmen qualified to perform the required work in a manner comparable with the best standards of practice. Continuity of personnel shall be maintained and transfers of key personnel shall be coordinated with the ENGINEER.

C. The CONTRACTOR shall provide a supervisor to be at the work site during surface preparation, paint coatings application and disinfection operations. The supervisor shall have the authority to sign change orders, coordinate work and make other decisions pertaining to the fulfillment of their contract.

D. The latest revision of the following surface preparation specifications of the Steel Structures Painting Council shall form a part of this Specification:

1. Solvent Cleaning (SSPC-SP1): Removal of oil, grease, soil and other contaminants by use of solvents, emulsions, cleaning compounds, steam

cleaning or similar materials and methods, which involve a solvent or cleaning action.

2. Hand Tool Cleaning (SSPC-SP2): Removal of loose rust, loose mill scale and other detrimental foreign matter present to degree specified by hand chipping, scraping, sanding and wire brushing.

3. Power Tool Cleaning (SSPC-SP3): Removal of loose rust, loose mill scale and other detrimental foreign matter present to degree specified by power wire brushing, power impact tools or power sanders.

4. Commercial Blast Cleaning (SSPC-SP6): Blast cleaning until at least two thirds of the surface area is free of all visible residue.

5. Brush-off Blast Cleaning (SSPC-SP7): Blast cleaning to remove loose rust, loose mill scale, and other detrimental foreign matter present to the degree specified.

6. Near-White Blast Cleaning (SSPC-SP10): Blast cleaning to near-white metal cleanliness, until at least ninety-five percent of the surface area is free of all visible residues, and equivalent to white metal blast cleaning.

7. Power Tool Cleaning to Bare Metal (SSPC-SP11): Power tool cleaning to produce a bare metal surface and to retain or produce a surface profile.

8. High- and Ultra High- Pressure Water Jetting (SSPC-SP12): Water jetting at high- or ultra high-pressure to prepare a surface for recoating using pressure above 10,000 psi.

9. Industrial Blast Cleaning (SSPC-SP14): Blast cleaning to remove all visible oil, grease, dust and dirt, when viewed without magnification.

E. Slag and weld metal accumulation and spatters not previously removed by the Fabricator, Erector or Installer shall be removed by chipping and grinding. All sharp edges shall be peened, ground or otherwise blunted.

F. Blast cleaning from rolling scaffolds shall only be performed within confines of interior perimeter of scaffold. Reaching beyond limits of perimeter will be allowed only if blast nozzle is maintained in a position which will produce a profile acceptable to ENGINEER.

G. The CONTRACTOR shall keep the area of work in a clean condition and shall not permit blasting materials to accumulate as to constitute a nuisance or

hazard to the prosecution of the work or the operation of the existing facilities. Spent abrasives and other debris shall be removed at the CONTRACTOR's expense as directed by the ENGINEER. If waste is determined to be hazardous, disposal by CONTRACTOR shall meet requirements of all regulatory agencies for handling and disposing of such wastes.

H. Blast cleaned surfaces shall be cleaned prior to application of specified coatings or paints via a combination of blowing with clean dry air, brushing/brooming and/or vacuuming as directed by the ENGINEER. Air hose for blowing shall be at least 1/2" in diameter and shall be equipped with a shut-off device.

I. All welds, when required, shall be neutralized with a suitable chemical compatible with the specified coating or paint materials.

J. Water blast cleaning (hydroblasting) shall be used only when and as directed by ENGINEER. Pressures shall be those determined by ENGINEER to effectively perform removal of loose, peeling/flaking paint of coating or other detrimental surface contaminants.

K. Any surfaces not coated/painted the same day they are prepared to receive specified paint systems shall be re-prepared prior to coating/painting, unless ENGINEER approved moisture control equipment is used by CONTRACTOR to maintain conditions that allow extended blasting schedules prior to application of prime coats.

L. Surface Preparation, Interior Surfaces

For the purpose of this project, interior surfaces shall include all surfaces which have contact with the stored fluid, including reservoir ceiling, shell, interior of center column and exterior of all pipes located within the center column, ladders, structural supports and any other interior surface not specifically excluded by these specifications to receive the specified paint system.

All interior surfaces of the reservoir and associated interior structures shall be blast cleaned to a near-white finish (SSPC-SP10) designation. The definition of near-white blast cleaning and the appearance of the completed surface shall be as described in the Steel Structures Painting Manual, "Systems and Specifications", Volume 2, latest edition. In addition, SSPC-VIS 1 or other approved visual standard of surface preparation as described elsewhere in these specifications shall be used to further define the completeness and compliance with the above referenced surface preparation standard.

Anchor profile shall be measured as described elsewhere in these specifications.

Following blast cleaning and prior to painting, the following additional operations shall be performed:

1. The ENGINEER and CONTRACTOR will perform an inspection of the blasted substrate metal for identification of areas with significant pitting of the substrate metal and any surface deficiencies. Pitting of the substrate metal to a depth greater than 0.125" (1/8 inch) shall be ground out with a suitable grinding tool and filled with weld filler materials so that the deposited weld filler material forms a convex surface over the base metal. This convex surface shall then be ground flush to the base metal prior to application of the prime coat. Surface deficiencies identified shall be repaired to the satisfaction of the ENGINEER.

2. The CONTRACTOR shall remove spent abrasives and existing coating waste material from all blasted surfaces. This shall be accomplished by blowing off all blasted surfaces with clean, dry air and vacuum cleaning or blooming/sweeping of all waste material.

3. The CONTRACTOR shall remove or cause to be removed all traces of rust bloom or deposits of oil, grease, or other contaminants which become visible prior to application of the prime coat.

M. Surface Preparation, Exterior Surfaces

For the purpose of this project, exterior surface preparation will be limited to areas where steel surfaces are modified as identified in Section 05500 and in order to remove existing paint from exterior ladder fall prevention system rail. Surface preparation shall be by power tool cleaning (SSPC - SP3) and hand tool cleaning (SSPC - SP2). Any damage to protective zinc coatings to be repaired according to Section 05500.

All exterior reservoir surfaces shall be hydroblasted with a 5% TSP solution and pressurizing equipment which complies with the following requirements subject to approval by ENGINEER.

1. Hydroblasting equipment shall generate 3000 pounds per square inch (PSI) pressure at a flow rate of 3.5 gallons per minute (GPM).

2. Hydroblasting nozzle manufacture and geometry shall provide a rotating nozzle which directs the high-pressure spray at a 90 degree angle to the axis of the pressure wand.

Surface preparation by hydro blasting shall remove all but the most tightly adherent paint. Acceptable surface preparation by hydroblasting shall be determined by hand tool cleaning of any adherent topcoat paint. Topcoat paint which cannot be removed by hand tool cleaning shall be considered acceptable to receive the new paint systems specified herein.

Following hydro blast cleaning and prior to painting, the additional operation described in Section 3.3, Paragraph L, parts 1 through 3 shall be performed as required, and any surface deficiencies will be repaired by the CONTRACTOR prior to application of a prime coat.

N. Surface Preparation, Existing Cellular Equipment

1. Cellular Equipment Supports and Mounting Hardware – Surface preparation for the existing cellular equipment supports and hardware shall be the same as described in paragraph 3.3.M Surface Preparation, Exterior Surfaces.

2. Cellular Cables - Surface preparation for the existing cellular cables shall be the same as described in paragraph 3.3.M Surface Preparation, Exterior Surfaces.

3. Cellular Antennas – High pressure hydroblasting shall not be directed at the antennas. CONTRACTOR shall take adequate precautions necessary to prevent damage to cellular antennas when performing surface preparation. Light cleaning, light hydroblasting, or other methods may be used for existing antenna surface preparation, as approved by the ENGINEER.

O. Humidity and Temperature Control

1. General -- Humidity and temperature control, when provided for interior spaces, shall be provided using appropriate specialized equipment as provided by Moisture Control Services - Munters Corporation, 16 Hunt Road, Amesbury, MA 01913-9926, or approved equal.

2. Dehumidification Equipment -- Dehumidification equipment shall be used to control the environment in the space 24 hours a day during blast

cleaning, coating and coating cure unless otherwise approved by ENGINEER. Equipment shall conform to the following requirements:

a. The dehumidifier shall be a solid desiccant design having a single rotary desiccant bed capable of continuous operation with fully automatic operation. No liquid desiccant, granular or loose lithium chloride drying systems shall be accepted.

b. Dehumidification equipment shall continuously deliver air with a maximum relative humidity of 11% sufficient to supply the space with two complete air changes per hour.

c. Dehumidification equipment shall supply sufficient dry air to assure that the air adjacent to the surfaces to be abrasive blasted or coated shall not exceed 35% relative humidity at any time during the blasting, coating or curing cycle.

d. Dehumidification equipment shall be capable of depressing the dew point in the space 10 degrees F below ambient air temperature within twenty minutes.

3. Heating Equipment -- Auxiliary heaters or chillers may be necessary to maintain the surface temperature at a level acceptable to the coating manufacturer's application parameters. This auxiliary equipment must be approved for use by the manufacturer of the dehumidification equipment and shall meet the following requirements:

a. Heaters and coolers shall be installed in the process air supply duct between the dehumidifier and the space as close to the space as possible.

b. Only electric or indirect gas fired auxiliary heaters shall be used. No direct fired space heaters will be allowed during the blasting, coating or curing phase.

c. Heaters shall be equipped with controls that automatically turn the heater off if the airflow is interrupted or the internal temperature of the heater exceeds its design temperature or that of the supply duct.

d. Air heaters or refrigeration equipment are not acceptable as a substitute for dehumidification.

4. The space to be controlled shall be sealed off as well as possible allowing air to escape at the bottom of the space away from the point

where the dehumidified air is being introduced. Maintain a slight positive pressure in the space unless the dust from the blasting operation is hazardous.

5. If is necessary to filter the air escaping the space, the filtration system must be designed to match the air volume of the dehumidification equipment in such a way the will not interfere with the dehumidification equipment's capacity to control the space as described herein. Do not recirculate the air from the space or from filtration equipment back through the dehumidifier when coating or solvent vapors are present.

3.4 Application

A. Thickness - Apply coatings in strict conformance with the manufacturer's application instructions. Apply each coat at the rate specified by the manufacturer to achieve the dry mil thickness specified. If material must be diluted for application by spray gun, build up more coating to achieve the same thickness as undiluted material. Correct apparent deficiency of film thickness by the application of an additional coat.

B. Coatings application shall conform to the requirements of the Steel Structures Painting Council Paint Application Specification SSPC-PA1, latest revision, for "Shop, Field and Maintenance Painting" and the manufacturer of the coating and paint materials printed literature and as specified herein.

C. Each application of coatings shall be applied evenly, free of brush marks, sags, runs and no evidence of poor workmanship. Care should be exercised to avoid lapping on glass or hardware. Coatings shall be sharply cut to lines. Finished surfaces shall be free from defects or blemishes.

D. Protective coverings or drop cloths shall be used to protect floors, fixtures, equipment, prepared surface and applied coatings. Personnel entering reservoir or walking on exterior roof of reservoir shall take precautions to prevent damage or contamination of coated surfaces. Care shall be exercised to prevent coatings from being spattered onto surfaces which are not to be coated. Surfaces from which such material cannot be removed satisfactorily shall be repainted as required to produce a finish satisfactory to the ENGINEER.

E. All material shall be applied as specified herein.

F. All welds, laps, edges, inside angles, and irregular surfaces shall receive a brush coat of the specified product prior to application of each complete coat.

Paint may be applied as a spray stripe coat and back brushed by hand. Coatings shall be brushed in multiple directions to insure penetration and coverage, as directed by the ENGINEER.

G. At conclusion of each day's cleaning and coating operations, a 6" wide strip of cleaned substrate shall remain uncoated to facilitate locating point of origin for successive day's cleaning operations.

H. All attachments, accessories, and appurtenances shall be prepared and coated in the same manner.

I. Ventilation - Adequately ventilate enclosed rooms and spaces during painting and curing periods.

J. Curing Time - Do not apply next coat of paint until each coat is dry. Test non-metallic surfaces with moisture meter. The manufacturer's recommended curing time shall mean an interval under normal condition to be increased to allow for adverse weather or curing conditions. Paint manufacturer's representative shall verify by cure testing, complete cure of coatings systems used for immersion service.

K. Thinning - Thin paint only when required by abnormal conditions, in accordance with the manufacturer's directions. Use manufacturer's thinner or that recommended by the paint manufacturer with knowledge and review of the ENGINEER.

L. No coating shall be applied: when the temperature of the surface to be coated is below 55 degrees F. for epoxy coatings (exceptions may be approved by ENGINEER with concurrence from manufacturer if material is “low temperature” type), below 40 degrees F. for organic urethane zinc or other urethane finishes, or above 125 degrees F.; to wet or damp surfaces or in rain, snow, fog or mist; when the temperature is less than 5 degrees F. above the dewpoint; when it is expected the air temperature will drop below 55 degrees F. for epoxy coating or 40 degrees F. for organic urethane zinc or other urethane finishes, or less than 5 degrees F. above the dewpoint within eight hours after application of coating. Dewpoint shall be measured by use of an instrument such as a Sling Psychrometer in conjunction with U.S. Department of Commerce Weather Bureau Psychometric Tables or other instrument acceptable to the ENGINEER.

If above conditions are prevalent, coating or paint application shall be delayed or postponed until conditions are favorable. The day's coating or paint application shall be completed in time to permit the film sufficient drying time prior to the onset of adverse atmospheric conditions.

M. Interior coating application shall be by airless spray application except where back rolling or striping.

N. Exterior paint application shall be by roller only. Brush may be used to repair paint in area of steel modification. Spray application will not be allowed.

O. Non-skid surface shall be applied after full prime coat has cured. Area of non-skid surface shall be masked off as directed by the ENGINEER. Apply a 3.0 mil coat of finish coating within masked area. Broadcast masked area with sand as specified herein while finish coating is still wet. After coating/sand mixture has cured, remove masking and apply finish coat over sand as specified herein.

3.5 Post Fabrication and Erection Cut-Outs

Special cut-outs within a fabricated steel panel for the temporary purpose of moving equipment into, out of, or off of the steel tank structure will not be allowed.

3.6 Cleanup

A. Upon completion of the work, all staging, scaffolding and containers shall be removed from the site or destroyed in a manner approved by the appropriate regulatory agencies. Coating or paint spots upon adjacent surfaces shall be removed and the entire jobsite cleaned. All damage to surfaces resulting from the work of this Section shall be cleaned, repaired or refinished to the complete satisfaction of the ENGINEER at no cost to the OWNER.

B. Disinfect reservoir interior according to Section 01651. Allow a minimum of seven days at 70°F curing after application of final coat to tank interior before flushing, sterilizing or filling with water. CONTRACTOR shall utilize a recording or high/low indicating thermometer and paint manufacturer's reference charts to determine actual cure of products. Prior to disinfection, CONTRACTOR shall demonstrate complete curing to ENGINEER and paint manufacturer's representative. CONTRACTOR shall use forced ventilation during approved work days and hours identified elsewhere in these Specifications to assist curing.

3.7 Collection, Monitoring and Disposal of Regulated Wastes

A. Unless otherwise indicated on the Plans or in the Specifications, all abrasive blasting material and byproducts, paints, solvents and containers and any other discarded materials or equipment shall remain the property of the CONTRACTOR and shall be disposed of in a manner compliant with applicable Federal, State and local laws and regulations governing disposal of all wastes generated by the CONTRACTOR in the prosecution of this contract.

END OF SECTION

SECTION 11000

EQUIPMENT, GENERAL

PART 1 GENERAL

1.1 Description

A. The CONTRACTOR shall provide all tools, supplies, materials, equipment and all labor necessary for the furnishing, construction, installation, testing and operation of equipment and appurtenant work, complete and operable, all in accordance with the requirements of the Contract Documents.

B. The provisions of this Section shall apply to all equipment specified and where referred to, except where otherwise specified or shown.

1.2 Reference Specifications, Codes and Standards

A. All equipment, products and their installation shall be in accordance with the following standards, as applicable and as specified in each section of these specifications:

1. American Society for Testing and Materials (ASTM)
2. American Public Health Association (APHA)
3. American National Standards Institute (ANSI)
4. American Society of Mechanical Engineers (ASME)
5. American Water Works Association (AWWA)
6. American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
7. American Welding Society (AWS)
8. National Fire Protection Association (NFPA)
9. Federal Specifications (FS)
10. National Electrical Manufacturers Association (NEMA)

11. Manufacturer's published recommendations and specifications

12. Oregon Occupational Safety and Health Division (OR-OSHA)

B. The following standards have been referred to in this section of the specifications.

ANSI B16.1	Cast Iron Pipe Flanges and Flanged Fittings Class 25, 125, 250 and 800
ANSI B16.5	Pipe Flanges and Flanged Fittings, Steel, Nickel Alloy and Other Special Alloys
ANSI B46.1	Surface Texture
ANSI S12.6	Method for the Measurement of the Real-Ear Attenuation of Hearing Protectors
ANSI/ASME B1.20.1	General Purpose Pipe Threads (Inch)
ANSI/ASME B31.1	Power Piping
ANSI/AWWA D100	Welded Steel Tanks for Water Storage
AWWA C206	Field Welding of Steel Water Pipe
ASTM A48	Specification for Gray Iron Castings
ASTM A108	Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality

1.3 Submittals

A. The CONTRACTOR shall furnish complete shop drawings for all equipment specified in the various sections, together with all piping, valves and controls for review by the ENGINEER in accordance with Section 01300-Submittals.

B. The CONTRACTOR shall supply one complete set of special tools where necessary for the assembly, adjustment and dismantling of the equipment. Tools shall be suitable for professional work and manufactured by a recognized supplier of professional tools such as Snap On, Crescent, Stanley, or equal.

C. The CONTRACTOR shall obtain and submit from the manufacturer a list of suggested spare parts for each piece of equipment. CONTRACTOR shall also

furnish the name, address and telephone number of the nearest distributor for each piece of equipment. Spare parts shall be supplied by the CONTRACTOR when indicated in the appropriate equipment specification sections.

D. Where required by the individual equipment sections, the CONTRACTOR shall submit to the ENGINEER a torsional and lateral vibration analysis of the equipment, in accordance with Section 01300-Submittals. Equipment shall be designed and constructed such that the natural frequency of the drive train is avoided by a minimum of 25 percent throughout the entire operating range. The analysis shall be performed by a specialist experienced in this type of work and approved by the ENGINEER. The specialist or their assigned representative who shall similarly be experienced in this type of work and who shall be approved by the ENGINEER shall visit the project site during startup and testing of the equipment to analyze and measure the amount of equipment vibration, certify that the operating frequency avoids the natural frequency by 25 percent, and make a written recommendation for keeping the vibration at a safe limit.

1.4 Quality Assurance

A. The CONTRACTOR shall demonstrate that all equipment meets the specified performance requirements. CONTRACTOR shall provide the services of an experienced, competent and authorized service representative of the manufacturer of each item of major equipment, who shall visit the project site to perform the following tasks.

1. Assist the CONTRACTOR in the installation of the equipment.

2. Inspect, check, adjust if necessary and approve the equipment installation.

3. Start-up and field-test the equipment for proper operation, efficiency and capacity.

4. Perform necessary field adjustments during the test period until the equipment installation and operation are satisfactory to the ENGINEER.

5. Instruct the OWNER's personnel in the operation and maintenance of the equipment. Instruction shall include step-by-step trouble shooting procedures with all necessary test equipment.

B. The costs of all inspection, startup, testing, adjustment and instruction work performed by said factory-trained representatives shall be borne by the

CONTRACTOR. When available, the OWNER's operating personnel will provide assistance in the field testing. See Section 01655, "Testing, Training and System Start-up", for detailed project testing and start-up requirements.

C. Tolerances and clearances shall be as shown on the shop drawings and shall be closely adhered to. Machine work shall in all cases be of high-grade workmanship and finish, with due consideration to the special nature or function of the parts.

D. The type of finish shall be the most suitable for the application and shall be in accordance with ANSI B46.1.

E. Unless otherwise noted, all equipment furnished shall have a record from the same manufacturer of at least 3 years successful, trouble-free operation in similar applications

PART 2 PRODUCTS

2.1 General Requirements

A. Unless otherwise specified or shown, all welding shall be by the metal arc method or gas-shielded arc method as described in the American Welding Society's "Welding Handbook" as supplemented by other pertinent standards of the AWS. Qualification of welders shall be in accordance with the AWS Standards governing same.

In assembly and during welding, the component parts shall be adequately clamped, supported and restrained to minimize distortion and for control of dimensions. Weld reinforcement shall be as specified by the AWS code. Upon completion of welding, all weld splatter, flux, slag and burrs left by attachments shall be removed. Welds shall be repaired to produce a workmanlike appearance with uniform weld contours and dimensions. All sharp corners of material to be painted or coated shall be ground to a minimum of 1/32-inch on the flat.

B. All equipment shall be painted or coated in accordance with Section 09800 – Protective Coatings, unless otherwise indicated. Non-ferrous metal and corrosion-resisting steel surfaces shall be coated with grease or lubricating oil. Coated surfaces shall be protected from abrasion or other damage during handling, testing, storing, assembly and shipping.

C. All equipment shall be boxed, crated, or otherwise protected from damage and moisture during shipment, handling and storage. All equipment shall be protected from exposure to corrosion and shall be kept thoroughly dry at all times.

D. Each item of equipment shipped shall have a legible identifying mark corresponding to the equipment number shown or specified for the particular item.

E. Shop fabrication shall be performed in accordance with the Specifications and the ENGINEER-approved shop drawings.

2.2 Equipment Supports and Foundations

A. All equipment supports, anchors and restraint shall be adequately designed for static, dynamic, wind and seismic loads. The design horizontal seismic force shall be the greater of that noted in the general structural notes or as required by the governing building code (10 percent of gravity minimum).

B. Equipment foundations shall be as per manufacturer's written recommendations. All equipment shall be mounted as shown on the manufacturer's standard details, unless otherwise shown or specified.

C. Shop drawings submitted to the ENGINEER for review in accordance with the requirements of Section 01300-Submittals shall include calculations showing equipment anchorage forces and the capacities of the anchorage elements to be provided by the CONTRACTOR.

2.3 Pipe Hangers, Supports and Guides

All pipe connections to equipment shall be supported, anchored and guided to avoid stresses and loads on equipment flanges and equipment.

2.4 Flanges and Pipe Threads

All flanges on equipment and appurtenances provided under this section shall conform to ANSI B16.1, Class 125 or B16.5, Class 150, unless otherwise shown. All pipe threads shall be in accordance with ANSI/ASME B1.20.1 and with requirements of Section 15000 – Piping, General.

2.5 Couplings

A. Flexible couplings shall be provided between the driver and the driven equipment to accommodate slight angular misalignment, parallel misalignment, end float and to cushion shock loads. Where required for

vertical shafts, three-piece spacer couplings or universal type couplings for extended shafts shall be installed.

B. The CONTRACTOR shall have the equipment manufacturer select or recommend the size and type of coupling required to suit each specific application.

C. Taper-lock bushings may be used to provide for easy installation and removal on shafts of various diameters.

D. Where universal type couplings are shown, they shall be equipped with grease fittings.

PART 3 EXECUTION

3.1 Couplings

The CONTRACTOR shall have the equipment manufacturer select or recommend the size and type of coupling required to suit each specific application. Installation shall be per equipment manufacturer's printed recommendations.

3.2 Packaged Equipment

A. When any system is furnished as pre-packaged equipment, the CONTRACTOR shall coordinate all necessary space and structural requirements, clearances, utility connections, signals and outputs with his subcontractors.

B. If the packaged system has any additional features other than specified, the CONTRACTOR shall coordinate such features with the ENGINEER and furnish all material and labor necessary for a complete installation, as required by the manufacturer, at no additional cost to the OWNER.

END OF SECTION

SECTION 11900

FALL PREVENTION SYSTEM

PART 1 GENERAL

1.1 Related Documents

The requirements of the plans and all other sections and provisions of the specifications are applicable to the work to be performed under this section.

1.2 Description of Work

The safety equipment work includes the provision and installation of fall prevention systems at each fixed ladder as shown on the drawings and as required to meet all safety and occupational code requirements.

1.3 Quality Assurance

A. Comply with requirements of OR-OSHA regulations and all applicable codes and standards. Install according to manufacturer's instructions.

B. Provide all system components from a single manufacturer that will assure compatibility of all components.

PART 2 PRODUCTS

2.1 Fall Prevention System

A. Fall prevention system shall be a flexible cable ladder system that includes cable, trolley, safety belt or harness and all mounting, installation and alignment hardware and other accessories as may be necessary to provide a complete and operational system.

B. Fall prevention system to be LAD-SAF by DBI-SALA (Capital Safety) without exception to match City's existing systems.

A pivot dismount section or removable extension shall be provided at locations shown on the plans. The pivot dismount section shall allow a person to step off of the ladder and onto the adjacent platform prior to unclipping from the cable. Provide removable ladder extensions where openings include access hatches. The removable extensions shall be designed to allow a lanyard to be attached to the extension for mounting and dismounting of the ladder and connection to the cable safety system.

Cable systems to be installed in reservoir wet-well interior, including fall prevention cables, fasteners, extensions, and appurtenances, shall be type 304 stainless steel. NSF-61 certified rubber bushings shall be provided at all ladder rung connections to prevent damage to ladder coatings.

Cable systems to be installed in reservoir dry areas, including fall prevention cables, fasteners, extensions, and appurtenances, shall be type 304 or 316 stainless steel. Neoprene rubber bushing shall be provided at all ladder rung connections to prevent damage to coatings.

PART 3 EXECUTION

3.1 Installation

Install fall prevention system according to manufacturer's instructions. Provide at least two safety harness assemblies and trolley sleeves. Harness shall be DBI Sala Exofit Vest Style Harness (1108525), size as requested by OWNER.

SECTION 16010

GENERAL PROVISIONS

PART 1 GENERAL

1.1 Description of Work

A. The work consists of furnishing all labor, materials, services, tools and other equipment necessary for the construction, installation, connection and testing of all electrical work for this project as shown on the drawings or specified herein.

B. This project includes the complete electrical installation for reservoir security and obstruction lighting.

1.2 Intent of Drawings and Specifications

A. Riser and other diagrams are schematic only and shall not be used for obtaining quantities.

B. The electrical drawings do not show complete details of the site conditions. The Contractor shall check actual conditions.

1.3 Coordination of Work

A. The Contractor shall plan his work in coordination with the City Operations.

B. The Contractor shall field verify all dimensions of equipment to be installed or provided by others or by this contract so that correct clearances and connections may be made between the work installed by the Contractor and equipment installed or provided by others.

C. The Contractor shall arrange all conduit runs so that they do not interfere with duct work, structural members, equipment access openings, etc.

D. All working measurements shall be taken from the sites, checked with those shown on the drawings, and if they conflict, reported to the Engineer at once, and before proceeding with the work. Should the Contractor fail to comply with this procedure, he shall alter his work at his own expense as directed by the Engineer.

E. No extra payments will be allowed where obstructions in the work of

other trades, or work under this contract requires offsets to conduit runs.

F. The Contractor is responsible for all alterations in the work to accommodate equipment differing in dimensions or other characteristics from that shown or specified.

1.4 Supervision

The Contractor shall maintain adequate supervision of the work and shall have a responsible person in charge at the site during all times that work under this contract is in progress, or when necessary for coordination with other work.

1.5 Codes

Work shall conform to the National Electrical Code, State codes, and other applicable codes, even though not specifically mentioned for each item. These shall be regarded as the minimum standard of quality for materials and workmanship.

1.6 Workmanship

A. All work shall be performed by personnel skilled in the particular trade. Workmanship shall conform to the standards of the NEC.

B. The Engineer shall be the sole judge as to whether or not the finished work is satisfactory; and if in his judgement any material or equipment has not been properly installed or finished, the Contractor shall replace the material or equipment whenever required, and reinstall it in a manner entirely satisfactory to the Engineer without any increase in cost to the Owner.

1.7 Permits, Fees and Service Charges

The Contractor shall obtain all permits and pay all fees, including any line extension fees from any utility company.

1.8 Contractor's Record Drawings

The Contractor shall maintain a neatly marked set of record drawings. In addition, the locations of panels, field mounted instruments and panels, terminal boxes, junction boxes and any other materials included in this contract shall be shown. Drawings shall be kept current with the work as it progresses and shall be subject to inspection by the Engineer at any time.

PART 2 PRODUCTS

2.1 Materials

See subsequent electrical sections and the drawings for specified materials.

2.2 Portable or Detachable Parts

A. The Contractor shall retain in his possession and shall be responsible for all portable and detachable parts or portions of installations such as fuses, key locks, adaptors, blocking chips, and inserts until completion of his work.

B. These parts shall be delivered to the Engineer and an itemized receipt obtained. This receipt, together with 2 copies of the final inspection certificate, shall be attached to the Contractor's request for final payment.

C. All equipment shall be demonstrated to operate in accordance with the requirements of this specification and the manufacturer's recommendations.

PART 3 EXECUTION

3.1 Support Backing

Provide any necessary backing required to properly support all fixtures and equipment installed under this contract.

3.2 Cutting, Patching and Framing

A. The Contractor shall determine in advance the locations and sizes of all sleeves, chases, and openings necessary for the proper installation of his work.

B. Whenever practical, inserts or sleeves shall be installed prior to covering work. Cutting and patching shall be held to a minimum. All required holes in concrete construction shall be made with a core drill and patched with non-shrink grout.

C. Cutting, fitting, repairing and finishing of carpentry work, metal work, or concrete work, and the like, which may be required for this work shall be done by craftsmen skilled in their respective trades. When cutting is required, it shall be done in such a manner as not to weaken walls, partitions, or floors; and holes required to be cut in floors must be drilled without breaking out around the holes.

3.3 Tests

A. The Contractor shall furnish all labor, material, instruments and tools to make all connections for testing of the electrical and instrumentation installation. All equipment shall be demonstrated as operating properly prior to the acceptance of the work. All protective devices shall be operative during testing of equipment. The tests shall be made under the supervision of the Engineer. All deficiencies or unsatisfactory conditions as determined by the Engineer or inspecting authorities shall be corrected by the Contractor in a satisfactory manner at his own expense.

B. After visual inspection of joints and connections and the application of tape and other insulating materials, all sections of the entire wiring system shall be thoroughly tested for shorts and grounds. A log of results for each circuit shall be kept by the Contractor and presented to the Engineer.

C. A phase rotation check shall be made to demonstrate that all power receptacles, service feeders, and main power feeders have the same A-B-C phase rotation and ground relationships.

D. Equipment shall be tested by operating all electric motors, relays, controls, switches, heaters, etc. sufficiently to demonstrate proper installation and electrical connections. Control and emergency conditions shall be artificially simulated where necessary for complete system or subsystem test.

E. Insulation resistance measurements of each circuit shall be made with loads connected and contactors, if any, blocked closed to give complete circuits. Insulation resistance of complete circuit shall be measured from the circuit breaker load terminals with the breaker open. A log of complete results shall be prepared by the Contractor and presented to the Engineer. Values of resistance shall be 10 megaohms or greater.

END OF SECTION

SECTION 16100

BASIC MATERIALS AND METHODS

PART 1 GENERAL

1.1 Description of Work

The work consists of furnishing all labor, materials and equipment required for electrical work shown on the drawings and as further described in these specifications.

1.2 Regulations and Permits

A. The Contractor shall comply with all applicable codes, ordinances, and regulations, including the National Electrical Code, National Electrical Safety Codes, and the State of Oregon.

B. The Contractor shall obtain a Certificate of Electrical Inspection from the local inspecting authority and submit to the owner upon completion of the project.

1.3 Excavation and Backfill

A. Perform all necessary excavation and backfilling for buried conduits and conductors as specified.

B. No backfilling shall be done until all direct burial cables, conduits and penetrations to be covered have been inspected and approved.

PART 2 PRODUCTS

2.1 Quality of Materials

All contract materials shall be new, of proven quality, and without imperfections or blemishes. All material not specifically detailed in this specification required to accomplish the completion of this contract shall be of compatible quality to the item specified and be approved by the Engineer. All materials shall be products of manufacturers regularly engaged in production of such equipment and shall be of the manufacturer's latest design. Where 2 or more units of the same classes of equipment are required, these units shall be of the same manufacture. All material and equipment shall be per NEMA, ANSI, IEEE or ICEA Standards as applicable, except as modified by these specifications. All material shall be UL labeled as applicable.

2.2 Raceways

A. All raceways shall be UL approved for the application.

B. Rigid steel conduit -- Provide zinc-coated rigid steel conduit conforming to Federal Specification WW-C-581.

C. Flexible metallic conduit -- Provide liquid tight flexible conduit, zinc-coated steel core, extruded gray PVC cover, UL approved, Sealtite type "UA" or Liquatite type "LA", or equal. Where permitted by local inspection authority, sizes larger than 3-inch shall be Sealtite type "EF", or Liquatite type "LT", or equal.

D. Rigid PVC conduit -- Provide rigid polyvinyl chloride (PVC) conduit, schedule 40, UL listed for concrete encased and direct burial underground. Rigid PVC conduit, including couplings, elbows and nipples, shall conform to the requirements of the latest edition of Federal Specification WW-C-1094, and NEC.

2.3 Conduit Fittings

Provide conduit fittings as follows unless otherwise noted or detailed. Catalog numbers shown are RACO//Appleton Electric Company unless otherwise noted. Similar products of other manufacturers are equally acceptable.

Rigid Conduit Insulating Bushings	Series 1400//Series BBU
Rigid Conduit Set Screw Fittings	3010-3022, 3102-3116// Series SRNTC and SNTCC
Flexible Metallic Conduit Fittings	Pylets (Pyle-National)//Unilets
Expansion Joints	Adalet Type STR//OZ Type AX or TX
Conduit Wall Entrance Sealing	OZ Type FSK-GALV Fittings
Conduit Seal-Offs	OZ Type FSK-GALV

2.4 Outlet Boxes

Provide outlet boxes as follows unless otherwise noted or detailed. Catalog numbers

shown are Appleton Electric Company. Similar products of other manufacturers are equally acceptable.

Lighting Outlet Boxes	FS/FD Series
Same (exterior and damp locations)	As required by fixture
Switch, Receptacles, Telephone and Junction Boxes	FS/FD Series with cast cover and gasket

Provide extension rings as required and increase the above specified minimum box sizes to conform to allowable fill permitted by the code.

For boxes installed in concrete or flush in walls or ceilings below finished grade, provide cast FS/FD series boxes.

2.5 Pull Boxes

Provide code gage galvanized sheet steel pull boxes as shown on the drawings. Provide removable screw cover on the largest access side of the box unless otherwise detailed. Where cast boxes are indicated or specified, provide conduit entrances with threaded hubs. Provide stainless steel screws at all exterior and damp locations. Where pull boxes are required but not shown, provide pull boxes as specified above sized per NEC requirements.

2.6 Conductors

A. This specification covers all conductors not specified in other sections. All conductors and cable shall conform to UL, Federal Specification J-C-30, or ICEA as applicable. Provide new cable manufactured within one year of installation.

B. 600 volt power, lighting and control cable -- Provide stranded copper conductors unless otherwise specified, conforming to Federal Specification J-C-30. For cable type TW or THW, provide insulation conforming to Federal Specification J-C-30. FOR types THHN or THWN, provide insulation conforming to UL-83.

For type RHW and RHH, provide insulation conforming to ICEA S-19081. For type XHHW, provide insulation conforming to ICEA S-66-524. Provide neoprene jacket on RHW-RR type cables in accordance with ICEA S-19-81 specifications.

Provide control cable with 600 volt TW type insulation for all multi-conductor, Class 1 remote control and signal wiring unless otherwise specified. Provide overall jacket complying with ICEA S-61-402. Color code control cable in accordance with ICEA S-61-402, Table 5-1.

C. Minimum conductor size -- Provide No. 12 AWG minimum branch circuit wire size. Provide No. 14 AWG control circuits unless otherwise specified or required by over-current protection. Provide smaller conductor sizes for specific application where shown on the drawings.

D. Class 2 remote control and signal conductors -- Provide cables UL approved for such use. Voltage rating shall be not less than 600 volts. Utilize multi-conductor cables with like or related functions generally grouped together. Unless otherwise specified or shown on the drawings, utilize No. 14 AWG conductors.

E. Instrumentation cables -- Multi-conductor cables shall have the quantity and size of conductors shown on the plans. Individual conductors shall be bare soft annealed copper Class B, 7-strand concentric per ASTM B-8. Individual conductor insulation shall be flame-retardant per UL 13, 15 mils nominal thickness, with a 105 degree C temperature rating. Conductor pairs shall be uniquely identified according to manufacturer's standard method. Overall cable assembly shall have 2.35 mils (minimum) aluminum-polyester tape shield overlapped for 100% coverage and provided with a 7-strand tinned copper drain wire the same size as an individual conductor. The jacket shall be flame-retardant per UL 13, with a 105°C temperature rating and a rip cord laid longitudinally under the jacket to facilitate removal. Conductors shall be twisted pairs and the cable shall be rated for operation to 300 volts.

F. Twisted shielded pairs (TSP) shall be 7 or 19-strand, No. 18 AWG, tinned-copper conductors, 600 volt, individually insulated with color-coded cross-linked polyethylene, insulated conductors twisted into a pair, pair-shielded with a spirally applied aluminum/mylar tape shield and a 7-strand drain wire. Cable to have an overall 45 mil jacket.

PART 3 EXECUTION

3.1 Conduit Installation

A. Conduit buried in earth -- Install raceways to provide not less than 24 inches cover to finished grade. Pitch to drain away from buildings; avoid trapped runs. Grade trenches and place pipe bedding material to provide uniform

trench bottom for raceway support. Buried raceway shall not be smaller than 1 inch and shall be Schedule 40 PVC as specified.

B. Provide rigid steel conduit for raceways embedded in structural reinforced concrete; in hazardous areas; in exposed locations; for sizes 1-1/4-inch and larger; and at all locations not otherwise specified.

C. Provide flexible metallic conduit connections at all motors and transformers plus other equipment connections subject to vibration. Utilize suitable fittings, keep route neat, at nominal right angles, and in conformance with equipment lines.

D. Exposed conduit shall be run in straight lines parallel to column lines, walls, or beam. Where conduit is grouped, the bends and fittings shall be installed to present an orderly appearance. Unnecessary bending or crossing shall be avoided.

E. Supports for exposed conduit runs shall be furnished and installed within 3 feet of each box. Supports shall be secured by means of expansion inserts in concrete.

F. Conduit and fittings shall be properly protected during the construction period against mechanical injury from any cause. Conduit which extends out of floors, walls or slabs shall be boxed or otherwise protected and ends shall be capped with metal pipe plugs.

G. Rigid conduit joints and connections shall be made thoroughly watertight and rustproof by means of thread compound which will not insulate the joint. Each threaded joint shall be thoroughly cleaned to remove all the cutting oil before the compound is applied. Running threads will not be allowed. Erickson couplings may be used in dry and exposed locations provided that they are installed with fixed threaded connection at the top of vertical runs.

H. Size -- Use raceways no smaller than ¾-inch except that ½-inch or larger may be used for switch legs; and control circuit wiring specified to be No. 14 AWG wire.

I. Raceways in plain concrete -- Do not place raceways in cement toppings on structural floors without special approval. Install, however, in nonreinforced concrete headers and similar locations provided for their installation and in cement fill on precast concrete roofs.

