BIDDING AND CONTRACT DOCUMENTS

FOR

RESERVOIR 4 INSULATION REPAIRS

BID OPENING DATE & TIME: April 27, 2023 at 2:00pm

Prepared for:

CITY OF PALMER

231 W. Evergreen Avenue
Palmer, AK 99645
(907) 745-3271

Contact: Jude Bilafer, Director of Public Works
phone: (907) 745-3400
email: jbilafer@palmerak.org

Prepared by:

HDL Engineering Consultants

202 West Elmwood Avenue
Palmer, AK 99645
(907) 746-5230 phone (907) 746-5231 fax

Contact: Chris Bowman, P.E., Project Engineer
email: cbowman@hdlalaska.com

April 2023

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

MASTER INDEX

CITY OF PALMER STANDARD SPECIFICATIONS, DATED 2018, MAY BE DOWNLOADED AT:
https://www.palmerak.org/public-works/page/standard-specifications-and-development-standards

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

I

INVITATION TO BID

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CITY OF PALMER

Invitation to Bid

Reservoir 4 Insulation Repairs

Description of Work: This project will perform repairs to the exterior insulation system for the City of Palmer's Reservoir 4 drinking water tank. This reservoir is located at: East College Loop, Palmer, Alaska. Project includes the removal of existing insulation and the installation of a completely new insulation system for Reservoir 4, as more fully described in the Contract Documents.

Sealed bids, in single copy, for furnishing all labor, equipment and materials and performing all work for the above project are hereby invited. Bids will be opened publicly and read at Palmer City Hall, 231 W. Evergreen Avenue, Palmer, Alaska on **April 27, 2023 at 2:00pm.**

A pre-bid meeting will be held at Palmer City Hall, 231 West Evergreen Avenue, Palmer, Alaska on **April 18, 2023 at 10:00am** with a site visit to follow.

This is a bonded, public works project. Contractors are required to be licensed by the City and State and shall comply with Title 36 and Davis-Bacon prevailing wages. A bid guarantee is required with each bid in the form and amount indicated in the Palmer Standard Specifications. Successful bidder will be required to provide a performance bond and a labor and material payment bond each in the amount equal to 100% of the contract price.

Contract Documents will be available starting **April 11, 2023** in electronic format only. Documents may be downloaded at www.cityofpalmer.org. There is no fee for Contract Documents.

For additional info, contact the Palmer Public Works office at (907) 745-3400.

The City reserves the right to reject any or all bids and to waive irregularities or informalities in any of the bids when in its best interest.

Date: April 10, 2023
Jude Bilafer, Public Works Director
City of Palmer

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

II

SPECIAL PROVISIONS

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

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CITY OF PALMER

Reservoir 4 Insulation Repairs

SPECIAL PROVISIONS

SECTION 95.01 LOCATION AND SCOPE

All proposed Work is located within the City of Palmer corporate limits and is more particularly located on the design drawings. The Work included under this Contract consists of furnishing all labor, materials, equipment, supervision, and other facilities necessary to successfully complete the Work set forth in the Drawings and specifications. It shall be the responsibility of the bidder to prepare his/her bid so that all materials and/or fittings shall harmoniously conform to the intent of the Contract Drawings, Specifications, and Special Provisions.

Below are the schedules of Work that are presented in the Bid Proposal of this Contract. Either Schedule A will be performed in its entirety OR Schedule B will be performed in its entirety. The difference between the two schedules is design wind speed as further described in Specification Section 07 21 00.

SCHEDULE DESCRIPTION

A Reservoir 4 Insulation Repairs, Complete

- Install a completely new insulation system for Reservoir 4 and all other associated work as further described in the Contract Documents.

B Reservoir 4 Insulation Repairs, Complete (Upgraded)

- Install a completely new insulation system for Reservoir 4 and all other associated work as further described in the Contract Documents.

SECTION 95.02 REFERENCE TO CITY OF PALMER STANDARD SPECIFICATIONS

This Contract is subject to and hereby incorporates by reference the 2018 City of Palmer Standard Specifications, hereinafter referred to as CPSS; the Alaska Traffic Manual - Manual on Uniform Traffic Control Devices (MUTCD), with the Alaska supplement latest edition; and the International Building Code, latest edition adopted by City of Palmer. When conflicts exist between CPSS and MUTCD, the requirements of CPSS and these Special Provisions shall govern.

SECTION 95.03 TIME OF COMPLETION

Work under this Contract shall be “substantially complete,” as defined by CPSS Section 10.05 Control of Work, Article 5.31 Substantial Completion by **November 1, 2023.**

The Contract Completion Date on or before **November 15, 2023**. Final Acceptance of the Work shall be obtained by the Contract Completion Date.

Award of this Contract is anticipated in **May 23, 2023**.

SECTION 95.04 MODIFICATIONS AND/OR ADDITIONS TO CITY OF PALMER STANDARD SPECIFICATIONS

The following enumerated provisions of CPSS are amended as hereinafter stated:

A. DIVISION 10 STANDARD GENERAL PROVISIONS

SECTION 10.01 DEFINITIONS

Add the following definitions:

Department – The City of Palmer Department of Public Works

PSS – Used interchangeably with CPSS to refer to the City of Palmer Standard Specifications.

SECTION 10.03 AWARD AND EXECUTION OF CONTRACT

Article 3.4 Action on Bids

Delete the last paragraph and replace with the following:

The execution of this Contract is subject to availability of funding from City, and/or State grant sources. Award of a contract is contingent upon receipt of such funds. If sufficient funds are not received, this project may be canceled at no cost to the City of Palmer.

Article 3.6 Execution of Contract

Delete the first sentence of the fourth paragraph and substitute the following:

The Contractor will be supplied with one (1) electronic file (PDF format) of the conformed Contract Documents, exclusive of City of Palmer Standard Specifications.

SECTION 10.04 SCOPE OF WORK

Article 4.1 Intent of the Contract Documents

Add the following paragraph at the end of the Article:

Working titles that are adjectives or have masculine genders such as “workman” and “flagman” or are pronouns such as “he,” “his,” and “him” are utilized in the Contract Documents for the sake of brevity and are intended to refer to persons of either gender.

Article 4.8 Work Incidental to the Contract

Delete Article 4.8 in its entirety and substitute the following:

The lump sum price shown on the bid schedule shall constitute full compensation to provide the Owner with a complete and operable system. No additional payment shall be made for items not shown or indicated but still required to complete the work as shown on the Drawings.

Article 4.17 Utilities

Delete the first three sentences of the first paragraph and substitute the following:

Utilities are not shown on the Drawings. The Contractor shall not be entitled to additional compensation from the Owner or extension of contract time due to delays caused by the acts or omission of a utility company.

Insert the following prior to the last paragraph:

The Contractor is hereby notified that certain utility companies may have facilities in the project limits. Contact numbers include, but are not limited to:

- Matanuska Telephone Association (907) 761-2553
- Matanuska Electric Association (907) 761-9302
- Enstar Natural Gas Company (907) 830-9065
- GCI Cable Company (907) 229-9176
- City of Palmer Department of Public Works (907) 745-3400
  (streetlights, water, sewer and storm drain)

Contractor shall notify and coordinate with utility companies for all Work in close proximity to their respective facilities.

