



City of Tacoma, WA

**TACOMA POWER
TRANSMISSION AND DISTRIBUTION
REQUEST FOR BIDS**

DISTRIBUTION CAPACITOR BANK

SPECIFICATION NO. PT22-0226N



**City of Tacoma
Tacoma Power/ Transmission and Distribution**

**REQUEST FOR BIDS PT22-0226N
Distribution Capacitor Bank**

Submittal Deadline: 11:00 a.m., Pacific Time, Monday, August 10, 2022

Submittals must be received by the City's Procurement and Payables Division prior to 11:00 a.m. Pacific Time. For electronic submittals, the City of Tacoma will designate the time of receipt recorded by our email, sendbids@cityoftacoma.org, as the official time of receipt. This clock will be used as the official time of receipt of all parts of electronic bid submittals.

Submittal Delivery: Submittals will be received as follows:

By Email:

sendbids@cityoftacoma.org

Maximum file size: 35 MB. Multiple emails may be sent for each submittal.

Bid Opening:

Submittals in response to a REQUEST FOR BIDS will be recorded as received. As soon as possible, after 1:00 PM, on the day of submittal deadline, preliminary results will be posted to www.TacomaPurchasing.org.

Solicitation Documents: An electronic copy of the complete solicitation documents may be viewed and obtained by accessing the City of Tacoma Purchasing website at www.TacomaPurchasing.org.

- [Register for the Bid Holders List](#) to receive notices of addenda, questions and answers and related updates.
- Click here to see a [list of vendors registered for this solicitation](#).

Pre-Proposal Meeting: A pre-proposal meeting will not be held.

Project Scope: Supply of pre-assembled distribution capacitor banks on an as-needed basis.

Estimate: \$200,000 (three-year term)

Paid Sick Leave: The City of Tacoma requires all employers to provide paid sick leave as set forth in Title 18 of the Tacoma Municipal Code. For more information, visit [our Minimum Employment Standards Paid Sick Leave webpage](#).

Americans with Disabilities Act (ADA Information): The City of Tacoma, in accordance with Section 504 of the Rehabilitation Act (Section 504) and the Americans with Disabilities Act (ADA), commits to nondiscrimination on the basis of disability, in all of its programs and activities. Specification materials can be made available in an alternate format by emailing Gail Himes at ghimes@cityoftacoma.org, or by calling her collect at 253-591-5785.

Title VI Information:

"The City of Tacoma" in accordance with provisions of Title VI of the Civil Rights Act of 1964, (78 Stat. 252, 42 U.S.C. sections 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration of award.

Additional Information: Requests for information regarding the specifications may be obtained by contacting Rebecca Lewis, Buyer by email to rlewis4@cityoftacoma.org

Protest Policy: City of Tacoma [protest policy](#), located at www.tacomapurchasing.org, specifies procedures for protests submitted prior to and after submittal deadline.



Meeting sites are accessible to persons with disabilities. Reasonable accommodations for persons with disabilities can be arranged with 48 hours advance notice by calling 253-502-8468.

SPECIFICATION CONTENTS

Submittal Checklist
Submittal Instructions
Signature Page
Proposal Pricing Sheet
Proposal – Conditions Sheet

Section 1 – Scope

1.1 – Scope of Work
1.2 Pricing and Purchase Orders
1.3 Respondent’s Proposal
1.4 Materials, Design, Workmanship, and Trade Names
1.5 Approved Equal
1.6 Evaluation of Award
1.7 Delivery Date
1.8 Force Majeure
1.9 Packing and Shipping
1.10 Delivery
1.11 Inspection and Warranty
1.12 Invoice and Payment
1.13 Classification
1.14 Equity In Contracting
1.15 Standard Terms and Conditions

Section 2 – Applicable Standards

Section 3 – Functional and Material Requirements


3.1 – Voltage Ratings
3.2 – Wire
3.3 – Wildlife Protection
3.4 – High Side Connections
3.5 – Capacitor Unit
3.6 – Capacitor Unit Elements
3.7 – Capacitor Pole Mounted Rack
3.8 – Capacitor Switches and Equipment
Figure 1 – 12,470 V Rack Connection Overview
Figure 2 – 13,800 V Rack Connection Overview

Appendix #1 – Substitution Request Form
Appendix #2 - Sample Contract

SUBMITTAL CHECKLIST

This checklist identifies items to be included with your submittal. Any submittal received without these required items may be deemed non-responsive and may not be considered for award. *Please do not include the entire specification document with your submittal.*

Submittals must be received by the City of Tacoma Purchasing Division by the date and time specified in the Request for Bids page at the front of this Specification or subsequent addenda.