J. Raceways in reinforced concrete -- Do not displace reinforcing steel to

accommodate the installation of raceways and outlet boxes. In general, locate all embedded conduits in the physical center of the particular section of concrete. Wooden plugs inserted in concrete or masonry are not acceptable as a base for raceway fastenings. Provide raceways embedded in reinforced concrete in conformance with the following usual types of conditions unless otherwise instructed by the Engineer. Particular attention is called to the fact that there are many extenuating conditions where the Contractor may be instructed during the course of the project not to place embedded conduits in certain areas, generally due to the possibility of unsightly cracking or for structural reasons. This instruction does not entitle the Contractor to extra compensation. Special approval will be required for any condition not covered by the following usual conditions.

Location	Maximum Allowance
Columns	Displacement of 4% of plan area of column
Floors and walls	Displacement of 1/3 of thickness of concrete, spaced not less than three diameters o.c.
Beams and joists	Displacement of 1/3 of least dimension, spaced not less than three diameters o.c.
Sleeves through floors and walls	Two-inch maximum pipe size, not less than three diameters o.c.

K. Raceways entering the facility below grade -- Provide raceways with galvanized cast iron wall entrance seals having a watertight sealing gland assembly.

3.2 Wire and Cable Installation

A. Conduit shall be thoroughly cleaned of all foreign material just prior to pulling the wire or cable. Lubricants shall be compounds specifically prepared for cable pulling and shall not contain petroleum or other products which will affect cable insulation. Lubrications shall be UL approved.

B. Splicing of conductors No.8 AWG or smaller shall be by preinsulated spring-pressure connectors, such as "Scotchlok" Types Y, R and B, Ideal "Wingnut" or equal. All uninsulated splices, joints and free ends of conductors shall be covered with rubber and friction tape or high-dielectric strength, plastic tape. All splices in underground boxes or direct buried shall be insulated and waterproofed, using scotchcast epoxy splicing compounds suited for the

purpose.

C. Terminal strips in panels shall be identified throughout the equipment utilizing a unique numbering system.

D. Wires terminating on terminal strips shall be tagged with the designation of the terminal strip and the number of the terminal to which they are connected. Wires shall be numbered with Brady nylon wire markers at all accessible locations. Wire markers shall be permanent type. Submit shop drawings of the type to be used for approval.

E. Wiring diagram shall show the terminal strips, terminals, and their identifying designations.

F. Color code

1. All secondary service, feeder, and branch circuit conductors shall be color coded as follows:

240/120 Volt	Phase
Black	A
Red	B
White or Gray	Neutral

24 Volt DC	
Blue	(+)
Yellow	(-)

2. All No. 12 and No. 10 branch circuit conductors shall have solid color compound or solid color coating. All neutral sizes shall have solid color compound or solid color coating.

3. No. 8 AWG and larger phase conductors shall have either

a. Solid color compound or solid color coating.

b. Stripes, bands, or hashmarks of colors specified above.

c. Colored pressure-sensitive plastic tape. Tape shall be applied in half overlapping turns for a minimum of 3 inches for all terminal points, and in all junction boxes, pull boxes, troughs, manholes, and handholes. Tape shall be 3/4 inch wide with colors as specified above. The last two laps of tape shall be applied with

no tension to prevent possible unwinding. Where cable markings are covered by tape, apply tags to cable stating size and insulation type.

G. Installation -- Keep all conductors within the allowable tension limits during installation. Lubricants for wire pulling, if used, shall be approved for the insulation and raceway material. Observe cable manufacturer's and industry standard cable bending radius recommendations. For type THHN/THWN conductors, avoid abrasion and damage to outer jacket. Wiring showing damage after installation shall be replaced.

H. 600 volt conductors -- Provide one of the conductor types indicated for the function and location listed below unless otherwise indicated on the drawings or approved by the Engineer. Provide ground and neutral wires identical to circuit wires.

I. Observe code restrictions with respect to wet and dry locations. At the Contractor's option, conductors with insulation systems rated for high operating temperatures may be substituted for lower temperature rated conductors. However, no reduction in conductor size will be permitted from that indicated. When using small diameter wire, do not reduce conduit size below that required for Type THW as shown in NEC Table 3A.

Location	**Insulation Type**	
	THW, THWN	RHH, THHN, XHHW
Lighting circuits, interior		
General	x	x
Special fixture requirements	x	x
Within 3 inches of ballast		x
Receptacle and single-phase	x	
Motor circuits		
Interior	x	

3.3 Equipment Installation

A. Boxes and cabinets shall be installed on the surface level and plumb and affixed to the surface with expansion inserts in concrete and machine screws to tapped holes in metal surfaces.

B. Interconnections between equipment shall be made per manufacturer's wiring diagram. All wiring shall be clearly labeled and external connections in control panel and remote cabinet brought out to terminal blocks. All equipment connected to telephone lines shall be protected against voltage transients.

END OF SECTION

SECTION 16640

RESERVOIR CATHODIC PROTECTION

PART 1 GENERAL

1.1 Related Documents

The requirements of all other sections and provisions of the specifications are applicable to the work to be performed under this section.

1.2 Description of Work

The work consists of furnishing professional services, labor, equipment, and materials necessary to remove some portions of an existing automatic impressed current type cathodic protection (CP) system used to control corrosion of the submerged steel surfaces of the subject water tank and replacing some portions of the CP system as described below. In general, the work includes re-installing existing anodes, furnishing and installing a rectifier/power unit, reference electrodes, wire, and wire connectors and all other materials and services required for a complete and operable cathodic protection system.

1.3 Qualifications

The CONTRACTOR shall utilize personnel on this project who has been engaged in the design, installation and maintenance of impressed current corrosion control systems for five (5) or more years. The designer shall be a licensed Professional Engineer or a person with an NACE International cathodic protection certification who has experience in potable water tank cathodic protection design and installation.

1.4 Submittal

Prior to construction or material purchase, the CONTRACTOR shall provide material submittals for written approval by the ENGINEER.

PART 2 PRODUCTS

2.1 General

All materials shall be new and shall conform to the applicable portions of these specifications. The materials to be furnished under these specifications shall be the standard product of manufacturers regularly engaged in the production

of such equipment and shall be the manufacturer's latest design. All materials and equipment supplied shall reflect the best and latest standard and practice for the intended application.

A. Materials and equipment to be furnished shall include:

a) Power/rectifier unit
b) Reference electrodes complete with lead wires
c) Wire connectors
d) Any and all supplementary equipment and/or materials required to provide a complete and operable cathodic protection system

B. In the case of conflict between the requirements of these specifications and the industry standards, whichever requirement is most stringent shall take precedence.

C. All materials in contact with the water or exposed to the interior of the tank shall be classified in accordance with ANSI/NSF 61 "Drinking Water System Components". This requirement shall be met under testing conducted by a product certification organization accredited for this purpose by the American National Standards Institute. CONTRACTOR shall submit copy of company registration and materials certificate to the ENGINEER verifying ANSI/NSF 61 system components classification.

2.2 Rectifier/Power Unit

A. The power unit shall be air cooled, 110 VAC single phase input, silicon stack, with adequate cooling surfaces so the normal temperature rise at rated capacity will not exceed that specified by N.E.M.A. with automatic control for constant current, constant voltage, constant potential with continuous output adjustment.

B. Components shall be mounted on an aluminum chassis within a Nema 4X diamond shield CSA approved enclosure with stainless steel hinges and latches and a nonconductive shock resistant front panel with provision for locking.

C. Control circuit shall be solid state, potential controlled with built in voltage and current control modes. Input and output circuits shall be fast acting, re-settable circuit breakers (no fuses). Separate digital LED meters for volts, amps and potential with amp readings down to 10 milliamps. Front panel shall be provided with accessible total precision shunt.

D. The unit shall be automatic or manual operation with multiple reference cell operation and built in reference cell failure shut down.

E. The rectifier shall be an air cooled water tank "W" series auto potential controlled, Model No. WPAI 20-8 GCK, by Universal, or equal.

F. The installation shall include failsafe backup current limiting capabilities. At a minimum this shall include in-line breakers on the D.C. current supply line to the anode system.

G. Provide a manufacturer schematic drawing of the power/unit controller.

H. Transformer

The transformer shall be of the separate primary and secondary type and shall withstand continuous operation 10% above rated input voltage at the maximum rated D.C. output. The transformer shall be designed for a maximum hot spot heat rise not to exceed 50 degrees C.

I. Control Circuits

The control circuit of the power unit shall be designed to continuously monitor and automatically regulate as required to maintain the preselected setting.

J. Circuit Breaker/Surge and Lightning Protection

The input circuit breaker shall be of the single phase, 2 pole, series trip, manually reset, magnetic type not affected by change in ambient temperature. The unit shall have both AC and DC semiconductor surge and lightning protection.

2.6 Reference Electrodes

A. Reference electrodes shall be permanent type copper-copper sulfate reference electrodes suitable for installation in potable water with a minimum design life of 20 years.

B. Electrode wire shall be No. 12 AWG stranded copper wire with yellow, 600 volt HMWPE, RHH, or RHW insulation. The wire shall be attached to the electrode and insulated with the manufacturer's standard connection. Connection shall be stronger than the wire and must support the electrode hanging in 35-feet of water. The wire shall be a minimum of 130 feet long.

2.7 Wire Connectors

Wire connectors shall be Bundy type split bolt connectors.

PART 3 EXECUTION

3.1 General

All work shall be accomplished in strict accordance with the plans and specifications and shall be subject to the terms and conditions of the contract. All work shall be of the highest quality and shall be conducted in a workmanlike manner. All work shall be performed by a Professional Engineer specializing in corrosion technologies (corrosion engineer) or a NACE International Cathodic Protection Specialist.

3.2 Removal of Existing Anodes/Electrodes and Rectifier

A. Prior to starting the interior coating surface preparation, the OWNER will turn off the existing CP system. CONTRACTOR shall disconnect the existing anodes from the existing header cable, remove without damage, and store in a protected location during the coating process.

B. Remove the existing reference electrodes by either cutting their leads near the glass insulator wire support or close to the entrance to the entrance conduit. Identify leads as to the location from where the electrode was removed. Existing reference electrodes shall be returned to the OWNER. The header cable and excess electrode leads shall be protected during the sandblasting and coating operation.

C. The existing rectifier shall be removed and delivered to the OWNER without damage.

3.3 Installation of Anodes/Electrodes and Rectifier

A. Following completion of the interior coating, the CONTRACTOR's engineer or CP Specialist shall reinstall the CP system. The existing anodes shall be tied to the glass insulator wire support leaving enough lead for the wire connection to the header cable and the anode which shall be located approximately 10 feet from the floor. The anode connections to the header cable shall be made using a split bolt connector for #8 stranded wires.

B. Following completion of the interior coating, the new reference electrodes shall be tied to the glass insulator wire support with enough lead left over to connect to the lead wire cut from the previous electrode. The electrode connections to the existing leads shall be made using a split bolt connector for #12 stranded wires.

C. Wires shall be cleaned to a bright copper before the connection is made. The split bolts shall be tightened down as tight as possible. Once the connection is

made, wrap the bare wire, split bolt and one inch of wire on either side of the connection with two wraps of linerless rubber high-voltage 3M Scotch 130C splicing tape. The high-voltage tape shall then be wrapped with two wraps of 3M Scotch 88 or Super 33+ vinyl electrical tape.

D. The new rectifier shall be installed in the same location as the existing rectifier using the same AC and DC power wires and the existing anode and electrode leads.

3.4 Start-Up and Testing

A. Start-up and testing shall be conducted following re-installation of the CP system and water reintroduced to the reservoir. The CONTRACTOR's corrosion engineer or CP specialist shall energize the system and adjust the power unit/controller to operate within the following criteria. The power unit/controller shall be set to maintain an electro-negative tank-to-water potential of at least 850 millivolts as measured with a copper/copper sulfate reference electrode. The potential shall be measured with protective current being applied as recommended in NACE Standard SP0169, latest revision.

B. To verify that the CP system is operating within the specified potential range, an independent series of potential measurements shall be made with a copper/copper sulfate reference electrode and a 10 mega-ohm or greater input impedance meter. When making the measurements, the test cell shall be placed within 1-2 centimeters of the submerged steel tank surface midway between anodes. All measurements shall be taken with protective current "ON" at intervals of approximately 3 feet across the tank floor and shell.

C. Following start-up and testing, the CP system will be turned off by disconnecting the anode power supply lines at the power unit and will be kept off until the first anniversary tank coating inspection. The first anniversary tank coating inspection will be conducted twelve months following project completion.

D. Following successful completion of the first anniversary tank coating inspection and filling of the tank, the CP system will be turned on. At the CONTRACTOR'S expense, the system shall be retested as per the start-up and testing procedure described above and turned back off until the OWNER decides to turn it back on.

3.5 Operations and Maintenance Instructions

Operating and maintenance instructions shall be provided with sufficient detail to permit the OWNER's operator to properly maintain and adjust the system. They shall

include a description of the main components and their function as well as a schematic drawing of the power/unit controller.

END OF SECTION

SECTION 17000

INSTRUMENTATION/CONTROL AND TELEMETRY SYSTEMS

PART 1 - GENERAL

1.1 Summary

A. This section covers all work necessary for furnishing, installing, adjusting, testing, documenting, and starting-up the Instrumentation and Control (I&C) and Telemetry System.

B. Major elements of this system include, but are not limited to, all materials, equipment, and work required to implement a complete and operating system as described herein. The system shall include primary elements for process variable measurements, analog display, control elements, and all hardware and software required for the Programmable Logic Controllers (PLCs), and Graphical User Interface (GUI) SCADA computers.

C. The I&C and Telemetry System provided as part of this contract is an addition and modification to the Owner's existing system, which was designed and furnished by S&B Inc. For compatibility with their comprehensive system, I&C design and system integration will be provided by the Owner's I&C Consultant/Integrator, S&B Inc.

D. Conduit and wiring between all devices and equipment is to be provided by the Contractor. See Section 16000 Electrical Work.

1.2 Definition of Terms

A. System Integrator: A single firm, pre-selected by the Owner, who shall design and furnish the system, assemble and test the instrument panels, and program PLCs, computers, and other instrument components and provide start-up and training services. The System Integrator is S&B Inc.

B. Contractor: The Contractor, as distinct from the System Integrator, shall install the panels, and other materials furnished by the System Integrator and provide all additional materials and work necessary and thereby, satisfy all requirements that are within the scope of this section.

1.3 Special Requirements

A. The Contractor shall install components including those assembled and programmed by the System Integrator at the locations shown in the plans.

B. The System Integrator shall be responsible for making all modifications and additions at the Owner's Control Center and Offices at 4100 Norfolk Street.

1.4 Submittals

A. Hardware Submittals

1. The System Integrator shall prepare a complete hardware submittal in electronic format. The City shall receive this submittal in electronic format (Adobe pdf file format), including fully detailed shop drawings, catalog cuts, wiring connections, and such other descriptive matter and documentation as may be required to fully describe the equipment and to demonstrate its conformity to these Specifications. Catalog information shall be submitted for all components and equipment, regardless of whether or not it is of the same manufacture as that listed in the Specifications.

B. System Drawing Submittals

1. The System Integrator shall prepare complete system interconnect wiring diagrams and panel layout drawings for approval. Interconnect wiring diagrams with equipment supplied under separate Section may show the terminal numbers as 'unknown' prior to construction, but must be provided in As-Built format with wire numbers identified.

1.5 Documentation

1. Operating and Maintenance Manuals

a. Provide three (3) complete sets of Operation and Maintenance Manuals. These 1-inch loose-leaf manuals shall include paper copies of the operating description, wiring diagrams and presentations. In addition, the manual shall have an optical media sleeve to hold an optical disk (DVD or CD) with comprehensive copies of all hardware descriptive materials as well as electronic copies of the hard copy materials described above. Access to manuals and drawing information on the optical media disks shall be hyperlinked using html and designed for use with Internet Explorer v6 or later and Adobe reader version 8 or later.

b. The manuals shall include operating and maintenance literature for all components provided in this section. The submitted literature shall be in sufficient detail to facilitate the operation, removal, installation, adjustment, calibration, and maintenance of each component provided under this section.

2. Record Drawings

   a. Block Diagrams: These diagrams shall be in the same format and style as those provided in these Contract Documents.

   b. Schematic and Interconnecting Wiring Diagrams: 'As-Built' drawings submitted to the City following successful function acceptance testing shall indicate terminations as tested. Diagrams shall show all equipment (panels, field elements, etc.) and all terminations provided under this section. Wiring diagrams shall clearly show all terminal block number designations and wire numbers. Diagrams, device designations, and symbols shall be in accordance with the Owner's Telemetry System record drawings. Thirty days shall be allowed following the test for documenting these terminations.

PART 2 - PRODUCTS

2.1 General

A. The Instrumentation and Control and Telemetry System is designed to function as an integral part of the Owner's comprehensive Water Telemetry, Control and Management Reporting System in place at other facilities.

   This system is designed to allow new facilities to be constructed or existing facilities to be modified and then to be fully integrated as part of this overall system. Products have, therefore, been selected to be fully compatible and when possible, to match existing systems.

   At the Owner's Control Center, the Master Telemetry Unit and SCDA Systems shall be modified by the System Integrator to accommodate the new facilities specified and indicated in the drawings.

B. The System Integrator shall furnish the following equipment for installation by the Contractor.

   1. For location at the Reservoir Site:

      a. One "Door Entry Touch Panel" in Nema 12 Enclosure. Unit includes integral touch panel, lamps and warning horn.

      b. Individual instruments and components not part of the above assemblies and to be installed separately by the Contractor as follows:

Tag #	Description	Mfg	Model
LSHH-1	Reservoir Overflow Level Switch	Anchor Sci	G-SI-20-NO
ZS-1	Reservoir Entry Limit Switch	Siemens	3SE03-AR16P / 3SX03-KL201
ZS-2	Upper Hatch Limit Switch	Siemens	3SE03-AR16 / 3SX03-KL201
ZS-3	Door Entry Limit Switch	Siemens	3SE03-AR16 / 3SX03-KL201

2. At the Control Center, S&B shall furnish all software and make all system modifications.

2.2 Personnel Entry System Description

A. General

1. The Instrumentation, Control and Telemetry system is existing and updated as part of this scope of work to provide monitoring and logging of entry and exit to various locations in the reservoir site.

2. The block diagrams illustrate each of the instrument loops and the major instrument components involved. The System Integrator shall be responsible for the design of the system and developing all software for the PLCs and GUI Systems.

3. Any equipment or devices shown on the drawings as future are shown for information purposes. No future hardware shall be included as part of this contract.

4. Software shall be provided for the Touch Panel, RTU Panel and for the Control Center system. At the RTU Panel, the PLC shall be programmed to provide entry dialog for authorized personnel working on this site. Updates to the status and permissions are provided by the Control Center PLC via the communications system. Software is also provided for the Human Machine Interface(HMI) in the RTU Panel. All alarm and control functions are monitored locally on the HMI as well as transmitted to Control Center. Fail safe features shall be included for all operations.

5. At the Control Center, software shall be provided for the Master PLC, and the Graphic User Interface (GUI) computers. The Master PLC software shall update 25 user names (up to 8 characters each) along with four digit personal identification numbers (PIN). These values are uploaded by user initiated command to the PLC unit at the reservoir site. The SCADA records entry and duration for each of the users. The GUI computer software will notify City personnel of violations to the login system via the off-duty alarm notification system.

6. At the reservoir site, the door entry touch panel provides each 'foreign' user the ability to authenticate using a pre-assigned username and PIN, within the constraints of three tries and within a maximum of three minutes (configurable limits assigned by administrator). City Operations personnel will bypass the door entry touch panel system and authenticate at the RTU touch screen. At the first moment the station entry door is detected in the open position, the condition is latched and the user must complete authentication within the prescribed time limit. An amber warning lamp flashes on the door entry panel to direct the user's attention of the requirement to authenticate. The horn briefly sounds (3 seconds) and the "Clearance Required" lamp flashes slowly (0.5 hz rate) until the user is authenticated or until 30 seconds before the entry is converted into an alarm condition. During the last 30 seconds the alarm lamp flashes rapidly (2 hz). Once authenticated, the user is presented with a steady green "Clear to Proceed" lamp indication.

7. The monitoring system is armed by any one of the following methods or actions. All users should log out of the system using the touch pad used for their entry. Once authenticated, the system provides a button action to allow the user to logout. A second method of arming the system is employed when all doors are secured for a 60 second time period (adjustable by the administrator). Once the system is armed, the green "Clear to Proceed" lamps flashes (1 hz) to indicate the user has one minute to exit the station and secure the entry door. The horn will chirp when the system is armed.

8. Alarms of unauthorized entry are annunciated at the City Operations Center by a failure to authenticate within the prescribed time period, hatch access when the system is armed, reservoir hatch access by anyone other than authenticated City personnel.

9. Logic resident at the reservoir site allows for City Operations personnel to access all monitored areas without alarm. Foreign personnel authenticated by the door entry touch panel may access the reservoir roof hatch without alarm, but not the reservoir entry hatch.

PART 3 - EXECUTION

3.1 General

A. Install materials and equipment in a workman-like manner utilizing craftsmen skilled in the particular trade. Provide work which has a neat and finished appearance.

B. Coordinate Instrumentation and Control work with the System Integrator, Owner, Contractor and work of other trades to avoid conflicts, errors, delays and unnecessary interference with system operations during construction.

3.2 Coordination With System Integrator

A. The Contractor shall coordinate directly with the System Integrator to insure all requirements within the scope of this Section are satisfied.

B. System Simulation

1. To the degree possible, the entire I&C and Telemetry System shall be simulated at the System Integrator's facility. The Engineer, Contractor and Owner personnel shall be invited to witness simulation and approve test results prior to shipment to Contractor.
2. The testing shall include factory floor demonstration using supplied VFDs, power metering and flowmeter equipment prior to shipment to jobsite.

C. Communication Testing and Simulation

1. Prior to start-up of the system, all communication facilities shall be tested by System Integrator. Signals shall be simulated and circuit performance verified prior to system start-up. The Contractor shall be responsible for installing cables and wires for connecting the RTU as shown on the drawings.

D. Field Acceptance Test

1. S&B shall conduct acceptance tests and provide operator training for the I&C and Telemetry System.

E. Schedule

1. System integration work shall begin upon receipt of approved Hardware Submittals. Delivery to the Contractor of completed panels and any system elements shall be made to meet Contractor’s schedule but not less than thirty days following System Integrator's receipt of all materials required. Field acceptance tests shall be completed within thirty days following installation by the Contractor.

3.3 Protection During Construction

A. Throughout this Contract, the Contractor shall provide protection for materials and equipment against loss or damage and the effects of weather. Prior to installation, store items in indoor, dry locations. Provide heating in storage areas for items subject to corrosion under damp conditions. Specific storage requirements shall be in accordance with the manufacturer's recommendations.

3.4 Material and Equipment Installation

A. Follow manufacturer's installation instructions explicitly, unless otherwise indicated. Wherever any conflict arises between manufacturer's instructions and these Contract Documents, follow Engineer's decision, at no additional cost to the Owner. Keep copy of manufacturer's installation instructions on the jobsite available for review at all times.

3.5 Tests

A. A witnessed FUNCTIONAL ACCEPTANCE TEST shall be performed on the complete system of Instrumentation and Controls. Each function shall be demonstrated to the satisfaction of the Engineer on a loop-by-loop basis. The actual testing program shall be conducted in accordance with the prior approved procedures, and shall be witnessed and signed off by both the Contractor and the Engineer upon satisfactory completion.

B. All special testing materials and equipment shall be provided under the SCOPE of this Section. Where it is not practical to test with real process variables, provide suitable means of simulation. These simulation techniques shall be subject to the approval of the Engineer.

C. Coordinate all testing with other associated suppliers and subcontractors.

D. The Contractor shall notify the Engineer at least two weeks prior to the date of the FUNCTIONAL ACCEPTANCE TEST. Acceptance tests shall be performed as described elsewhere in these specifications.

END OF SECTION

END OF TECHNICAL SPECIAL PROVISIONS

SUPPLEMENTARY INFORMATION A

Returned for Record

RECEIVED
OCT 24 1990
MURRAY, SMITH & ASSOCIATES, INC.

BOTT. { 234 #10 RODS X 21'-6 LG. SPACED AS SHOWN
TOP { 110 #5 RODS ~ R2 SPACED AS SHOWN
TOP { 220 #7 RODS ~ R3 SPACED AS SHOWN

A= 10° ON 31'-10 RAD.
A= 10 5/8° ON 31'-0 RAD
6 7/8" ON 10'-0 RAD.
45~ ANCHORS (WB1-1)
2'-0
R = 16'-0
R = 18'-0
R = 17'-3 3/4
R = 31'-0
4'-9 13/16
2'-5
7'-2 3/8
9'-6 1/2
11'-10 1/8
14'-1
16'-3 1/16
18'-4 3/16
20'-4 1/4
22'-3 1/16
24'-0 5/8
2'ø SCH 40 PVC CONDUIT IRRIGATION CONTROL
2'ø RGS CONDUIT ELECTRICAL
2'ø SCH 40 PVC CONDUIT TELEPHONE
2'ø RGS CONDUIT 2'-6 BELOW GRADE ELBOWED UP AT DS RING WALL
2 1/2'ø PVC CONDUIT 2'-6 BELOW GRADE
℄ ELECTRICAL METER
TYP.
FLG BOLT HOLES TO STADDLE ℄ BETWEEN INLET & D'FLOW
R= 10'-0
R= 7'-0
35°
1'ø SCH 40 PVC WATER SERVICE
9'-4 9/16 ARC
7'-10 3/16 ARC
4'-2 9/16 ARC
4'-10 15/16 ARC
8'-6 9/16 ARC
10'-0 13/16 ARC
5'-1 1/2
1'-8
4 3/8
12
12'ø D'FLOW & DRAIN
18' DI INLET
4'-0
S.L.O.
14'-0ø PAD & 4'-0 WALKWAY 6" THK W/ 6 X 6 10/10 WWF SEE ENG'RS DWGS
CONC PAD 5' X 5'-0 X 5'-0 W/ WWF 6 X 6 W1.4 X W1.4 SEE ENG'RS DWGS.
℄ SHIPDOOR AND PADS

PLAN

NON-FREEZE POST HYDRANT
SEAL W/ SILICONE RTV
1 1/2'ø RGS CONDUIT SLEEVE X 9' LG. FOR 1'ø WATER SERVICE
2'ø PVC X 2'-6 LG. PIPE SLEEVE
RING WALL
1'-6 7/8
1/2" GROUT SHOULDER
6'
2'
3'-0
1'ø WATER SERVICE

SECTION C-C

REGISTERED PROFESSIONAL ENGINEER
13403
OREGON
SEPT. 18, 1986
GREG CHEHEY
10-23-90

FURNISHED & INSTALLED BY FOUNDATION SUB-CONTRACTOR

DUCTILE IRON CEMENT LINED
1. 18'ø PIPE X TO LIMIT OF CONTRACT
2. 18'ø MJ 90° ELBOW
3. 18'ø PIPE X 3'-10 13/16 PIE-F1E
4. 12'ø PIPE X TO LIMIT OF CONTRACT
5. 12'ø MJ 90° ELBOW
6. 12'ø PIPE X 5'-0 1/2 PIE-F1E
7. 3/4'ø CORP. STOP & PRESSURE GAUGE

(SEE ENGINEER'S PLANS AND SPECS)

SEAL W/ SILICONE RTV
1/2" GROUT SHOULDER
2 1/2'ø RGS CONDUIT SLEEVE X 9' LG. FOR 2'ø CNDUIT
6'
2'
3'-0

SECTION D-D

2'-8 1/16
1'-2 11/16
1'-2 1/4
3 3/16
12
2'ø SCH 40 PVC CONDUIT TELEPHONE
2'ø RGS CONDUIT ELECTRICAL
2'ø SCH 40 PVC CONDUIT IRRIGATION CONTROL
12'ø D'FLOW & DRAIN
1'ø SCH 40 PVC WATER SERVICE
18'ø INLET
5'-2 5/8
4'-6 7/8
4'-2 1/4
4'-0
2'-8 3/8
1'-3 5/8

PLAN AT PAD

1'-6 5/16
2'-3 1/2
6'
2'-9
1'-0
1'-4 1/2
2'-4 1/2
INSTALL 1/2" FELT SLEEVE AROUND PIPES AT PIPE PENETRATIONS
THRUST BLOCK
THRUST BLOCK
FLG BOLT HOLES TO STADDLE ℄ BETWEEN 18'ø INLET & 12'ø DFLOW

SECTION B-B

3'-9
16'ø X 3'-0 LG. PIPE SLEEVE
2'ø PVC X 2'-6 LG. PIPE SLEEVE
24'ø X 3'-0 LG. PIPE SLEEVE
3'-0
5'-1 7/8
ARC ON DS

R= 18'-0
13'-0
R= 16'-0
2'-0
R= 31'-0
R= 10'-0
6'-0
1'-3 3/4
8 1/4"
5' CONCRETE SLAB 5'-0 X 5'-0 W/ WWF 6 X 6 X W1.4 X W1.4
R= 17'-3 3/4
ANCHOR (WB1-1)
ELEV. = 750.0'
2'
2'
7" ANCHOR PROJECTION
6"
2' RAKED PEA GRAVEL STRUCTURAL FILL
2' CLR.
2' CLR.
STRUCTURAL FILL
GRADE
4'-8
4 @ 1'-0 1/2= 4'-2
3
3
10'-0
117 VERT. RODS #8 ~ R1 @ 10 5/16" C-C } ON 16'-0 RAD.
117 VERT. RODS #8 ~ R1 @ 10 5/16" C-C } LAP 2'-2 IF DOWELLED
5 HOOP RODS #5 CONTINUOUS EA. FACE ~ LAP SPLICES 1'-10
STAGGER LAPS ~ 2'-0
CONST. JOINT
2 X 6 KEYWAY
220 #7 RADIAL RODS ~ R3 SEE PLAN VIEW
5'-4
2'-11
1'-5
3 CLR
110 #5 RADIAL RODS ~ R2 SEE PLAN VIEW
22 #5 HOOP RODS CONTINOUS SPC'D AS SHOWN LAP SPLICE = 2'-7 STAGGER LAPS 2'-0
1'-0 MIN COMPACTED CRUSHED ROCK PER SPECS.
234 RADIAL RODS #10 X 20'-6 LG. SEE PLAN VIEW
24 #9 HOOP RODS CONTINUOUS SPC'D. AS SHOWN LAP SPLICE = 4'-4 STAGGER LAPS 2'-0
3 1/2"
21 SPACES @ 11 11/16= 20'-5 TOP
23 SPACES @ 10 5/8+= 20'-5 BOTTOM
3 1/2"

SECTION A-A

#8 VERT. RODS X 3'-0 AS SHOWN BOTH FACES
#6 HORIZ. RODS X 10'-0 AS SHOWN BOTH FACES
9'-6
STD. ACI 90° HOOK
R1
R2
R3
6'-2 1/2
13'-1
1'-10
STD. ACI 90° HOOK
2'-11

R2
R3

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. N/A
EIS- N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY _____ P.E.
STATE ___ NO. ___
DATE 9-24-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

RPM Pitt-Des Moines, Inc.

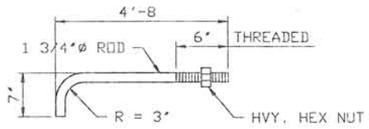
PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M GAL. PEDESTAL SPHEROID
WEST LINN, OREGON
FOUNDATION PLAN

DWG. PREPARED AT 31 | FABRICATED AT 32

DRAWN: DWJ | BY | DATE 9-18-90 | DRAWING F1AB
CHECKED: PS | DATE 9-21-90 | CONTRACT 50064

8543F1A ... PLOTTED: 09/21/90 14:45:14 ... BY: DWJ



45 ANCHORS (WB1-1)
FURNISHED BY PDM INC.

FOUNDATION NOTES:

1. DO NOT SCALE THIS DRAWING.
2. CHECK ALL DIMENSIONS ON THE GROUND.
3. IF ANY DIMENSIONS DO NOT CHECK, DO NOT PROCEED UNTIL THEY ARE VERIFIED OR CORRECTED.
4. CHAMFER ALL EXPOSED EDGES 1".
5. DO NOT PERMIT WEIGHT OF CONCRETE ON ANCHORS TO PULL THEM OUT OF POSITION WHILE POURING.
6. CONCRETE 4000 P.S.I. OR BETTER AT 28 DAYS. REFER TO ENGINEER'S SPECS.
7. REINFORCING BAR TO BE A.S.T.M. A615-60 OR AS NOTED ON THE DETAILS.
8. ALL REINFORCING TO BE FURNISHED AND PLACED BY THE FOUNDATION BUILDER.
9. LAP REBAR SPLICES AS NOTED.
10. THESE FOUNDATIONS ARE DESIGNED FOR BEARING ON GOOD FIRM NATURAL EARTH, CLEAN DRY SAND, FIRM CLAY OR OTHER SOIL HAVING A SAFE BEARING CAPACITY OF 4000 P.S.F. WITH WIND & EARTHQUAKE. IF THE BOTTOM OF THE EXCAVATION IS NOT EQUAL TO THE ABOVE REQUIREMENTS, IF IT IS NOT OF UNIFORM BEARING VALUE, OR IF THERE ARE ANY STREAMS OR EXCAVATIONS NEAR WHICH MIGHT AFFECT THE STABILITY OF THE FOUNDATIONS, CONSULT YOUR ENGINEER OR PITT-DES MOINES, INC. BEFORE PRECEEDING AS PITT-DES MOINES, INC. ASSUMES NO RESPONSIBILITY FOR THE SAFE BEARING OF THE SOIL.
11. IF THESE FOUNDATIONS ARE CONSTRUCTED BY PITT-DES MOINES, INC. OR BY ITS REPRESENTATIVE, OWNER OR HIS REPRESENTATIVE SHALL FURNISH AND SET SUBSTANTIAL LOCATION AND ELEVATION MARKERS. FOUNDATION CONSTRUCTOR SHALL BUILD FOUNDATIONS TO MARKED ELEVATION AND, UNLESS CONTRACT SPECIFIES OTHERWISE, SHALL ROUGH GRADE SOIL EXCAVATED FOR THE FOUNDATION CONSTRUCTION EVENLY AROUND FOUNDATIONS.

A > ~~OWNER OR HIS REPRESENTATIVE SHALL FURNISH AND PLACE ANY ADDITIONAL REQUIRED SOIL, OR REMOVE ANY SURPLUS~~.

12. THE TOP OF THE RINGWALL IS TO BE SMOOTH AND LEVEL WITHIN ± 1/8" IN ANY 30 FOOT CIRCUMFERENTIAL LENGTH. NO POINT IN THE THE CIRCUMFERENCE OF THE WALL SHOULD VARY MORE THAN ± 1/4" FROM THE ESTABLISHED ELEVATION. PLAN DIMENSIONS SHALL NOT BE MORE THAN 1/2" LESS THAN SHOWN. CENTERLINE LOCATION OF RINGWALL SHALL NOT VARY MORE THAN ± 1/2" FROM DIMENSIONS SHOWN.
13. FOUNDATIONS SUB-CONTRACTOR TO MARK NORTH-SOUTH AND EAST-WEST CENTERLINES ON TOP OUTSIDE EDGE OF RINGWALL WITH WATERPROOF MARKER.
14. WHEN FOUNDATIONS ARE COMPLETE, PUT TWO ANCHOR BOLT NUTS ON ALTERNATE ANCHOR BOLTS AND TIGHTEN THEM TOGETHER SO THAT THEY CANNOT BE REMOVED BY HAND. CAUTION: DO NOT EXERT ANY FORCE OR PRESSURE ON THE CONCRETE PIER.
15. ANCHOR TOLERANCE ± 3/16" FROM TRUE LOCATION IN PLAN AND ± 1/8" IN VERTICAL PLUMB.
16. ALL DETAILS NOT SHOWN ARE TO BE IN ACCORDANCE WITH ENGINEER'S PLANS AND SPECIFICATIONS.
17. CONSTRUCTION JOINTS AS SHOWN.
18. PROTECT BEARING SOILS FROM WEATHER EXPOSURE (WATER) WITH SEAL SLAB (2" MIN.) OPTIONAL.
19. FOUNDATION BUILT BY PITT-DES MOINES, INC. SUB-CONTRACTOR.
20. ELECTRICAL SUB-CONTRACTOR SHALL BE ON SITE BEFORE POURING CONCRETE TO VERIFY LOCATION OF ELECTRICAL SLEEVES THAT PENETRATE THE RINGWALL (IF ANY ARE REQUIRED).
21. COMPACT BACKFILL TO CONFORM TO SPECIFICATIONS.

FOUNDATION LOADS:

H_2O.....3477560 LBS.
SL(25).....17420 LBS.
DL.....293047 LBS.
WS(100 MPH)..69262 LBS.
WM.....4505071 FT. LBS.
EQ. S.....503752 LBS.
EQ. M. ...44896240 FT. LBS.
P-DELTA WIND M.....0 LBS.
P-DELTA EQ.M..624618 FT. LBS.

CONCRETE QUANTITIES

FOUNDATION	329.0 C.Y.
FLOOR	3.5 C.Y.
PAD	.4 C.Y.
TOTAL	332.9 C.Y.