SECTION 10.05 CONTROL OF WORK

Article 5.3 Construction Progress Schedule and Schedule of Values

Delete the first paragraph and substitute the following:

Within five (5) calendar days after execution of contract, the Contractor shall submit to the Engineer a Construction Progress Schedule in the form of a time-scaled bar chart or Critical Path Method (CPM) schedule, the elements of which shall be the significant bid items, at a minimum. Additional items shall be added to represent other significant features of the Work, such as the submittal schedule, material procurement and freighting. Weather and ground condition restraints, work suspensions and other significant influences on the Contract amount and/or time for completion of the Work shall be shown. The initial schedule shall be for the entire Work, and shall extend through project completion. The schedule shall be revised and submitted at two-week intervals with a report identifying changes to activities (start, finish, duration, or critical path), changes to Contract Time, and methods to recover from delays for each activity.

Article 5.9 Contractor's Authorized Representatives and Employees

In the first sentence, delete "Notice to Proceed***" and replace with "***execution of the contract***".***

Article 5.10 Subcontracting

Delete the following:

"2. Within ten (10) days after the effective date of the Notice-to-Proceed, and prior to commencement of the Work, the Contractor shall provide…"

And replace with:

"2. Within two (2) days after bid opening, and prior to commencement of the Work, the apparent low bidder shall provide…"

Article 5.27 Liquidated Damages

Delete the entire first paragraph and substitute the following:

The Owner may withhold from any progress payment the sum of $1,000.00 per day as Liquidated Damages for each and every calendar day that Substantial Completion of any Work Area is delayed beyond the Substantial Completion Date. After substantial completion, the Owner may withhold out of any progress payment the sum of $1,000.00 per day as Liquidated Damages for each and every calendar day that Final Acceptance is delayed beyond the Contract Completion Date. If no money is due Contractor, the Owner shall have the right to recover said sums from Contractor, the Surety, or both.

Actual damages for delay in performance of the contract may be greater than the liquidated damages amount set forth above. In the event actual damages for delay in the Project prove to be greater than the amount of liquidated damages set forth above, the City, at its sole option, may elect to prove actual damages for delay and the Contractor shall be liable for actual damages which are greater than the liquidated damages, and in lieu of the liquidated damages, based on such proof.

Article 5.34 Substantial Completion

Delete the last paragraph and replace with the following:

For Substantial Completion, all work shall be complete such that all systems are functional for their intended use and provide for public safety.

SECTION 10.06 LEGAL RELATIONS AND RESPONSIBILITIES

Article 6.6 Permits

Add the following at the end of the article:

Contractor shall secure and pay for all permits and fees associated with this work, including but not limited to:

- Department of Labor and Workforce Development Notice of Work

Contractor shall coordinate with utilities and pay all fees associated with utility permits, relocations, inspection, or deposits.

Article 6.15 State of Alaska Prevailing Wage Scale

Delete Article 4.8 in its entirety and substitute the following:

The Contractor shall comply with Alaska Statute Title 36 for the payment of prevailing wages to their employees.

This Contract contains State of Alaska wage rates and a Federal Wage Decision. The Contractor and all Subcontractors shall comply with both wage decisions. The Contractor and all Subcontractors shall be responsible for paying the higher pay rate between the state and federal wage decisions. Additionally, the Contractor and all Subcontractors shall be responsible for providing certified payrolls to both the Engineer and the State of Alaska, Department of Labor, Wage and Hour Division on a weekly basis utilizing the appropriate agency's form(s).

SECTION 10.07 MEASUREMENT AND PAYMENT

Article 7.7 Final Payment

Delete Paragraph B and replace with the following:

B. Other contractually required documents noted in the contract, including Contract Completion and Acceptance Certificate and Contractor's Statement Concerning Claims, on the forms provided by the Owner; and Contractor's Release of Liens.

C. DIVISION 60 STANDARD CONSTRUCTION SPECIFICATIONS FOR WATER SYSTEMS

Add the following new section:

SECTION 60.22 RESERVOIR 4 INSULATION REPAIRS

Article 22.1 General

This item consists of all work to perform the upgrades as described in the Contract Documents, including but not limited to: removal of the existing insulation system for Reservoir 4 and replacement with a new insulation package for a complete and functional insulation system.

Article 22.2 Measurement and Payment

Method of measurement will be lump sum, as described herein and shown on the bid schedules. Payment for this work shall be in accordance with CPSS, Division 10.00 Standard General Provisions, Section 10.07 Measurement and Payment. The lump sum shall constitute full compensation to provide the Owner with a complete and operable system. All incidental costs to construct the project and provide the Owner with a complete and operable system shall be included in the lump sum. The Owner reserves the right to delete independent elements of the project without compensation to the Contractor.

Payment shall include the furnishing of all testing, plant, labor, material, supervision, and incidentals necessary to complete the work as further defined in the Contract Documents.

Payment shall be made under the following items:

Reservoir 4 Insulation Repairs, Complete	Lump Sum

Additional project technical specifications are further defined in the Supplemental Specifications.

END OF SPECIAL PROVISIONS

CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

SUPPLEMENTAL SPECIFICATIONS

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SECTION 07 21 00 - TANK INSULATION

PART 1 - GENERAL

1.1 DESCRIPTION

A. This item consists of replacing exterior insulation systems for one water reservoir.

1.2 SUBMITTALS

A. Provide the Following:

1. Manufacturer's qualifications, project references, and contacts.
2. Manufacturer's product data on tank insulation system.
3. Color chart or chips.
4. Shop drawings including flashing details.
5. Tank lid anchor system.
6. Calculations showing conformance with the wind design criteria set forth hereinafter for the insulation system. The calculations shall be stamped and signed by a professional engineer registered in the State of Alaska.
7. Welder qualifications.
8. Remotely Operated Vehicle (ROV) inspection plan.
9. ROV inspection report.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Use only new materials that conform to plan details, or as specified. Provide shop drawings and calculations supporting insulation system design.

2.2 TANK INSULATION SYSTEM

A. Tank shall be insulated with pre-manufactured multi-layer horizontal panel system as manufactured by Thermacon Thermal Containment Systems, or approved equal.

B. Insulation system manufacturer shall have a minimum of 5 years experience designing and fabricating composite metal panel insulation systems for large reservoirs. Submit project references and contact information.

C. A manufacturer's representative shall be present during the installation of the tank insulation system and shall notify the Engineer of any deviation from manufacturer requirements.

D. The Contractor shall be responsible for storage of foam insulation components in accordance with manufacturer's recommendations. Crushed or damaged insulation shall not be installed on the tank. Contractor may stage material on site but shall coordinate with the Owner.

E. The tank shall remain in operation during the work, including during the addition of anchor elements, unless interior coating system is damaged during construction.

F. Horizontal Tank Shell Insulation Panels

1. Insulation panels shall be 4 feet by 8 feet and composed of two layers of 2-inch thick, foil faced isocyanurate foam laminated to a 0.030-inch thick, 3105-H18 aluminum sheathing. The thermal conductivity (k) of the isocyanurate foam insulation shall be a maximum of 0.140 BTU/in at 75° mean temperature.

2. The exposed side of the aluminum sheathing panels shall have a Kynar 500 painted finish. The color of the exterior sheathing will be selected by the Owner. Color selection charts shall be furnished for this purpose.

3. The contractor shall state the number of panels required to complete the installation and shall furnish two additional panels, and one gallon of touch-up paint that matches the sheathing color in the event that the Owner needs to repair the insulation system after the project has completed.

4. Provide weather sealing consisting of a shop-installed, extruded aluminum vertical weather seal, and neoprene gasket insert on the end of each panel. The extrusion shall function as a weather sealed overlap; the slotted ends and factory punched slots will provide location and prevent vertical movement of the horizontal banding system.