The following items, in this order, make up your submittal package:		
1	One electronic copy of your complete submittal package in PDF format.	
2	Signature Page with <u><i>signature</i></u> , including acknowledgement of any addenda. This form is intended to serve as the first page of your submittal after the Title Page. Do not alter it in any way or add it to letterhead paper or present cover letters or blank pages ahead of it.	
3	Proposal Sheets (Pricing Sheet and Conditions Sheet)	



SUBMITTAL INSTRUCTIONS

PRE-SUBMITTAL QUESTIONS

- A. Questions and requests for clarification of these Specifications may be submitted in writing by **3:00 p.m., Pacific Time, August 2, 2022**, via email addressed to the Purchasing contact below. Questions received after this date and time may not be answered.
1. Please indicate the specification number and title in the email subject line.
 2. Present your questions in MS Word format or directly in the body of the email message. If applicable, cross reference the specific section of the RFB.
 3. Questions will not be accepted by telephone or fax.
 4. Questions marked confidential will not be answered.
 5. Individual answers will not be provided directly to Respondents.
 6. The City reserves the discretion to group similar questions to provide a single answer or not to respond when the requested information is confidential.
 7. The City will not be responsible for unsuccessful submittal of questions.
- B. Written answers to all questions will be posted on the Purchasing website at www.TacomaPurchasing.org on or about **August 5, 2022**. Navigate to *Contracting Opportunities / Supplies*, and scroll to this RFB. A notice will not be posted with the Specification if no questions are received.
- C. The answers are not typically considered an addendum.
- D. To receive notice of the posted answers, you must register as “bid holder” for this solicitation.

Communication	Addressee
For all questions regarding Specification PT22-0226N	Becky Lewis Buyer rlewis4@cityoftacoma.org - email



Material Specification PT22-0226N
Distribution Capacitor Bank

SUBSTITUTION REQUESTS

- A. If the Respondent elects to bid alternative equipment, materials, or processes where allowed, a Substitution Request Form (Appendix #1) must be submitted by email to Becky Lewis, rlewis4@cityoftacoma.org, a minimum of **seven (7) business days, (August 1, 2022)** prior to the submittal deadline. Substitution Request Forms received after this time will not be accepted. Respondents will be notified of an approved or rejected Substitution Request Form no later than **five (5) business days, (August 3, 2022)** prior to the submittal deadline.

REVISIONS TO SPECIFICATION

- A. All revisions to this specification will be in the form of written addenda, and no oral revision should be relied upon for any purpose. In the event it becomes necessary to revise any part of this RFB, addenda will be issued to registered planholders and posted on the Purchasing website at www.TacomaPurchasing.org: Navigate to Current Contracting Opportunities / Supplies Solicitations, and scroll to this RFB. Failure to acknowledge addenda may result in a submittal being deemed non-responsive.

SIGNATURE PAGE

CITY OF TACOMA TACOMA POWER / TRANSMISSION AND DISTRIBUTION

All submittals must be in ink or typewritten, executed by a duly authorized officer or representative of the bidding/proposing entity, and received and time stamped as directed in the **Request for Bids page near the beginning of the specification**. If the bidder/proposer is a subsidiary or doing business on behalf of another entity, so state, and provide the firm name under which business is hereby transacted.

REQUEST FOR BIDS SPECIFICATION NO. PT22-0226N DISTRIBUTION CAPACITOR BANK

The undersigned bidder/proposer hereby agrees to execute the proposed contract and furnish all materials, labor, tools, equipment and all other facilities and services in accordance with these specifications.

The bidder/proposer agrees, by submitting a bid/proposal under these specifications, that in the event any litigation should arise concerning the submission of bids/proposals or the award of contract under this specification, Request for Bids, Request for Proposals or Request for Qualifications, the venue of such action or litigation shall be in the Superior Court of the State of Washington, in and for the County of Pierce.