REINF. QUANTITIES
FOUNDATION 49790#

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY

10-23-90

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. N/A
EIS- N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY Greg Chehey P.E.
STATE ___ NO. ___
DATE 9-24-90

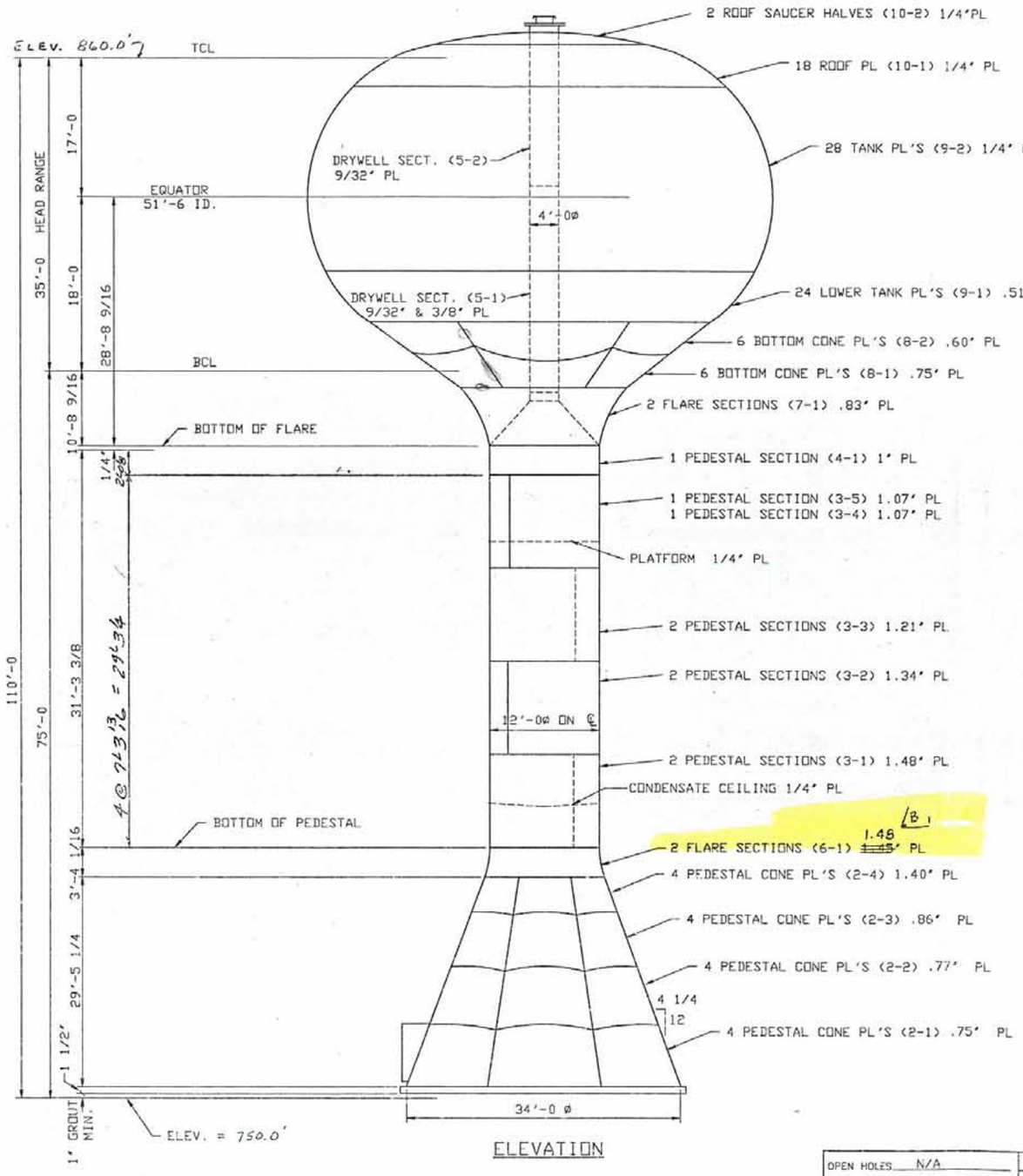
NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE
A	OMIT NOTE PER APPROVAL	PB	10-17-90		

PDM Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M GAL. PEDESTAL SPHEROID
WEST LINN, OREGON
FOUNDATION NOTES
DWG. PREPARED AT 31 FABRICATED AT 32
DRAWN: BY DWJ DATE 9-18-90 DRAWING F1B
CHECKED: PB 9-21-90 CONTRACT 50064

8543F1B ... PLOTTED: 09/21/90 14:14:37 ... BY: DWJ



ELEVATION

GENERAL NOTES:

1. WELDING
   A. WELD SPECS: AWWA D100-84 & ENG'RS SPECS
   B. ALL FIELD CONNECTIONS WELDED EXCEPT AS LISTED ON FIELD BOLT LIST FB1.
   C. ALL WELDS ON ERECTION DWGS. ARE FIELD WELDS.
   D. SEE DWG. E3 FOR WPS'S.
   E. PROVIDE CONTINUOUS WELDS WHEREVER NECESSARY TO PREVENT MOISTURE POCKETS.
2. TANK TESTING
   A. SPOT X-RAY PER AWWA D100-84 AND PDM RT-2.
   B. HYDROTEST PER HT-1. UNLESS OTHERWISE STATED IN THE CONTRACT, THE SUPPLY AND DISPOSAL OF THE TEST WATER SHALL BE THE RESPONSIBILITY OF THE PURCHASER.

3. SUBLET ITEMS
   (ALL MATERIAL AND LABOR)
   A. FOUNDATION
   B. FIELD PAINTING & DISINFECTION
   C. ELECTRICAL
   D. CATHODIC PROTECTION
   E. MECHANICAL (IRRIGATION ETC.)

4. DRAWING LIST
   F1 - FOUNDATION
   E1 - MAIN ERECTION
   E2 - ORIENTATION AND ROOF ERECTION
   E3 - GROUND SUB-ASSEMBLIES & WELDING DIAGRAM
   E4 - O'FLOW AND INLET ERECTION
   E5 - MISC. ERECTION
   E6 - LADDER ERECTION
   E7 - ELECTRICAL DIAGRAM
   E8 - CONDENSATE DRAIN
   E9 - PAINTERS RAILS & LUG'S.
   D1 - DISINFECTION INSTRUCTIONS
   P1 - PAINTING INSTRUCTIONS
   E10 - TEMPLATE DRAWING

5. FOREMAN NOTE:
   SEE DWG. E3 FOR SUB-ASSEMBLY COMMENTS & DOCUMENTATION BEFORE BEGINNING CONSTRUCTION.

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY
12-3-90

☐ NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction; coordination of his work with that of all other trades and the satisfactory performance of his work.

MURRAY, SMITH & ASSOCIATES, INC.
DATE 12/7/90 BY DWJ

OPEN HOLES	N/A
ERECTION REF.	N/A
WELD SPECS.	AWWA D100-84
EIS--	N/A
CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS	
BY	P.E.
STATE	NO.
DATE	10-9-90

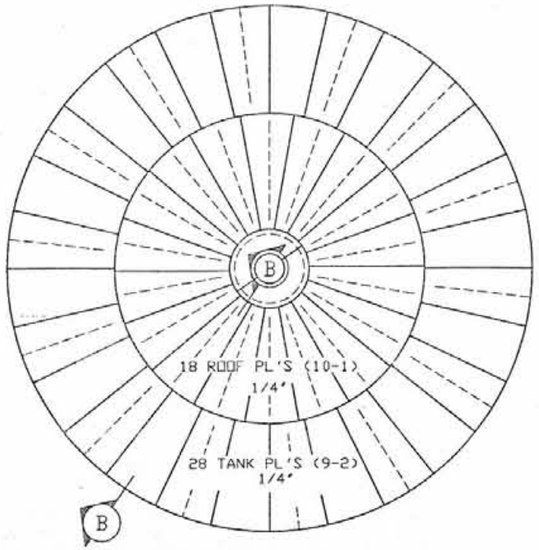
NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE
B1	APPROVAL CORRECTION	PB	11-28-90		
A3	APPROVAL CORRECTIONS	PB	10-29-90		

PDM Pitt-Des Moines, Inc.

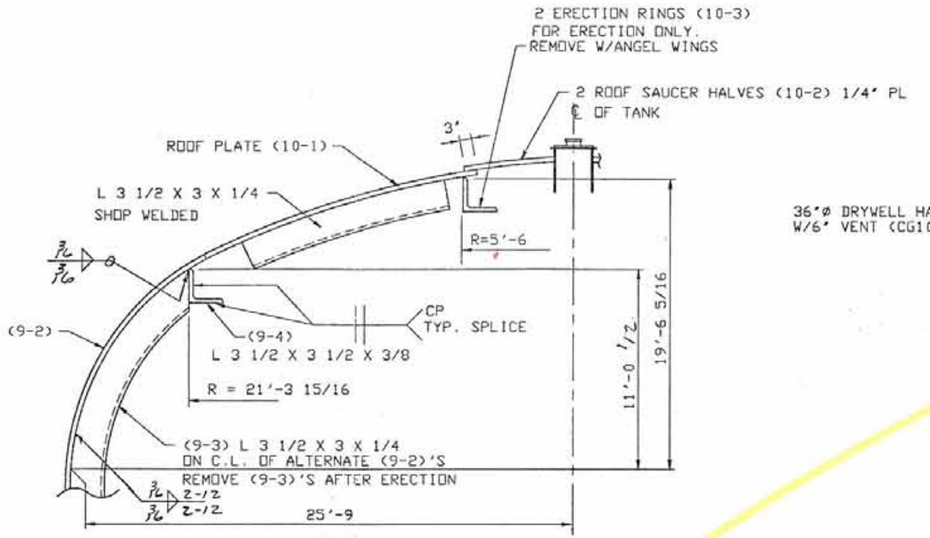
PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M GAL. PEDESTAL SPHEROID
WEST LINN, OR.
MAIN ERECTION

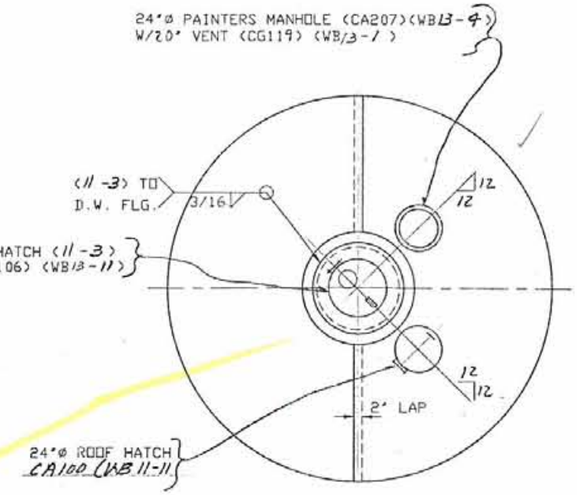
DWG. PREPARED AT	31	FABRICATED AT	32
	BY	DATE	
DRAWN:	LDM	10-3-90	DRAWING E1
CHECKED:	PB	10-9-90	CONTRACT 50064



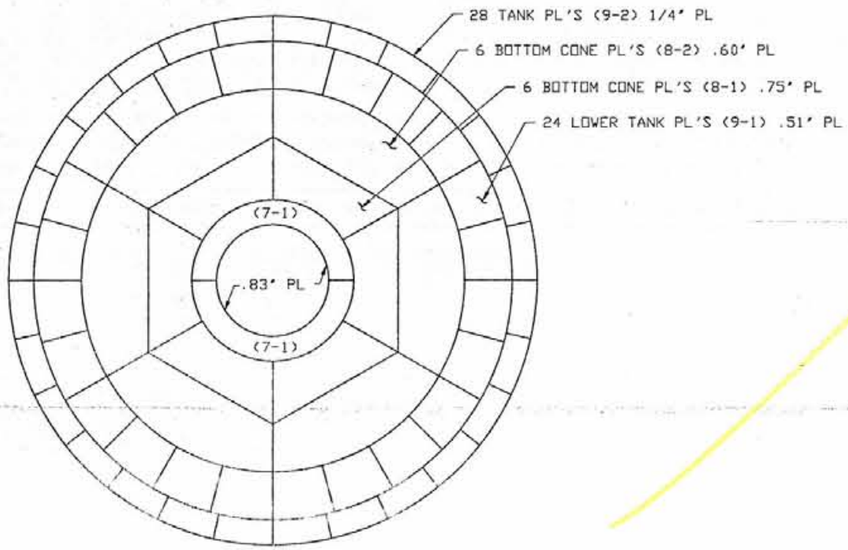
ROOF PLAN



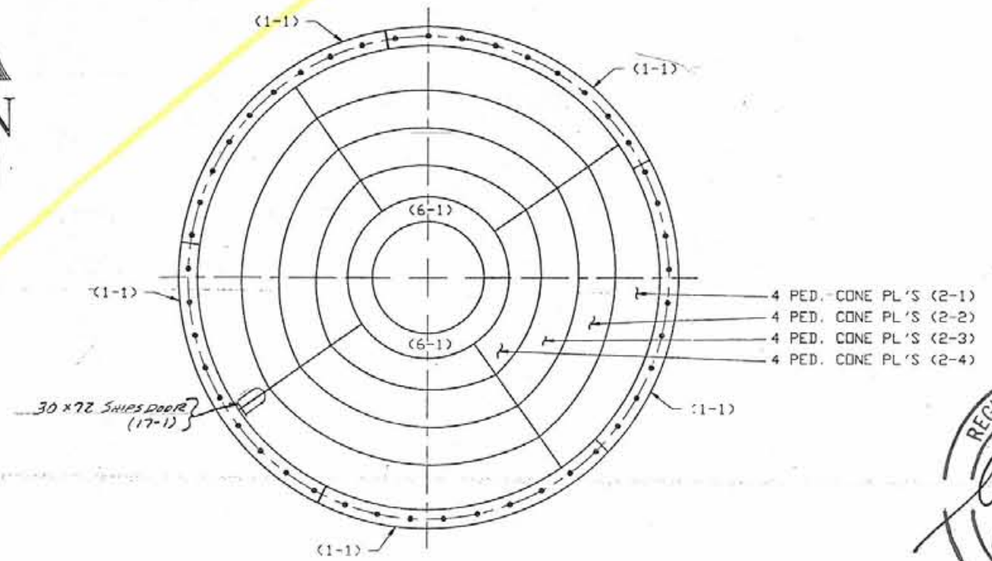
SECTION B-B



ROOF SAUCER ORIENTATION



BOTTOM PLAN



ORIENTATION OF BASE PL'S & BTM. CONE

REGISTERED PROFESSIONAL ENGINEER
13403
OREGON
SEPT. 18, 1986
GREG CHEHEY
10-11-90

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. AWWA D100-84
EIS- N/A
CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY _____ P.E.
STATE IA NO. _____
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

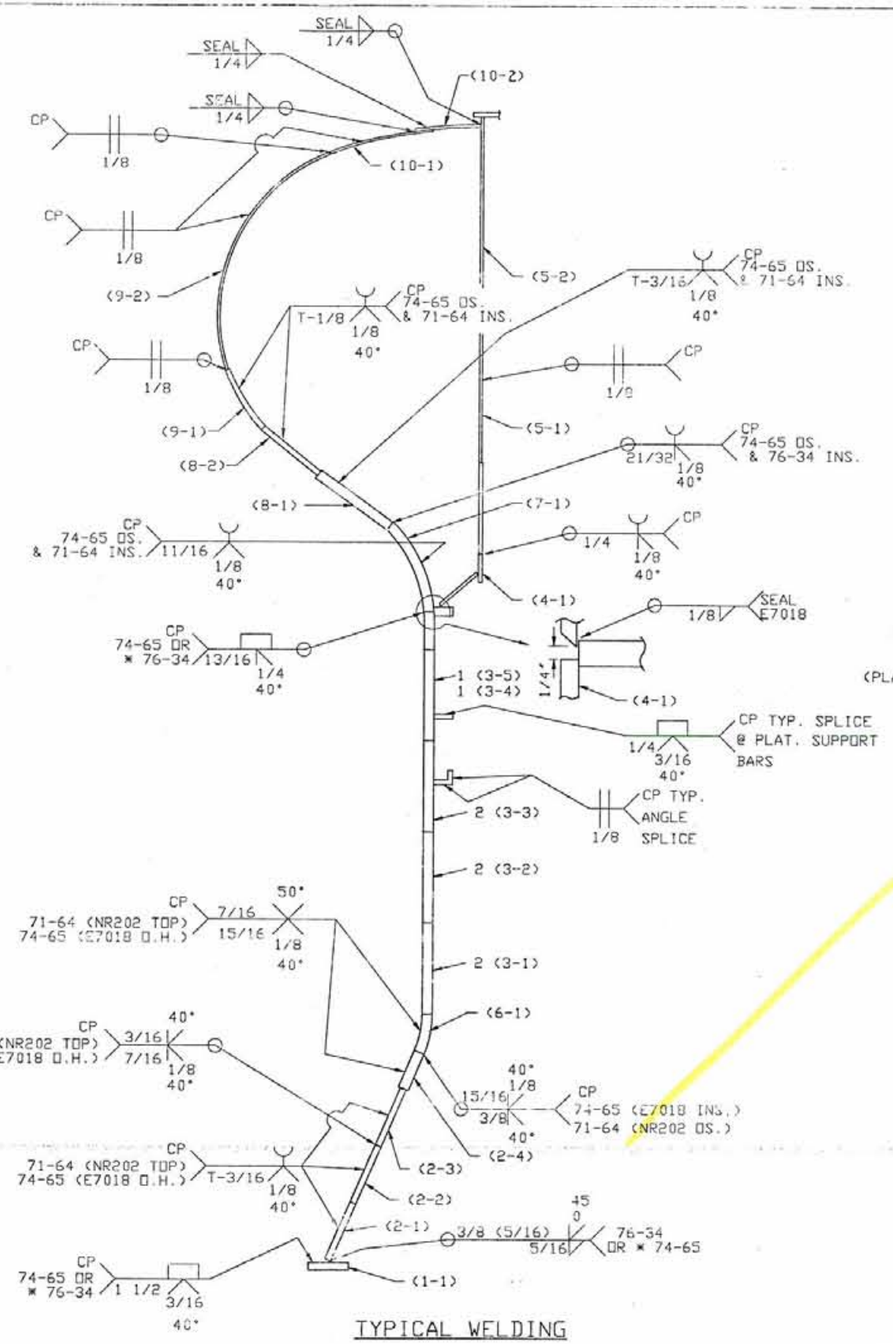
Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

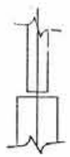
400 M GAL. PEDESTAL SPHEROID
WEST LINN, OR.
ORIENTATION AND ROOF ERECTION

DWG. PREPARED AT 31		FABRICATED AT 32
	BY	DATE
DRAWN: GWM	10-3-90	DRAWING F2
CHECKED: PB	10-9-90	CONTRACT 50064

6ERDR132 01/10/90 8543E2A ... PLOTTED: 09/19/90 11:06:18 ... BY: RCR

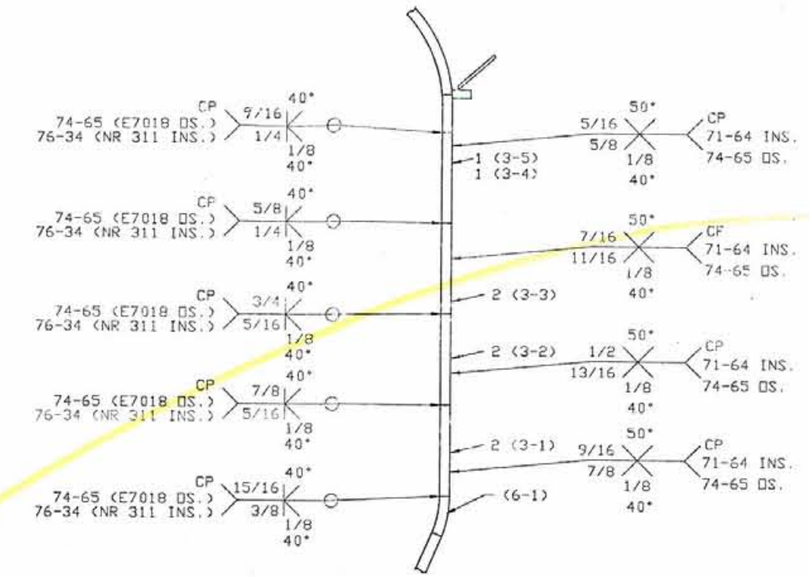


TYPICAL WELDING



TYP

(PLATES TO BE ALIGNED ON CL'S)



PEDESTAL WELDING

NOTES:

ALL WELDS ON THIS DRAWING ARE FIELD WELDS PER AWWA D100-84. ALL WELDS QUALIFIED BY WPS 50-39 (E6010) UNLESS NOTED.

WELD SYMBOL C.P. = COMPLETE PENETRATION.

* INDICATES PROCEDURE FOR WHICH WELD QUANTITY WAS FIGURED.

USE E7018, LH-70, OR E6011 FW-35LS WHEN TACKING OR MAKING ROOT PASSES FOR INNERSHIELD.

CLARIFY (TYP.)

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY

10-11-90

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. AWWA D100-84
EIS- N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY _____ P.E.
STATE OR NO. _____
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

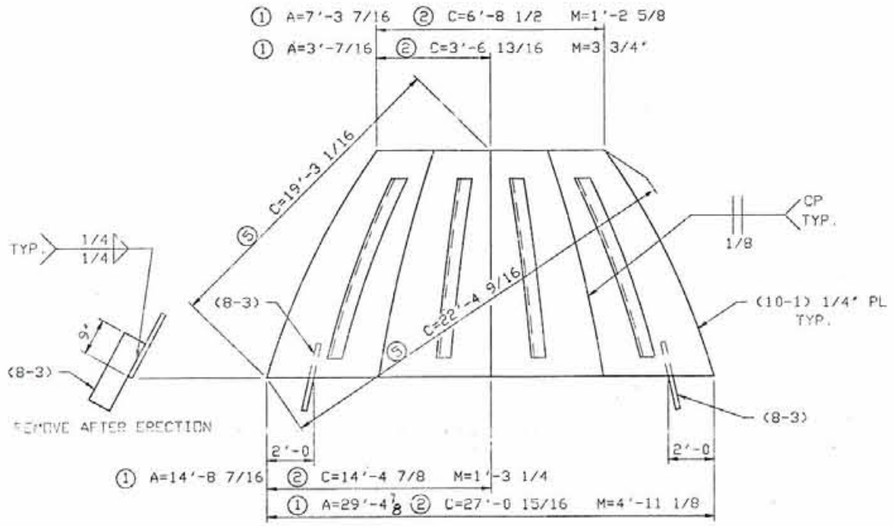
Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS – FABRICATORS – CONTRACTORS

400 M GAL. PEDESTAL SPHEROID
WEST LINN, OR.
WELDING DIAGRAM

DWG. PREPARED AT 31 FABRICATED AT 32

	BY	DATE		
DRAWN:	[illegible]	10-8-90	DRAWING	E3AB
CHECKED:	PB	10-9-90	CONTRACT	50064

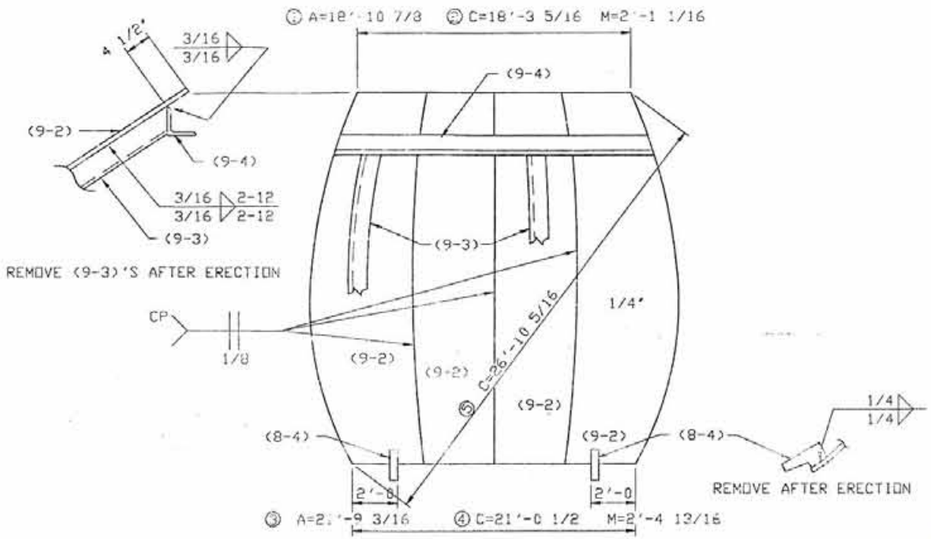


ROOF SUB-ASS'Y. C W/4 PL'S (10-1)

(4 REQ'D INS. SHOWN WT = #)

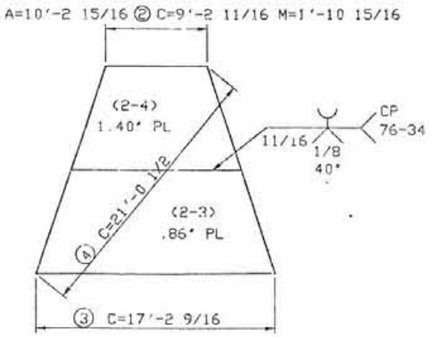
ROOF SUB-ASS'Y. D W/2 PL'S (10-1)

(1 REQ'D INS. SHOWN WT = #)



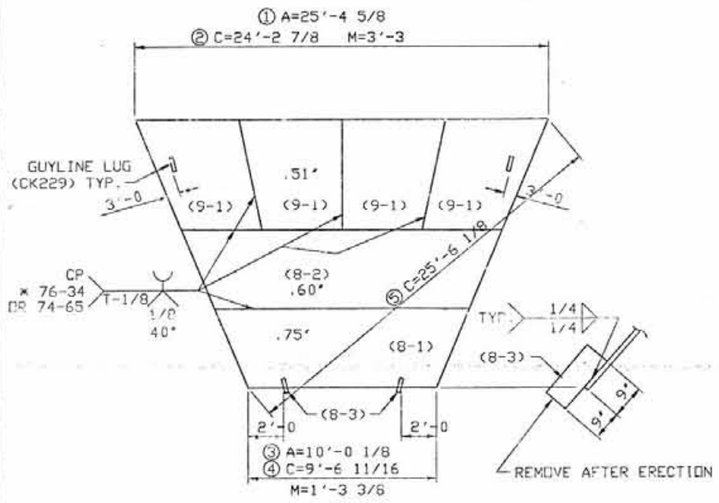
TANK SUB-ASS'Y B

(7 REQ'D INS. SHOWN WT = #)



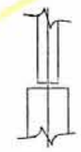
UPPER PEDESTAL CONE SUB-ASS'Y.

(4 REQ'D INS. SHOWN WT = #)



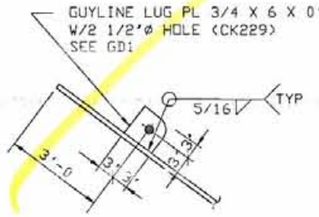
LOWER TANK & BOTTOM CONE SUB-ASS'Y A

(6 REQ'D INS. SHOWN WT.= #)



TYP

(PLATES TO BE ALIGNED ON CL'S)

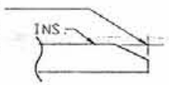


TYP GUYLINE LUG

(REMOVE AFTER ERECTION)

NOTE:

ALL ARC & CHORD DIMENSIONS SHOWN ON PL'S ARE MEASURED TO I.S. EDGE OF PL UNLESS NOTED. IF PL IS SHOP BEVELED FOR WELDING LOCATE THIS POINT WITH SMALL SQUARE OR WOODEN BLOCK.



FOREMAN NOTE:

FIELD MEASURE DIMENSIONS AS SHOWN. RECORD MEASUREMENTS ON CHARTS ON SHEET SA1. WHEN ERECTION IS COMPLETE MAIL CHART TO YOUR C.M.

LOWER PEDESTAL CONE SUB-ASS'Y.

(4 REQ'D INS. SHOWN WT = #)

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. AWWA D100-84
EIS- N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY [signature] P.E.
STATE IA NO.
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

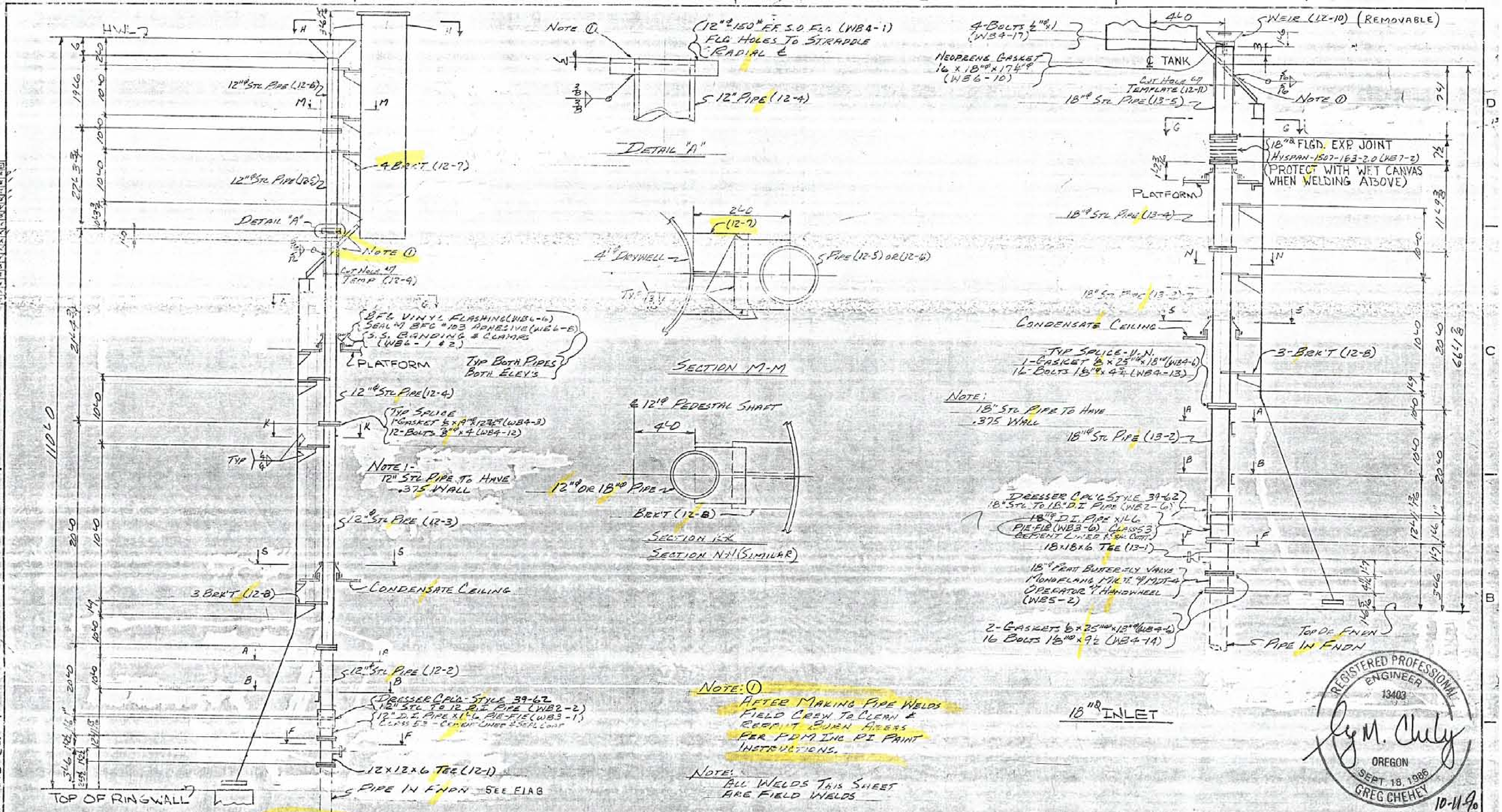
PDM Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M GAL. PEDESTAL SPHEROID
WEST LINN, OR.
GROUND SUB-ASSEMBLIES

	BY	DATE		
DWG. PREPARED AT 31			FABRICATED AT	32
DRAWN: WTPPT		10-2-90	DRAWING	E3B
CHECKED: PB		10-9-90	CONTRACT	50064

6EN3A132 07/05/90 8543E32 ... PLOTTED: 09/19/90 11:09:22 ... BY: RCR



PITT-DES MOINES, INC.
REVIEWED FOR CONFORMANCE TO PLANS & SPECIFICATIONS
BY Mike Amuah
TITLE DES. ENG
DATE 10-9-90
COMPLIES YES
EXCEPTIONS NOTED

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS. AWWA-D100-84

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

PDM Pitt-Des Moines, Inc.

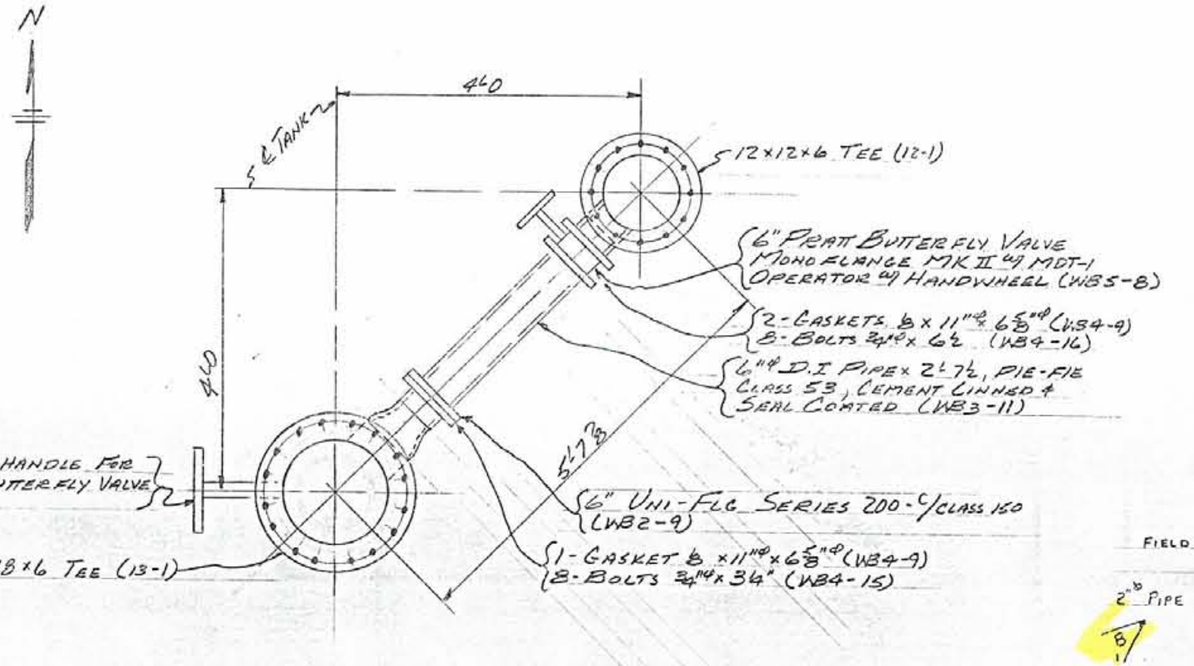
PRELIMINARY FOR APPROVAL — DATE
NOT FOR CONSTRUCTION
APPROVED FOR RELEASE — DATE
PREVIOUS PRINTS VOID

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

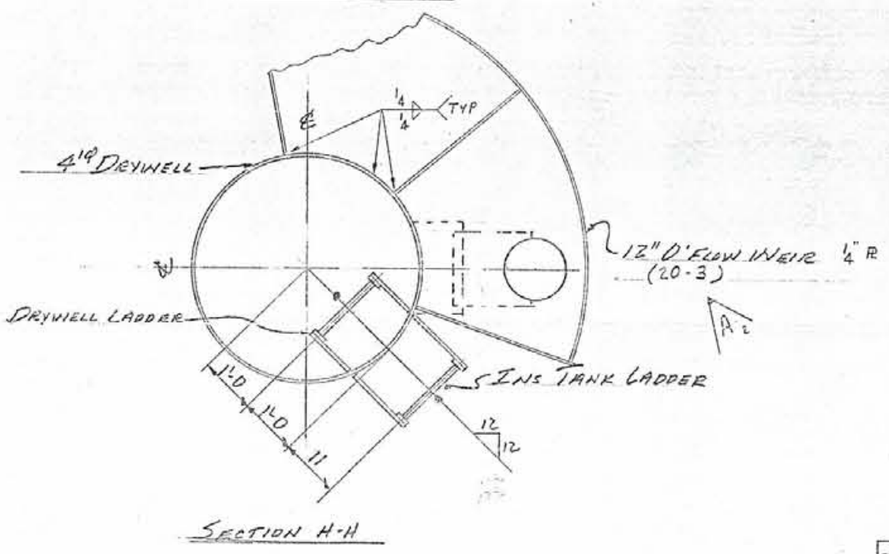
400 M GAL PEDESTAL SPHEROID
WEST LINN - OR.
O'FLOW & INLET ERECTION

DWG. PREPARED AT 31 — FABRICATED AT 32

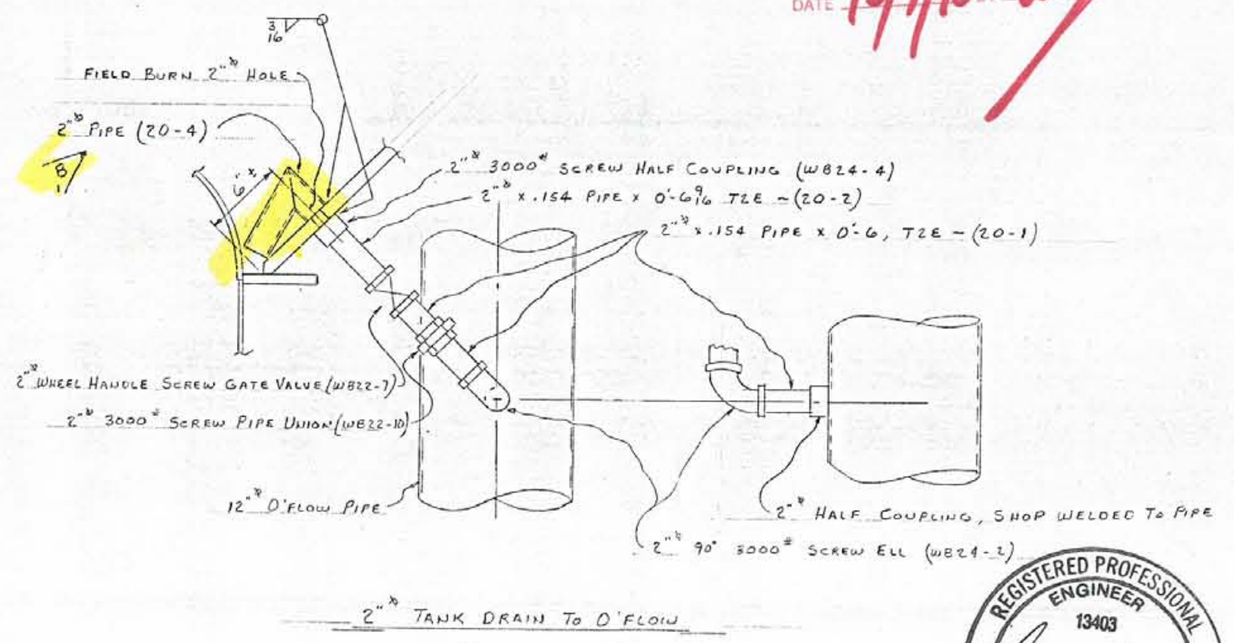
	BY	DATE	
DRAWN:	WTM	9-18-90	DRAWING E4A.C
CHECKED:	PB	10-9-90	CONTRACT 50069



SECTION F-F



SECTION H-H



2" TANK DRAIN TO O'FLOW

NO EXCEPTION TAKEN ☐ MAKE CORRECTIONS NOTED
☒ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for dimensions which he is to confirm and correlate at the job site; fabrication and techniques of construction, coordination of his work with that of all other trades and the satisfactory performance of his work.

MURRAY, SMITH & ASSOCIATES, INC.