5. Bands and clamps shall be provided for attaching the panels to the tank. Provide Bandison Clamping System as manufactured by Thermacon Thermal Containment Systems, or equal. A minimum of three clamps per band shall be provided.

a. Schedule A: Banding and clamping system shall be designed per the 2021 IBC, using 130 mph (3-second gust) basic wind speed in accordance with ASCE 7-16, and shall be rated for temperature extremes of -60°F to +100°F. Topographical effects of each site must be considered. Minimum Topographical Factor (Kzt) value is 1.3.

b. Schedule B: Banding and clamping system shall be designed per the 2021 IBC, using 135 mph (3-second gust) basic wind speed in accordance with ASCE 7-16, and shall be rated for temperature extremes of -60°F to +100°F. Topographical effects of each site must be considered. Minimum Topographical Factor (Kzt) value is 1.3.

G. Tank Roof Insulation System

1. Tank roof insulation system shall consist of a multi-layer, foil faced isocyanurate foam laminated to a 0.030-inch thick, 3105-H18 aluminum sheathing. The thermal conductivity (k) of the isocyanurate foam insulation shall be a maximum of 0.140 BTU/in at 75° mean temperature.

2. The exposed side of the aluminum sheathing panels shall have a Kynar 500 painted finish. The color of the exterior sheathing will be selected by the Owner. Color selection charts shall be furnished for this purpose.

3. Internal securement grid system shall be secured to the roof plate. Existing anchor elements may be used to attach new cladding and insulation system to tank roof. Existing anchor elements shall be verified by the contractor in the field, including verification that they are not visibly damaged or distressed. The existing anchor elements are observed to be welded bar rings spaced at 3’ OC.

4. New cladding and attachments:

   a. Schedule A: New cladding and attachments shall be designed per the 2021 IBC, using 130 mph (3-second gust) basic wind speed in accordance with ASCE 7-16. Topographical effects of each site must be considered. Minimum Topographical Factor (Kzt) value shall be minimum Kzt = 1.3.

   b. Schedule B: New cladding and attachments shall be designed per the 2021 IBC, using 135 mph (3-second gust) basic wind speed in accordance with ASCE 7-16. Topographical effects of each site must be considered. Minimum Topographical Factor (Kzt) value shall be minimum Kzt = 1.3.

5. Supply roof flashing in sufficient quantity to cover the entire circumference/perimeter of the top deck panel to shell panel intersection. Provide perimeter eave flashing and closure at the joint with new or existing horizontal shell insulation system with an anchored steel angle or other structural support with a positive, designed attachment to the tank structure.

H. Contractor shall supply two shell manway covers and manway flanges at Reservoir 4. The covers and flanges shall be precurved to fit the tank shell curvature. The covers shall be composed of a 2-inch foil faced isocyanurate foam core laminated to a 0.030-inch thick, 3105-H18 aluminum sheathing. Aluminum sheathing color shall be identical to the insulation panel color. Design of the shell manway cover and flange shall be provided by the manufacturer.

2.3 ADDITIONAL TANK LID ANCHORS

A. Basis of Design attachment: 1/4" or 3/8” diameter welded threaded stud by Nelson Stud Company or approved equal.

B. Mechanical anchors are discouraged to avoid compromising the inner waterproof coating of the tank system.

C. Chemical anchors (adhesives) may be used as an alternative with supporting data indicating suitability for the required loading and site-specific condition.

PART 3 - EXECUTION

3.1 REMOTLEY OPERATED VEHICLE PRCONSTRUCTION INSPECTION

A. Contractor shall perform ROV inspection of interior surface of reservoir lid to establish preconstruction condition of the existing coating system. Snapshots of the existing conditions shall be comprehensive. Submit inspection photos to the Engineer prior to modifying existing anchor elements.

B. ROV inspection shall conform to AWWA C652-19 and Appendix C of AWWA M42.

3.2 ADDITIONAL ANCHORS TO TANK LID

A. Contractor shall use the Basis of Design connection: welded threaded Nelson studs, 3/8” diameter maximum. Alternate anchor systems will be evaluated and are subject to approval.

B. The existing rod anchors were bent upward from the tank lid as much as 3 1/2" during the Wind Event that damaged the original cladding. The original attachment was fillet welds spaced at 8’-0” on center maximum. To install new cladding, the existing anchors must be pressed down to the lid, and additional attachments will be required to reduce the anchor spacing of the original rods to 4’-0” on center. This will require new anchors at roughly 8’-0” on center, a new anchor between each existing attachment point.

C. Additional anchor points may be required as necessary for the indicated loading and new insulation attachment system.

D. Exterior coatings damaged during construction shall be repaired.

E. After all new anchors have been installed to the reservoir lid, repair damaged interior coating system on reservoir lid or perform ROV inspection of interior surface of reservoir lid to demonstrate existing coating system was not compromised. Contractor shall inspect the tank interior at all attachment points. Any locations where the interior coating has been compromised shall be repaired as follows:

1. Coordinate with the City of Palmer for shutting down and draining water from the reservoir to allow personnel access into the reservoir. Contractor shall minimize down time.

2. Remove all damaged coating material from the areas where damage is encountered.

3. Repair damaged coatings in accordance with AWWA D102-21.

4. Coordinate with the City of Palmer to bring the reservoir back into service in accordance with AWWA C652-19.

3.3 INSULATION APPLICATION

A. Contractor shall use supplier’s recommended method for installation of the roof and wall sheathing system.

B. The location of the spacing of banding and clamping devices for shell panels shall be as called for in the supplier's installation procedures.

C. Sheathing shall be cut to fit snugly around appurtenances with a ¼ inch maximum gap. Gaps between appurtenances and sheathing shall be caulked with an approved sealant provided by the supplier.

D. All manways, piping, brackets, vents, stairways and other appurtenances shall have panels cut to have a maximum ¼ inch gap around them. Gaps shall be sealed with polyurethane rubber caulk.

E. Roof panels shall be secured to the internal grid rods with stainless steel clips that are incorporated into the panel seam and 16 gauge stainless steel tie wire at each crossing internal rod.

F. Roof insulation panels shall be secured to shell panels with #12 x ¾" stainless steel screws and sealed with butyl tape.

END OF SECTION

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

III

SUBMITTAL LIST

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

SUBMITTAL LIST

Job #: _____ Contractor: _____

Submittal Number	Rev.	Description
1		DOL Notice of Public Work
2		List of Construction Equipment
3		Construction Schedule and Updates
4		List of Substitutions
5		Schedule of Values
6		Notice of Reservoir Repair Operations
7		Application for Payment – Progress and Final
8		Bi-weekly Certified Payroll
9		Safety Plan
10		Contractor's Quality Control Plan
11		Contractor's Quality Control Testing Results
12		Contractor's Daily Reports
13		Red Line Drawings
14		DOL Notice of Completion of Public Work
15		Release of Liens, Statement Concerning Claims
16		Certificate of Compliance (Section 10.07, Article 7.7)
17		Consent of Surety to Final Payment
18		Contract Completion and Acceptance Certificate
		See Technical Specifications for Required Product Data and Quality Control Submittals

NOTE: The above list of submittals is not all inclusive. In addition to the above, the Contractor is required to comply with all submittal requirements as required or identified in the specifications, City of Palmer Standard Specifications, or as directed by the Engineer.