Non-Collusion Declaration

The undersigned bidder/proposer hereby certifies under penalty of perjury that this bid/proposal is genuine and not a sham or collusive bid/proposal, or made in the interests or on behalf of any person or entity not herein named; and that said bidder/proposer has not directly or indirectly induced or solicited any contractor or supplier on the above work to put in a sham bid/proposal or any person or entity to refrain from submitting a bid/proposal; and that said bidder/proposer has not, in any manner, sought by collusion to secure to itself an advantage over any other contractor(s) or person(s).

Bidder/Proposer's Registered Name

Signature of Person Authorized to Enter Date
into Contracts for Bidder/Proposer

Address

Printed Name and Title

City, State, Zip

(Area Code) Telephone Number / Fax Number

Authorized Signatory E-Mail Address

State Business License Number
in WA, also known as UBI (Unified Business Identifier) Number

E.I.No. / Federal Social Security Number Used on Quarterly
Federal Tax Return, U.S. Treasury Dept. Form 941

State Contractor's License Number
(See Ch. 18.27, R.C.W.)

E-Mail Address for Communications

Addendum acknowledgement #1_____ #2_____ #3_____ #4_____ #5_____

THIS PAGE MUST BE SIGNED AND RETURNED WITH SUBMITTAL.



PROPOSAL - PRICING SHEET

Item #	Description	Estimated 3 Year Quantity	Lead Time (weeks)	Unit Price (each)	Net Price
1	Pre-Assembled Distribution Capacitor Bank	15		\$	\$
Sub Total for Proposal					\$
Sales Tax @ 10.3%, Location Tax Collected: Tacoma, WA Note Paragraph 1.41 of Standard Terms and Conditions					\$
Total for All Items with Tax					\$

NOTES:

1. Quantities listed on the Proposal Pricing Sheets are an estimate only. Actual quantities will be according to purchase order on an as-needed basis.
2. Price adjustments will be made per section 1.2.4 – Annual Pricing Adjustment.
3. All prices shall be submitted as F.O.B. Destination, freight prepaid and allowed (included in the unit price).

VENDOR INQUIRY

1. **Does your firm accept payment by EFT/ACH? __Y __N**
(Electronic Funds Transfer (EFT) by Automated Clearing House (ACH))
2. **Does your firm accept payment by credit card (Visa)? ____Y ____N**
NOTE: The City of Tacoma will not accept price changes or pay additional fees when a credit card is used.
3. **Prompt Payment discount offered ____%, ____ days.**
Only discounts offered of 20 days or more will be considered for bid evaluation purposes.



Material Specification PT22-0226N
Distribution Capacitor Bank

PROPOSAL - CONDITIONS SHEET

The City requires that Respondents determine the cost of compliance with the City's terms and conditions, and include such costs into the unit prices of the items in the Respondent's submittal. Unless a bid responds to the specification in all material respects, it is not a responsive bid. Acknowledge each question with a checkmark ☒ to indicate your response.

1. Does your submittal make any restrictions or take any exceptions to the conditions or provisions outlined in this Specification?

YES	
NO	

2. Do all items submitted per this Specification meet and/or exceed the requirements of the Technical Provisions (Section 2)?

YES	
NO	

1. Scope

1.1. Tacoma Power, hereinafter referred to as TPWR, requires a qualified vendor to provide a pre-assembled capacitor bank that shall be shunt connected, switched and pole mounted. The capacitor bank shall be shipped factory assembled, pre-wired and ready for installation. The furnished capacitor bank shall be designed, fabricated, tested, and delivered in accordance with the latest revision of all applicable ASTM, ANSI, IEEE, ICEA, NEMA, UL and RUDP standards.

1.1.1. Furnished capacitor bank packages shall include two discreet designs for deployment on 12,470 V and 13,800 V distribution systems.

- 12,470 V packages shall accommodate connection to the system as outlined in Section 1.2.3; neutral current sensing shall be included as outlined in Section 3.6.5.
- See Figure 1 below for system connectivity diagram.
- 13,800 V packages shall accommodate connection to the system as outlined in Section 1.2.3 and therefore will not require neutral current sensing.
- See Figure 2 below for system connectivity diagram.