DATE 12/7/90 BY

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY 12-3-90

OPEN HOLES N/A
ERECTION REF N/A
WELD SPECS AWWA-D100-84
BBS -

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY Mike Arnold P.E.
STATE IA NO.
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE
B1	ADD PIPE 20-4 TO MAKE SIPHON	PB	11-28-90		
A2	ADD TANK DRAIN, REV. WIER PER DESIGN	PB	10-29-90		

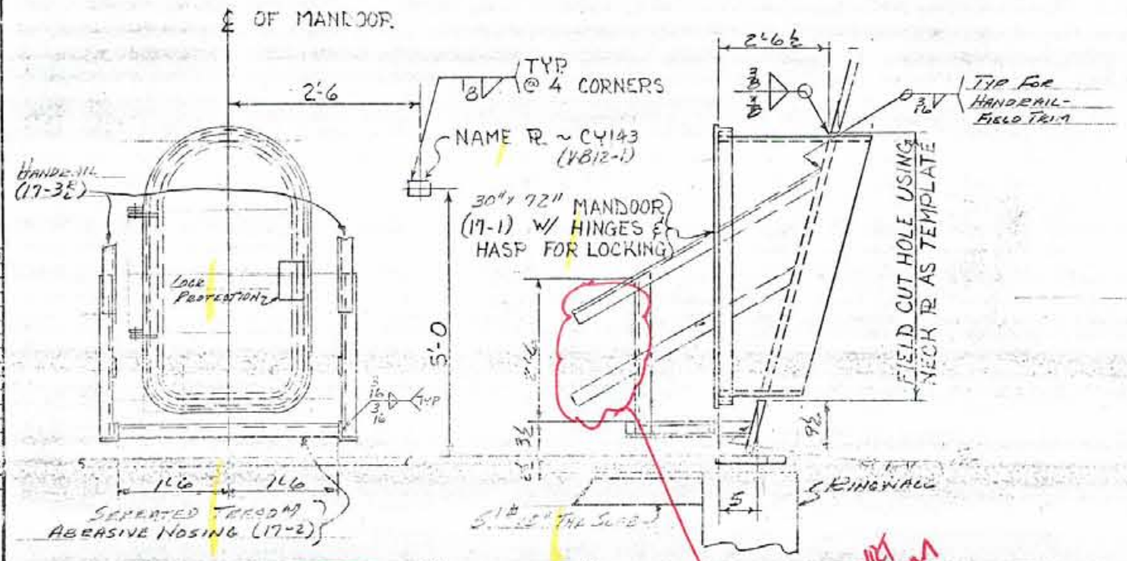
PDM Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M GAL PEDESTAL SPHEROID
WEST LINN - OR
O'FLOW & INLET ERECTION

DWG. PREPARED AT 31 FABRICATED AT

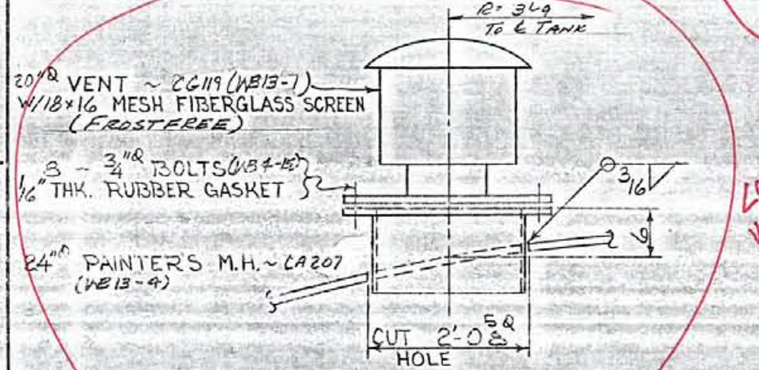
	BY	DATE	
DRAWN: WITH		9-24-90	DRAWING E4C
CHECKED: PB		10-10-90	CONTRACT 50064



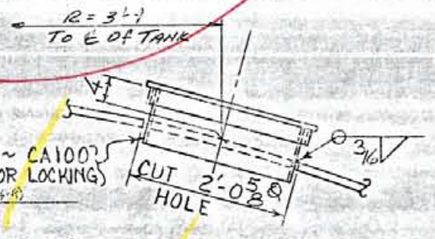
MANDOOR ERECTION

CHECK WITH OSHA - TRIM AS REQ'D

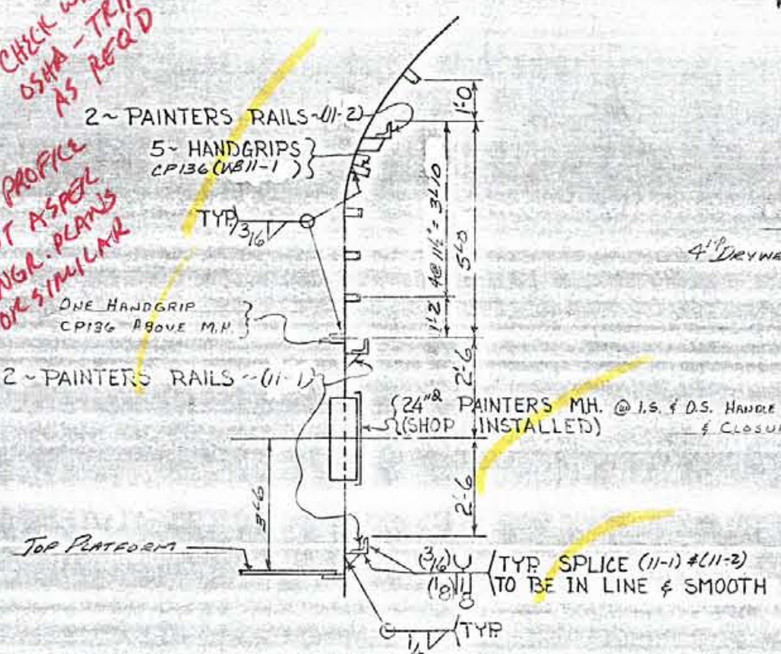
LOW PROFILE VENT AS REQ'L ENGR. PLANS OR SIMILAR



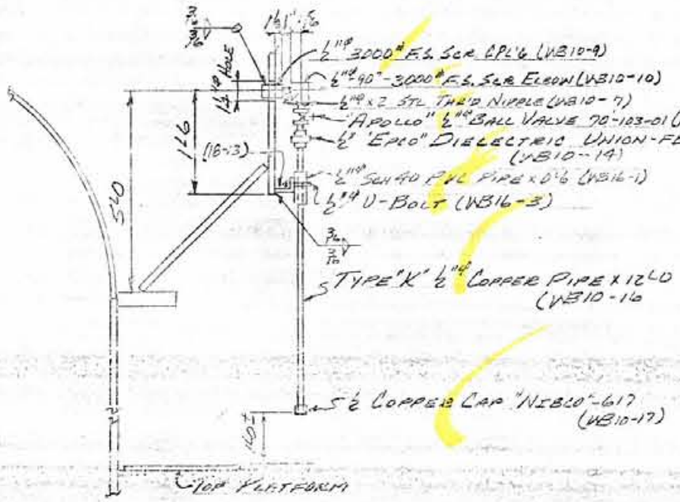
PAINTER'S MANHOLE ERECTION
(SEE E2 FOR ORIENTATION)



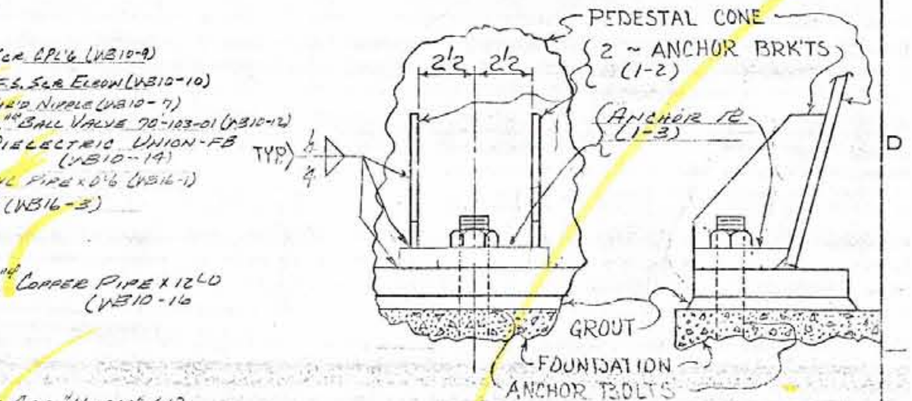
24"Ø ROOF HATCH ERECTION
(SEE E2 FOR ORIENTATION)



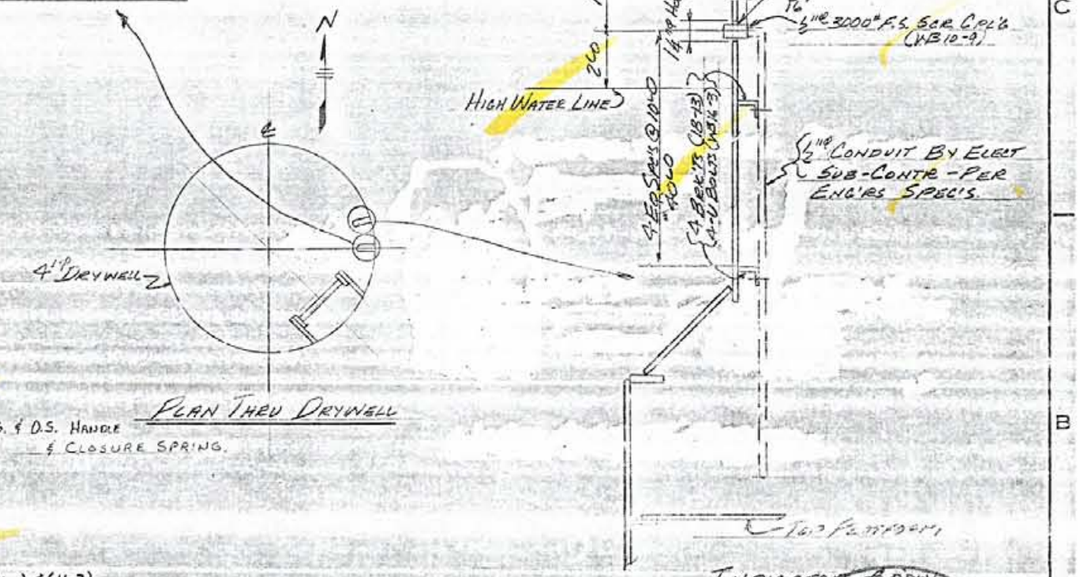
PAINTERS RAILS TO TANK



FUTURE INDICATOR CONN



ANCHOR BRK'TS TO PEDESTAL



PLAN THRU DRYWELL

NOTE:
WELD SPECS: AWWA D100-84
ALL WELDS THIS SHT ARE FIELD WELDS.
SEE NOTES SHT. E2
C.P. = COMPLETE PENETRATION
ALL WELDS QUALIFIED BY WPS 50:39 (E6010) UNLESS NOTED.

REGISTERED PROFESSIONAL ENGINEER
13403
OREGON
SEPT 18, 1986
GREG CHURCHILL
10-11-90

PITT-DES MOINES, INC.
REVIEW NOT BY WORKMANSHIP TO PLANS SPECIFICATIONS
BY Neale Smith
TITLE Des. Engr.
DATE 10-9-90
COMPLIES ✓
EXCEPTIONS NOTED

OPEN HOLES
ERECTION REF
WELD SPECS. AWWA D100-84
ETC.

NO.	REVISION DESCRIPTION	BY	DATE	CHK	DATE

PDM Pitt-Des Moines, Inc.

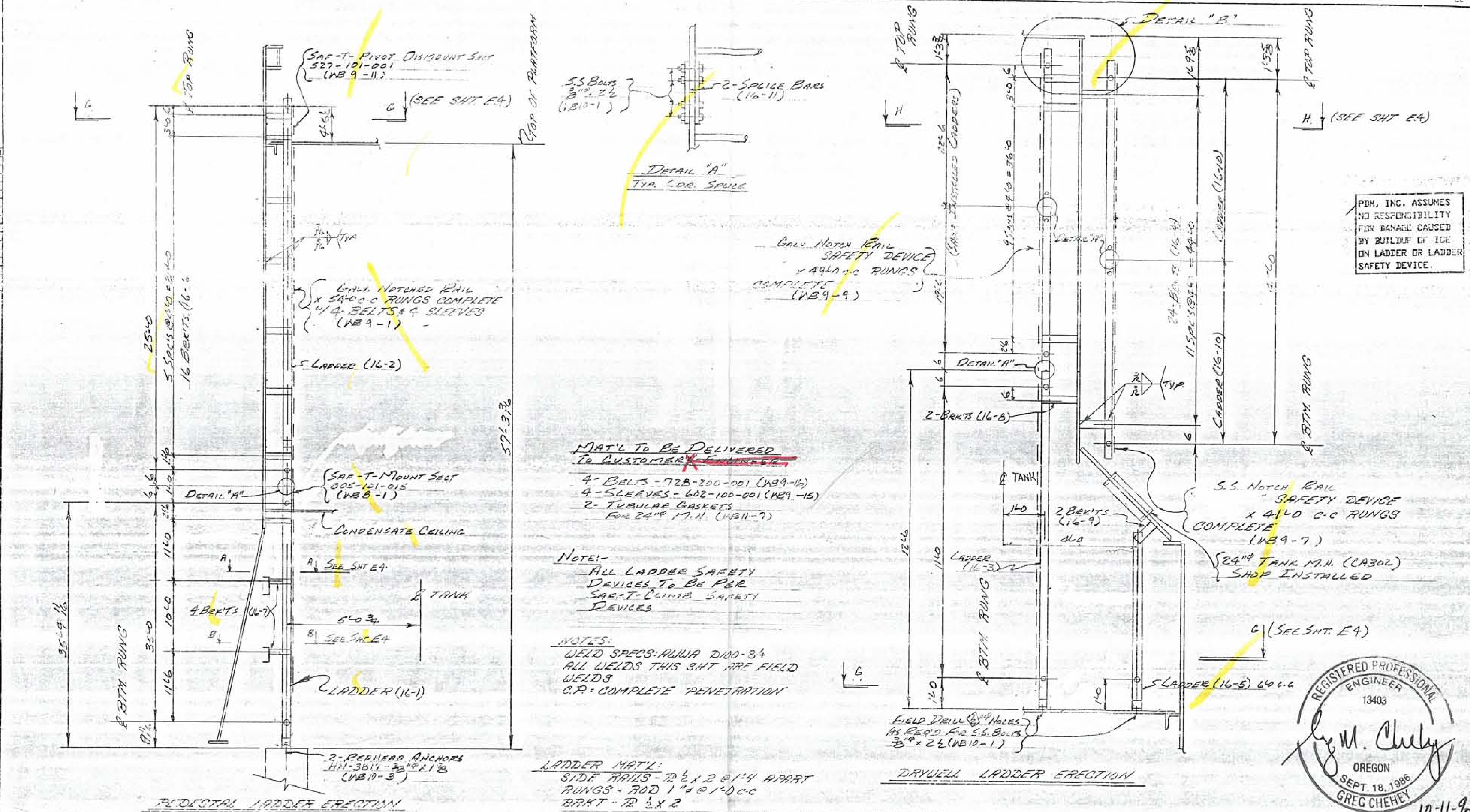
PRELIMINARY FOR APPROVAL
DATE
NOT FOR CONSTRUCTION
APPROVED FOR RELEASE
DATE
PREVIOUS PRINTS VOID

PITT DES MOINES, INC. ENGINEERS - FABRICATORS - CONTRACTORS

460 M. GAL. PEDESTAL SPHEROID
WEST LINN - OR.
MISC. ERECTION

DWG. PREPARED AT	31	FABRICATED AT	32
BY	DATE		
DRAWN LWM	10-1-90	DRAWING	E5
CHECKED PB	10-10-90	CONTRACT	50064

BRUNING 40-1 6735
PEP STD (12)



PDM, INC. ASSUMES NO RESPONSIBILITY FOR DAMAGE CAUSED BY BUILDUP OF ICE ON LADDER OR LADDER SAFETY DEVICE.

MAT'L TO BE DELIVERED TO CUSTOMER ~~ENGINEER~~

- 4 - BELTS - 728-200-001 (VB9-16)
- 4 - SLEEVES - 602-100-001 (VB9-15)
- 2 - TUBULAR GASKETS FOR 24"φ M.H. (VB11-7)

NOTE:-
ALL LADDER SAFETY DEVICES TO BE PER SAF-T-CLIMB SAFETY DEVICES

NOTES:
WELD SPECS: AWWA D100-84
ALL WELDS THIS SHT ARE FIELD WELDS
C.P. = COMPLETE PENETRATION

LADDER MAT'L:
SIDE RAILS - PL 2 1/2 x 2 @ 1'-4 APART
RUNGS - ROD 1"φ @ 1'-0 c-c
BRKT - PL 1/2 x 2

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY
10-11-90

PITT-DES MOINES, INC.	
BY	Mike Anim
TITLE	DES. ENG.
DATE	10-9-90
COMPLIES	YES
EXCEPTIONS NOTED	

OPEN HOLES N/A
ERECTION REF. N/A
WELD SPECS AWWA D100-84

PDM Pitt-Des Moines, Inc.

PRELIMINARY FOR APPROVAL
NOT FOR CONSTRUCTION
APPROVED FOR RELEASE

PITT-DES MOINES, INC. ENGINEERS · FABRICATORS · CONTRACTORS
400 M GAL PEDESTAL SPHEROID
WEST LINN - OR
LADDER ERECTION
DWG. PREPARED AT | FABRICATED AT
DRAWN | 9-21-94 | DRAWING E4AB

FORM E 18100

NOTE!-
WHEN NOT IN USE REMOVE EXTENSIONS AND STORE IN BRKTS (16-12) & (16-13)

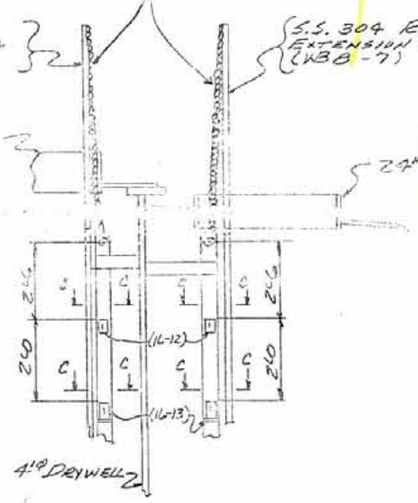
STD LINK MACHINE CHAIN. TRADE SIZE 3/0 X 540 TACK WELD TO LADDER & EXTENSIONS (WB6-15)

GALV REMOVABLE EXTENSION KIT B02-101-054 (WB8-4)

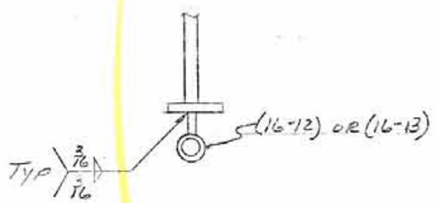
S.S. 304 REMOVABLE EXTENSION KIT B02-103-054 (WB8-7)

36"ø DRYWELL HATCH

24"ø ROOF HATCH



DETAIL "B"



SECTION C-C

REGISTERED PROFESSIONAL ENGINEER
13403
OREGON
SEPT. 18, 1986
GREG CHEHEY
10-11-90

OPEN HOLES N/A
ERECTION REF N/A
WELD SPECS. AWWA-D100 PP
EIS- N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY Greg Chehey P.E.
STATE IA NO.
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

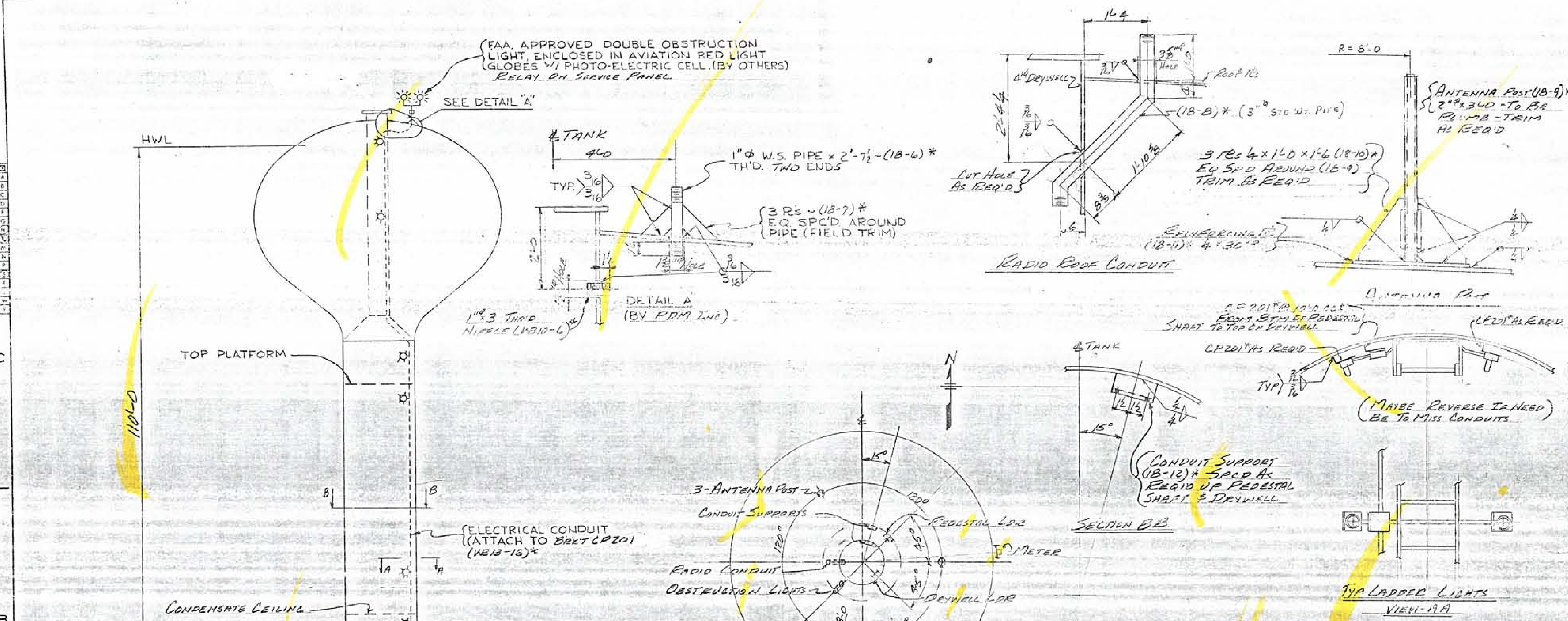
Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400M GAL. PEDESTAL SPHEROID
WEST LINN - OR.
LADDER ERECTION

DWG. PREPARED AT 31 | FABRICATED AT

	BY	DATE	
DRAWN:	WDM	9-25-90	DRAWING E68
CHECKED:	PB	10-10-90	CONTRACT 50064



NOTES:
ALL LABOR & MAT'L. FOR ELECTRICAL WORK BY SUB-CONTRACTOR UNLESS NOTED.
SEE ENGINEERS SPECIFICATIONS FOR COMPLETE DESCRIPTION OF ELECTRICAL WORK.
ELECTRICAL SUB-CONTRACTOR TO LOCATE PDM FITTINGS AS REQ'D
* FURNISHED BY PDM INC.

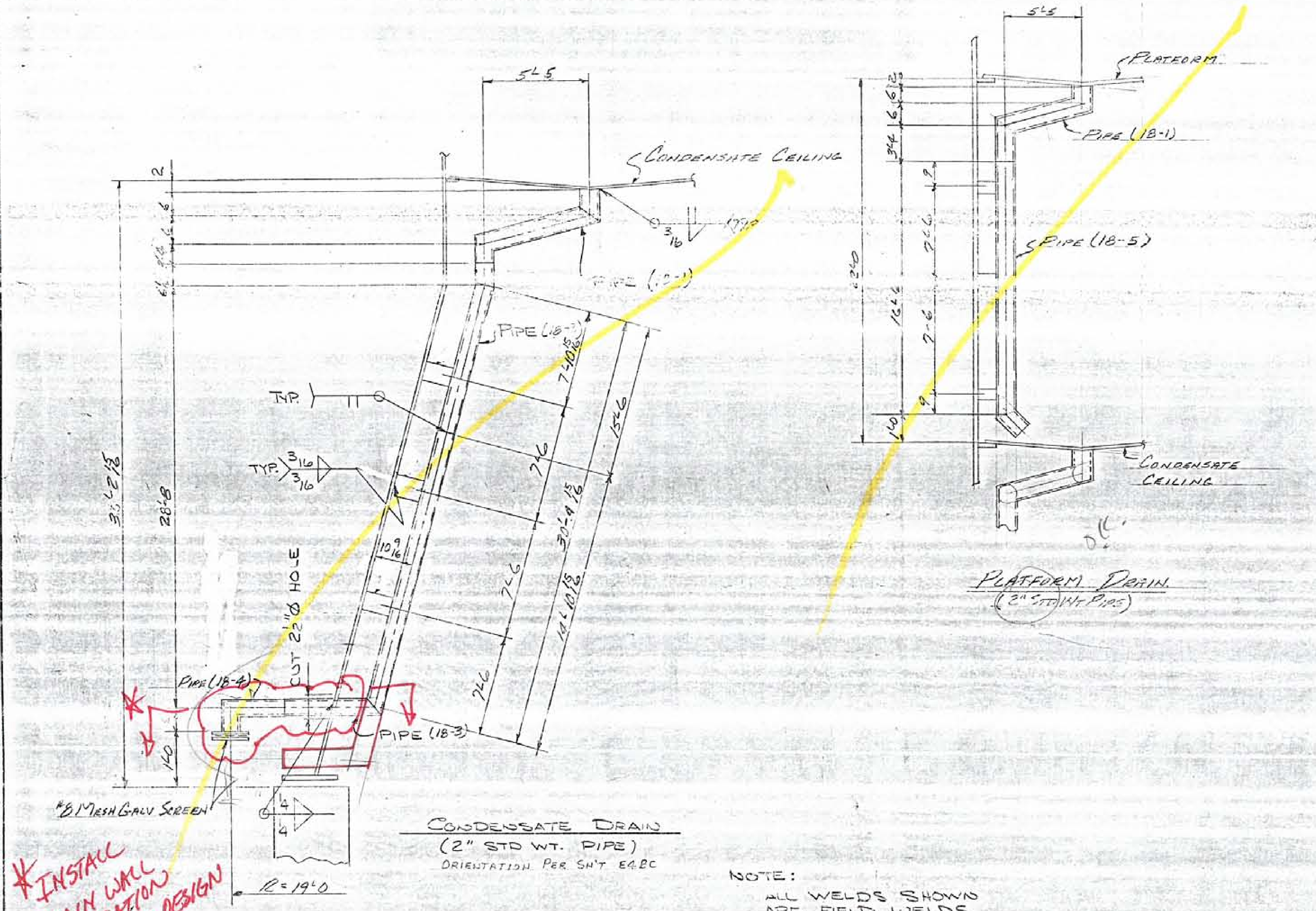
REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY
10-11-90

REVIEWED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS BY ... TITLE DES ENG DATE 10-9-90 COMPLIES YES EXCEPTIONS NOTED	OPEN HOLES EREC REF WELD SPECS TIS-	NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

PDM PITT-DES MOINES, INC

[redacted]

PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS
400 M GAL. PEDESTAL SPHEROID
WEST LINN - ORE.
ELECTRICAL DIAGRAM
DWG PREPARED AT 31 | FABRICATED AT
DRAWN: WTM 9-28-90 | DRAWING E7
CHECKED: PB 10-10-90 | CONTRACT 50064



CONDENSATE DRAIN
(2" STD WT. PIPE)
ORIENTATION PER SH'T E4&BC

PLATFORM DRAIN
(2" STD WT PIPE)

NOTE:
ALL WELDS SHOWN ARE FIELD WELDS

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY 10-11-90

REVIEW FOR CONFORMANCE TO PLANS & SPECIFICATIONS	
BY	[signature]
TITLE	DES ENG
DATE	10-4-90
COMPLIES	YES
EXCEPTIONS NOTED	

OPEN HOLES
ERECTION REF.
WELD SPECS. AWWA D100-84

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

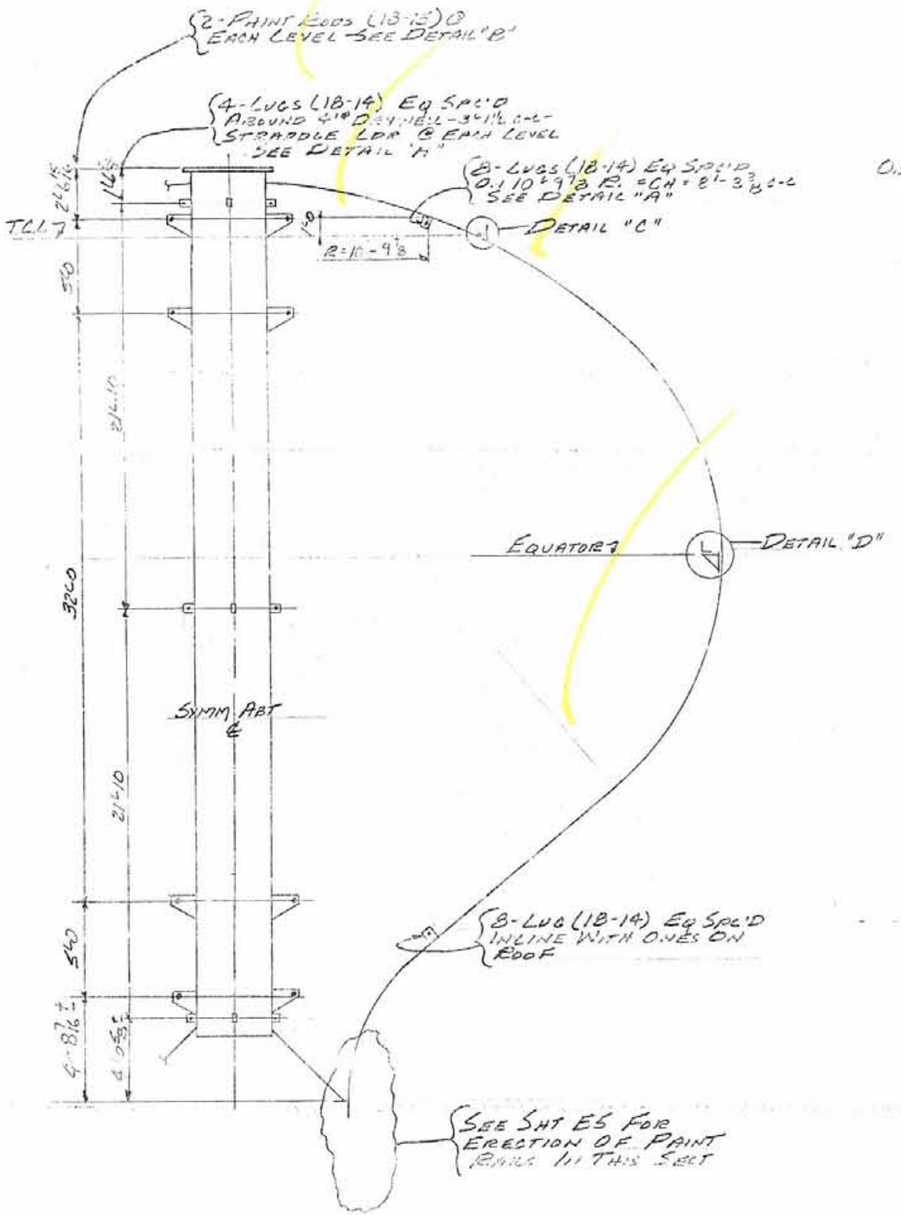
PDM Pitt-Des Moines, Inc.

PRELIMINARY FOR APPROVAL — DATE
NOT FOR CONSTRUCTION
APPROVED FOR RELEASE — DATE
PREVIOUS PRINTS VOID

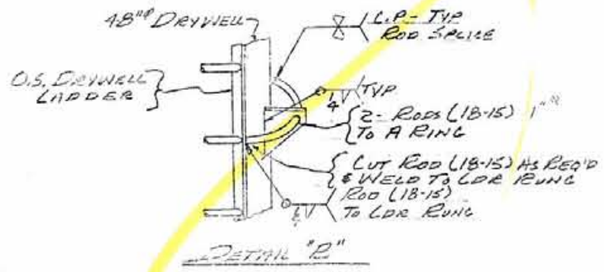
PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400 M. GAL. PED SPHEROID
WEST LINN - OR
CONDENSATE DRAIN

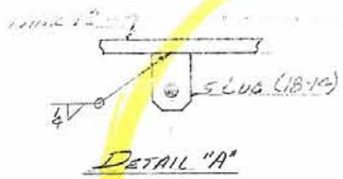
DWG. PREPARED AT 31		FABRICATED AT 32
	BY / DATE	
DRAWN	WTM 9 29 90	DRAWING E8
CHECKED	FB 10-10-90	CONTRACT 50864



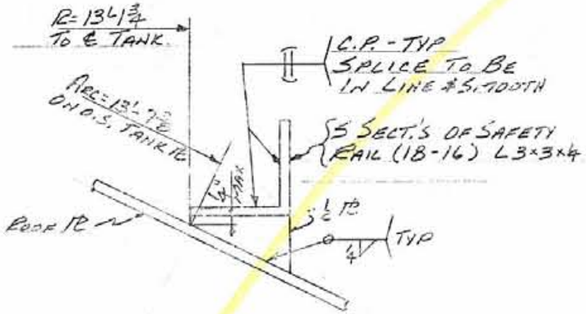
HALF ELEVATION OF TANK



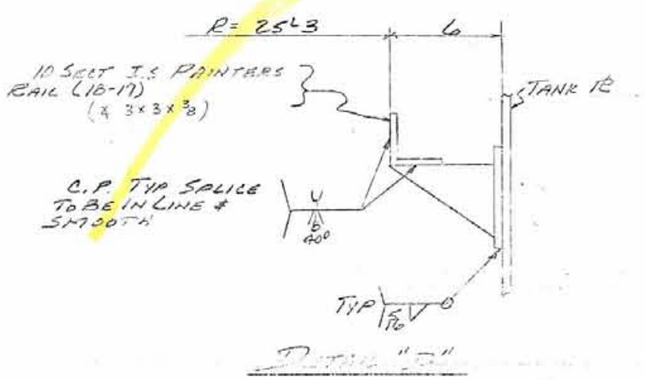
DETAIL "B"



DETAIL "A"



DETAIL "C"



DETAIL "D"

NOTES:
ALL WELDS THIS SHT ARE FIELD WELDS
WELD SPEC'S AWWA-D100-84
C.P. = COMPLETE PENETRATIONS.

REGISTERED PROFESSIONAL ENGINEER
13403
OREGON
SEPT. 18, 1986
GREG CHEHEY
10-11-90

OPEN HOLES
ERECTION REF
WELD SPECS.
EIS
CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY _____ P.E.
STATE ID NO.
DATE 10-9-90

NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE

Pitt-Des Moines, Inc.

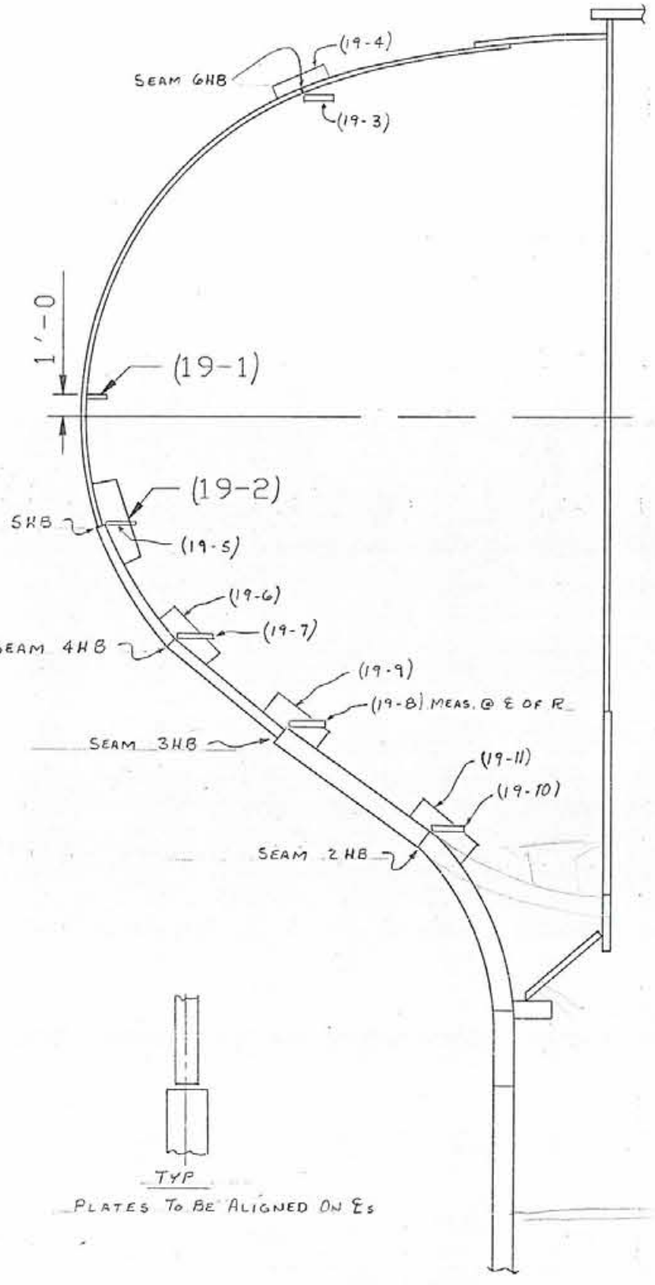
PITT-DES MOINES, INC.
ENGINEERS - FABRICATORS - CONTRACTORS

400M Gal PEDESTAL SPHEROID
WEST LINN - OR
PAINTERS RAILS & LUGS.

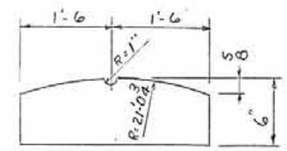
DWG. PREPARED AT 31 | FABRICATED AT 32

	BY	DATE
DRAWN:	WTM	10-3-90
CHECKED:	PB	10-10-90

DRAWING E9
CONTRACT 50064

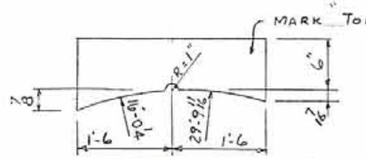


LOCATION FOR RADIUS BOARDS



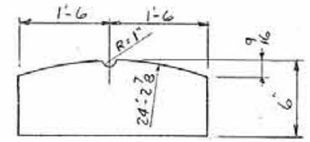
MARK " SEAM 6HB HORIZ."

RADIUS BOARD ~ (19-3)



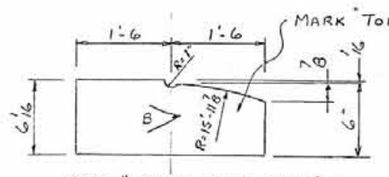
MARK "SEAM 6HB VERT."

RADIUS BOARD ~ 19-4



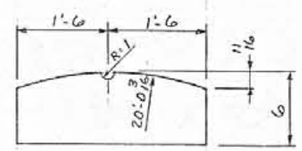
MARK " SEAM 5HB HORIZ"

RADIUS BOARD-(19-5)



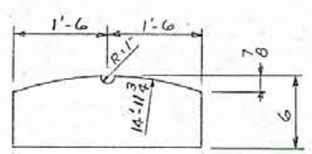
MARK " SEAM 4HB VERT."

RADIUS BOARD-(19-6)



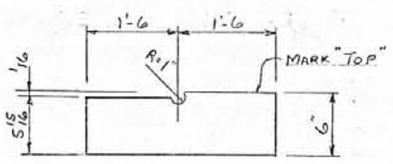
MARK " SEAM 4HB HORIZ."

RADIUS BOARD (19-7)



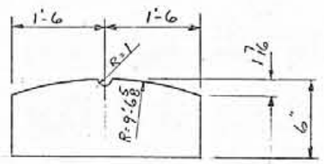
MARK " SEAM 3HB HORIZ"

RADIUS BOARD (19-8)



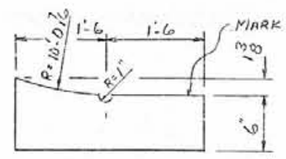
MARK "SEAM 3HB VERT"

RADIUS BOARD (19-9)



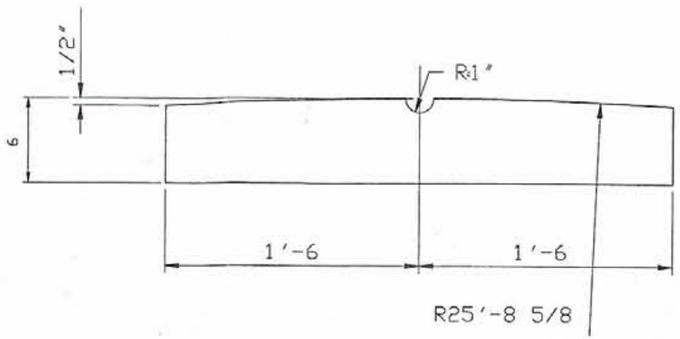
MARK "SEAM 2HB HORIZ."