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

VII

MINIMUM RATES OF PAY

EXHIBIT A

PREVAILING WAGE RATES

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Laborers' & Mechanics' Minimum Rates of Pay

Labor for the project must be paid at the prevailing wage rates in accordance with the Davis-Bacon and Related Acts (DBRA) and those listed in the Alaska Department of Labor & Workforce Development, Laborers' & Mechanics' Minimum Rates of Pay, Wage & Hour Administration Pamphlet no. 600.

The State of Alaska wage rates can be obtained at:

http://www.labor.state.ak.us/lss/pamp600.htm

The DBRA prevailing wage rates can be obtained at:

https://sam.gov/content/wage-determinations

Use the State wage rates that are in effect 10 days before Bid Opening.

A paper copy of the wage rates will be included in the executed Contract.

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

VIII

CONTRACT

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CITY OF PALMER

Reservoir 4 Insulation Repairs

CONSTRUCTION CONTRACT

THIS CONTRACT, between the **City of Palmer,** herein called the **Owner,** and:

_____, an Individual, Partnership, Joint Venture, Sole Proprietorship, Corporation, incorporated under the laws of the State of Alaska, its successors and assigns, hereinafter called the Contractor, is effective the date of the signature of the Owner on this document.

WITNESSETH: That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the City, hereby covenants and agrees to furnish and deliver all materials and to do and perform all the work and labor required in the construction of the **Reservoir 4 Insulation Repairs,** at the prices bid by the Contractor for the respective estimated quantities aggregating approximately the sum of:

_____ Dollars ($_____), and such other items as are mentioned in the original Proposal, which Proposal and prices named, together with the Contract Documents, and City of Palmer Standard Specifications dated **2018** are made a part of this Contract and accepted as such, the project being situated as follows:

Reservoir 4, at East College Loop, as more particulary described in the Contract Documents, located in Palmer, Alaska

It is distinctly understood and agreed that no claim for additional work or materials, done or furnished by the Contractor and not specifically herein provided for, will be allowed by the Owner, nor shall the Contractor do any work or furnish any material not covered by this Contract, unless such work is ordered in writing by the Owner. In no event shall the Owner be liable for any materials furnished or used, or for any work or labor done, unless the materials, work or labor are required by the Contract or on written order furnished by the Owner. Any such work or materials which may be done or furnished by the Contractor without written order first being given shall be at the Contractor's own risk, cost and expense and the Contractor hereby covenants and agrees to make no claim for compensation for work or materials done or furnished without such written order.

The Contractor further covenants and agrees that all materials shall be furnished and delivered and all labor shall be done and performed, in every respect, to the satisfaction of the Owner, on or before: _____. It is expressly understood and agreed that in case of the failure on the part of the Contractor, for any reason, except with the written consent of the Owner, to complete the furnishing and delivery of materials and the doing and performance of the work before the aforesaid date, the Owner shall have the right to deduct from any money due or which may become due the Contractor, or if no money shall be due, the Owner shall have the right to recover

_____dollars ($_____) per day for each calendar day elapsing between the time stipulated for the completion and the actual date of completion in accordance with the terms hereof; such deduction to be made, or sum to be recovered, not as a penalty but as liquidated damages.

The bonds given by the Contractor in the sum of $_____ Payment Bond, and $_____ Performance Bond, to secure the proper compliance with the terms and provisions of this contract, are submitted herewith and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Contract and hereby agree to its terms and conditions.

CONTRACTOR

_____
Name of Contractor

_____ _____
Signature Date

_____
Name and Title

(Corporate Seal)

CITY OF PALMER

_____ _____
Mayor (Signature) Date

_____
Typed Name

CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

IX

CONTRACT PERFORMANCE AND PAYMENT BOND

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CITY OF PALMER

Reservoir 4 Insulation Repairs

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That_____ of _____ as Principal, and _____ of _____ as Surety, firmly bound and held unto the _____ in the penal sum of _____ Dollars ($_____), good and lawful money of the United States of America for the payment whereof, well and truly to be paid to the _____, we bind ourselves, our heirs, successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into written contract with said _____, on the _____ of _____ A.D. 20___, for construction of: **Reservoir 4 Insulation Repairs**, said work to be done according to the terms of said contract.

Now, THEREFORE, the conditions of the foregoing obligations is such that if the said Principal shall well and truly perform and complete all obligations and work under said contract and if said principal shall reimburse upon demand of the **City of Palmer** any sums paid to him which exceed the final payment determined to be due upon completion of the project, then these presents shall become null and void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at _____, this _____ day of _____ A.D., 20___.

_____

Principal:

By:_____

By:_____

_____

Surety:

By: _____

By: _____

_____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

_____ _____

Authorized Representative – City of Palmer Date

INSTRUCTIONS

1. This form, shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Owner.

2. The full legal name and business address of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.

3. The penal amount of the bond, or in the case of more than one surety, the amount of obligation shall be entered in words and in figures.

4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Owner.

5. The bond shall be signed by authorized persons. Where such persons are signing in a representative capacity (e.g. an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

CITY OF PALMER

Reservoir 4 Insulation Repairs

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____ as Principal, and _____ of _____ as Surety, firmly bound and held unto the _____ in the penal sum of _____ Dollars ($_____), good and lawful money of the United States of America for the payment whereof, well and truly to be paid to the _____, we bind ourselves, our heirs, successors, executors, administrators, and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into written contract with said _____, on the _____ of _____ A.D. 20___, for construction of: **Reservoir 4 Insulation Repairs,** said work to be done according to the terms of said contract.

Now, THEREFORE, the conditions of the foregoing obligations is such that if the said principal shall comply with all requirements of law and pay, as they become due, all just claims for labor performed and materials and supplies furnished upon or for the work under said contract, whether said labor be performed and said materials and supplies be furnished under the original contract, any subcontract, or any and all duly authorized modifications thereto, then these presents shall become null and void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, we have hereunto set our hands and seals at _____, this _____ day of _____ A.D., 20___.

_____

Principal: _____

By:_____

By:_____

_____

Surety: _____

By: _____

By: _____

_____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

_____ _____

Authorized Representative Date
City of Palmer

INSTRUCTIONS

1. This form, for the protection of persons supplying labor and material, shall be used whenever a payment bond is required. There shall be no deviation from this form without approval from the Owner.

2. The full legal name and business address of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.

3. The penal amount of the bond, or in the case of more than one surety, the amount of obligation shall be entered in words and in figures.

4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Owner.

5. The bond shall be signed by authorized persons. Where such persons are signing in a representative capacity (e.g. an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

X

CERTIFICATE OF INSURANCE

(submit original certificate)

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

XI

BID BOND

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CITY OF PALMER

Reservoir 4 Insulation Repairs

BID BOND

(See Instructions on Reverse)

	DATE BOND EXECUTED
PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION 0 INDIVIDUAL 0 PARTNERSHIP 0 JOINT VENTURE 0 CORPORATION
	STATE OF INCORPORATION

SURETY(IES) (Name and Business Address)		
A.	B.	C.

PENAL SUM OF BOND	DATE OF BID

We, the PRINCIPAL and SURETY above named, are held and firmly bound to the City of Palmer, in the penal sum of the amount stated above, for the payment of which sum will be made, we bind ourselves and our legal representatives and successors, jointly and severally, by this instrument.

THE CONDITION OF THE FOREGOING OBLIGATION is that the Principal has submitted the accompanying bid or proposal in writing, date as shown above, on **PROJECT: Reservoir 4 Insulation Repairs** in accordance with contract documents filled in the office of the Contracting Officer, and under the Invitation for Bids therefore, and is required to furnish a bond in the amount stated above.

If the Principal's bid is accepted and he is offered the proposed contract for award, and if Principal fails to enter into the contract, then the obligation to the State created by this bond shall be in full force and effect.