1.1.2. Vendor shall provide TPWR preliminary drawings as part of the bid, illustrating basic connectivity to distribution systems

1.1.3. Award of Contract

With this solicitation, the City of Tacoma (City) intend to award a single contract and does not anticipate award to multiple suppliers. Regardless, the City reserves the right to award to one or more suppliers, or make no award, in the best interest of City.

1.1.4. Respondents Originating from Outside the United States

Respondents that originate bids from outside the legal jurisdiction of the United States of America will be subject to the City of Tacoma's Legal Department opinion as to the viability of possible litigation pursuant to a supply contract resulting from this Specification. If it is the opinion of the City of Tacoma's Legal Department that any possible litigation would be beyond reasonable cost and/or enforcement the bid may be excluded from evaluation.

1.1.5. Sub-Vendors

The Respondent shall list, on the form provided, all sub-vendors it intends to use to fulfill requirements in any part of this Specification. Included in the listing shall be the sub-

vendor's name, address, and telephone number; contact name; and description of work they will perform. It shall be the responsibility of the awarded Supplier to police, enforce, and ensure that all work performed by any sub-vendor shall be in accordance with this Specification.

1.1.6. Contract

- **Contract Period**
The contract is intended for a minimum of three (3) years from the award date of the contract
- **Contract Extensions**
Two contract extensions of up to one year per occurrence may be considered upon mutual agreement of both parties to extend the contract under the same terms and conditions of the original contract
- **Award Date of Contract**
The Award Date of Contract is the date that the City of Tacoma Purchasing Division issues the contract. This occurs after the Tacoma Public Utilities Board approves the award of this Contract and all documents (if required) have been returned to the Purchasing Division.
- **Termination of Contract**
The City reserves the right to cancel the Contract at any time upon prior notice to the Supplier (refer to Section 1.27 of the Standard Terms and Conditions).

1.2. Pricing and Purchase Orders

1.2.1. Prices Quoted

- Per City of Tacoma Standard Terms and Conditions Section 1.16, the prices quoted on the Proposal Pricing Sheets shall remain open for acceptance by the City for a minimum of 90 days from the submittal deadline. The prices quoted on the proposal sheets shall be firm for the first year of the contract.

1.2.2. Freight Allowances

- The Respondent shall provide prices including delivery F.O.B. Destination, Pre-Paid and Allowed (included in unit price), as noted on the Proposal Pricing Sheets.

1.2.3. Quantities and Purchase Orders

- The quantities listed on the “Proposal - Pricing Sheet” are an estimate only. Delivery will be according to purchase order issued on an as-needed basis throughout the contract. The City reserves the right to increase or decrease quantities under this contract (refer to Section 1.35 of the Standard Terms and Conditions). The purchase order will be delivered to the Supplier by email.

1.2.4. Annual Price Adjustment

- On an annual basis, the supplier may submit unit price adjustment requests, by email to the Engineer, no later than fourteen (14) days prior to the following 12 month period after contract award. Any proposed increase/decrease in price to contract items must be beyond control of the Supplier and supported by written documentation from the manufacturer and/or wholesale distributor indicating new higher/lower price in effect and/or for raw materials used in the manufacturing of the equipment/material. The City reserves the right to accept or reject all such increases/decreases.
- Promotional Pricing
City is entitled to any promotional pricing during contract period that is lower than the Supplier’s pricing as provided in bid. This promotional pricing shall include, but not be limited to: sale prices, price lowering, and/or lump-sum rebates.

1.2.5. Unscheduled Adjustments

- At the City’s discretion, the pricing adjustment terms may be waived for extraordinary conditions that could not have been known by either party at the time of bid or other circumstances beyond the control of both parties.

Requests for increases or decreases, other than scheduled, shall be sent to the Engineer/Contract Manager accompanied by documentation supporting the requested change. No other individual or City Department is authorized to approve such modifications. Changes shall be considered effective upon Supplier’s receipt of a revised contract document. Concurrence is implied unless Supplier rejects the changes in writing immediately upon receipt of the revised contract document.

1.2.6. Promotional Pricing

- City is entitled to any promotional pricing during contract period that is lower than the Supplier's pricing as provided in bid. This promotional pricing shall include, but not be limited to: sale prices, price lowering, and/or lump-sum rebates.