RADIUS BOARD (19-10)

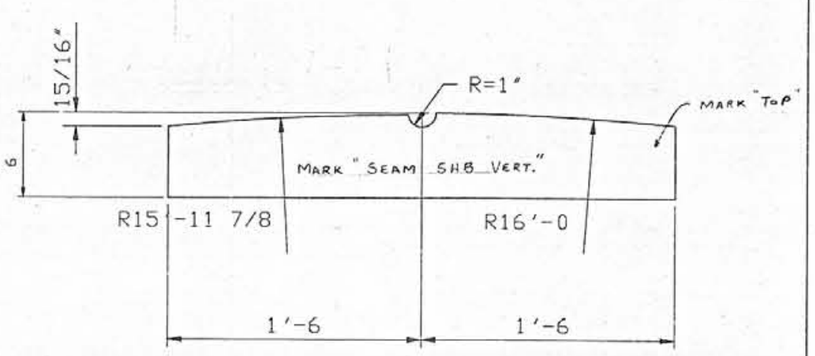


MARK "SEAM 2HB VERT"

RADIUS BOARD (19-11)



RADIUS BOARD (19-1)



RADIUS BOARD (19-2)

NOTE:

ERECTION TOLERANCES PER API 650 8TH EDITION:

5.5.4 PEAKING

WITH A HORIZONTAL SWEEP BOARD 36 INCHES LONG, PEAKING SHALL NOT EXCEED 1/2 INCH.

5.5.5 BANDING

WITH A VERTICAL SWEEP BOARD 36 INCHES LONG, BANDING SHALL NOT EXCEDE 1/2 INCH.

DEVIATIONS FROM TRUE CURVATURE OR ALIGNMENT, NOT TO EXCEED ± 1/2 INCH.

REGISTERED PROFESSIONAL ENGINEER 13403 OREGON SEPT. 18, 1986 GREG CHEHEY

12-3-90

OPEN HOLES	N/A
ERECTION REF.	N/A
WELD SPECS.	AWWA D100-84
EIS-	N/A

CERTIFIED FOR CONFORMANCE TO PLANS AND SPECIFICATIONS
BY _____ P.E.
STATE OF NO. 5227
DATE 10/29/90

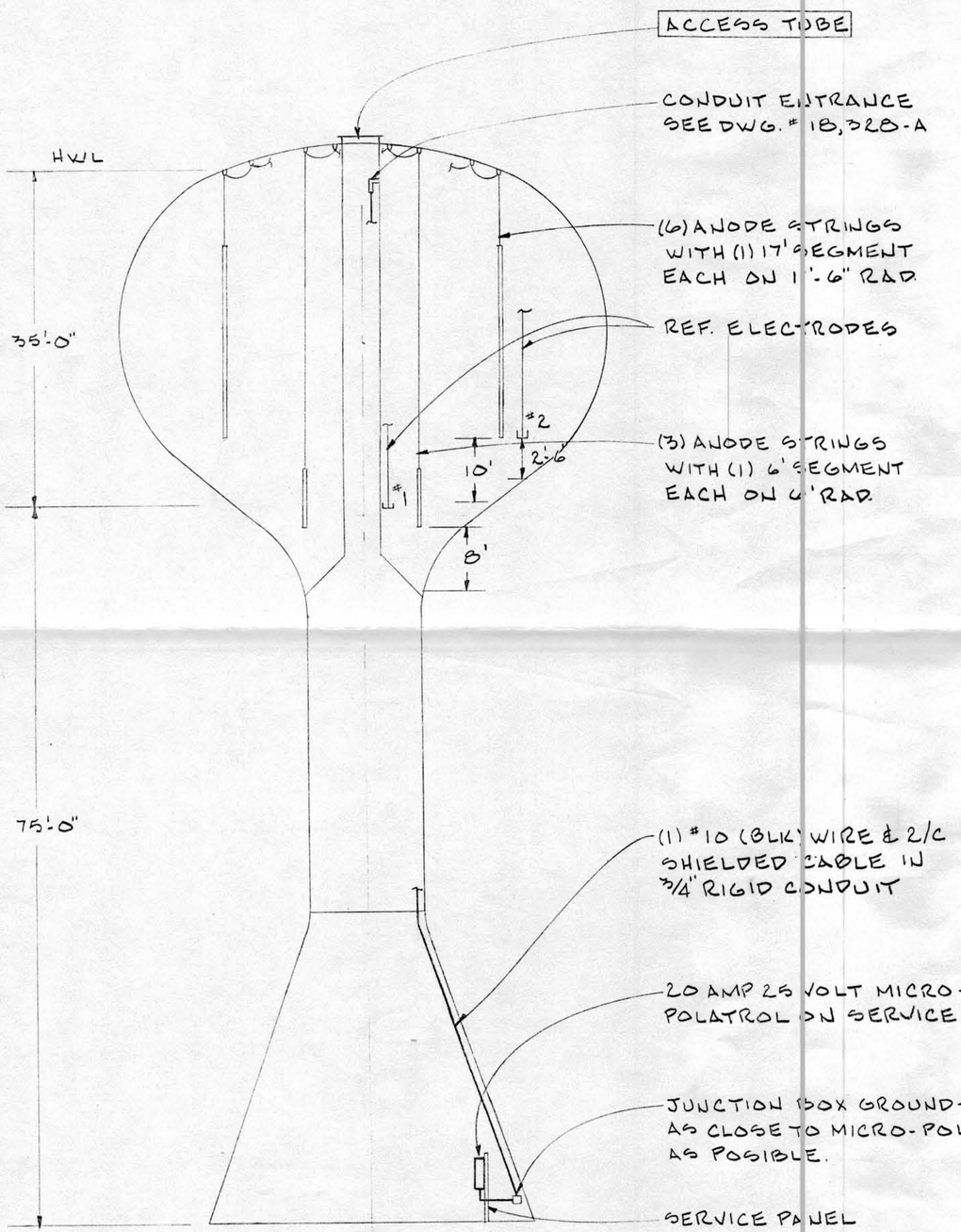
NO	REVISION DESCRIPTION	BY	DATE	CHK	DATE
C	APPROVAL CORRECTION	PB	11-28-90		
B	CORRECT (19-6), RAD. OMITTED	PB	11-8-90		
A	ADD RAD. BDS 19-3 - 19-11, ADD SEAM NOS.	PB	11-3-90		

Pitt-Des Moines, Inc.

PITT-DES MOINES, INC.
ENGINEERS — FABRICATORS — CONTRACTORS

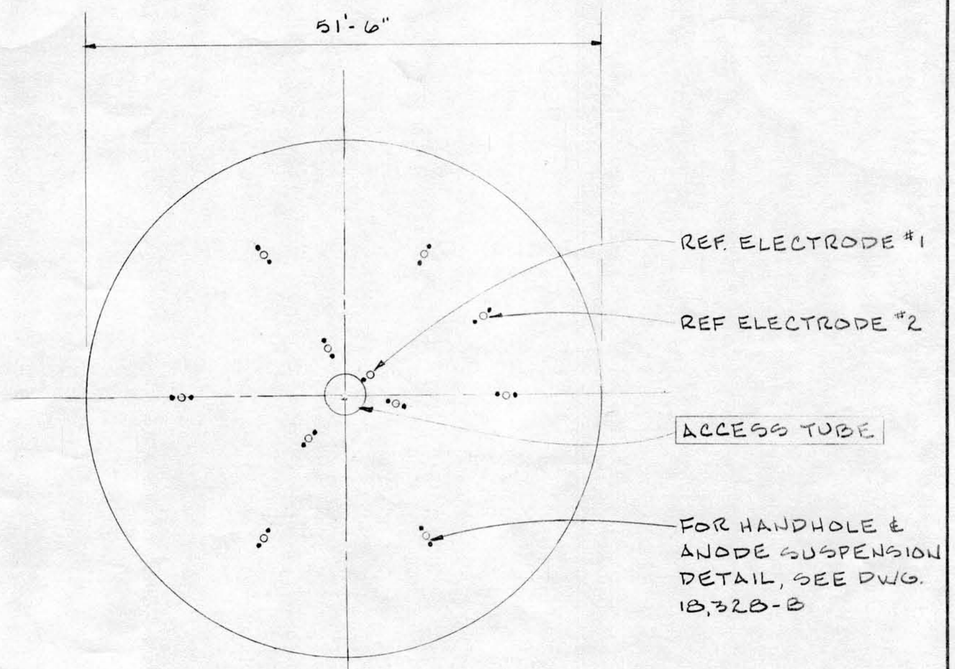
400 M GAL. PEDESTAL SPHEROID
WEST LINN, OR.
RADIUS BOARDS

	BY	DATE		
DWG. PREPARED AT 31			FABRICATED AT	32
DRAWN: PWH		10/29/90	DRAWING	E10
CHECKED: PB		10-29-90	CONTRACT	50064

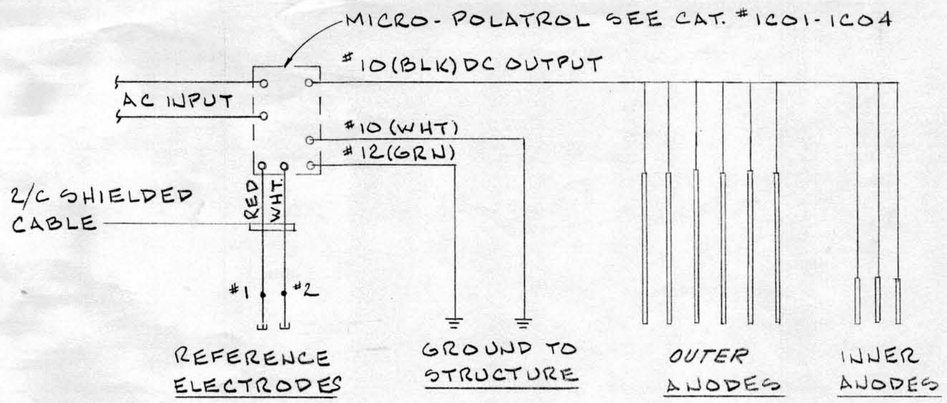


ELEVATION

ANODE MAT'L: .063" DIA. PLATINUM/NIOBIUM WIRE



PLAN



CIRCUIT DIAGRAM

N.T.S.

ROSEMONT RESERVOIR

CATHODIC PROTECTION SYSTEM FOR
400,000 GAL. ELEVATED TANK
CITY OF WESTLINN, OREGON

Cathodic Protection Services
A Kaiser Company

PROJ MGR		SCALE AS NOTED	DATE 12-4-90
SR ENG		DRAWN BY RUBEN	DRAWING NO 18,328
DESIGN BY		SHEET 1 OF 1	

REV 1, 1-3-91 ADDED WIRE SIZE & TYPE
REV 2 ADDED ANODE RAD & DIM. FROM GTM 3-11-91
REV 3

Pitt-Des Moines, Inc.

9719 Lincoln Village Drive, Suite 301 Sacramento, CA 95827

June 24, 1991

Murray, Smith and Associates
121 S.W. Salmon
Suite 1110
Portland, Oregon 97204

Attention: David W. Leibbrandt

Ref: Rosemont Reservoir
City of West Linn
Pitt-Des Moines Contract 50064

Gentlemen:

Enclosed are five (5) sets of revised drawings for the Cathodic Protection System. We are also forwarding a letter from CPS concerning your request for a fuse in the D.C. line to the anodes.

While CPS was roughing-in the cathodic protection system, they raised the location of the conduit entrance and did some minor adjustments to the anode positions. This was due to the high level of the water when the reservoir is full.

Please review these drawings, and if you have any questions, contact us. We plan on installing the cathodic system the week of July 8.

Very truly yours,

John C. Dewey
Project Manager

Cathodic Protection Services Company
Water Works Division
43 Fadem Road
Springfield, New Jersey 07081
(201) 379-2500
FAX: (201) 379-5611

May 29, 1991

Pitt-Des Moines, Inc.
9719 Lincoln Village Drive
Sacramento, CA 95827

Attention: Mr. John C. Dewey
Project Manager

Reference: Your Subcontract No. 50064-781
LOCATION: West Linn, Oregon
400,000 Gallon Reservoir, "Rosemount"
Cathodic Protection System No. 18323

Dear Mr. Dewey:

The unit provided for the referenced project is a Micro-Polatrol as called for in the specifications. However, it does not include a fuse in the D.C. line to the anodes. To fuse the D.C. line would not allow the Micro-Polatrol to return itself to normal operation at previously set parameters once the short is cleared. With a blown fuse the unit would not be providing corrosion control until someone realized the problem and replaced the fuse.

Protection of the Micro-Polatrol is accomplished with surge protection circuits and each printed circuit board set has internal surge protection to prevent damage to the components. The power circuit is protected by a choke and comparator circuit which stops the SCR from gating. Should a short circuit be detected after the bridge is gated on, the choke limits the rate of rise of output into the short circuit. The choke is sized to keep the peak current under the single cycle surge current rating of the SCR bridge.

Anode strings have been manufactured and installed with anode weights at the bottom of the string as shown on enclosed drawing T-88.

If there are any additional questions regarding the Cathodic Protection System, do not hesitate to contact us.

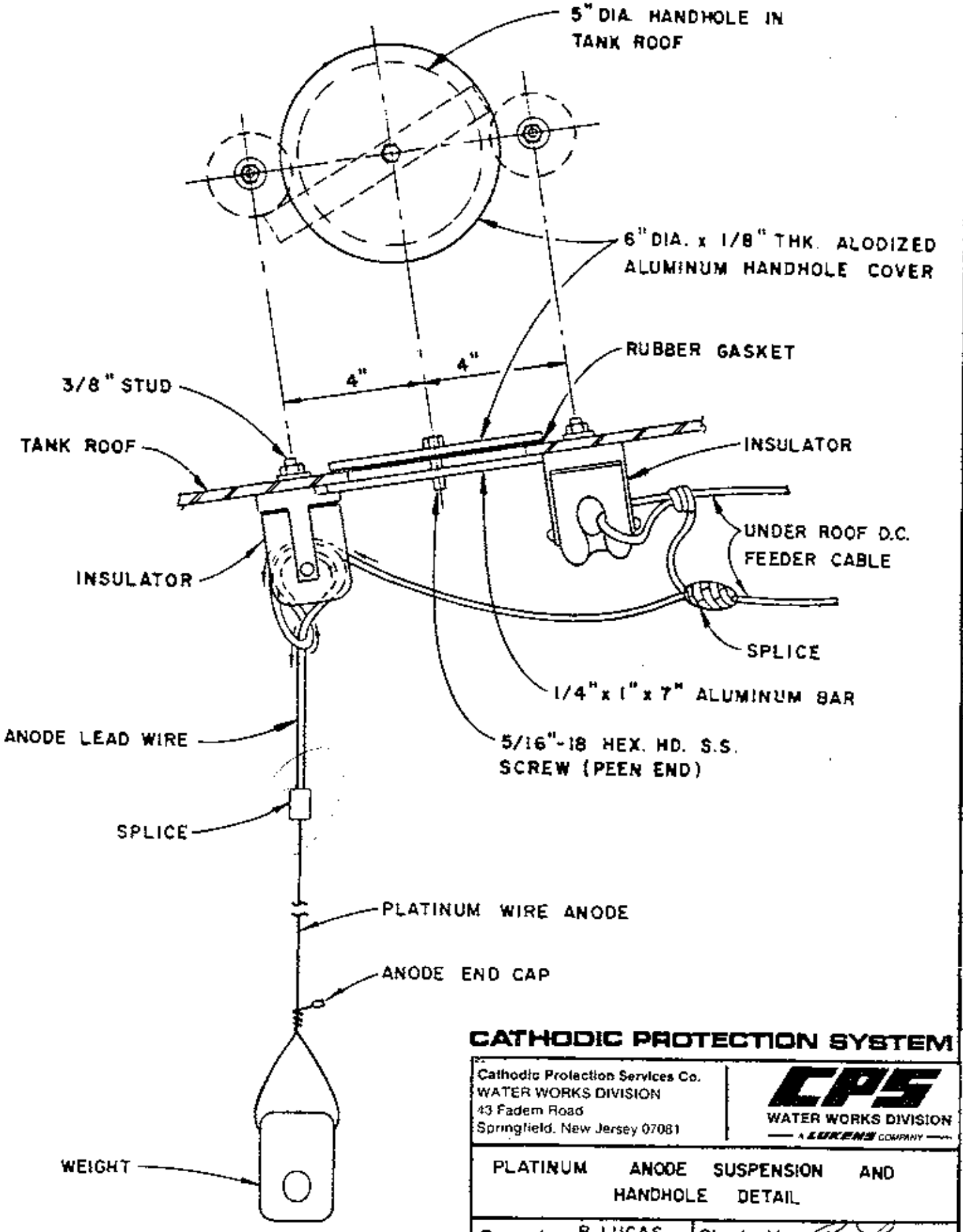
Sincerely yours,

CATHODIC PROTECTION SERVICES
Water Works Division

Ronald Lucas
Staff Engineer

RL:jc
cc: file

CPS
WATER WORKS DIVISION
A LUKENS COMPANY



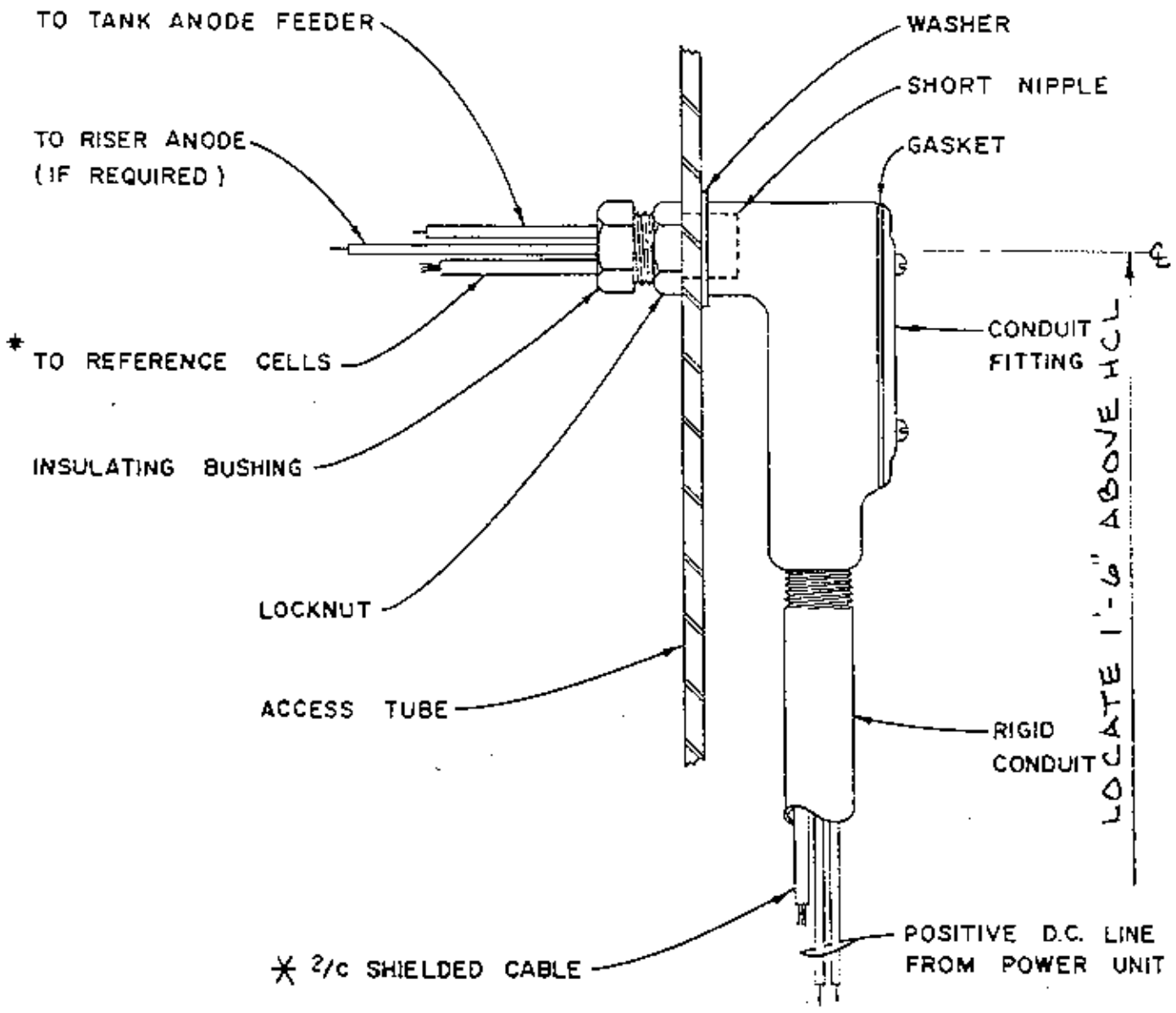
CATHODIC PROTECTION SYSTEM

Cathodic Protection Services Co.
WATER WORKS DIVISION
43 Fadem Road
Springfield, New Jersey 07081

CPS WATER WORKS DIVISION
A LUKENS COMPANY

PLATINUM ANODE SUSPENSION AND HANDHOLE DETAIL

Drawn by: R. LUCAS	Checked by: R.L.
Scale: N T S	
Date: 7-17-89	DWG. NO. T-88



NOTE: CONDUIT ENTRANCE TO BE ABOVE HIGH WATER LINE

* FOR MICRO POLATROL SYSTEM

CATHODIC PROTECTION SYSTEM

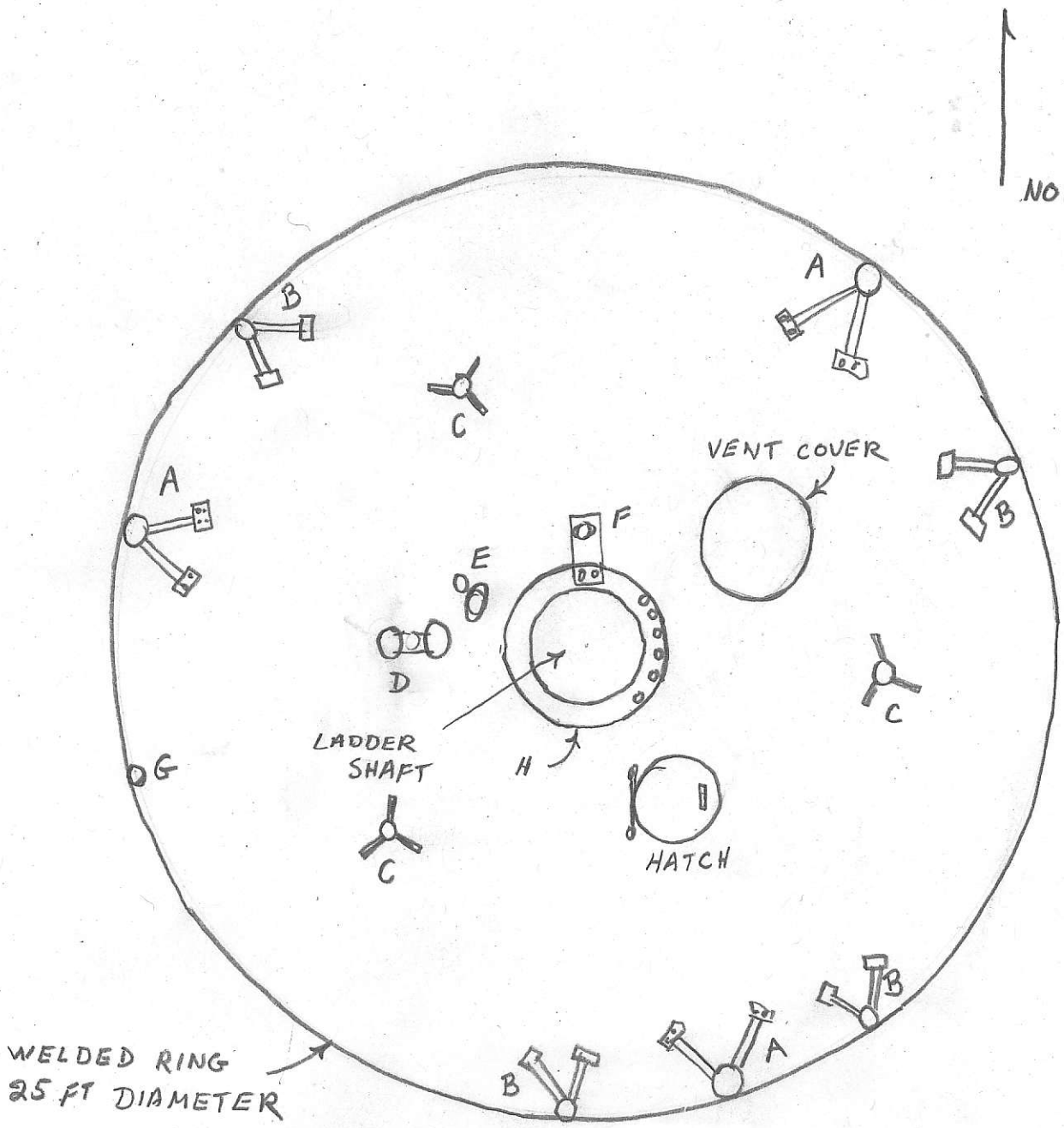
CATHODIC PROTECTION SERVICES CO.
25 Main Street
Belleville, New Jersey 07109-3057
Tel: (201)759-6000/Telex: 219431 WATCO UR
CABLE: WALTHERMAN NEWARK
FAX: (201) 759-6775

CPS Cathodic Protection Services — A EUREKA Company

CONDUIT ENTRANCE DETAIL

Drawn by: K. MISTRY	Checked by: L. DOTH
Scale: NTS	
Date: 5-8-89	DWG. NO. 18,328-A

SUPPLEMENTARY INFORMATION B



WEST LINN WATER TANK
APPROXIMATE LOCATIONS OF STRUCTURES

SEE "DESCRIPTION OF STRUCTURES" PDF FILE FOR DETAILS

11/15/2012 Don Mooney

West Linn water tank, description of top structures

The top of the tank has a ring 25 ft in diameter made of 3” x 1/4” thick angle bent to form a circle and welded to the tank top. The tank top measures .28 inches thick with the ultrasonic meter. There is plenty of space around this ring for additional antenna mounts.

Structures labeled A on drawing:
Three pipe mounts holding panel antennas 6” wide x 41” tall and associated amplifiers (photo 6). One of the pipes also holds one 2 ft dish and another also holds two 2 ft dishes. The pipes are 3” OD x 10.5 feet tall and are attached to the ring by a single bolt through holes drilled in pipe and ring. Two strut braces made of 3” x 1/4” angle x 58” long come down and attach to the tank (attachment details to follow).

Structures labeled B:
Four pipe mounts made in the same way as those labeled A but smaller with 2 3/8” OD pipes x 4 ft tall (photo 7). They have strut braces made from 2 1/2” x 1/8” angle x 42” long. Three of these mounts support panel antennas 12” wide x 4’7” tall plus 2 small amplifiers. The third supports a 10” patch antenna and a GPS antenna.

Structures labeled C:
Three 2 3/8” OD pipe mounts attached by 3 gusset plates welded to the tank (photo 8). Each of these supports a tall whip antenna.

Structure labeled D:
Aviation obstruction dual marker lights mounted on 3/4” pipe which is attached by 3 gusset plates welded to tank (photo 0).

Structure labeled E:
1 1/2” OD pipe supporting a small wire whip. The pipe is attached to a 3 1/2” OD x 2’ long pipe which is welded to tank. This fixture has an electrical weather head on top (photo 0, to the right of the lights).

Structure labeled F:
2 3/8” OD pipe supporting a 4’ tall fiberglass whip. The pipe is attached to a piece of 1” thick green composite material of the type used in mills for skids. The composite material is bolted to structure labeled H (photo 2).

Structure labeled G:
Small pipe mount supporting a GPS antenna and a small fiberglass whip. The pipe is bolted to the ring via an interface bracket. There are no strut braces (photo 20).

Structure labeled H:
This is a 4’7” diameter heavy ring surrounding the ladder shaft made of 1” thick steel and has stamped holes of 1” diameter every 6 1/2” around the entire circumference (photos 3 and 19). This ring could be the support for other mounts in a fashion similar to structure F.

Additional information on hardware attachment methods:
Photo 22 shows an unused bolt we found. This appears to have been welded to the tank but the bead does not look like arc welding beads I have seen. However there are some splatter beads of the type seen around arc welds. Marks are visible from an angle grinder used to remove the paint. In photo 23 we lifted a bracket temporarily to inspect the stud. It was attached in the same manner. We are assuming that these are representative of the method used on other studs holding down brackets.


11/14/2012 11:02


11/14/2012 11:03


11/14/2012 11:04


11/14/2012 11:04

11/14/2012 11:05


11/14/2012 11:05


11/14/2012 11:05


11/14/2012 11:05


11/14/2012 11:06


11/14/2012 11:06


11/14/2012 11:07


11/14/2012 11:07


11/14/2012 11:03


11/14/2012 11:08


11/14/2012 11:08


11/14/2012 11:11


11/14/2012 11:14


11/14/2012 11:18


11/14/2012 11:18


11/14/2012 11:31


11/14/2012 11:31


11/14/2012 11:03


11/14/2012 11:03


11/14/2012 11:04


11/14/2012 11:04


11/14/2012 11:04


11/14/2012 11:04


11/14/2012 11:04

SUPPLEMENTARY INFORMATION C

CONSTRUCTION FINAL
07/25/2014

at&t

Your world. Delivered.

PN11 ROSEMONT AND WISTERIA

19739 SUNCREST DRIVE
WEST LINN, OR 97068

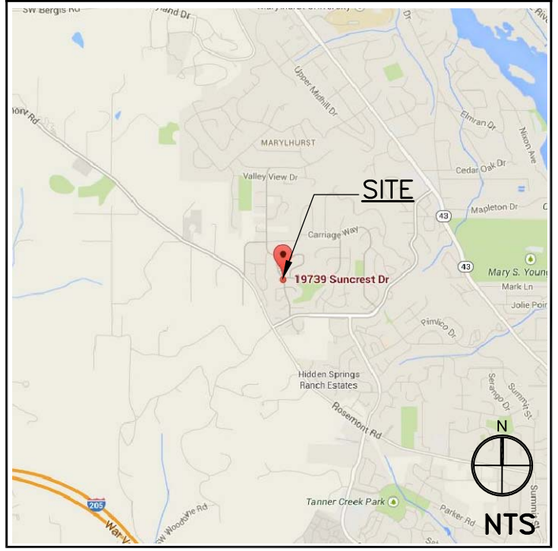
PROPRIETARY INFORMATION

THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE AT&T MOBILITY SERVICES IS STRICTLY PROHIBITED.

REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

NOTE: ARCHITECTURAL STAMP AND SIGNATURE APPLIES TO SHEETS IN DRAWING INDEX INDICATED BY AN X ON LEFTMOST COLUMN.

VICINITY MAP



GENERAL LOCATION MAP

DRIVING DIRECTIONS

WEST ON SW SAGERT FOR .4 MILES, THEN LEFT ON SW 65TH. GO NORTH ON SW 65TH FOR 430 FT., THEN TURN LEFT RIGHT (EAST) ONTO SW BORLAND ROAD. TRAVEL EAST FOR 2 MILES ON SW BORLAND RD., THEN AT THE TRAFFIC CIRCLE TAKE THE THIRD EXIT ONTO SW STAFFORD RD. TRAVEL NORTH/NORTHEAST FOR 1.5 MILES ON SW STAFFORD RD., THEN TAKE THE FIRST EXIT AT THE NEXT TRAFFIC CIRCLE ONTO SW ROSEMONT RD. TRAVEL SOUTHEAST FOR 1.8 MILES ON SW ROSEMONT RD., AND THEN TURN LEFT (EAST) ON CARRIAGE WAY. THEN TAKE THE FIRST RIGHT ONTO DEANA DRIVE. AFTER .1 MILES, TURN RIGHT ONTO SPRING RIDGE RD., AND THE DESTINATION WILL BE ON THE LEFT.

APPROVAL/SIGN OFF OF CONSTRUCTION DRAWINGS

CONSULTANT GROUP SIGN OFF	DATE	SIGNATURE	AT&T SIGN OFF	DATE	SIGNATURE
CONSTRUCTION COORDINATOR			COMPLIANCE		
LANDLORD'S REPRESENTATIVE			CONSTRUCTION MANAGER		
PROJECT MANAGER			DEPLOYMENT MANAGER		
SITE ACQUISITION			EQUIPMENT ENGINEER		
ZONING			INTERCONNECT		
SITE AQUISITION MANAGER			OPERATIONS		
PERMITS			RF ENGINEER		
			RF ENGINEER MANAGER		
REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED					

PROJECT INFORMATION

APPLICANT:
AT&T MOBILITY CORPORATION
19801 SW 72ND AVENUE
TUALATIN, OR 97062
CONTACT: TODD FIEBIG
PH: (206) 354-9271

CONSTRUCTION MANAGER:
CONTACT: BRYAN MULLEN
PHONE: (971) 371-6627

PROJECT CONSULTANTS:
TAEC
15618 SW 72ND AVE
PORTLAND, OR 97224
CONTACT: TIA JOHNSON
PHONE: (503) 730-1834

PROJECT ARCHITECT:
GPA ARCHITECTS LLC
2701 NW VAUGHN, SUITE 764
PORTLAND, OR 97210
CONTACT: BRANDON DOLE
PHONE: (503) 274-7800 x221

SURVEYOR/CIVIL
DUNCANSON COMPANY, INC.
145 SW 155TH ST, #102
SEATTLE, WA 98166
CONTACT: KEVIN WALKER
CONTACT: HAROLD DUNCANSON
PHONE: (206)244-4141

LAND/ TANK OWNER:
CITY OF WEST LINN PUBLIC WORKS
22500 SALAMO RD
WEST LINN, OR 97068
CONTACT: LANCE CALVERT
PHONE: (503)722-5516

UTILITY INFORMATION:
POWER: PGE
CONTACT: MIKE HEIB
PHONE: (503) 672-5483

TELCO: CENTURY LINK (QWEST)
CONTACT: KEN SCIULLI
PHONE: (503) 242-0304

MECH & ELEC. ENGINEER:
R&W ENGINEERING
9615 S.W. ALLEN BLVD., SUITE 107
BEAVERTON, OR 97005
CONTACT: GREG ROBERTSON
PHONE: (503)229-6000

STRUCTURAL ENGINEER:
WDY STRUCTURAL
6443 SW BEAVERTON-HILLSDALE HWY,
SUITE 210; PORTLAND, OR 97221
CONTACT: JIM GIPE
PHONE: 503-203-8111

CODE INFORMATION:
ZONING CLASSIFICATION: R-10 RESIDENTIAL
BUILDING CODE: 2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
CONSTRUCTION TYPE: VB
OCCUPANCY: S-2
JURISDICTION: CITY OF WEST LINN

SITE LOCATION: (BASED ON NAD 83)
TAX LOT #: 2000
LATITUDE: 45° 22' 46.53" N (45.379592°)
LONGITUDE: 122° 39' 20.65" W (122.655737°)
ELEVATION AT BASE OF (E) WATER TANK: 752.9' AMSL
ELEVATION AT TOP OF (E) WATER TANK: 112'-11"± AGL
ELEVATION AT TOP OF NEW ANTENNAS: 128'-4"± AGL

PROJECT AREA:
APPROX. 2,558 SQ. FT.

GENERAL INFORMATION:
1. PARKING REQUIREMENTS ARE UNCHANGED.
2. TRAFFIC IS UNAFFECTED.
3. SIGNAGE IS PROPOSED.

PROJECT DESCRIPTION:
AT&T PROPOSES TO CONSTRUCT A NEW UNSTAFFED RADIO TELECOMMUNICATIONS FACILITY CONSISTING OF A NEW (THREE TENANT) EQUIPMENT SHELTER, EMERGENCY POWER GENERATOR

DRAWING INDEX

	DWG. NO.	DESCRIPTION
X	T-1.0	TITLE SHEET
X	G-1.0	GENERAL NOTES
X	A-1.0	OVERALL SITE PLAN
X	A-3.0	ELEVATION & ENLARGED ANTENNA PLAN
X	A-4.0	ANTENNA MOUNTING DETAIL
	S1.0	STRUCTURAL NOTES & SPECIAL INSPECTION
	S2.0	WATER TANK PLAN
	S3.0	ANTENNA FRAME DETAILS
	E-3.3	GROUNDING DETAILS
	E-2.0	UTILITY DETAILS
	E-2.1	UTILITY RACK DETAILS
	E-3.0	SCHEMATIC GROUNDING PLAN
	E-3.1	GROUNDING DETAILS
	E-3.2	GROUNDING DETAILS

LEGAL DESCRIPTION

SEE SITE SURVEY

Technology Associates
International Corporation

at&t Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	06/13/14
DRAWN BY:	LTW
CHECKED BY:	BD

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
	06/13/14	CD REVIEW	LTW
	07/25/14	CD FINAL	NAR

REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
TITLE SHEET

SHEET NUMBER
T-1.0

JOB No. 14-002

GENERAL NOTES:

1. VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS. NOTIFY AT&T AND ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
2. DRAWINGS ARE NOT TO BE SCALED, WRITTEN DIMENSIONS TAKE PRECEDENCE, THIS SET OF DOCUMENTS IS INTENDED TO BE USED FOR DIAGRAMMATIC PURPOSES ONLY, UNLESS NOTED OTHERWISE. THE GENERAL CONTRACTOR'S SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR, AND ANY REQUIREMENTS DEEMED NECESSARY TO COMPLETE PROJECT AS DESCRIBED IN THE DRAWINGS AND OWNER'S PROJECT MANUAL.
3. PRIOR TO THE SUBMISSION OF BIDS, CONTRACTORS INVOLVED SHALL VISIT THE JOB SITE TO FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. CONTRACTORS SHALL VISIT THE CONSTRUCTION SITE WITH THE CONSTRUCTION/CONTRACT DOCUMENTS TO VERIFY FIELD CONDITIONS AND CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN. PRIOR TO PROCEEDING WITH CONSTRUCTION, ANY ERRORS, OMISSIONS, OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER VERBALLY AND IN WRITING.
4. AT&T, AND THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) AT&T, AND THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S/VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.
7. ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK.
8. CONTRACTOR SHALL PROVIDE, AT THE PROJECT SITE, A FULL SET OF CONSTRUCTION DOCUMENTS UPDATED WITH THE LATEST REVISIONS AND ADDENDA OR CLARIFICATIONS FOR USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.
9. THE STRUCTURAL COMPONENTS OF ADJACENT CONSTRUCTION OR FACILITIES ARE NOT TO BE ALTERED BY THIS CONSTRUCTION PROJECT UNLESS NOTED OTHERWISE. ENSURE THAT EXCAVATION DOES NOT AFFECT ADJACENT STRUCTURES.
10. SEAL ALL PENETRATIONS THROUGH FIRE–RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF APPLICABLE TO THIS FACILITY AND OR PROJECT SITE.
11. CONTRACTOR TO PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2–A OR 2–A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.
12. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.
13. CONTRACTOR SHALL KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. CONTRACTOR SHALL REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.
14. THE CONTRACTOR SHALL RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS/CONTRACT DOCUMENTS.
15. THE CONTRACTOR SHALL PERFORM WORK DURING OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.
16. THE CONTRACTOR SHALL PROVIDE AT&T. PROPER INSURANCE CERTIFICATES NAMING AT&T. AS ADDITIONAL INSURED, AND AT&T. PROOF OF LICENSE(S) AND PE & PD INSURANCE.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING AND COORDINATING ALL INSPECTIONS.
18. CAUTION! CALL BEFORE YOU DIG! BURIED UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE ONE–CALL UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION. 1–800–424–5555. FOR OREGON 1–800–332–2344
19. CONTRACTOR TO DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS AND SUBMIT TO AT&T. ALONG WITH REDLINED CONSTRUCTION SET.
20. CONTRACTOR TO DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP (REDLINING) THE APPROVED CONSTRUCTION SET AND SUBMITTING THE REDLINED SET TO AT&T. UPON COMPLETION.
21. FOR COLLOCATION SITES: CONTACT TOWER OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.
22. CONTRACTOR IS TO COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED. CONTRACTOR TO REPORT POWER INSTALLATION COORDINATION SOLUTION(S) TO NETWORK CARRIER REPRESENTATIVE, PROJECT CONSTRUCTION MANAGER AND ARCHITECT.
23. ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY AT&T CONSTRUCTION MANAGER.
24. WHERE ANCHORING TO A CONCRETE ROOF SLAB, CONTRACTOR SHALL CONFIRM (PRIOR TO SUBMITTING BID) WITH CONSULTING CONSTRUCTION COORDINATOR AND ARCHITECT THE PRESENCE OF POST TENSION TENDONS. CONTRACTOR SHALL INCLUDE PROVISIONS FOR X–RAY PROCEDURES TO LOCATE THE TENDONS.