If the Principal enters into the contract, then the foregoing obligation is null and void.

PRINCIPAL				
Signature(s)	1.	2.	3.	Corporate Seal
Name(s) & Titles (Typed)	1.	2.	3.	

CORPORATE SURETY(IES)					
SURETY A	Name of Corporation		State of Incorporation	Liability Limit $	
	Signature(s)	1.	2.		Corporate Seal
	Name(s) & Titles (Typed)	1.	2.		

CORPORATE SURETY(IES) (Continued)					
SURETY B	Name of Corporation		State of Incorporation	Liability Limit $	
	Signature(s)	1.	2.		Corporate Seal
	Name(s) & Titles (Typed)	1.	2.		
CORPORATE SURETY(IES) (Continued)					
SURETY C	Name of Corporation		State of Incorporation	Liability Limit $	
	Signature(s)	1.	2.		Corporate Seal
	Name(s) & Titles (Typed)	1.	2.		

INSTRUCTIONS

1. This form shall be used whenever a bid bond is submitted.

2. Insert the full legal name and business address of the Principal in the space designated. If the Principal is a partnership or joint venture, the names of all principal parties must be included (e.g. "Smith Construction, Inc. and Jones Contracting, Inc. DBA Smith/Jones Builders, a joint venture"). If the Principal is a corporation, the name of the state in which incorporated shall be inserted in the space provided.

3. Insert the full legal name and business address of the Surety in the space designated. The Surety on the bond may be any corporation or partnership authorized to do business in Alaska as an insurer under AS.21.09. Individual sureties will not be accepted.

4. The penal amount of the bond may be shown either as an amount (in words and figures) or as a percent of the contract bid price (a not-to-exceed amount may be included).

5. The scheduled bid opening date shall be entered in the space marked Date of Bid.

6. The bond shall be executed by authorized representatives of the Principal and Surety. Corporations executing the bond shall also affix their corporate seal.

7. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.

8. The states of incorporation and the limits of liability of each surety shall be indicated in the spaces provided.

9. The date that bond is executed must not be later than the bid opening date.

CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

XII

BIDDER'S CHECKLIST

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BIDDER'S CHECKLIST

INSTRUCTIONS TO BIDDER

I. GENERAL

Bidders are advised that, notwithstanding any instructions or implications elsewhere in this Invitation to Bid, only the documents shown and detailed on this sheet need be submitted with and made part of their bid. Other documents may be required to be submitted after bid time, but prior to award. Bidders are hereby advised that failure to submit the documents shown and detailed on this sheet shall be justification for rendering the bid nonresponsive. Evaluation of bids for responsiveness shall be accomplished in accordance with Palmer Municipal Code.

II. REQUIRED DOCUMENTS FOR BID

NOTE: "Only the following listed items as marked with an "X" are required to be completely filled out and submitted with the bid."

__X__ Bid proposal consisting of pages BP-1 through BP-2. BP-1 must be manually signed.

__X__ Erasures or other changes made to the Bid Proposal Sheet must be initialed by the person signing the bid.

__X__ Bid bond, certified check, cashiers check, money order or cash shall be submitted with the bid in the amount of 10% of the bid.

__X__ All Addenda issued shall be acknowledged in the space provided on the Bid Proposal sheet or by manually signing the Addenda sheet and submitting it prior to the bid opening in accordance with Palmer City Code.

__X__ Product Data Certification Form
Descriptive literature, brochures, and/or data must accompany the bid where specifically requested or when in support of an "or equal" offer.

__X__ Bidder Qualification Form

__X__ Subcontractors & Suppliers List

_____ MBE/WBE Compliance Statement

_____ Interested Bidder's List

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

XIII

BID PROPOSAL

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BID PROPOSAL
(CERTIFICATION)

TO: CITY OF PALMER
CITY HALL
1316 S. BONANZA STREET
PALMER, ALASKA 99654

SUBJECT: Invitation to Bid No. _____

PROJECT TITLE: **Reservoir 4 Insulation Repairs**

Pursuant to and in compliance with subject Invitation to Bid, and other Contract documents relating thereto, the bidder hereby proposes to furnish all labor and materials and to perform all Work for the construction of the above-referenced project in strict accordance with the Contract documents at the prices established in the Bid Proposal, Page BP-2 submitted herewith.

The bidder agrees, if awarded the Contract, to commence and complete the Work within the time specified in the Contract documents.

The bidder acknowledges receipt of the following Addenda:

Addendum No. & Date _____ Addendum No. & Date _____
Addendum No. & Date _____ Addendum No. & Date _____
Addendum No. & Date _____ Addendum No. & Date _____

Enclosed is Bid Bond in the amount of

_____
(Percentage of Bid)

Type of Business Organization

The bidder, by checking the applicable box, represents that it operates as:
☐ a corporation incorporated under the laws of the State of Alaska ☐ a joint venture
☐ an individual ☐ a partnership ☐ a nonprofit organization
If a partnership or joint venture, identify all parties on a separate page.

Bidder/Company Name
_____

Alaska Contractor's License Number: _____

Address of Bidder
_____

Employer's Tax Identification Number: _____

_____

Signature

Telephone Number _____ _____

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CITY OF PALMER
RESERVOIR 4 INSULATION REPAIRS
BID PROPOSAL

Schedule A - Reservoir 4 Insulation Repairs

Item No.	Work Description	Pay Unit	Estimated Quantity	Unit Price	Total Bid Price
A-1	Reservoir 4 Insulation Repairs, Complete	Lump Sum	1		

Total _____

Schedule B - Reservoir 4 Insulation Repairs (Upgraded)

Item No.	Work Description	Pay Unit	Estimated Quantity	Unit Price	Total Bid Price
B-1	Reservoir 4 Insulation Repairs, Complete	Lump Sum	1		

Total _____

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

XIV

FORMS FOR BIDDING

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PRODUCT DATA CERTIFICATION FORM

Bidders are hereby advised that failure to complete and sign this form shall be justification for rendering the bid nonresponsive.

Check the following applicable statement and submit product data for the insulation system to be furnished and installed under Schedule A. If modifications to the existing anchor elements on one or both tanks are required please state. The lump sum cost submitted on the bid proposal shall include any and all modifications and subsequent repairs needed to the existing tanks.

_____ The attached insulation system for Schedule A meets the requirements of the contract documents and DOES NOT require additional anchor elements beyond the existing elements listed in Specification Section 07 21 00 and shown in Exhibit B.

_____ The attached insulation system for Schedule A meets the requirements of the contract documents and DOES require the following additional anchor elements. Please append additional information as needed.

_____
_____
_____
_____
_____

Check the following applicable statement and submit product data for the insulation system to be furnished and installed under Schedule B. If modifications to the existing anchor elements on one or both tanks are required please state. The lump sum cost submitted on the bid proposal shall include any and all modifications and subsequent repairs needed to the existing tanks.

_____ The attached insulation system for Schedule B meets the requirements of the contract documents and DOES NOT require additional anchor elements beyond the existing elements listed in Specification Section 07 21 00 and shown in Exhibit B.

_____ The attached insulation system for Schedule B meets the requirements of the contract documents and DOES require the following additional anchor elements. Please append additional information as needed.

_____
_____
_____
_____
_____

_____
Name of Contractor

_____
Signature

_____
Date

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BIDDER QUALIFICATION FORM

The Bidder shall submit the data requested below as part of the bid package.