1.3. Respondent's Proposal

1.3.1. Respondent Requirements

- Submittals must be emailed with the Specification number, Specification title, and Respondent name in the subject line, and received by the City of Tacoma Purchasing Division by the date and time specified in the "Request for Bids" page or subsequent addenda.

The bid package submitted must be returned with the Respondent's proposal filled in as directed, including all data requested by the Provisions of these Specifications. All blank spaces on the Proposal forms will be properly filled in, printed in ink or typewritten.

- Proposal Pricing Sheet

The "Proposal Pricing Sheet" Include with the original submittal completely filled out.

- Signature Page

The "Signature Page" included with the original submittal shall be signed by the responsible company official and include printed or typewritten designation of the office they hold in the company.

1.3.2. Alternate Bids

- All bids including alternates shall include an original Signature Page. Each bid package submitted must be returned with the Respondent's proposal completed as directed, including all data requested.
- Alternate Bid Proposals
Alternate bid proposals must be submitted as a separate bid package and identified as "ALTERNATE".
- Alternate Materials

If the Respondent elects to bid alternative equipment a Substitution Request Form (Appendix #2) must be submitted by email to Becky Lewis, rlewis4@cityoftacoma.org, a minimum of seven (7) business days prior to the submittal deadline. Respondents

will be notified of an approved or rejected Substitution Request Form no later than five (5) business days prior to the submittal deadline.

An approved Substitution Request Form shall not indicate acceptance of the alternate by the City. Complete data must be submitted with the bid, including the information as requested in Section 1.5 "Approved Equal". The data shall demonstrate that the alternative item is of a quality equal to or better than that specified and has the required characteristics for the intended use. Failure to submit such data will render the bid non-responsive.

- **Alternate Evaluation**

Upon request, the Respondent shall furnish to the City, within five (5) working days, additional information relating to such alternative items as the City may require. In the event that the equivalency is not readily ascertained from the information supplied by the Respondent, the City may test the material/equipment or have it tested. The Respondent shall bear all expenses of the City's determination of whether or not alternative equipment, materials, or processes are equal to those designated.

1.3.3. English Language Requirements

- All drawings, correspondence, catalogs, submittals, nameplates, etc., shall be in the English language as used in the U.S. Dimensions and tolerances shall conform to ANSI Y14.5M and shall be in the U.S. customary units. If units are fabricated utilizing SI units (metric system), both units shall be shown on the drawings, nameplate, etc. U.S. units shall be shown above the SI units. Conversion tolerances shall have a maximum tolerance of 1/32-inch (2.70 mm) and/or one ounce (28.4 grams).

1.3.4. Costs to Prepare Submittal

- The City is not liable for any costs incurred by the Respondent for the preparation of materials or a proposal submitted in response to this RFB, conducting presentations to the City, or any other activities related to responding to this RFB.

1.3.5. Expansion Clause

- Any resultant contract from this RFB may be further expanded in writing to include other related services or products normally offered by the Contractor, as long as the

price of such additional services or products have a profit margin equal to or less than that in place at the time of original submittal. Such additions and prices will be established in writing. New items not meeting these criteria will not be added to the contract. Contractor profit margins are not to increase as a result of contract additions.

Any new products or services accepted by the City may be added to this contract and/or substituted for discontinued products or services. New products and services shall meet or exceed all Specifications of original award.

1.4. Materials, Design, Workmanship, and Trade Names

Unless otherwise noted in this Specification, all materials and equipment incorporated into any item covered by the Specifications shall be new and of the most suited of their respective kinds for their intended use. All workmanship shall be in accordance with accepted industry practices.

1.4.1. Manufacturing Requirements

- All major components of the material/equipment must be manufactured or distributed by the original equipment manufacturer and advertised on a factory brochure as a standard or optional component.

1.5. Approved Equal

The term "approved equal" shall mean that the quality and characteristics of equipment or materials intended for use must be equal to the listed items.

1.5.1. Determination of Equality

- The City or its designee will determine the suitability, reliability, and serviceability of a proposed substitute. Refer to Section 1.36 of the Standard Terms and Conditions.
- Required Materials
To be considered by the City, the request for substitution shall be accompanied with the complete physical data, technical data, certified test results, manufacturer's catalog data, photographs, user's lists, failure data, samples, and the address of the nearest authorized service representative. Any other information, as required by the Engineer, shall be promptly provided upon request. The City shall be the sole arbiter in the determination of equality.