GENERAL NOTES (CONT'D):

25. CONTRACTOR SHALL USE STAINLESS STEEL METAL LOCKING TIES FOR ALL CABLE TRAY TIE DOWNS AND ALL OTHER GENERAL TIE DOWNS (WHERE APPLICABLE). PLASTIC ZIP TIES SHALL NOT BE PERMITTED FOR USE ON AT&T PROJECTS. RECOMMENDED MANUFACTURER SHALL BE: PANDUIT CORP. METAL LOCKING TIES MODEL NO. MLT4S–CP UNDER SERIES–304 (OR EQUAL). PANDUIT PRODUCT DISTRIBUTED BY TRIARC OF TACOMA, WA.
26. MAINTAIN THE INTEGRITY OF THE BUILDING ENVELOP AND CONSTRUCT BARRIERS IN THE AREA OF WORK TO PREVENT DAMAGE FROM WEATHER AND CONSTRUCTION DUST AND DEBRIS.

SITE NOTES:

1. CLEAR AND GRUB SITE OF ALL VEGETATION, PAVING, GRAVEL BASE AND OTHER DEBRIS NOT TO REMAIN. SUBGRADES ARE TO BE SET PRIOR TO LANDSCAPE INSTALLATION.
2. ELEVATION OF SUBGRADE TO BE WITHIN .10 FOOT OF ELEVATIONS SHOWN ON PLAN MINUS DEPTH OF TOPSOIL, FILL, AND MULCH.
3. ALL AREAS SHALL BE ROUGH GRADED WITHIN FOOT OF ELEVATIONS INDICATED BEFORE PLANTING. ALL GRADES SHALL PRODUCE POSITIVE DRAINAGE AWAY FROM EQUIPMENT SLABS, BUILDINGS AND THROUGH ALL PLANTER AREAS TO AVOID LOW SPOTS AND STANDING WATER.
4. NEW GRADES SHALL BLEND NATURALLY INTO EXISTING GRADES.
5. IN LANDSCAPE AREAS, FINISH GRADES ARE TO FOLLOW THE GRADES AND EDGE DETAILS INDICATED AND BE MOUNDED 6 INCHES IN THE CENTER OF THE BED ABOVE THE EDGE OF THE LANDSCAPE AREA.
6. NOTIFY AT&T AND THE ARCHITECT IF MODIFICATIONS TO THE SHOWN GRADING SEEM NECESSARY AND OBTAIN APPROVAL PRIOR TO START OF WORK.
7. FOOTINGS SHALL BEAR ON FIRM, NATURAL, UNDISTURBED SOIL, OR ON ENGINEERED FILL (COMPACTED TO 95%). ENSURE THAT EXCAVATIONS ARE FREE OF ORGANIC MATERIAL, DEBRIS, OR OTHER FOREIGN MATERIAL. NOTIFY ARCHITECT IF ANY UNUSUAL CONDITIONS ARE ENCOUNTERED.
8. FILL AND SLAB BASE MATERIAL SHALL BE 3/4" MINUS CRUSHED ROCK PLACED IN 8" (MAXIMUM) LOOSE LIFTS AND COMPACTED TO 98% ASTM D1557 OR AASHTO T–180.
9. SPECIAL INSPECTION SHALL BE PERFORMED AS REQUIRED BY IBC (OSSC) SECTION 1704 BY AN INDEPENDENT SPECIAL INSPECTOR APPROVED BY THE LOCAL JURISDICTION.

SPECIAL INSPECTIONS:

1. CONTRACTOR SHALL PROVIDE REQUIRED SPECIAL INSPECTIONS PERFORMED BY AN INDEPENDENT INSPECTOR, APPROVED BY AT&T AND THE LOCAL JURISDICTION, AS REQUIRED BY IBC (OSSC) SECTION 1704 FOR THE FOLLOWING:

   A. CONCRETE: PROVIDE SPECIAL INSPECTION PER 1704.4
      i. TAKE CONCRETE TEST SPECIMENS DURING THE PLACING OF STRUCTURAL REINFORCING AND STRUCTURAL CONCRETE. EXTERIOR AND INTERIOR SLABS ON GRADE ARE NOT STRUCTURAL ELEMENTS.
      ii. VERIFY REINFORCING SIZE, PLACEMENT, AND GRADE.
   B. BOLTS AND ANCHORS IN CONCRETE:
      i. HOLDDOWN ANCHORS BOLTS: INSPECT SIZE, LENGTH, HOOK AND TIE TO REINFORCING.
      ii. ADHESIVE ANCHORS: INSPECT HOLE SIZE, DEPTH, CLEANLINESS, AND INSTALLATION PER MANUFACTURES RECOMMENDATIONS.
   C. WELDING:
      i. VISUALLY INSPECT ALL STRUCTURAL FIELD AND SHOP WELDING.
      ii. THE SPECIAL INSPECTOR NEED NOT TO BE CONTINUOUSLY PRESENT DURING WELDING, PROVIDED THE MATERIALS, QUALIFICATIONS OF WELDING PROCEDURES AND WELDERS ARE VERIFIED PRIOR TO THE START OF WORK; PERIODIC INSPECTIONS ARE MADE OF WORK IN PROGRESS; AND A VISUAL INSPECTION OF ALL WELDS IS MADE AFTER COMPLETION OR PRIOR TO SHIPMENT OF SHOP WELDING.
2. PROVIDE SPECIAL INSPECTIONS FOR OTHER ITEMS NOTED ON DRAWINGS TO CONFIRM COMPLIANCE WITH CONTRACT DOCUMENTS.
3. THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THE REPORT TO THE OWNER, ARCHITECT, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL.

CONCRETE NOTES:

1. ALL CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI–318.
2. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH CHAPTER 19 OF THE 2010 OSSC. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED.

28 DAY STRENGTHS (f'c)	W/C RATIO	MINIMUM CEMENT CONTENT PER CUBIC YARD
2,500 PSI	≤ .45	5 1/2 SACKS

   CEMENT SHALL BE ASTM C150, PORTLAND CEMENT TYPE II U.N.O.
3. THE GENERAL CONTRACTOR SHALL SUPERVISE AND BE RESPONSIBLE FOR THE METHODS AND PROCEDURES OF CONCRETE PLACEMENT.
4. ALL CONCRETE WITH SURFACES EXPOSED TO WEATHER SHALL BE AIR–ENTRAINED WITH AN AIR–ENTRAINING AGENT CONFORMING TO ASTM C260, C494, C618, C989 AND C1017. CONCRETE EXPOSED TO FREEZING AND THAWING WHILE MOIST SHALL BE AIR ENTRAINED IN ACCORDANCE WITH ACI 318, SECTION 4.4.1.
5. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy=60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy=40,000 PSI. GRADE 60 REINFORCING BARS INDICATED ON DRAWINGS TO BE WELDED SHALL CONFORM TO ASTM A706. REINFORCING COMPLYING WITH ASTM A615(S1) MAY BE WELDED ONLY IF MATERIAL PROPERTY REPORTS INDICATING CONFORMANCE WITH WELDING PROCEDURES SPECIFIED IN A.W.S. D14 ARE SUBMITTED.
6. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH AC1 315 AND 318. LAP ALL CONTINUOUS REINFORCEMENT AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'–0". PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP CORNER BARS AT LEAST 30 BAR DIAMETERS OR A MINIMUM OF 2'–0". LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.

CONCRETE NOTES (CONT'D):

7. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A–185.
8. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy=60,000 PSI.
9. REINFORCING PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE CONSULTANT.
10. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

– FOOTINGS AND OTHER UNFORMED SURFACES, EARTH FACE		3"
– FORMED SURFACES EXPOSED TO EARTH OR WEATHER	(#6 BARS OR LARGER)	2"
	(#5 BARS OR SMALLER)	1 1/2"
– SLABS AND WALLS (INTERIOR FACE)		3/4"

11. BARS SHALL BE SUPPORTED ON CHAIRS OR DOBIE BRICKS.
12. ANCHOR BOLTS TO CONFORM TO ASTM A307.
13. NON–SHRINK GROUT SHALL BE FURNISHED BY AN APPROVED MANUFACTURER AND SHALL BE MIXED AND PLACED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PUBLISHED RECOMMENDATIONS. GROUT STRENGTH SHALL BE AT LEAST EQUAL TO THE MATERIAL ON WHICH IT IS PLACED (3,000 PSI MINIMUM).
14. ALL EXPANSION ANCHORS TO BE HILTI BRAND. ADHESIVE ANCHORS REQUIRE TESTING TO CONFIRM CAPACITY UNLESS WAIVED BY ENGINEER AND LOCAL JURISDICTION.

STRUCTURAL STEEL NOTES:

1. SHOP DRAWINGS FOR STRUCTURAL STEEL SHALL BE SUBMITTED TO AT&T AND THE CONSULTANT FOR REVIEW PRIOR TO FABRICATION.
2. STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION (INCLUDING FIELD WELDING, HIGH STRENGTH FIELD BOLTING, EXPANSION BOLTS, AND THREADED EXPANSION ANCHORS) SHALL BE BASED ON THE A.I.S.C. "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS" LATEST EDITION. SUPERVISION SHALL BE IN ACCORDANCE WITH 2003 IBC CHAPTER 22, BY A QUALIFIED TESTING AGENCY DESIGNATED BY THE CONSULTANT. THE CONSULTANT SHALL BE FURNISHED WITH A COPY OF ALL INSPECTION REPORTS AND TEST RESULTS.
3. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

   TYPE OF MEMBER

A. WIDE FLANGE SHAPES	ASTM A992, GRADE 50
A. OTHER SHAPES, PLATES, ANGLES, AND RODS	ASTM A36, Fy 36 KSI
B. SPECIAL SHAPES AND PLATES	ASTM A572, Fy 50 KSI
C. PIPE COLUMNS	ASTM A53, Fy 35 KSI
D. STRUCTURAL TUBING	ASTM A500, Fy 46 KSI
E. ANCHOR BOLTS	ASTM A307
F. CONNECTION BOLTS	ASTM A325 TWIST–OFF–TYPE

4. HOT DIP GALVANIZE AFTER FABRICATION PER A123/A123M–00 ALL STEEL EXPOSED TO WEATHER AND WHERE NOTED.
5. ALL WELDING SHALL BE IN CONFORMANCE WITH A.I.S.C. AND AWS STANDARDS AND SHALL BE PERFORMED BY ANSI/AWS D1.1 CERTIFIED WELDERS USING E70 XX ELECTRODES. ONLY PREQUALIFIED WELDS (AS DEFINED BY AWS) SHALL BE USED. WELDING OF GRADE 60 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING LOW HYDROGEN ELECTRODES. WELDING OF GRADE 40 REINFORCING BARS (IF REQUIRED) SHALL BE PERFORMED USING E70 XX ELECTRODES. WELDING WITHIN 4" OF COLD BENDS IN REINFORCING STEEL IS NOT PERMITTED. SEE REINFORCING NOTE FOR MATERIAL REQUIREMENTS OF WELDED BARS.
6. COLD–FORMED STEEL FRAMING MEMBERS SHALL BE OF THE SHAPE, SIZE, AND GAGE SHOWN ON THE PLANS. PROVIDE MINIMUM SECTION PROPERTIES INDICATED. ALL COLD–FORMED STEEL FRAMING SHALL CONFORM TO THE A.I.S.S. "SPECIFICATION FOR THE DESIGN OF COLD–FORMED STEEL STRUCTURAL MEMBERS."
7. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (3/4" DIA.) AND SHALL HAVE A MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.
8. NON–STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIA. ASTM A307 BOLTS UNLESS NOTED OTHERWISE.
9. (UNLESS NOTED OTHERWISE). PREPARATION AND PAINTING SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND IN ACCORDANCE WITH THE PAINT MANUFACTURERS WRITTEN INSTRUCTIONS.
10. ALL WELDS TO BE 1/4" FILLET UNLESS NOTED OTHERWISE.
11. TOUCH UP ALL FIELD DRILLING ,WELDING AND CUT SURFACES WITH 2 COATS OF GALVACON (ZINC RICH PAINT) OR APPROVED EQUAL.

TOWER/POLE NOTES:

1. VERIFICATION THAT THE EXISTING TOWER/POLE CAN SUPPORT THE PROPOSED ANTENNA LOADING IS TO BE DONE BY OTHERS.
2. PROVIDE SUPPORTS FOR THE ANTENNA COAX CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS. ANTENNA COAX CABLES ARE TO BE SUPPORTED AND RESTRAINED AT THE CENTERS SUITABLE TO THE MANUFACTURER'S REQUIREMENTS.

NOTE:
STRUCTURAL DRAWINGS AND NOTES SHALL TAKE PRECEDENCE OVER ALL DRAWINGS AND NOTES.

SAFETY PROCEDURES

FALL PROTECTION METHODS TO BE PER FEDERAL, STATE, LOCAL, OSHA, AT&T AND OWNER REQUIREMENTS.

SYMBOLS AND ABBREVIATIONS

A/C	AIR CONDITIONING	HORZ	HORIZONTAL	PLYWD	PLYWOOD
AGL	ABOVE FINISH GRADE	HR	HOUR	PROJ	PROJECT
APPROX	APPROXIMATELY	HT	HEIGHT	PROP	PROPERTY
		HVAC	HEATING VENTILATION AIR CONDITIONING	PT	PRESSURE TREATED
BLDG	BUILDING			REQ	REQUIRED
BLK	BLOCKING			RM	ROOM
				RO	ROUGH OPENING
CLG	CEILING	ID	INSIDE DIAMETER	*SHT*	SHEET
CLR	CLEAR	IN	INCH	*SIM*	SIMILAR
CONC	CONCRETE	INFO	INFORMATION	*SPEC*	SPECIFICATION
CONST	CONSTRUCTION	INSUL	INSULATION	SF	SQUARE FOOT
CONT	CONTINUOUS	INT	INTERIOR	SS	STAINLESS STEEL
		IBC	INTERNATIONAL BUILDING CODE	STL	STEEL
DBL	DOUBLE			STRUCT	STRUCTURAL
DIA	DIAMETER			STD	STUD
DIAG	DIAGONAL	LBS	POUNDS	SUSP	SUSPENDED
DN	DOWN	MAX	MAXIMUM		
DET	DETAIL	MECH	MECHANICAL	THRU	THROUGH
DWG	DRAWING	MTL	METAL	TNNG	TINNED
		MFR	MANUFACTURE	TYP	TYPICAL
EA	EACH	MGR	MANAGER		
ELEV	ELEVATION	MIN	MINIMUM	UNO	UNLESS NOTED OTHERWISE
ELEC	ELECTRICAL	MISC	MISCELLANEOUS		
EQ	EQUAL				
EQUIP	EQUIPMENT	NA	NOT APPLICABLE	VERT	VERTICAL
EXT	EXTERIOR	NIC	NOT IN CONTRACT	VIF	VERIFY IN FIELD
		NTS	NOT TO SCALE		
FIN	FINISH			W/	WITH
FLUOR	FLOURESCENT	OC	ON CENTER	W/O	WITHOUT
FLR	FLOOR	OD	OUTSIDE DIAMETER	WP	WATER PROOF
FT	FOOT				
GA	GAUGE				
GALV	GALVANIZED				
GC	GENERAL CONTRACTOR				
GRND	GROUND				
GYP BD	GYPSUM WALL BOARD				

—— T —— TELEPHONE
—— P —— POWER
—— G —— GROUND WIRE
——COAX—— COAXIAL CABLE
ANTENNA
℄ CENTERLINE
[E] EXISTING
[N] NEW
(X) DETAIL NUMBER
(X–X) SHEET NUMBER

CALL BEFORE YOU DIG!!

UTILITIES UNDERGROUND LOCATION CENTER

CALL TOLL FREE

811

Technology Associates
International Corporation

at&t Your world. Delivered.

GPA ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE: 06/13/14
DRAWN BY: LTW
CHECKED BY: BD

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
	06/13/14	CD REVIEW	LTW
	07/25/14	CD FINAL	NAR

REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
GENERAL NOTES

SHEET NUMBER
G–1.0

JOB No. 14–002

ADJACENT PARCELS (EAST)
ZONE: R–10
JURISDICTION: CITY OF WEST LINN

ADJACENT PARCELS (WEST)
ZONE: R–7 RESIDENTIAL
JURISDICTION: CITY OF WEST LINN

PROJECT PARCEL
TAXLOT: 21E23CA05500
ZONE: R–10
JURISDICTION: CITY OF WEST LINN

SUNCREST DR.

APPROX. TELEPHONE RISER

APPROX. PAD MOUNTED TRANSFORMER

NEW AT&T MULTI–TENANT EQUIPMENT SHELTER

EXIST TREE(S) TO BE REMOVED, TYP.

NEW AT&T LEASE AREA

SEE ENLARGED ANTENNA PLAN 2/A3.0

PROPERTY LINE

15'–0"

NEW TRENWA TRAFFIC RATED CONC. CABLE TRENCH

EXIST WATER TANK OVERHANG

EXIST 110'± WATER TANK

NEW HANDRAIL (BY OTHER)

TREE LINE

20'–0" SETBACK

EXIST (3) POWER METERS

EXIST GENERATOR PLUG

NEW UTILITY HANDOLE

EXIST MAIN HATCH

EXIST CONC STOOP TO REMAIN

NEW AT&T (12) PANEL ANTENNAS

REMOVE EXIST SIDEWALK

EXIST GRASS AREA

1/A3.0

2/A3.0

NEW AT&T SHARED DIESEL GENERATOR W/BOLLARDS

NEW H–FRAME W/ 6–GANG METERBASE, SEE ELECT.

NEW UTILITIES VAULT, SEE ELCT.

NEW BOLLARDS

EXIST. TRANSFORMER

EXIST CONC. CURB

EXIST ASPHALT

MAINTAIN EXIST GATE

EXIST CONC SIDEWALK

NEW AT&T 20'–0" ACCESS/UTILITY EASEMENT

RELOCATED EXIST. SIGN

REMOVE EXISTING GRASSCRETE ROAD

NEW SHARED ACCESS ROAD, SEE CIVIL

EXIST IRRIGATION VALVES

TREE LINE

20'–0" SETBACK

PROPERTY LINE

ADJACENT PARCELS (SOUTH)
ZONE: R–10
JURISDICTION: CITY OF WEST LINN

MN 15° 44'E

OVERALL SITE PLAN

22" X 34" SCALE: 1/16" = 1'-0"
11" X 17" SCALE: 1/32" = 1'-0"

1

Technology Associates International Corporation

at&t Your world. Delivered.

GPA ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	06/13/14
DRAWN BY:	LTW
CHECKED BY:	BD

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
	06/13/14	CD REVIEW	LTW
	07/25/14	CD FINAL	NAR

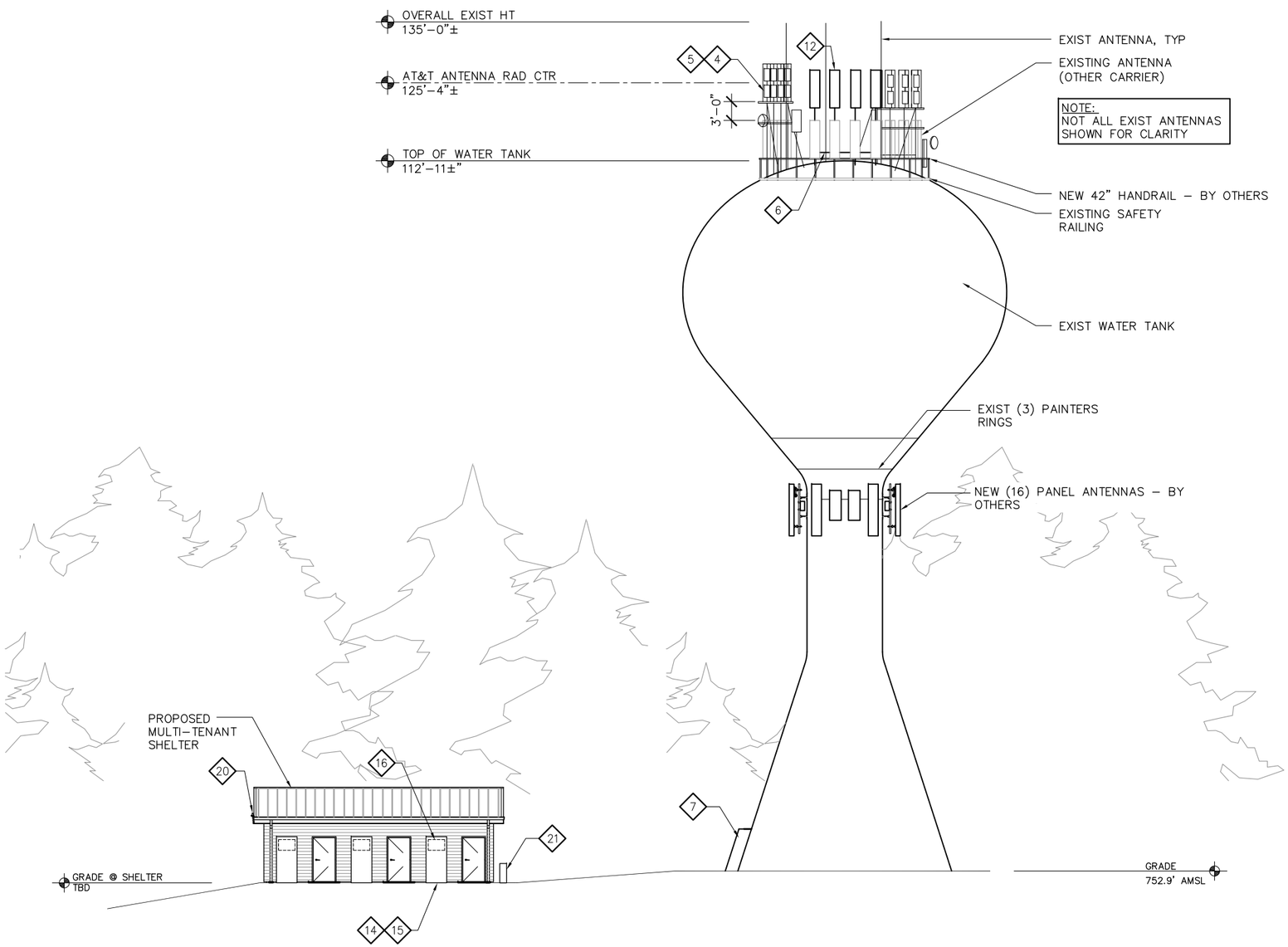
REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
OVERALL SITE PLAN

SHEET NUMBER
A–1.0

JOB No. 14–002

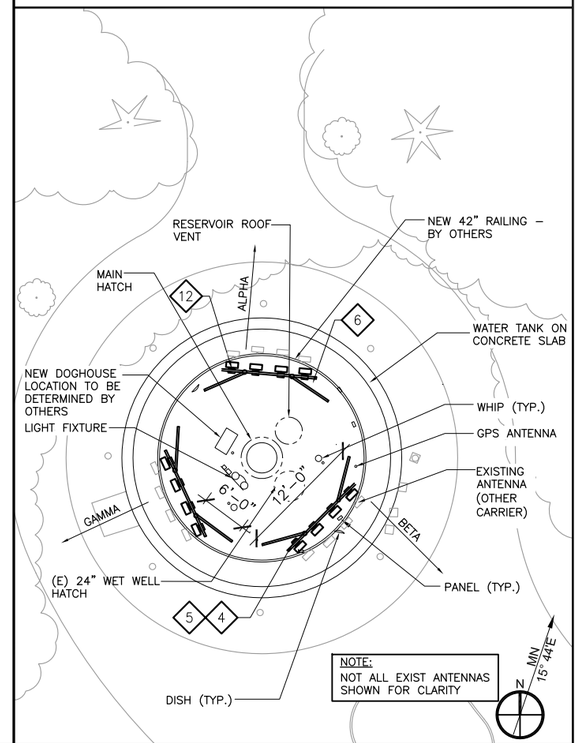


SOUTHWEST ELEVATION

22" X 34" SCALE: 1" = 10'-0"
11" X 17" SCALE: 1" = 20'-0"
1

CONSTRUCTION KEYED NOTES

4. AT&T (24) REMOTE RADIO HEAD
5. AT&T (4) DC SURGE PROTECTOR (SQUID)
6. AT&T ANTENNA FRAME (1 / A–4.0)
7. CABLE RISER (3 / A–4.0)
12. AT&T (12) PANEL ANTENNAS
14. COAXIAL CABLE TO ANTENNAS
15. CONCRETE COAX CABLE TRENCH
16. COAX ENTRY @ EQUIPMENT SPACE
20. GPS/E–911 DOWNLINK ANTENNAS. MOUNT TO EQUIPMENT SHELTER MIN. 12'–0" AGL. GPS TO BE INSTALLED WITH A SOUTHERN VIEW W/ MIN. 65° EXPOSURE TO THE HORIZON.
21. NEW (6) CONDENSER UNITS



ENLARGED ANTENNA PLAN

22" X 34" SCALE: 1" = 10'-0"
11" X 17" SCALE: 1" = 20'-0"
2

Technology Associates
International Corporation

at&t
Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	06/13/14
DRAWN BY:	LTW
CHECKED BY:	BD

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
	06/13/14	CD REVIEW	LTW
	07/25/14	CD FINAL	NAR

REGISTERED ARCHITECT
STEVEN M. N. PLUMMER
PORTLAND, OREGON
STATE OF OREGON

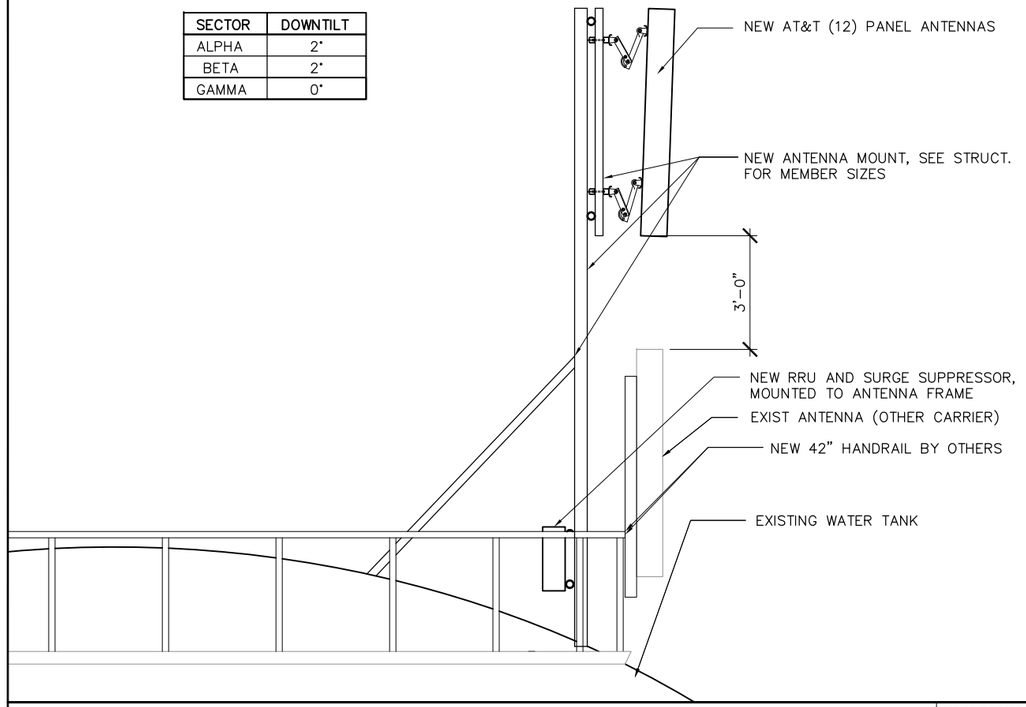
SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
ELEVATION & ENLARGED
ANTENNA PLAN

SHEET NUMBER
A–3.0

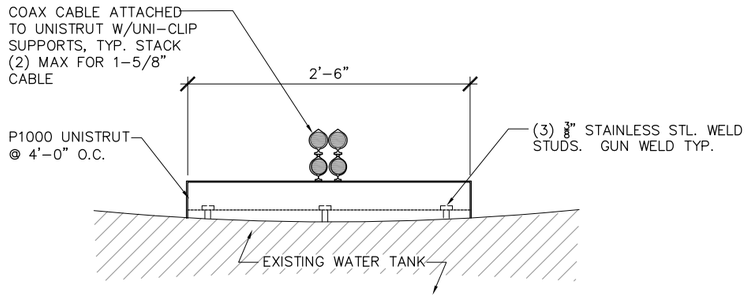
JOB No. 14–002

SECTOR	DOWNTILT
ALPHA	2°
BETA	2°
GAMMA	0°



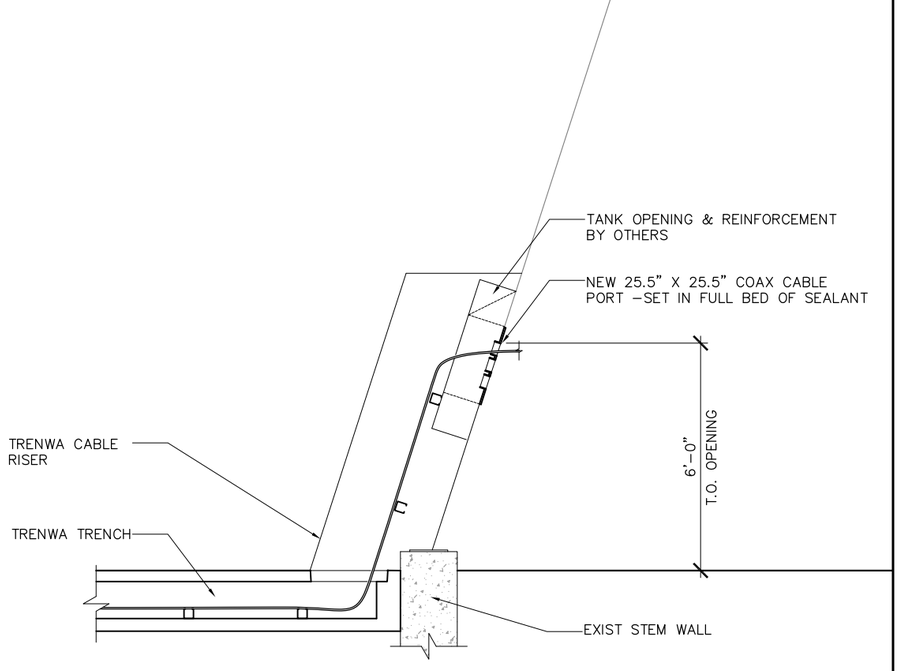
ANTENNA MOUNT DETAIL

22" X 34" SCALE: 1/2" = 1'-0"
11" X 17" SCALE: 1/4" = 1'-0"
1



CABLE LADDER DETAIL

22" X 34" SCALE: NTS
11" X 17" SCALE: NTS
2



CABLE RISER DETAIL

22" X 34" SCALE: 1/2" = 1'-0"
11" X 17" SCALE: 1/4" = 1'-0"
3

NOT USED

22" X 34" SCALE: NTS
11" X 17" SCALE: NTS
4

Technology Associates
International Corporation

at&t
Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	06/13/14
DRAWN BY:	LTW
CHECKED BY:	BD

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
	06/13/14	CD REVIEW	LTW
	07/25/14	CD FINAL	NAR

REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
ANTENNA MOUNT DETAIL

SHEET NUMBER
A-4.0

JOB No. 14-002

ABBREVIATIONS

A.B.	ANCHOR BOLT
A.F.F.	ABOVE FINISH FLOOR
ALT	ALTERNATE
ARCH	ARCHITECTURAL
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
B.N.	BOUNDARY NAILING
BOT	BOTTOM
BRG	BEARING
BTWN	BETWEEN
C	CAMBER
C.F.D.	CEMENT FIBER DECK
C.J.	COLD JOINT
CL	CENTER LINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	CENTER
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
COORD	COORDINATE
C.P.	COMPLETE PENETRATION
CTSK	COUNTERSINK
DBL	DOUBLE
DET	DETAIL
DIA	DIAMETER
DIM	DIMENSION
DIR	DIRECTION
DL	DEAD LOAD
DP	DEEP
DRWG	DRAWING
EA	EACH
E.J.	EXPANSION JOINT
EL or ELEV	ELEVATION
EMBED	EMBEDMENT
E.N.	EDGE NAILING
EQ	EQUAL
E.W.	EACH WAY
EXIST or (E)	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FC	FACE
FDN	FOUNDATION
F.F.	FINISH FLOOR
FIN	FINISH
FLR	FLOOR
F.O.C.	FACE OF CONCRETE
F.O.M.	FACE OF MASONRY
F.O.S.	FACE OF STUD
FTG	FOOTING
GA	GAGE OR GAUGE
GALV	GALVANIZED
GEN	GENERAL
GYP WALL BD	GYPSUM WALLBOARD
H.C.A.	HEADED CONCRETE ANCHOR
HDR	HEADER
HGR	HANGER
HORIZ	HORIZONTAL
HT	HEIGHT
ICF	INSULATED CONCRETE FORM
INT	INTERIOR
INFO	INFORMATION
JST	JOIST
JT	JOINT
LBS or #	POUNDS
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
MANUF	MANUFACTURER
MAT'L	MATERIAL
MAX	MAXIMUM
M.B.	MACHINE BOLT
MBR	MEMBER
MECH	MECHANICAL
MIN	MINIMUM
(N)	NEW
N.A.	NEUTRAL AXIS
N.S.	NON-SHRINK
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.H. or OPP	OPPOSITE HAND
P.A.F.	POWDER ACTUATED FASTENER
PERF	PERFORATED
PL	PLATE
PLCS	PLACES
PLYWD	PLYWOOD
P.P.	PARTIAL PENETRATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
P.T.	PRESSURE TREATED
REINF	REINFORCEMENT/REINFORCING
REQ'D	REQUIRED
SCHED	SCHEDULE
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
S.O.G.	SLAB ON GRADE
SPECS	SPECIFICATIONS
SQ	SQUARE
S.S.	STAINLESS STEEL
STD	STANDARD
STIFF	STIFFENER
STL	STEEL
STRUCT	STRUCTURAL
SW	SHEAR WALL
THRD	THREADED
T.O.C.	TOP OF CONCRETE
T.O.F.	TOP OF FOOTING
T.O.J.	TOP OF JOIST
T.O.S.	TOP OF SLAB OR STEEL
T.O.W.	TOP OF WALL
T&G	TONGUE AND GROOVE
TYP	TYPICAL
U.O.N.	UNLESS OTHERWISE NOTED
VERT	VERTICAL
W.J.	WET JOINT
W.W.F.	WELDED WIRE FABRIC
W/	WITH
W/O	WITHOUT
#	POUNDS or NUMBER
+/-	PLUS or MINUS

STRUCTURAL NOTES

01.0 GENERAL NOTES

1. These notes set minimum standards for construction. The drawings govern over the Structural Notes to the extent shown.
2. Contractor shall verify all dimensions and conditions on drawings and in field. Coordinate locations of openings through floors, roofs and walls with architectural, mechanical and electrical plans. Notify owner's representative of any discrepancies.
3. Construction means, methods and all necessary temporary support prior to completion of vertical and lateral load systems is the sole responsibility of the contractor.
4. Compliance with all safety and OSHA requirements is the sole responsibility of the contractor.
5. All work shall be in compliance with 2010 edition of the "Oregon Structural Specialty Code" (OSSC) as amended by all other state and local codes, permits, and building department requirements that apply.
6. Where reference is made to ASTM, AISC, ACI or other standards, the Code referenced issue shall apply.
7. Design Criteria:

Table 1604.5	Occupancy Category	II
Wind	Basic wind speed	95 mph, 3-sec gust
	Wind importance factor, I_w	1.00
	Wind exposure	B, N-S; B, E-W

8. Details shown on the drawings are intended to apply at all similar conditions and locations.
9. Do not scale information from drawings.

05.0 STRUCTURAL AND MISCELLANEOUS STEEL

1. Detailing, fabrication and erection shall conform to the Steel Construction Manual of AISC.
2. The contractor shall be solely responsible for all OSHA requirements for safety and erection including, but not limited to, erection bolts, bracing, fall protection, guard rails, etc.
3. All steel shapes and plates to be ASTM A36.
4. All pipe shall be ASTM A53, Type E or S, Grade B.
5. All welds shall be made by Pre-qualified Welders to AWS Pre-qualified Welded Joint Standards.
   a. Prior to beginning and during welding, all requirements of the 'Special Inspection' section of these notes shall be met.
   b. Filler metals shall meet AWS A5 specifications. Electrodes shall be 70ksi which are compatible with the base material, welding process and position. Provide low hydrogen electrodes for SMAW. Do not mix weld electrodes that reduce the CVN value of the weld.
   c. Preheat and interpass temperatures are to meet AWS requirements.
   d. Unless otherwise noted on drawings, provide AISC minimum weld sizes for all welded joints.
6. Bolts shall be A307 unless otherwise noted. Provide standard plate washers under all bolt heads and nuts in contact with wood.
7. All exterior exposed steel, and steel noted on the drawings as galvanized, shall be hot dipped galvanized per ASTM A123. Repair hot dipped galvanized steel coatings at areas of field welding or other damaged areas per ASTM A780. Appropriate safety and health practices in applying repairs to hot dipped galvanized coatings are the sole responsibility of the contractor. All exposed fasteners, and fasteners noted on the drawings as galvanized, shall be hot dipped galvanized per ASTM A153 or ASTM F2329, including washers and nuts. Do not use snap-off type bolts at galvanized connections.