Contractor Business Name:_____
Business Address: _____
Years in business as contractor under above business name:_____

List six or more important or similar construction projects completed by Bidder with date, approximate cost, and name and phone number of project engineer or owner (use additional pages as required):

Project:
_____
Owner:
_____
Date: Cost:
_____ _____
Contact Name:
_____
Contact Phone:
_____

Project:
_____
Owner:
_____
Date: Cost:
_____ _____
Contact Name:
_____
Contact Phone:
_____

Project:
_____
Owner:
_____
Date: Cost:
_____ _____
Contact Name:
_____
Contact Phone:
_____

Project:
_____
Owner:
_____
Date: Cost:
_____ _____
Contact Name:
_____
Contact Phone:
_____

List other construction projects your firm will be working on or anticipate working on between July 1, 2023 and October 15, 2023. _____

_____

List major equipment to be used on this project and indicate if owned or rented:

_____

Have you received firm quotes & delivery times for major materials for this project?____

Have you ever failed in any material way to perform your obligations under any contract with the City or other government agency? _____ If so, provide details.

_____

(signed) (title) (date)

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SUBCONTRACTORS & SUPPLIERS LIST

The Successful Bidder shall submit the data requested below by the end of the second business day following Bid opening. Use additional pages as required.

Contractor Business Name: _____

Business Address: _____

List all Subcontractors and Suppliers who will be performing more than ½ of 1% of the total cost of this project.

Business Name: _____ Trade: _____

Address: _____ Contractor's License #: _____

_____ Telephone: _____

Contact: _____ FAX: _____

Business Name: _____ Trade: _____

Address: _____ Contractor's License #: _____

_____ Telephone: _____

Contact: _____ FAX: _____

Business Name: _____ Trade: _____

Address: _____ Contractor's License #: _____

_____ Telephone: _____

Contact: _____ FAX: _____

Business Name: _____ Trade: _____

Address: _____ Contractor's License #: _____

_____ Telephone: _____

Contact: _____ FAX: _____

Business Name: _____ Trade: _____

Address: _____ Contractor's License #: _____

_____ Telephone: _____

Contact: _____ FAX: _____

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

XV

SCOPE OF WORK AND EXHIBIT B

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CITY OF PALMER

Scope of Work

Reservoir 4 Insulation Repairs

This project will perform repairs to exterior insulation systems for the following above-ground welded steel drinking water tank located in Palmer, Alaska. Existing exterior insulation systems were damaged by high winds in early-2022.

- Reservoir 4 Tank:
  - 74’ nominal diameter.
  - 40’ nominal height.

The Work of Project is defined by the Contract Documents and generally consists of the following items at Reservoir 4:

1. Perform remotely operated vehicle (ROV) inspection of interior surface of reservoir lid to establish preconstruction condition of the existing coating system.
2. Remove all exterior insulation.
3. Modify existing exterior anchor elements on lid and, if required, install new exterior anchor elements on the lid. Repair exterior coatings damaged during construction.
4. Furnish and install a new insulation system.
5. Repair damaged interior coating system on reservoir lid or perform ROV inspection of interior surface of reservoir lid to demonstrate existing coating system was not compromised.
6. All other work indicated in these Specifications.

There are two (2) schedules listed on the Bid Proposal. Either Schedule A will be performed in its entirety OR Schedule B will be performed in its entirety. The difference between the two schedules is design wind speed as further described in Specification Section 07 21 00.

Period of Performance:

- All work shall be complete by November 15, 2023.

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CITY OF PALMER

RESERVOIR 4 INSULATION REPAIRS

RESERVOIR 4 TANK RECORD INFORMATION

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H:\Jobs\08-029 Palmer Southwest Utility Ext. Ph. II\08-029-07 Final Design\Res 4 and Booster Station\CAD\Drawings\08029_07_T101-T104, 1=96, 02/18/16 at 12:07 by tlc
LAYOUT: T1.01

RESERVOIR DESIGN CRITERIA:

1. CONTRACTOR SHALL DESIGN, FURNISH, AND CONSTRUCT A 1 MILLION GALLON WELDED STEEL WATER TANK IN SUBSTANTIAL CONFORMANCE TO THESE PLANS AND THE PROJECT SPECIFICATIONS.

2. DESIGN LIVE LOADS:

CODES:
DESIGN PER AWWA D100-11, ASCE7-05

SNOW LOAD:

GROUND SNOW LOAD, P_g	50 PSF
ROOF/FLAT SNOW LOAD, P_f	40 PSF

WIND LOAD:

WIND SPEED (3 SECOND GUST), V_{3s}	V=120 MPH
EXPOSURE CLASSIFICATION	C
IMPORTANCE FACTOR, I_w	1.15
MIN. SIDING SUCTION LOAD	45 PSF
MIN. ROOFING SUCTION LOAD (INTERIOR)	45 PSF
MIN. ROOFING SUCTION LOAD (7.5 ft IN FROM EDGE)	60 PSF

SEISMIC LOAD:

OCCUPANCY CATEGORY (AWWA CRITERIA) ESSENTIAL FACILITY (I=1.5)	IV
SHORT PERIOD RESPONSE ACCELERATION, S_s	1.5
ONE SECOND PERIOD RESPONSE ACCELERATION, S_1	0.55
SITE CLASS	D
S_{ds}	1.0
S_{d1}	0.55
IMPULSE DESIGN ACCELERATION, A_i	0.10
CONVECTIVE DESIGN ACCELERATION, A_c	0.124
SLOSHING WAVE HEIGHT	6 ft
DESIGN SHEAR @ TOP OF FOUNDATION	1,700 k
DESIGN OVERTURNING MOMENT	38,200 k-ft

APPLY ALL LOADING TO ASCE7-05 BASIC LOADING COMBINATIONS, ALLOWABLE STRESS DESIGN. INCLUDE VERTICAL EARTHQUAKE FORCES IN CONFORMANCE WITH ASCE7-05.

FOUNDATIONS:

ALLOWABLE SOIL BEARING PRESSURE	3,500 psf

SOIL BEARING PRESSURE ALLOWABLE TO INCREASE BY 1/3 FOR WIND OR SEISMIC LOADING CONDITIONS.

3. LOCATE TANK VENT/S AS NEAR TO ROOF APEX AS PRACTICABLE TO PROVIDE CLEAR OPENING BETWEEN ROOF SUPPORT BEAMS.

4. THE TANK MANUFACTURER SHALL VERIFY THAT THE SIZE AND SPACING OF ANCHOR BOLTS AND THE WIDTH AND REINFORCING OF THE FOOTING ARE ADEQUATE FOR THE MANUFACTURER'S TANK DESIGN. THE ANCHOR BOLT SIZE AND SPACING AND THE FOOTING WIDTH AND REINFORCING AS SHOWN ON THESE DRAWINGS SHALL BE CONSIDERED AS MINIMUM. GENERAL CONTRACTOR SHALL PROVIDE THE DESIGN CALCULATION DRAWINGS OF ANCHOR BOLT LAYOUT AND EMBEDMENT BY ALASKA REGISTERED PROFESSIONAL ENGINEER AND SUBMIT DRAWINGS FOR APPROVAL.

5. PROVIDE INSULATION SYSTEM (MINIMUM THICKNESS OF 4") ON THE EXTERIOR RESERVOIR SHELL AND ROOF. REFER TO SPECIFICATIONS FOR DESIGN AND PAINTING REQUIREMENTS. SEE SHEET T1.05 FOR SIDING ATTACHMENT DETAILS.