1.6. Evaluation and Award

Respondents are to provide unit or lump sum pricing for each line item, which will be summed for a subtotal price. Subtotals will be compared amongst each Respondent, including any offered payment discount terms of 20 days or more.

1.6.1. Award of Contract

- The Contract will be awarded to the lowest and best responsible Respondent(s) delivering a responsive submittal in compliance with these Specifications, provided such submittal is reasonable and it is in the best interests of the City to accept. The City, however, reserves the right to reject any and all bids and to waive any informalities in bids received. The award of this contract will not be based on cost alone, as other factors will be considered in the evaluation criteria
- Pricing Conditions of Section 1.2.4
Those bids that do not accept the pricing conditions of Section 1.2.4 may be considered non-responsive.

1.6.2. Evaluation Criteria

- In evaluating the proposals, the City will consider any or all of the following:
 - Compliance with Specifications
 - Proposal prices, listed separately if requested, as well as a lump-sum total
 - Minimum order requirements
- Other Elements
The City may also take into consideration other criteria for determining award. Other elements or factors, whether or not specifically provided for in this Specification, which would affect the final cost to and the benefits to be derived by the City, may be considered in determining the award of the contract. The final award decision will be based on the best interests of the City.

1.7. Delivery Date

Respondents must guarantee delivery times as stated on their Proposal Pricing Summary Sheet. The delivery time will be enforced for all releases of this contract and any contract renewals.

1.7.1. Notification

- Notification to deliver product will be by the issuance of a City of Tacoma purchase order (per Section 1.2.3) for the materials described in this Specification.
- Delays Beyond the Control of the Supplier
Delays caused by problems beyond the control of the Supplier, if fully documented and submitted to the city, may be excused. This allowance shall in no way be construed to apply to or excuse delays caused by negligence on the part of the Supplier. (For additional information, refer to the Force Majeure portion, located in Section 1.8 of this document).

1.8. Force Majeure

Unavoidable delays in the prosecution of the work shall include only delays from causes beyond the control of the Supplier and which he/she could not have avoided by the exercise of due care, prudence, foresight and diligence.

The Supplier shall not, be responsible for delays in delivery due to acts beyond his/her or manufacturer's reasonable control, or due to act of god, fire, strikes, epidemics, war, riot, unavoidable delay in transportation or rail car/transport shortages, or documented unavoidable material shortages, provided the City is notified in writing by the Supplier of such pending or actual delay and the reasons therefore. If deemed excusable, the City shall authorize an extension of time. In the event of such an excusable delay, the date of delivery shall be extended for a period equal to the time lost due to the reason for delay. Any damage assessment or extensions of time are to be authorized by written purchase order changes issued by the City of Tacoma.

1.8.1. Termination of Purchase Order Release(s)

- If the delay will extend beyond 10 working days, the City may exercise the right to terminate any and all purchase order releases that are affected by the delay and obtain the items required materials from other sources.

1.8.2. Termination of Contract

- If the delay will extend beyond 60 working days the City may exercise the right to terminate the contract and obtain the items required from other sources.

1.8.3. Contract Extension

- Any contract extension shall be limited to a period of time equal in length to the period of such prevention and/or delay.

1.8.4. Due Diligence

- It shall be the responsibility of the Supplier to supply the City with adequate documentation to demonstrate that the Supplier exercised due diligence in endeavoring to avoid the delay.

1.9. Packing and Shipping

The Supplier shall be responsible for industry standard packing that conforms to the requirements of the carrier's tariffs and the ICC regulations.

1.9.1. Packing Requirements

- Stick conduit shall be banded together with 2x4's in such a manner that standard fork lift truck may lift and stack.
Each pallet and conduit sling shall be labeled with:
 - Conduit Size
 - Quantity
 - City of Tacoma Purchase Order Number

1.9.2. Shipping Requirements

- Materials shall be shipped in such a fashion that they will arrive at the City without transit-associated damage. A complete packing list must be included.
Tacoma Power reserves the right to request and require a change in shipping company utilized by the Supplier based upon history of damaged goods delivered to Tacoma Power and/or evidence of unsafe work practices by the shipping company.