A. GENERAL

1. Independent testing lab to be retained by owner to provide inspections and special inspections as described herein.
2. Contractor is responsible to coordinate and provide on site access to all required inspections and notify testing lab in time to make such inspections.
3. Do not cover work required to be inspected prior to inspection being made. If work is covered, uncover as necessary.
4. The contractor shall correct all deficiencies noted in the special inspection reports to bring the construction into compliance with the contract documents, addendum, RFI's and/or written instructions. The contractor is responsible to request summary reports from the special inspector at the time of the project substantial completion.

SPECIAL INSPECTIONS

Required special inspections shall be performed by an independent special inspector per Section 1701 of the International Building Code (IBC) for the following: [1,2,3]

Item	Continuous[4]	Periodic[4]	Comments
Structural Steel:			IBC Table 1704.3
Material verification per IBC Table 1704.3			
Inspection of welding			See footnotes 5, 6 and 7
a. Structural Steel			
1.Single-pass fillet welds <= 5/16"		X	

Special inspection Program Footnotes

1. Items checked with **X** shall be inspected in accordance with IBC Chapter 17 by certified special inspectors from a testing agency approved by the building official.
2. Special inspection is not required for work performed by an approved fabricator meeting the requirements of IBC Section 1704.2.2.
3. The special inspector shall provide a copy of their report to the owner, architect, structural engineer, contractor and building official.
4. Continuous special inspection means full-time observation of the work requiring special inspection by an approved special inspector present in the area where the work is being performed. Periodic special inspection means part time or intermittent observation of the work at intervals necessary to confirm that work requiring special inspection is in compliance.
5. All structural shop and field welds shall be visually inspected. The special inspector need not be continuously present during welding, except as noted, provided the materials, qualifications of welding procedures and welders are verified prior to the start of work; periodic inspections are made of work in progress; and a visual inspection of all welds is made after completion or prior to shipment of shop welding.
6. The contractor shall submit a 'welding procedure specification' (WPS) in accordance with AWS 5.1.2 for review by special inspector prior to beginning work. The WPS shall include all information recommended in the sample form of Appendix E of the AWS code including recommendations from the electrode manufacturer, proposed method of base metal preparation, back gouging sequence, method of placement of new weld material, backer plate and runoff tab removal and final finishing.
7. The inspector shall verify welder qualifications, WPS, welding process, electrode, assembly configuration, fit-up tolerance (1/16 inch max.), preheat and interpass temperature and preparation of all steel surfaces.

WDY
Structural • Civil Engineers
6443 SW Beaverton-Hillsdale Hwy, suite 210 Portland, OR 97221 ph:503.203.8111 fx:503.203.8122 www.wdyi.com

Technology Associates International Corporation

at&t Your world. Delivered.

GPA ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE: 7/23/14
DRAWN BY: KC
CHECKED BY: JG

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:

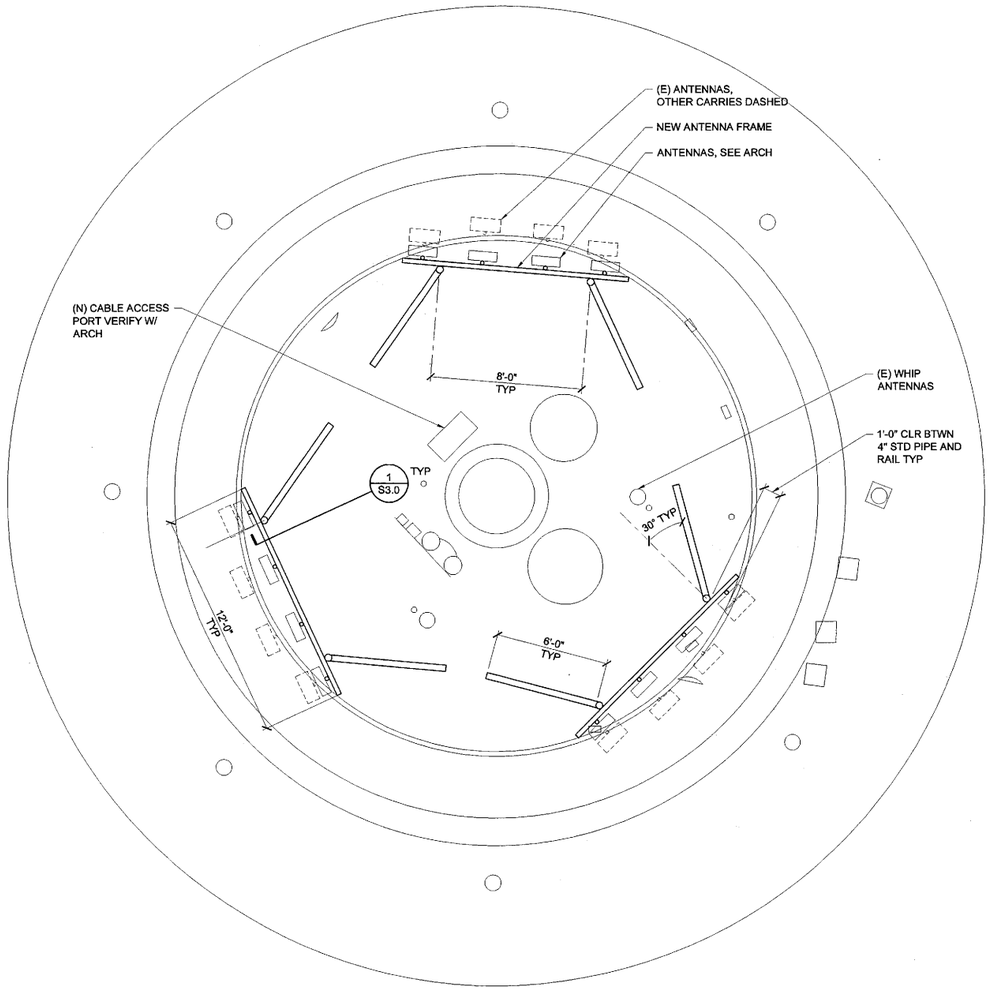
REGISTERED PROFESSIONAL ENGINEER
52799
OREGON
JAN. 14, 2005
JAMES D. GIPE
RENEWS: 06-30-2015

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97608

SHEET NAME
STRUCTURAL NOTES AND SPECIAL INSPECTION

SHEET NUMBER
S1.0

JOB No. 14938



WATER TANK ANTENNA FRAME PLAN

22" X 34" SCALE: 1/4" = 1'-0"
11" X 17" SCALE: 1/8" = 1'-0"

1

WDY
6443 SW Beaverton-Hillsdale Hwy, Suite 210 Portland, OR 97221 ph:503.203.8111 fx:503.203.8122 www.wdy.com
Structural · Civil Engineers

Technology Associates
International Corporation

at&t
Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	7/23/14
DRAWN BY:	KC
CHECKED BY:	JG

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:

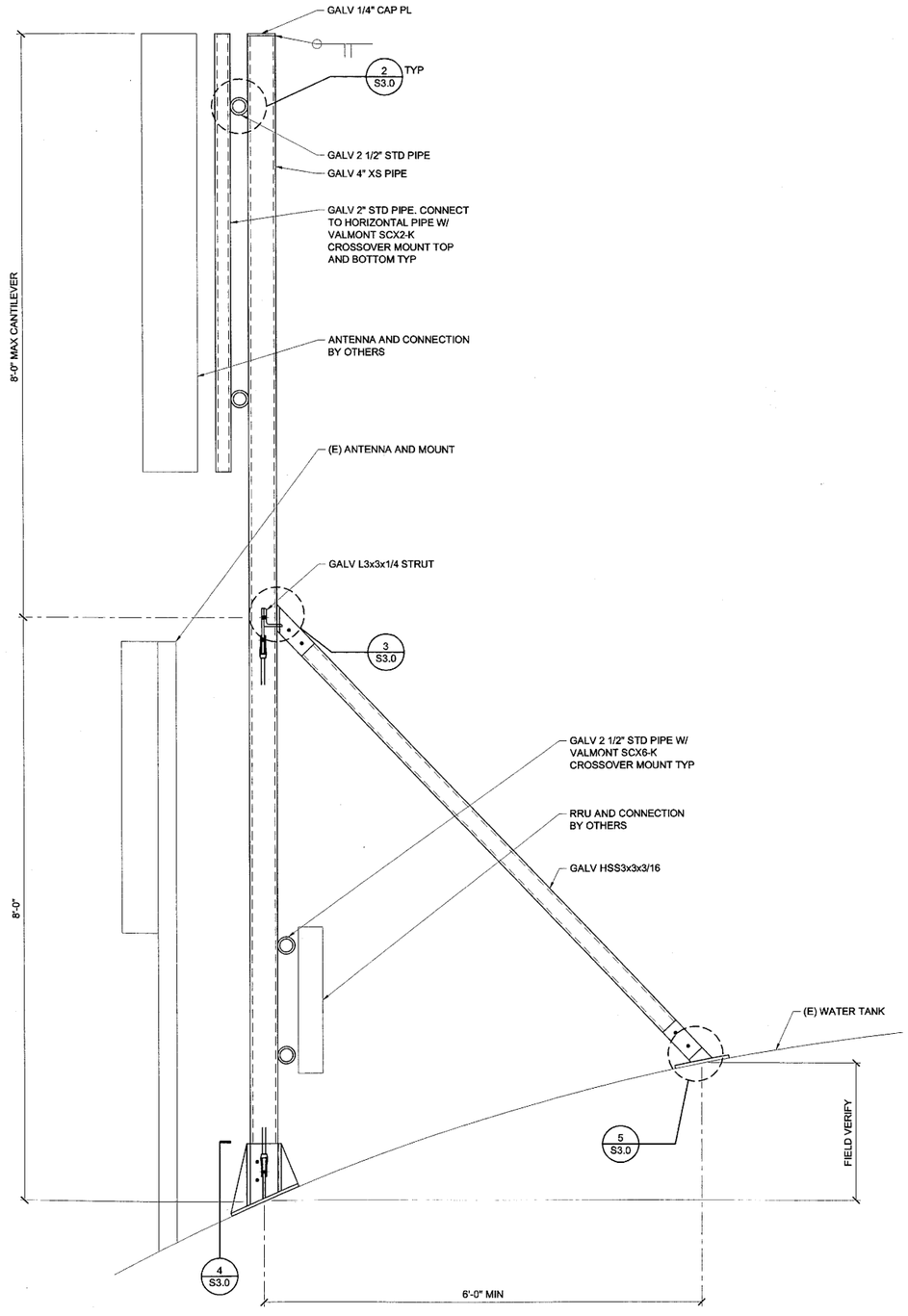
STRUCTURAL ENGINEERED PROFESSIONAL
52799
OREGON
JAMES D. GIPE
RENEWS: 06-30-2015

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97608

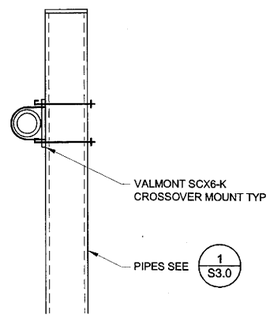
SHEET NAME
WATER TANK PLAN

SHEET NUMBER
S2.0

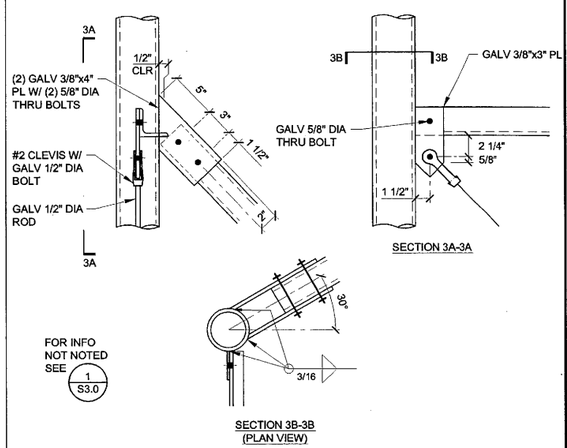
JOB No. 14038



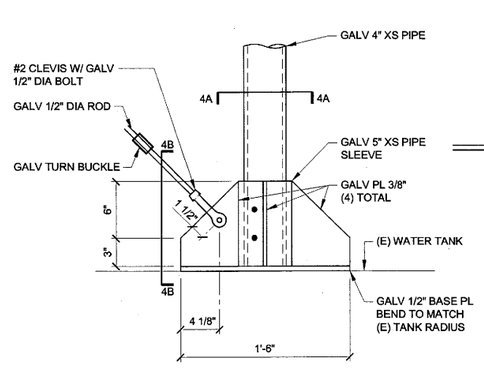
DETAIL 1 — 22" X 34" SCALE: 1" = 1'-0" / 11" X 17" SCALE: 1/2" = 1'-0"



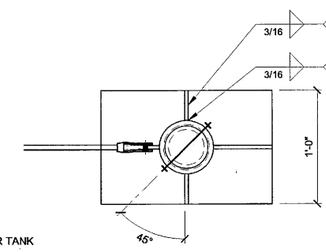
DETAIL 2 — 22" X 34" SCALE: 1 1/2" = 1'-0" / 11" X 17" SCALE: 3/4" = 1'-0"

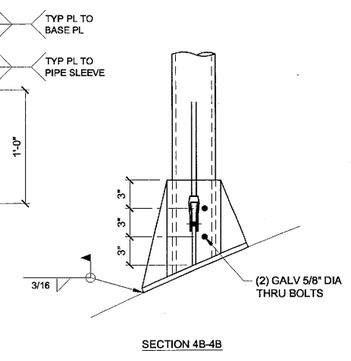


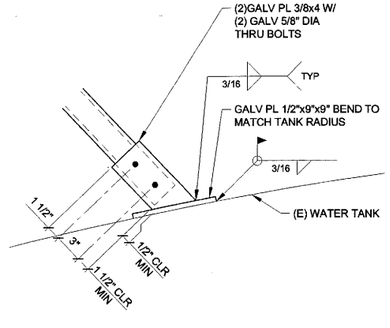
DETAIL 3 — 22" X 34" SCALE: 1 1/2" = 1'-0" / 11" X 17" SCALE: 3/4" = 1'-0"



DETAIL 4 — 22" X 34" SCALE: 1 1/2" = 1'-0" / 11" X 17" SCALE: 3/4" = 1'-0"







DETAIL 5 — 22" X 34" SCALE: 1 1/2" = 1'-0" / 11" X 17" SCALE: 3/4" = 1'-0"

DETAIL 6 — 22" X 34" SCALE: 1 1/2" = 1'-0" / 11" X 17" SCALE: 3/4" = 1'-0"

Technology Associates
International Corporation

at&t Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

Structural • Civil Engineers
WDY
6443 SW Beaverton-Hillsdale Hwy, suite 210 Portland, OR 97221 ph:503.203.8111 fx:503.203.8122 www.wdy.com

DATE:	7/23/14
DRAWN BY:	KC
CHECKED BY:	JG

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:

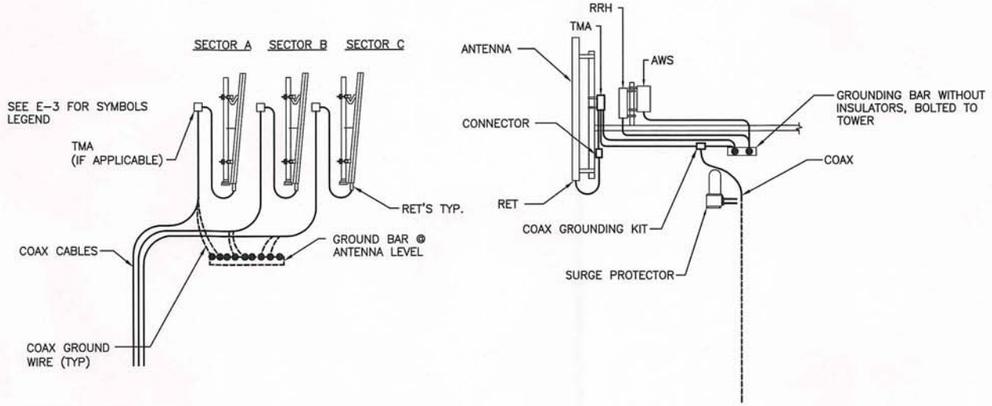
STRUCTURAL REGISTERED PROFESSIONAL ENGINEER
52799
OREGON
JAN. 14, 2003
JAMES D. GIPE
RENEWS: 06-30-2015

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97608

SHEET NAME
ANTENNA FRAME DETAILS

SHEET NUMBER
S3.0

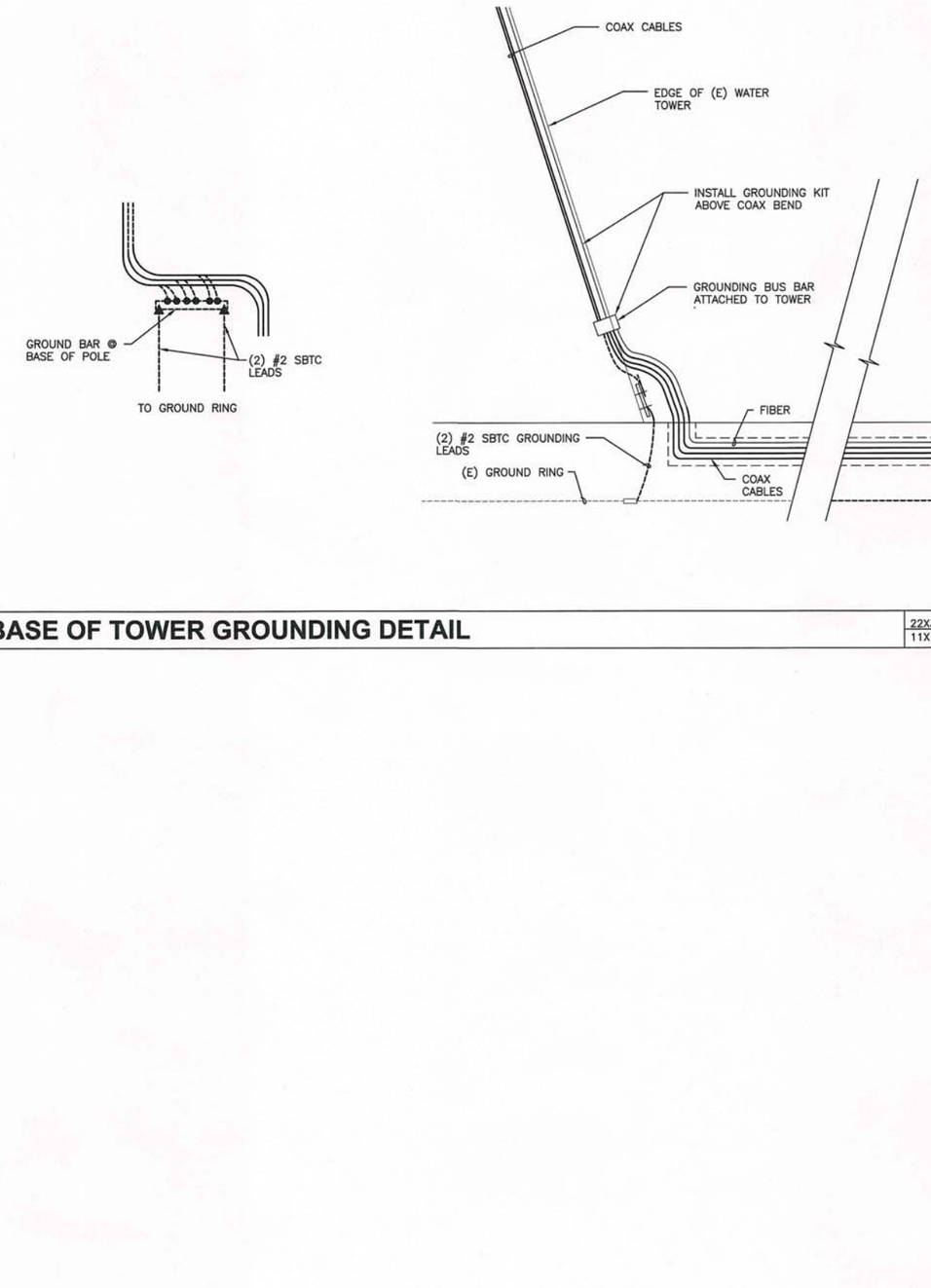
JOB No. 14938



LEGEND	
SYMBOL	DESCRIPTION
□	CADWELD CONNECTION
●	SIDE SPLICE CADWELD

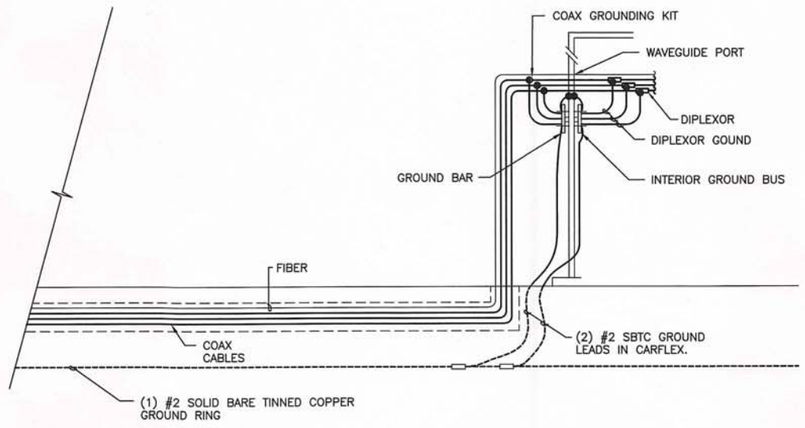
ANTENNA GROUNDING DETAIL

22X34 SCALE: NTS
11X17 SCALE: NTS
1



BASE OF TOWER GROUNDING DETAIL

22X34 SCALE: NTS
11X17 SCALE: NTS
2



WAVEGUIDE GROUNDING DETAIL

22X34 SCALE: NTS
11X17 SCALE: NTS
3

NOT USED

22X34 SCALE: NTS
11X17 SCALE: NTS
4

Technology Associates
International Corporation

at&t
Your world. Delivered.

R&W ENGINEERING, INC.
"Engineering Integrated Solutions"
9615 S.W. Allen Blvd., Suite 107
Beaverton, Oregon 97005
Phone: (503) 292-6000
Fax: (503) 726-3326
E-mail: rweng@rweng.com
Project No.: 229.1123.001
Contact: GREG ROBERTSON

DATE:	05/29/14
DRAWN BY:	MJP
CHECKED BY:	GLR

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
A	06/13/14	ISSUED CD REVIEW	GLR
0	07/03/14	ISSUED CD FINAL	GLR

REGISTERED PROFESSIONAL ENGINEER
13742
OREGON
JULY 16, 1987
GREGG H. SCHOLZ
7/2/14
EXPIRES 6/30/2016

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97068

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
E-3.3

FINAL CDs
07/25/2014

at&t

Your world. Delivered.

PN11 ROSEMONT AND WISTERIA

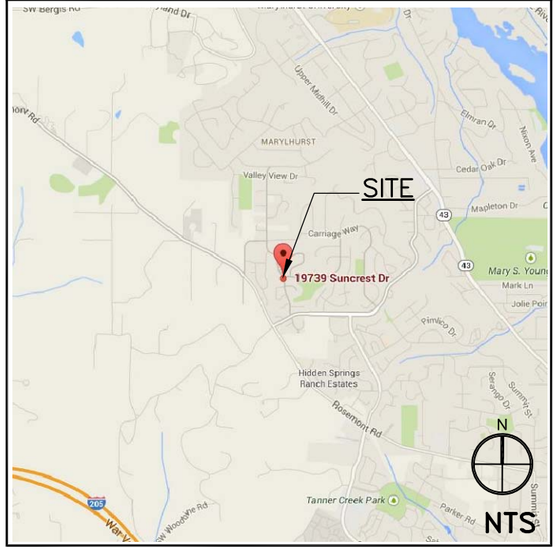
19739 SUNCREST DRIVE
WEST LINN, OR 97068

PROPRIETARY INFORMATION

REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

NOTE: ARCHITECTURAL STAMP AND SIGNATURE APPLIES TO SHEETS IN DRAWING INDEX INDICATED BY AN X ON LEFTMOST COLUMN.

VICINITY MAP



GENERAL LOCATION MAP

DRIVING DIRECTIONS

WEST ON SW SAGERT FOR .4 MILES, THEN LEFT ON SW 65TH. GO NORTH ON SW 65TH FOR 430 FT., THEN TURN LEFT RIGHT (EAST) ONTO SW BORLAND ROAD. TRAVEL EAST FOR 2 MILES ON SW BORLAND RD., THEN AT THE TRAFFIC CIRCLE TAKE THE THIRD EXIT ONTO SW STAFFORD RD. TRAVEL NORTH/NORTHEAST FOR 1.5 MILES ON SW STAFFORD RD., THEN TAKE THE FIRST EXIT AT THE NEXT TRAFFIC CIRCLE ONTO SW ROSEMONT RD. TRAVEL SOUTHEAST FOR 1.8 MILES ON SW ROSEMONT RD., AND THEN TURN LEFT (EAST) ON CARRIAGE WAY. THEN TAKE THE FIRST RIGHT ONTO DEANA DRIVE. AFTER .1 MILES, TURN RIGHT ONTO SPRING RIDGE RD., AND THE DESTINATION WILL BE ON THE LEFT.

APPROVAL/SIGN OFF OF CONSTRUCTION DRAWINGS

CONSULTANT GROUP SIGN OFF	DATE	SIGNATURE	AT&T SIGN OFF	DATE	SIGNATURE
CONSTRUCTION COORDINATOR			COMPLIANCE		
LANDLORD'S REPRESENTATIVE			CONSTRUCTION MANAGER		
PROJECT MANAGER			DEPLOYMENT MANAGER		
SITE ACQUISITION			EQUIPMENT ENGINEER		
ZONING			INTERCONNECT		
SITE AQUISITION MANAGER			OPERATIONS		
PERMITS			RF ENGINEER		
			RF ENGINEER MANAGER		
REVIEWERS SHALL CLEARLY PLACE INITIALS ADJACENT TO EACH REDLINE NOTE AS DRAWINGS ARE BEING REVIEWED					

PROJECT INFORMATION

APPLICANT:
AT&T MOBILITY CORPORATION
19801 SW 72ND AVENUE
TUALATIN, OR 97062
CONTACT: TODD FIEBIG
PH: (206) 354-9271

CONSTRUCTION MANAGER:
CONTACT: BRYAN MULLEN
PHONE: (971) 371-6627

PROJECT CONSULTANTS:
TAEC
15618 SW 72ND AVE
PORTLAND, OR 97224
CONTACT: TIA JOHNSON
PHONE: (503) 730-1834

PROJECT ARCHITECT:
GPA ARCHITECTS LLC
2701 NW VAUGHN, SUITE 764
PORTLAND, OR 97210
CONTACT: BRANDON DOLE
PHONE: (503) 274-7800 x221

SURVEYOR/CIVIL
DUNCANSON COMPANY, INC.
145 SW 155TH ST, #102
SEATTLE, WA 98166
CONTACT: KEVIN WALKER
CONTACT: HAROLD DUNCANSON
PHONE: (206)244-4141

CODE INFORMATION:
ZONING CLASSIFICATION: R-10 RESIDENTIAL
BUILDING CODE: 2010 OREGON STRUCTURAL SPECIALTY CODE (OSSC)
CONSTRUCTION TYPE: VB
OCCUPANCY: S-2
JURISDICTION: CITY OF WEST LINN

SITE LOCATION: (BASED ON NAD 83)
TAX LOT #: 2000
LATITUDE: 45° 22' 46.53" N (45.379592°)
LONGITUDE: 122° 39' 20.65" W (122.655737°)
ELEVATION AT BASE OF (E) WATER TANK: 752.9' AMSL
ELEVATION AT TOP OF (E) WATER TANK: 112'-11"± AGL
ELEVATION AT TOP OF NEW ANTENNAS: 128'-4"±

PROJECT AREA:
APPROX. 2,558 SQ. FT.

GENERAL INFORMATION:
1. PARKING REQUIREMENTS ARE UNCHANGED.
2. TRAFFIC IS UNAFFECTED.
3. SIGNAGE IS PROPOSED.

PROJECT DESCRIPTION:
AT&T PROPOSES TO CONSTRUCT A NEW UNSTAFFED RADIO TELECOMMUNICATIONS FACILITY CONSISTING OF A NEW (THREE TENANT) EQUIPMENT SHELTER, EMERGENCY POWER GENERATOR

LAND/ TANK OWNER:
CITY OF WEST LINN PUBLIC WORKS
22500 SALAMO RD
WEST LINN, OR 97068
CONTACT: LANCE CALVERT
PHONE: (503)722-5516

UTILITY INFORMATION:
POWER: PGE
CONTACT: MIKE HEIB
PHONE: (503) 672-5483

TELCO: CENTURY LINK (QWEST)
CONTACT: KEN SCIULLI
PHONE: (503) 242-0304

MECH & ELEC. ENGINEER:
R&W ENGINEERING
9615 S.W. ALLEN BLVD., SUITE 107
BEAVERTON, OR 97005
CONTACT: GREG ROBERTSON
PHONE: (503)229-6000

STRUCTURAL ENGINEER:
WDY STRUCTURAL
6443 SW BEAVERTON-HILLSDALE HWY, SUITE 210; PORTLAND, OR 97221
CONTACT: JIM GIPE
PHONE: 503-203-8111

STRUCTURAL ENGINEER:
IMPLEMENTATION MANAGER
AT&T MOBILITY CORPORATION
19801 SW 72ND AVENUE
TUALATIN, OR 97062
CONTACT: BYRON JARNAGIN
PH: (503) 681-4937

DRAWING INDEX

	DWG. NO.	DESCRIPTION
X	T-1.0	TITLE SHEET
X	G-1.0	GENERAL NOTES
	SV1	EXISTING SITE SURVEY
	C1	SITE & DRAINAGE PLAN
	C2	ESC PLAN
	C3	DETAILS
X	A-1.0	OVERALL SITE PLAN
X	A-2.0	ENLARGED SITE PLAN
X	A-3.0	ELEVATION
X	A-3.1	SHELTER ELEVATIONS
X	A-4.0	SHELTER SECTION & DETAILS
X	A-4.1	CONSTRUCTION DETAILS
X	A-4.2	CONSTRUCTION DETAILS
X	A-4.3	CONSTRUCTION DETAILS
X	A-5.0	SIGNAGE DETAILS
X	A-5.1	SIGNAGE DETAILS
X	A-5.2	SIGNAGE DETAILS
	S1.0	STRUCTURAL NOTES & SPECIAL INSPECTION
	S2.0	FOUNDATION PLAN
	S2.1	ROOF FRAMING PLAN
	S3.0	DETAILS
	E-1.0	OVERALL SITE PLAN - ELECTRICAL
	E-1.1	ENLARGED AT&T TENANT PLAN-ELECTRICAL
	E-1.2	ENLARGED WATER TOWER PLAN-ELECTRICAL
	E-2.0	ONE-LINE DIAGRAM
	E-2.1	ELECTRICAL DETAILS
	E-2.2	ELECTRICAL DETAILS
	E-3.0	ENLARGED AT&T TENANT PLAN-GROUNDING
	E-3.1	ENLARGED AT&T TENANT PLAN-GROUNDING
	E-3.2	GROUNDING DETAILS
	M-0.1	LEGENDS & SCHEDULE - MECHANICAL
	M-1.0	ENLARGED BUILDING PLAN - MECHANICAL

LEGAL DESCRIPTION

SEE SITE SURVEY

Technology Associates
International Corporation

at&t Your world. Delivered.

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DATE:	07/25/14
DRAWN BY:	LTW
CHECKED BY:	BD

REVISIONS

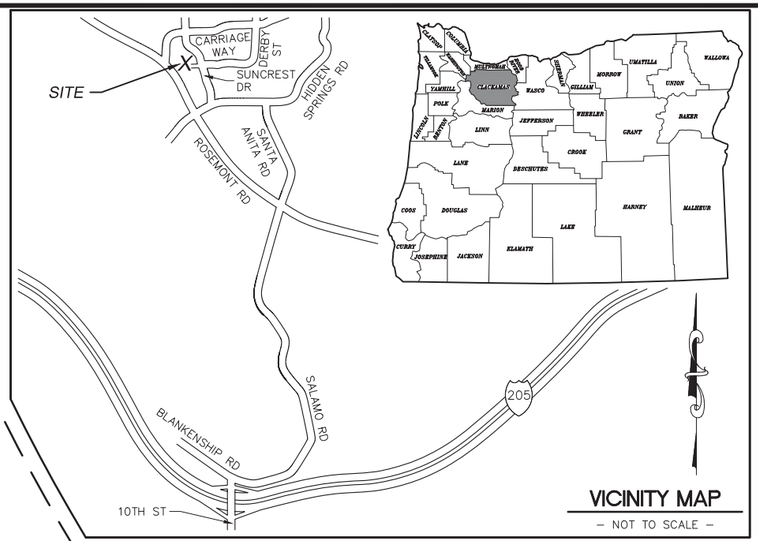
REV.:	DATE:	DESCRIPTION:	BY:
	06/17/14	CD REVIEW	LTW
	07/25/14	CD FINAL	LTW

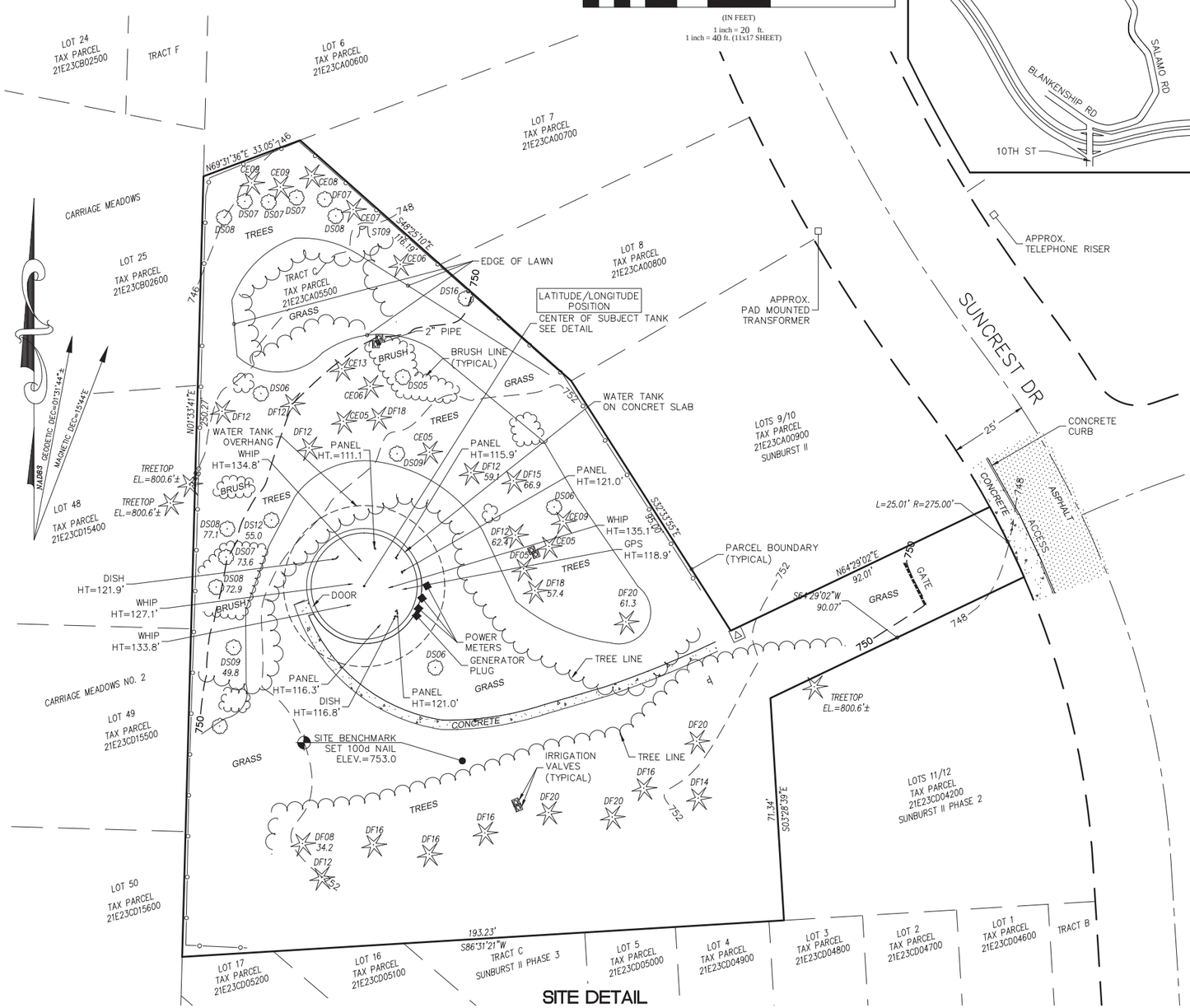
REGISTERED ARCHITECT
STEVEN M. N. PLOWMAN
PORTLAND, OREGON
STATE OF OREGON

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR. 97068

SHEET NAME
TITLE SHEET

SHEET NUMBER
T-1.0





LEGAL DESCRIPTION

TRACT C, SUNBURST II, IN THE CITY OF WEST LINN, COUNTY OF CLACKAMAS, STATE OF OREGON.

EXCEPTING THEREFROM THE FOLLOWING TRACT DESCRIBED IN LOT LINE ADJUSTMENT DEED RECORDED MARCH 21, 2012, RECORDER'S FEE NO. 2012–016931, AS FOLLOWS:

BEGINNING AT A 2 INCH PIPE FOUND AT THE MOST NORTHERLY CORNER OF TRACT "C", BLOCK 7, SAID SUNBURST II; THENCE, ALONG THE NORTHEASTERLY LINE OF SAID TRACT "C" AND THE SOUTHWESTERLY LINE OF SAID LOT 6, SOUTH 50°07'42" EAST, 40.00 FEET TO AN ANGLE POINT IN THE SOUTH LINE OF SAID LOT 6; THENCE, ON THE WESTERLY EXTENSION OF THE SOUTHERLY LINE OF SAID LOT 6, SOUTH 67°39'58" WEST, 33.08 FEET TO A 5/8 INCH IRON ROD WITH A YELLOW PLASTIC CAP STAMPED "REPPETO LS 657" FOUND ON THE WEST LINE OF SAID TRACT "C"; THENCE, ALONG SAID WEST LINE, NORTH 0°08'51" WEST, 38.21 FEET TO THE POINT OF BEGINNING.

EASEMENTS

△# CORRESPONDS WITH ITEM NUMBER IN 'SCHEDULE B' OF TITLE REPORT.

THE FOLLOWING EASEMENTS FROM THE REFERENCED TITLE REPORT CONTAIN SUFFICIENT INFORMATION TO BE DEPICTED ON THE PLAN. OTHER EASEMENTS OR ENCUMBRANCES, IF ANY, MAY AFFECT THE PROPERTY, BUT LACK SUFFICIENT INFORMATION TO BE SHOWN.

△6 MEMORANDUM OF LEASE WITH WESTERN PCS I CORP. PER CLACKAMAS COUNTY RECORDING NO. 96–054255 – DOCUMENT CONTAINS NO DESCRIPTION, NOT SHOWN

LATITUDE/LONGITUDE POSITION

COORDINATE DATA AT CENTER OF SUBJECT TANK:
NAD 83
LAT – 45°22'46.53" N
LONG – 122°39'20.65" W

NAVD 88
ELEV.= 752.9 FEET

NAVD 88

BENCHMARK IS "JIME"
NGS GPS CORS STATION.
ELEV = 250.0'

ELEVATION DERIVED USING GPS. ACCURACY MEETS OR EXCEEDS 1A STANDARDS AS DEFINED ON THE FAA ASAC INFORMATION SHEET 91:003.