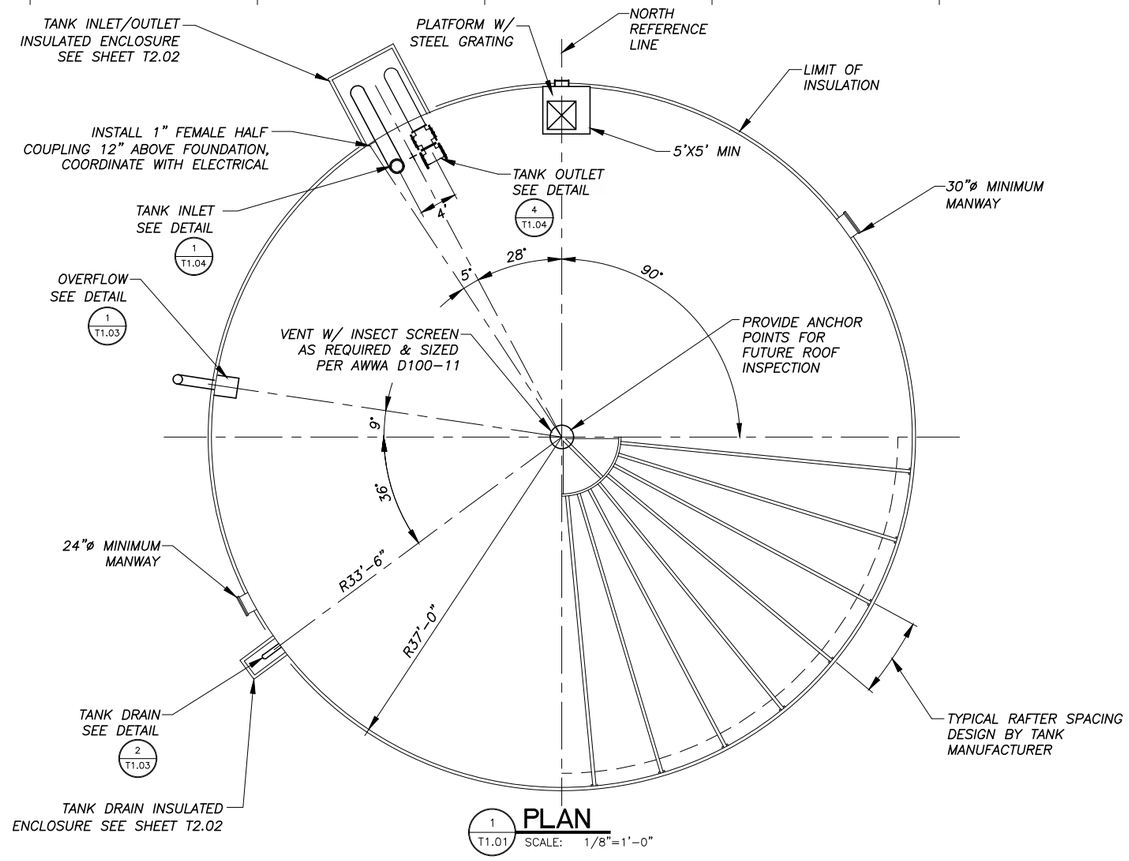
6. PROVIDE OSHA APPROVED SAFETY CHAINS WITH SNAP HOOK AT LADDER OPENING TO PLATFORM. VERIFY 3'x3' HATCH OPENING ACCESS IS NOT BLOCKED BY THE OVERFLOW PIPE. PROVIDE GALVANIZED 3'-0"x2'-0" STEEL PLATE SIGN WITH WARNING "DO NOT CLIMB OVER RAILING" ATTACHED TO RAILING.

7. PROVIDE 1/8" TEFLON SHEET UNDER ALL COLUMN BASES. IF REQUIRED COAT ALL STEEL SURFACES PRIOR TO SETTING COLUMNS.

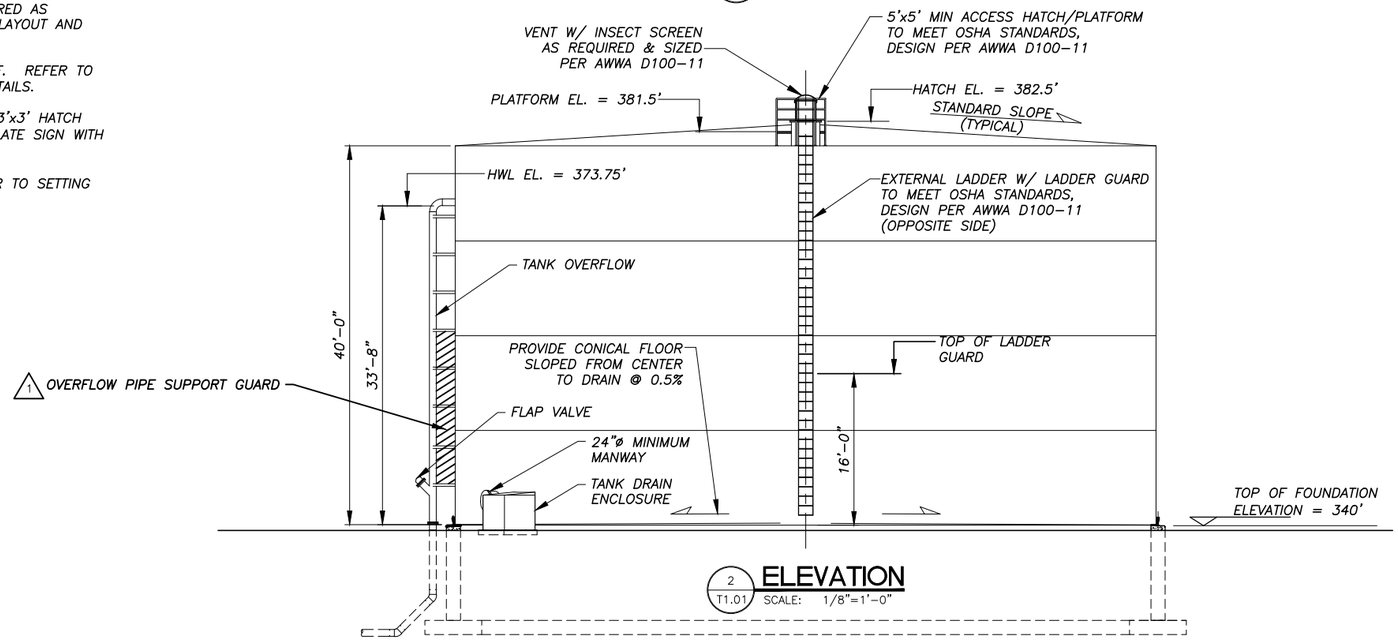
RECORD DRAWING

THESE DRAWINGS HAVE BEEN PREPARED FROM MARKED-UP DRAWINGS SUPPLIED BY THE CONTRACTOR. AN AS-BUILT SURVEY HAS NOT BEEN CONDUCTED. FIELD VERIFY ANY INFORMATION CONTAINED HEREON BEFORE USING.