1.9.3. Shipping Notice

- The shipper shall notify the Tacoma Power Warehouse a minimum of 24 hours prior to arriving at delivery destination. This notice may be sent via phone or email and is required to convey final delivery information and insure sufficient staff available to unload cargo.
-



Material Specification PT22-0226N
Distribution Capacitor Bank

Tacoma Power Warehouse	
Contact	Keith Wawrin
Phone Number	253-502-8760
Email Address	kwawrin@cityoftacoma.org

1.10. Delivery

1.10.1. Delivery Time

- The completed materials shall be delivered F.O.B. between 9:00 a.m. and 3:30 p.m. Monday through Friday excluding City observed holidays (refer to Section 1.37 of the Standard Terms and Conditions).

1.10.2. Delivery Location

- Tacoma Power Warehouse
3628 South 35th Street (rear)
Tacoma, WA 98409
- Alternate Delivery Locations
The City retains the option to have the merchandise delivered to an alternate facility or on-site within a 35-mile radius of the Tacoma Power Warehouse. Notification of any change will be on the purchase order release.

1.11. Inspection and Warranty

All goods are subject to final inspection and acceptance by the Engineer and the appropriate shop foreman.

1.11.1. Failure of Inspection

- Material failing to meet the requirements of this specification will be held at Supplier's risk and may be returned to Supplier. If so returned, the cost of transportation, unpacking, inspection, repacking, reshipping, or other like expenses are the responsibility of the Supplier.
Charges for dismantling and reinstallation of materials furnished pursuant to the Contract will be the responsibility of the Supplier only when a change out or

replacement is required because of a suspected or known design defect or large scale failure of manufacturer's quality control system.

1.11.2. Factory Inspection

- The Engineer/Contract manager shall be permitted to witness the manufacture of items supplied per this contract and to perform a “quality audit” of the facility manufacturing.
- **Quality Assurance Audits**
The City or its representative may audit the quality assurance program at any time prior to and during the Contract period or its extensions.
- **Quality Assurance Documentation**
The manufacturer shall provide, when requested, access to and copies of quality assurance documents such as material certificates, inspection and test results obtained in the course of quality assurance, control charts, and other quality documents compiled during the work.
- **Factory Assistance During Inspection**
The manufacturer shall have engineering, manufacturing, quality control, and operational factory personnel available who speak technical and conversational English without the need of an interpreter.

1.11.3. Warranty

Unless a longer period is specified, the Supplier and/or manufacturer of the supplies, materials and/or equipment furnished pursuant to this Contract agrees to correct any defect or failure of the supplies, materials and/or equipment which occurs within one year from the date of commencement of use, however, said warranty period shall not extend beyond eighteen months after date of receipt by the City.

When the Supplier is not the manufacturer of the item of equipment, Supplier agrees to be responsible for this warranty and Supplier is not relieved by a manufacturer's warranty.

- **Warranty Period Extension**
The Contract warranty period shall be suspended from the time a significant defect is first documented by the City until the material is repaired or replaced by Supplier and

accepted by the City. In addition, in the event less than ninety (90) days remain on the warranty period (after recalculating), the warranty period shall be extended to allow for at least ninety (90) days from the date the work or equipment is repaired or replaced and accepted by the City.

- **Warranty Work**

All materials requiring warranty work will be returned to the manufacturer at its expense or the manufacturer may replace the defective materials. All replaced materials will be held for pick up (no more than) 30 days after the arrival of replacement materials. Tacoma Power at its discretion will dispose of any materials not picked up within 30 days.

- **Return Time Frame**

All warranty repair work on returned material/equipment shall be accomplished within the specified lead-time for delivery listed in the Supplier's bid submittal. Warranty repair time will be calculated from the time the material/equipment defect or failure is reported to the Supplier.

1.12. Invoices and Payment

All items called for in these Specifications, including, but not limited to, the necessary drawings and test results, must be supplied to the City before the final invoice can be processed.