SITE DETAIL

VICINITY MAP

– NOT TO SCALE –

WATER TANK DETAIL

NOT TO SCALE

NOTES

1) TITLE REPORT PROVIDED BY FIDELITY NATIONAL TITLE COMPANY, TITLE NUMBER 20130087963–FTPOR25, DATED DECEMBER 4, 2013.
2) FIELD WORK CONDUCTED IN FEBRUARY, 2014.
3) BASIS OF BEARING: OREGON COORDINATE SYSTEM, NORTH ZONE (NAD83).
4) UNDERGROUND UTILITIES SHOWN HEREON, IF ANY, WERE DELINEATED FROM SURFACE EVIDENCE AND/OR UTILITY COMPANY RECORDS. CRITICAL LOCATIONS SHOULD BE VERIFIED PRIOR TO DESIGN AND CONSTRUCTION.
5) FEMA DESIGNATION: ZONE X (AREAS DETERMINED TO BE OUTSIDE 0.2% ANNUAL CHANCE FLOOD PLAIN), PANEL 19 OF 1175, FIRM MAP NUMBER 41005C0019D, EFFECTIVE DATE JUNE 7 ,2008.

LEGEND

- SUBJECT BOUNDARY LINE
- RIGHT–OF–WAY CENTERLINE
- RIGHT–OF–WAY LINE
- ADJACENT BOUNDARY LINE
- SECTIONAL BREAKDOWN LINE
- OP — OVERHEAD POWER LINE
- UP — BURIED POWER LINE
- G — BURIED GAS LINE
- OT — OVERHEAD TELEPHONE LINE
- UT — BURIED TELEPHONE LINE
- W — BURIED WATER LINE
- SS — BURIED SANITARY SEWER
- SD — BURIED STORM DRAIN
- DITCH LINE/FLOW LINE
- ROCK RETAINING WALL
- VEGETATION LINE
- CHAIN LINK FENCE
- WOOD FENCE
- BARBED WIRE/WIRE FENCE

△	TRANSFORMER	⊕	FIRE HYDRANT
⌧	LIGHT STANDARD	⋈	GATE VALVE
P	POWER VAULT	⊞	WATER METER
⊠	UTILITY BOX	♁	FIRE STAND PIPE
⌀	UTILITY POLE	□	CATCH BASIN, TYPE I
←	POLE GUY WIRE	◎	CATCH BASIN, TYPE II
⦶	GAS VALVE	⊥	SIGN
⊡	GAS METER	○	BOLLARD
T	TELEPHONE VAULT	▭	MAIL BOX
▫	TELEPHONE RISER	234.21	SPOT ELEVATION

NOTE:
1) ALL ELEVATIONS SHOWN ARE ABOVE MEAN SEA LEVEL (AMSL) AND ARE REFERENCED TO THE NAVD88 DATUM.
2) ALL TOWER, TREE AND APPURTENANCE HEIGHTS ARE ABOVE GROUND LEVEL (AGL) AND ARE ACCURATE TO ± 3 FEET OR ± 1% OF TOTAL HEIGHT, WHICHEVER IS GREATER.

TREE LEGEND

DECIDUOUS TREE

AL12 ← TRUNK DIAMETER (IN)
TYPE

AL=ALDER
MP=MAPLE
DS=DECIDUOUS
MA=MADRONA
OK=OAK
CH=CHERRY

EVERGREEN TREE

DF18
195.2 ← HEIGHT AGL IF MEASURED

CE=CEDAR
DF=DOUGLAS FIR
HE=HEMLOCK
PI=PINE
EVG=EVERGREEN

NOTE:
TREE DRIP LINES ARE NOT TO SCALE. TREE SYMBOLS REFERENCE TRUNK LOCATION ONLY. TRUNK DIAMETERS WERE APPROXIMATED AT 3.5' TO 4' ABOVE GROUND LEVEL. TREES SHOWN ARE FOR REFERENCE ONLY AND OTHER TREES AND VEGETATION MAY EXIST.

SITE INFORMATION

TAX LOT NUMBER	21E23CA05500
SITE ADDRESS	19739 SUNCREST DRIVE WEST LINN, OREGON 97068
SITE CONTACT	LANCE CALVERT
PHONE NUMBER	(503) 722–5516
ZONING	R–10 (CITY OF WEST LINN)
TOTAL LOT AREA	38,116± S.F. (0.88 AC.)
PROJECT AREA	TO BE DETERMINED

SURVEY REFERENCE

1) SUNBURST II, PLAT BOOK 85. PAGE 15, RECORDING NO 2623, RECORDS OF CLACKAMAS COUNTY
2) RECORD OF SURVEY PS–22412, RECORDS OF CLACKAMAS COUNTY

BOUNDARY DISCLAIMER

THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY. SUBJECT AND ADJACENT PROPERTY LINES ARE DEPICTED USING FIELD–FOUND EVIDENCE AND RECORD INFORMATION.

CAUTION!

UNDERGROUND UTILITIES EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY BE INCOMPLETE. STATE LAW REQUIRES THAT CONTRACTOR CONTACT THE ONE–CALL UTILITY LOCATE SERVICE AT LEAST 48 HOURS BEFORE STARTING ANY CONSTRUCTION.

1-800-424-5555

at&t
Your world. Delivered.

GPA
ARCHITECTS LLC
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

DUNCANSON
Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OREGON 97068
CLACKAMAS COUNTY

FLD. CREW:	JAR/CR
FLD. BOOK:	317/34
DRAWN BY:	JGC
JOB #:	01792.1303
DATE:	02/21/14

REVISIONS

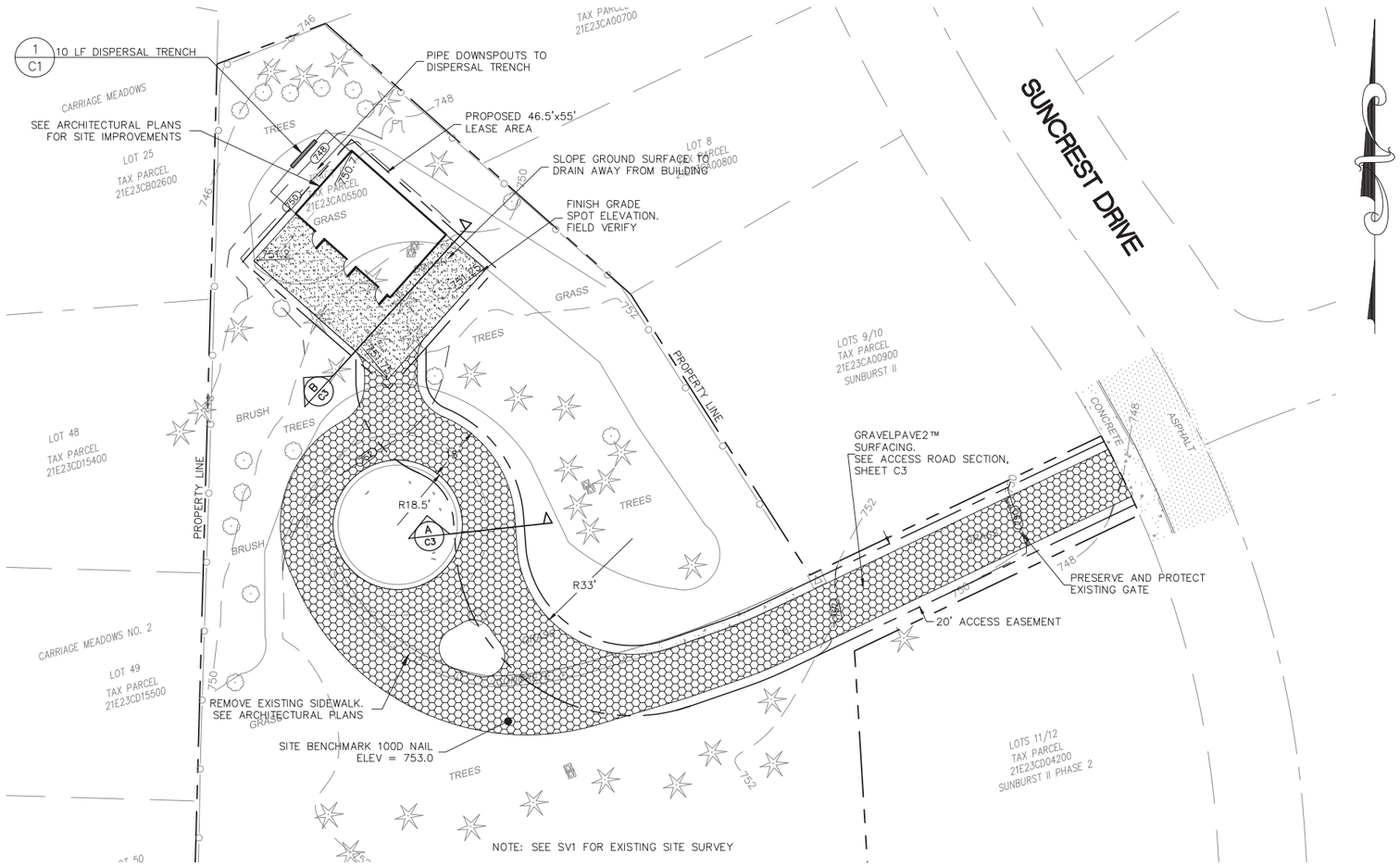
DATE	DESCRIPTION	BY
4/28/14	ADDED TITLE INFORMATION AND ADDITIONAL TOPO	LAC

REGISTERED
PROFESSIONAL
LAND SURVEYOR
APR. 29, 2014
OREGON
MAY 10, 2011
JONATHAN MARLO BECKER
84870
RENEWS: 12/31/2015

SHEET TITLE
EXISTING SITE SURVEY
SEC 23, TWP 2 S, RNG 1 E, WM

SHEET NUMBER
SV1

PN11 ROSEMONT



NOTE: SEE SV1 FOR EXISTING SITE SURVEY

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.
1 inch = 40 ft. (11x17 SHEET)

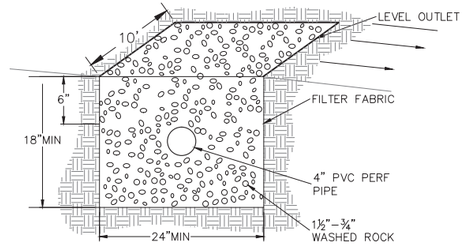
SITE INFORMATION

TAX LOT NUMBER	21E23CA05500
SITE ADDRESS	19739 SUNCREST DRIVE WEST LINN, OREGON 97068
SITE CONTACT	LANCE CALVERT
PHONE NUMBER	(503) 722-5516
ZONING	R-10 (CITY OF WEST LINN)
TOTAL LOT AREA	38,116± S.F. (0.88 AC.)
LEASE AREA	2557.5 S.F.
EFFECTIVE IMPERVIOUS AREA (LEASE AREA SURFACING INCL. BUILDING)	2142 S.F. < 5000 S.F.

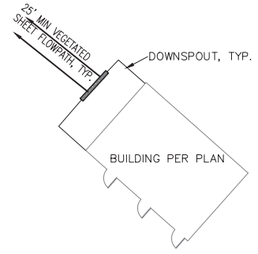
SHEET INDEX

GENERAL NOTES

ALL WORK SHALL CONFORM TO THE CITY OF WEST LINN PUBLIC WORKS STANDARD CONSTRUCTION SPECIFICATIONS AND THE WEST LINN COMMUNITY DEVELOPMENT CODE.



TRENCH X-SECTION



PLAN VIEW

1 10 FOOT DISPERSAL TRENCH

NOT TO SCALE – SCHEMATIC

NAVD 88

BENCHMARK IS "JIME"
NGS GPS CORS STATION.
ELEV = 250.0'

811 Know what's **below.** **Call** 48 hours before you dig.

DUNCANSON
Company, Inc.
145 SW 155th Street, Suite 102
Seattle, Washington 98166
Phone 206.244.4141
Fax 206.244.4455

at&t Your world. Delivered.

GPA ARCHITECTS LLC
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

REVISIONS

NO.	DATE	DESCRIPTION	BY

PN11 ROSEMONT

SITE & DRAINAGE PLAN

DRAWN: CAR
DCI NO: 01792.1303
DATE: 6/13/14

REGISTERED PROFESSIONAL ENGINEER
18070PE
OREGON
SEP 19, 1985
HAROLD M. DUNCANSON
RENEWS: 12/31/15

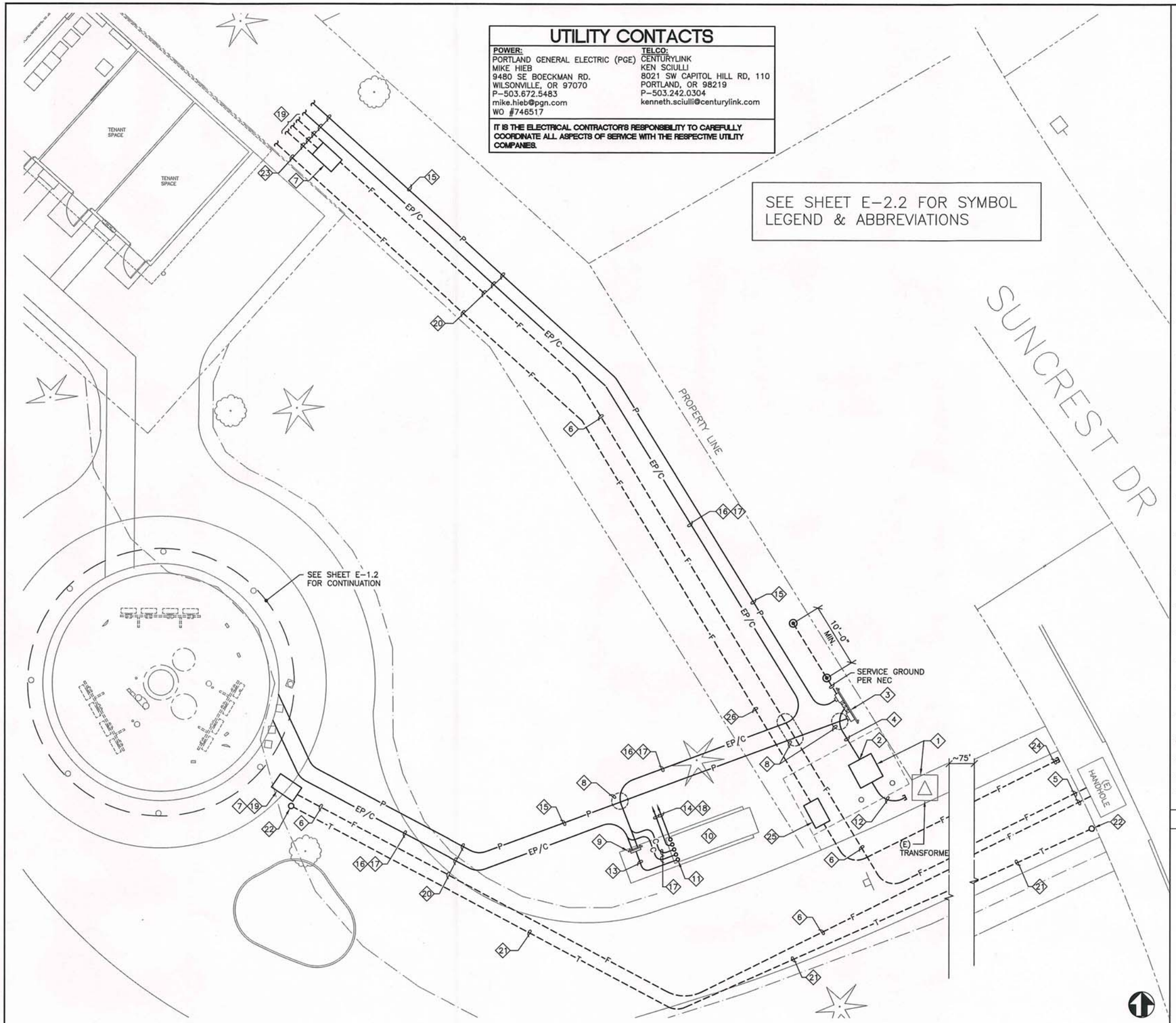
C1

1 OF 3 SHEETS

UTILITY CONTACTS

POWER:	TELCO:
PORTLAND GENERAL ELECTRIC (PGE) MIKE HIEB 9480 SE BOECKMAN RD. WILSONVILLE, OR 97070 P-503.672.5483 mike.hieb@pgn.com WO #746517	CENTURYLINK KEN SCIULLI 8021 SW CAPITOL HILL RD, 110 PORTLAND, OR 98219 P-503.242.0304 kenneth.sciulli@centurylink.com

IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CAREFULLY COORDINATE ALL ASPECTS OF SERVICE WITH THE RESPECTIVE UTILITY COMPANIES.



ELECTRICAL KEYED NOTES

1. PROVIDE UTILITY VAULT 644-3-PGE PER UTILITY REQUIREMENTS. COORDINATE LOCATION WITH UTILITY REPRESENTATIVE AND AT&T CONSTRUCTION MANAGER. SEE GENERAL NOTES A, B, F, G & H. COORDINATE WITH UTILITY TO RELOCATE (E) TRANSFORMER.
2. STUB (3) 3" SCHEDULE 40 PVC CONDUITS, WITH NYLON PULL CORDS, INTO THE (N) PGE TRANSFORMER VAULT. A PGE REPRESENTATIVE WILL NEED TO BE PRESENT. SEE GENERAL NOTES A, B, F, G & H.
3. PROVIDE NEW GALVANIZED STEEL POWER H-FRAME, WITH A (6) METER/MAIN DISTRIBUTION PANEL, SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, AND DETAIL 4/E-2.2.
4. PROVIDE (3) 3" SCHEDULE 40 PVC CONDUITS, WITH NYLON PULL CORDS, 36" BELOW GRADE, FOR SECONDARY POWER SERVICE. COORDINATE EXACT ROUTE WITH UTILITY AND AT&T CONSTRUCTION MANAGER. SEE GENERAL NOTES A, B, E, G & H.
5. STUB (2) 4" SCHEDULE 40 PVC CONDUIT, EACH WITH (1) 1-1/4" INNERDUCT, AND NYLON PULL CORDS IN EACH CONDUIT AND INNTERDUCT INTO (E) HANDHOLE. COORDINATE STUB LOCATION WITH UTILITY, 36" BELOW GRADE, FOR TELCO. SEE GENERAL NOTES A, B & D.
6. EXTEND (1) 4" SCHEDULE 40 PVC CONDUIT, SEE NOTE 5, 36" BELOW GRADE, FOR FIBER. SEE GENERAL NOTES A, B, & D.
7. SEE DETAIL 1/E-1.1, NOTE 2.
8. MAINTAIN MINIMUM 12" VERTICAL SEPARATION BETWEEN UTILITIES AT CONDUIT CROSSING.
9. PROVIDE GALVANIZED STEEL H-FRAME AND WEATHERPROOF (WP) GENERATOR DISTRIBUTION PANEL (GDP), SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, AND DETAIL 3/E-2.2.
10. STANDBY POWER GENERATOR FURNISHED BY AT&T, INSTALLED AND CONNECTED COMPLETE BY CONTRACTOR. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0.
11. VERIFY CONDUIT STUB-UP LOCATIONS WITH GENERATOR MANUFACTURER.
12. STUB OUT AND CAP (1) 4" SCHEDULE 40 PVC CONDUIT, WITH NYLON PULL CORD, FOR PRIMARY POWER. FINAL CONNECTION COMPLETE BY PGE.
13. EMERGENCY STAND-BY POWER FEEDER. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0.
14. PROVIDE (2) 20A, 120V CIRCUITS FROM AT&T'S PANEL 'A' FOR GENERATOR BATTERY CHARGER, AND BLOCK HEATER. COORDINATE WITH GENERATOR MANUFACTURER. 1/2"C., (4) #12 CU., (1) #12 CU. GRD..
15. PROVIDE (1) 2" SCHEDULE 40 PVC CONDUIT, 36" B.G., TO EACH TENANT SPACE FOR INCOMING POWER. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0. SEE GENERAL NOTES A, B, C & D.
16. PROVIDE CONDUIT FROM PANEL 'GDP', ON THE GENERATOR H-FRAME, TO EACH TENANT SPACE. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, FOR CONDUIT SIZE. TYPICAL 6.
17. PROVIDE 1"C. (6) #14 CU. TO EACH ATS FOR GENERATOR STOP/START, STATUS AND CONTROL FROM GENERATOR CONTROL TERMINAL. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0. TYPICAL 6.
18. PROVIDE 1"C. WITH NYLON PULL CORD, TO AT&T'S TELCO BACKBOARD FOR FUTURE ALARMS.
19. PROVIDE (1) 2" SCHEDULE 40 PVC CONDUIT, WITH NYLON PULL CORD, 36" B.G, FROM THE TELCO HANDHOLE INTO EACH TENANT SPACE.
20. POWER AND TELCO IN COMMON TRENCH, MAINTAIN MINIMUM 12" SEPARATION.
21. PROVIDE (1) 2" SCHEDULE 40 PVC CONDUIT, WITH NYLON PULL CORD, 36" B.G, FOR GENERAL TELCO USE.
22. PROVIDE (1) 6"-10" ROUND VALVE BOX, TO PROVIDE VISUAL LOCATION OF CONDUIT STUB.
23. SEE DETAIL 1/E-1.1 FOR CONTINUATION.
24. STUB AND CAP (1) 4" SCHEDULE 40 PVC CONDUIT AT EDGE OF PROPERTY.
25. PROVIDE 3048 VAULT FOR VERIZON WIRELESS.
26. PROVIDE (1) 4" SCHEDULE 40 PVC CONDUIT, WITH NYLON PULL CORD, 36" B.G, FOR FIBER SPARE.

ELECTRICAL GENERAL NOTES

A. CAREFULLY LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO ANY NEW TRENCHING OR EXCAVATION, PACIFICORP REQUIRES AN "811" LOCATE.

B. COORDINATE EXACT CONDUIT ROUTING AND STUB UP LOCATIONS WITH UTILITIES AND AT&T PROJECT MANAGER PRIOR TO ROUGH-IN.

C. ALL CONDUIT ABOVE GROUND AND EXPOSED TO THE ELEMENTS TO BE RIGID STEEL CONDUIT.

D. ALL SWEEPS WILL NEED TO HAVE A MINIMUM 36" RADIUS.

E. A MINIMUM 4'-0" CLEARANCE BETWEEN THE METERBASE AND ANYTHING IN FRONT OF IT MUST BE PROVIDED.

F. A "GREEN TAG" INSPECTION MUST BE OBTAINED BEFORE PGE WILL ENERGIZE SERVICE.

G. ALL INSTALLED TRENCHING, CONDUITS AND METERBASE TO BE INSPECTED BY PGE.

H. MAINTAIN PROPER CLEARANCE FROM ALL EXISTING PIPING, DRAINAGE AND CONDUITS ON PROPERTY.

OVERALL SITE PLAN - ELECTRICAL

22X34 SCALE: 1/8" = 1'-0"
11X17 SCALE: 1/16" = 1'-0"

1

Technology Associates
International Corporation

at&t
Your world. Delivered.

R&W ENGINEERING, INC.
'Engineering Integrated Solutions'
9615 S.W. Allen Blvd., Suite 107
Beaverton, Oregon 97005
Phone: (503) 292-6000
Fax: (503) 726-3326
E-mail: rweng@rweng.com
Project No.: 229.1123.001
Contact: GREG ROBERTSON

DATE:	05/29/14
DRAWN BY:	MJP
CHECKED BY:	GLR

REVISIONS

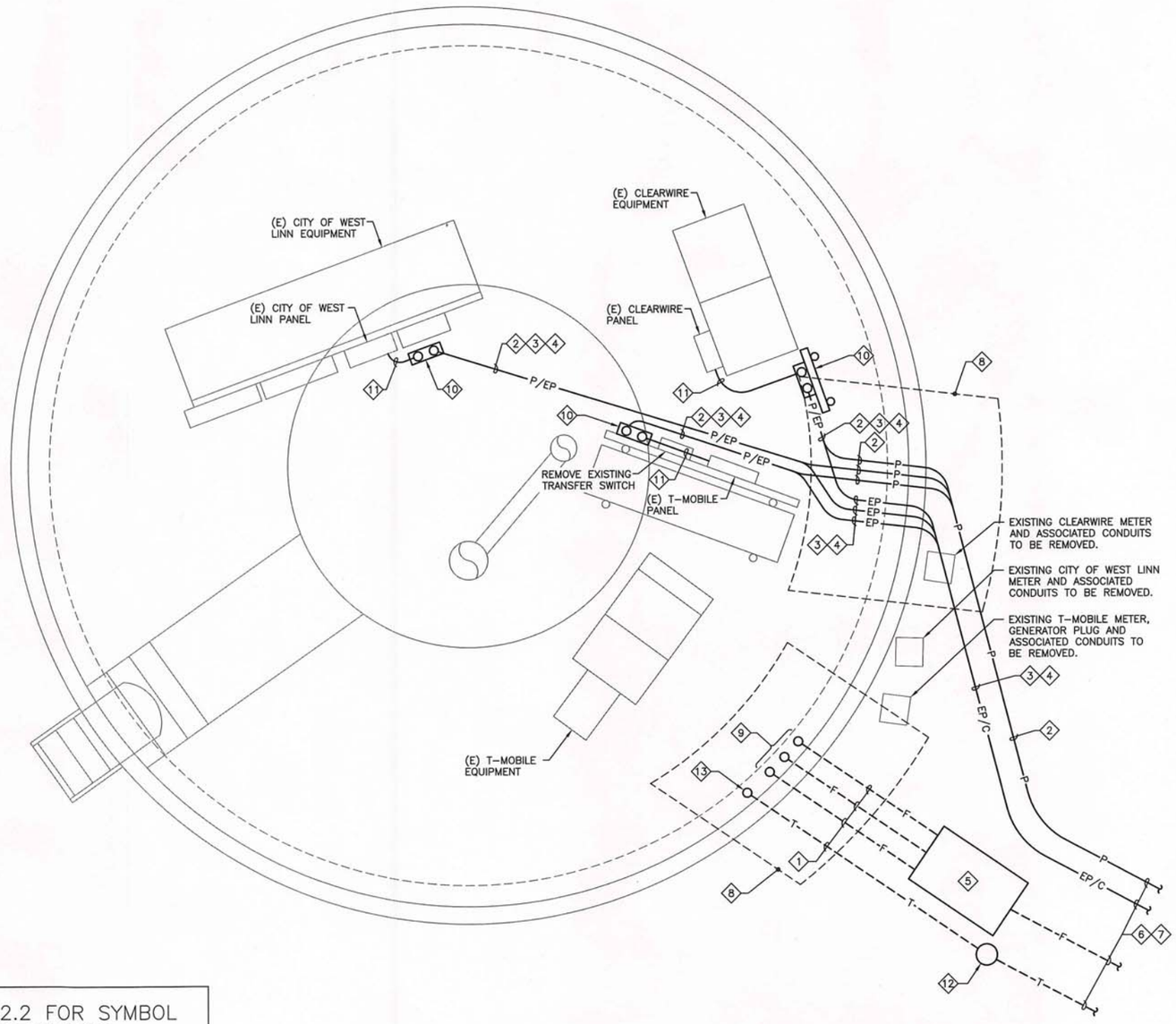
REV.:	DATE:	DESCRIPTION:	BY:
A	06/13/14	ISSUED CD REVIEW	GLR
0	07/03/14	ISSUED CD FINAL	GLR

REGISTERED PROFESSIONAL ENGINEER
13742
OREGON
JULY 16, 1987
GREGG H. SCHOLZ
7/3/14
EXPIRES 6/30/2016

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97068

SHEET TITLE
OVERALL SITE PLAN - ELECTRICAL

SHEET NUMBER
E-1.0



SEE SHEET E-2.2 FOR SYMBOL LEGEND & ABBREVIATIONS

ELECTRICAL KEYED NOTES

1. PROVIDE (4) 2" SCHEDULE 40 PVC CONDUIT, 36" BELOW GRADE, FOR FIBER. SEE GENERAL NOTES A AND B.
2. PROVIDE (1) 2" SCHEDULE 40 PVC CONDUIT, WITH NYLON PULL CORD, 36" B.G., TO EACH TENANT SPACE FOR INCOMING POWER. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0. SEE GENERAL NOTES A & B.
3. PROVIDE CONDUIT FROM PANEL 'GDP', ON THE GENERATOR H-FRAME, TO EACH TENANT SPACE. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, FOR CONDUIT SIZE. TYPICAL 6.
4. PROVIDE 1"C. (6) #14 CU. TO EACH ATS FOR GENERATOR STOP/START, STATUS AND CONTROL FROM GENERATOR CONTROL TERMINAL, AT GENERATOR, TO EACH TENANT SPACE FOR ATS CONTROL. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, FOR CONDUIT SIZE. TYPICAL 6.
5. PROVIDE A FLUSH MOUNTED HANDHOLE, OLDCASTLE PRECAST #3048, OR APPROVED EQUAL. COORDINATE EXACT LOCATION WITH UTILITY AND AT&T CONSTRUCTION MANAGER. STUB NEW SERVICE CONDUIT INTO HANDHOLE AT A LOCATION TO BE INDICATED BY UTILITY.
6. POWER AND TELCO IN COMMON TRENCH, MAINTAIN MINIMUM 12" SEPARATION.
7. SEE DETAIL 1/E-1.0 FOR CONTINUATION.
8. PROVIDE CONCRETE BACKFILL, EXTENDING 3' ON EACH SIDE, FOR ALL CONDUIT TRENCHING UNDERNEATH WATER TOWER FOUNDATION.
9. STUB AND CAP CONDUITS FOR FUTURE TENANT SERVICE WITH CENTURYLINK.
10. PROVIDE ASCO SERIES 300 AUTOMATIC TRANSFER SWITCH (ATS), OR APPROVED EQUAL. COORDINATE EXACT LOCATION WITH AT&T CONSTRUCTION MANAGER. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0 FOR SIZING REQUIREMENTS.
11. PROVIDE A CONNECTION FROM NEW ATS TO EXISTING TENANT PANEL. SEE ONE-LINE DIAGRAM, DETAIL 1/E-2.0, FOR CONDUIT SIZE.
12. PROVIDE 10" ROUND VALVE BOX.
13. STUB AND CAP FOR FUTURE GENERAL TELCO USE.

ELECTRICAL GENERAL NOTES

A. CAREFULLY LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO ANY NEW TRENCHING OR EXCAVATION.

B. COORDINATE EXACT CONDUIT ROUTING AND STUB UP LOCATIONS WITH CITY OF WEST LINN AND AT&T PROJECT MANAGER PRIOR TO ROUGH-IN.

C. ALL CONDUIT ABOVE GROUND AND EXPOSED TO THE ELEMENTS TO BE RIGID STEEL CONDUIT.

D. ALL SWEEPS WILL NEED TO HAVE A MINIMUM 36" RADIUS.

E. MAINTAIN PROPER CLEARANCE FROM ALL EXISTING PIPING, DRAINAGE AND CONDUITS ON PROPERTY.

F. MAINTAIN MINIMUM 12" SEPARATION AT ALL CONDUIT CROSSING.

Technology Associates
International Corporation

at&t
Your world. Delivered.

R&W ENGINEERING, INC.
"Engineering Integrated Solutions"
9615 S.W. Allen Blvd., Suite 107
Beaverton, Oregon 97005
Phone: (503) 292-6000
Fax: (503) 726-3326
E-mail: rweng@rweng.com
Project No.: 229.1123.001
Contact: GREG ROBERTSON

DATE:	05/29/14
DRAWN BY:	MJP
CHECKED BY:	GLR

REVISIONS

REV.:	DATE:	DESCRIPTION:	BY:
A	06/13/14	ISSUED CD REVIEW	GLR
0	07/03/14	ISSUED CD FINAL	GLR

REGISTERED PROFESSIONAL ENGINEER
13742
OREGON
JULY 16, 1987
GREGG H. SCHOLZ
EXPIRES 6/30/2016

SITE
PN11
ROSEMONT AND WISTERIA
19739 SUNCREST DRIVE
WEST LINN, OR 97068

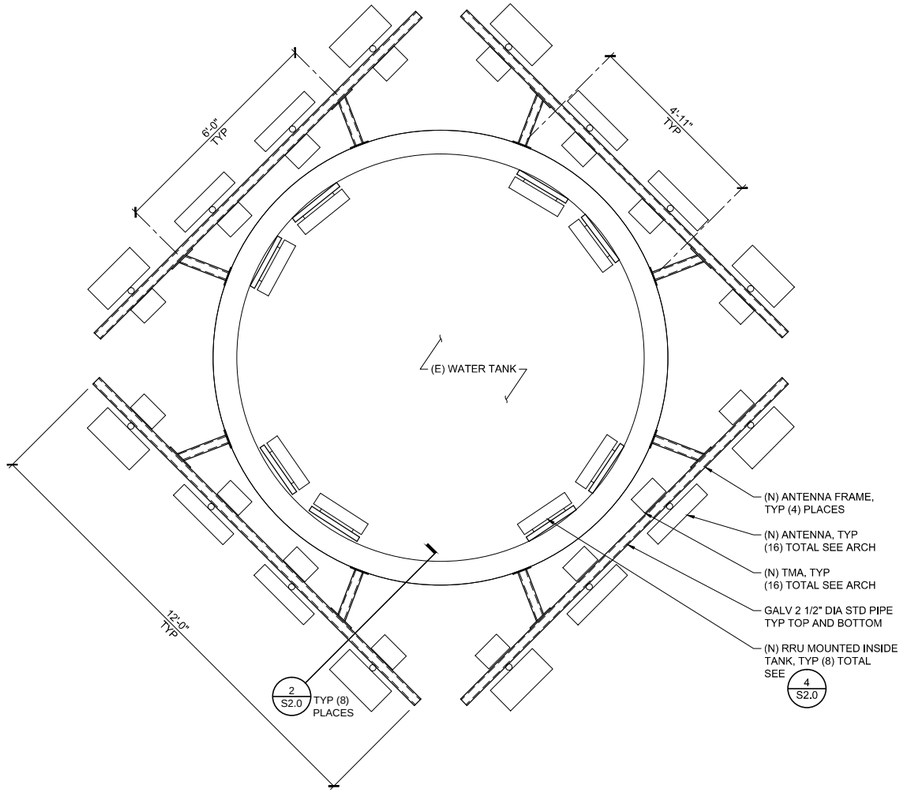
SHEET TITLE
ENLARGED WATER TOWER PLAN - ELECTRICAL

SHEET NUMBER
E-1.2

ENLARGED WATER TOWER PLAN - ELECTRICAL

22X34 SCALE: 3/8" = 1'-0"
11X17 SCALE: 3/16" = 1'-0"

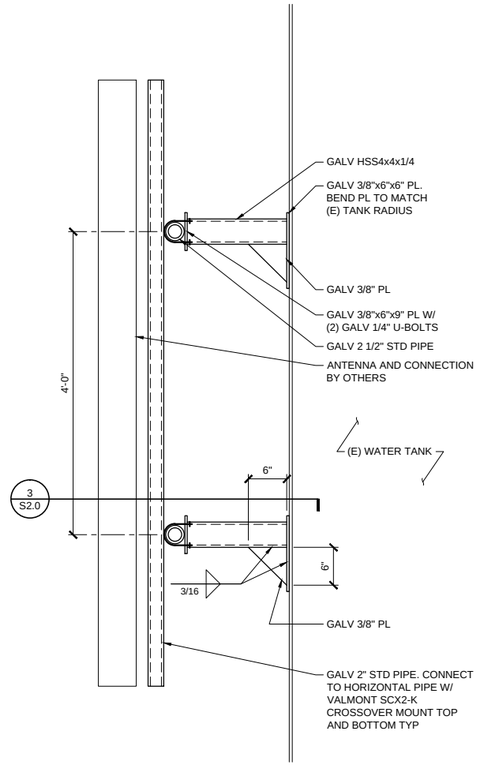
SUPPLEMENTARY INFORMATION D



ANTENNA MOUNTING PLAN

22" X 34" SCALE: 1/2" = 1'-0"
11" X 17" SCALE: 1/4" = 1'-0"

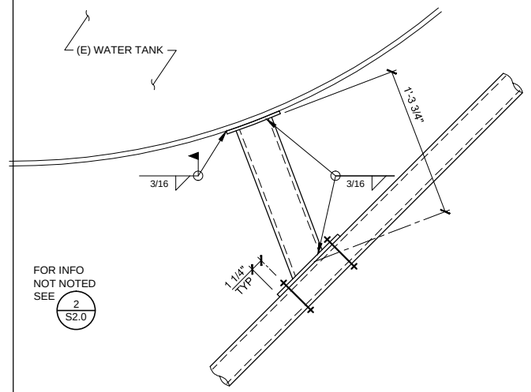
1



DETAIL

22" X 34" SCALE: 1" = 1'-0"
11" X 17" SCALE: 1/2" = 1'-0"

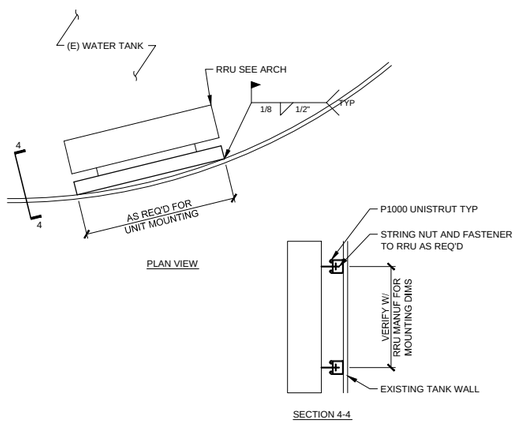
2



DETAIL

22" X 34" SCALE: 1" = 1'-0"
11" X 17" SCALE: 3/4" = 1'-0"

3



DETAIL

22" X 34" SCALE: 1 1/2" = 1'-0"
11" X 17" SCALE: 3/4" = 1'-0"

4

DETAIL

22" X 34" SCALE: 1 1/2" = 1'-0"
11" X 17" SCALE: 3/4" = 1'-0"

5

DETAIL

22" X 34" SCALE: 1 1/2" = 1'-0"
11" X 17" SCALE: 3/4" = 1'-0"

6

DETAIL

22" X 34" SCALE: 1 1/2" = 1'-0"
11" X 17" SCALE: 3/4" = 1'-0"

7

LEXCOM

Drawings Produced By:

GPA
ARCHITECTS
2701 NW Vaughn, Suite 764
Portland, OR 97210
503-274-7800

PRELIMINARY NOT FOR CONSTRUCTION 06/26/14

No.	Date	By	Revisions
	06/27/14	JG	CD REVIEW

File no.	14903
Date	06/27/14
Designed by	KC
Drawn by	KC
Checked by	JG
Approved by	JG
Date issued	: 07/22/10
Date issued for Zoning Permit	: 10/19/07
Date issued for Building Permit	: 11/26/07
Date issued for Bid	: 10/06/05
Date issued for Construction	: 10/06/05

Project title :

POR HIDDEN SPRINGS

19739 SUNCREST DRIVE
WEST LINN, OR 97068

Sheet title :

ANTENNA MOUNTING PLAN AND FRAME DETAILS

Sheet no. :

S2.0

Structural Engineering
WDY
6443 SW Beaverton-Hillsdale Hwy, suite 210 Portland, OR 97221
ph:503.203.8111 fx:503.203.8122 www.wdyi.com

Appendix C

SEE ATTACHED PLANS