2/18/2016



1 T1.01 **PLAN** SCALE: 1/8"=1'-0"



2 T1.01 **ELEVATION** SCALE: 1/8"=1'-0"

REVISIONS			
MARK	DATE	DESCRIPTION	
1	9/11/14	RFP #5	
2	2/18/16	RECORD DRAWING	
3			
4			
5			

HATTENBURG DILLEY & LINNELL
Engineering Consultants
• ENGINEERING • EARTH SCIENCE
• SURVEYING • PLANNING
• PROJECT MANAGEMENT • ENVIRONMENTAL
(907) 564-2120 - ANCHORAGE WWW.HDLALASKA.COM
(907) 746-6230 - PALMER

STATE OF ALASKA — 49th — REGISTERED PROFESSIONAL ENGINEER — David G. Thompson — No. 13579-E — 2/18/2016

PALMER SOUTHWEST UTILITY EXTENSION PHASE IIa

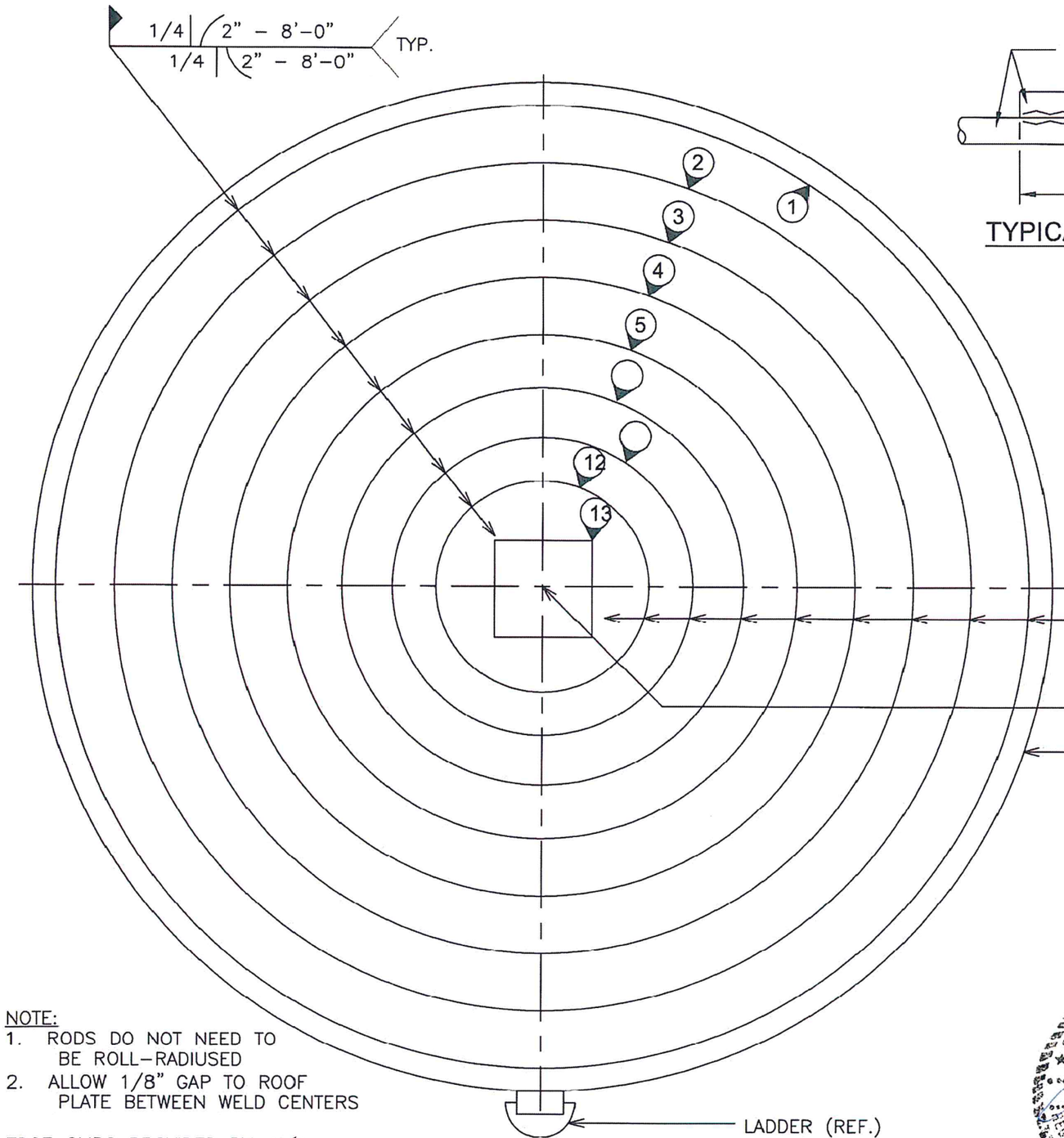
CONSTRUCT RESERVOIR 4 AND BOOSTER STATION

PALMER, ALASKA

SHEET TITLE: TANK PLAN & ELEVATION

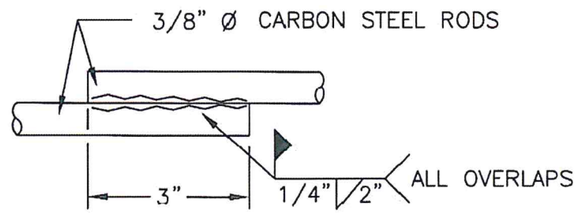
SHEET: T1.01

DRAWN BY: DGT	CHECKED BY:
DATE: JULY 2014	SCALE: AS NOTED
JOB NUMBER: 08-029	



TANK ROOF PLAN

ALL ROD CIRCLES NOT SHOWN



TYPICAL GRID ROD OVERLAP

ROD CIRCLE LOCATIONS FROM CENTER OF TANK ROOF	
ROD CIRCLE #	ARC RADIUS ON ROOF SLOPE
1	36'-0"
2	33'-0"
3	30'-0"
4	27'-0"
5	24'-0"
6	21'-0"
7	18'-0"
8	15'-0"
9	12'-0"
10	9'-0"
11	6'-0"
12	3'-0"
13	2'-6" SQ.

NOTE:
1. RODS DO NOT NEED TO BE ROLL–RADIUSED
2. ALLOW 1/8" GAP TO ROOF PLATE BETWEEN WELD CENTERS

EDGE CLIPS PROVIDED BY: N/A
RODS PROVIDED BY: OTHERS
WELDING BY: OTHERS

TOTAL 3/8"ØCARBON STL. ROD PROVIDED:1500 LINEAR FEET TANK
75 LENGTHS @ 20'–0" EACH.

STATE OF ALASKA 49TH
Colin Maynard
CE-7574
REGISTERED PROFESSIONAL ENGINEER
4/21/14

COMPANY CONFIDENTIAL

This document containing proprietary information of VERTARIB INC. is transmitted to you in confidence and trust and is to be returned upon request. Its contents may not be disclosed in whole or in part to others or used for other than the purpose for which transmitted without the prior written permission of VERTARIB INC.

THERMACON INSULATION SYSTEMS by
VERTARIB INC.

INSTALLATION DETAILS
INSULATION ATTACHMENT RODS
CITY OF PALMER
PALMER, AK

(1) 74'-0"Ø x 40'-0 " HIGH CRT

SCALE: NOT TO SCALE		FABRICATED BY: .	
DRAWN BY: CJC	DATE: 4/21/14	SHEET No. 1 OF 1	REV 0
APPROVED BY:	DATE:	DRAWING No. CITY OF PALMER–9	
		CAD FILE NAME: XXX–9	

Palmer Reservoir 4 - Photo 1 of 4:

Ground View of Damage to Siding and Insulation Layers

Palmer Reservoir 4 - Photo 2 of 4:

Damage to Siding and Insulation Layers showing exposed tank shell (white)

Palmer Reservoir 4 - Photo 3 of 4:

Drone View of Roof Damage

Palmer Reservoir 4 - Photo 4 of 4:

Drone View of Roof Damage showing Grid Rods, Insulation Layers, and Galvalume Sheathing