1.12.1. Invoices

Invoices shall be emailed to:

(Per Section 1.39 of the Standard Terms and Conditions) AccountsPayable@cityoftacoma.org

1.12.2. Payment

- Upon certification by the Engineer and/or appropriate warehouse personnel that the items have been received in accordance with the Specifications and are in satisfactory condition, a 100 percent payment will be made. Payment methods include:
 - Credit card. Tacoma's VISA procurement card program is supported by standard bank credit Suppliers and requires merchants abide by the VISA merchant operating rules.

- Vendors must be PCI-DSS compliant (secure credit card data management).
 - Vendors must be set up by their card processing equipment provider (merchant acquirer) as a minimum of a Level II merchant with the ability to pass along tax, shipping and merchant references information.
 - Electronic Funds Transfer (EFT) by Automated Clearing House (ACH).
 - Check or other cash equivalent.
 - The City may consider cash discounts when evaluating submittals. See 1.20.2 of the Standard Terms and Conditions.
- Unsatisfactory Performance
In the case of unsatisfactory performance, the payment shall be made after the Supplier has made the necessary repairs and/or modifications and satisfactory performance is obtained, or the unit is replaced.

1.13. Classification

1.13.1. No deviations from these specifications on the part of the manufacturer shall be allowed without review and prior approval. Any item supplied under these specifications which is not in complete compliance with these specifications without prior approval will not be accepted and returned to the manufacturer. TPWR reserves the right to change this specification at any time.

1.13.2. All manufacturers furnishing switches under these specifications shall have at least ten (10) years of experience in the production of pre-assembled capacitor banks.

1.13.3. The capacitor bank shall be externally fused, and applied as noted below:

Item	Rated High Voltage (Volts)
#1	12,470 V Nominal – 4 wire Multi-grounded Wye System (Grounded Wye System)
#2	13,800 V Nominal – 3 wire system - single point wye grounded system @ Substation Bank (Delta System)

1.13.4. The pre-assembled capacitor banks purchased under this specification shall be 900 kVAR switched capacitor banks.

1.14. Equity In Contracting

The City of Tacoma is committed to encouraging firms certified through the [Washington State Office of Minority and Women's Business Enterprise](#) to participate in City contracting opportunities. See the TMC 1.07 Equity in Contracting Policy at the City's [Equity in Contracting Program website](#).

1.15. Standard Terms and Conditions

City of Tacoma [Standard Terms and Conditions](#) apply.

2. Applicable Standards

All characteristics, definitions, and terminology, except that specifically covered in this specification shall be in accordance with the latest revision of the following standards:

- ANSI/AWS D1.1-06 – Structural Welding Code – Steel
- ANSI/AWS D1.2-03 – Structural Welding Code – Aluminum
- ASTM A6-06 – General Requirements for Rolled Steel Plates, Shapes, Sheet Piling and Bars for Structural Use
- ASTM A36-05 – Carbon Structural Steel
- ASTM A123-02 – Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- ASTM A143-03 – Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
- ASTM A384-02 – Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies
- ASTM B308-02 – Aluminum-Alloy 6061-T6 Standards Structural Profiles
- IEEE Std. 18-20 – Shunt Power Capacitors
- IEEE C37.66-05 – Capacitor Switches for AC Systems (1kV to 35kV)
- NEMA 250-03 – Enclosures for Electric Equipment (1000 Volts Maximum)
- UL 50-95 (R2003) – Enclosures for Electric Equipment

3. Function and Material Requirements

3.1. Voltage Ratings: The voltage ratings shall be in accordance with the following:

Item	Rated High Voltage (Volts)	BIL (kV)	Insulation Class (kV)
#1	12,470 Nominal – 4 wire Multi-grounded Wye System	95kV	15kV
#2	13,800 V Nominal – 3 wire single point wye grounded system	95kV	15kV

3.2. Wire: All energized conductors shall be #4 CU solid soft-drawn, insulated in accordance with ASTM B-8.

3.3. All energized parts shall be insulated for wildlife protection.

3.4. High side connections to existing distribution systems shall be furnished and installed by TPWR.

3.5. Capacitor Unit: The individual capacitor units shall be rated 150 kVAR banked to make up 300 kVAR per phase, 900 kVAR three phase bank.

3.6. CAPACITOR UNIT ELEMENTS:

3.6.1. The capacitor unit elements:

- Shall be film type and not contain Kraft paper.
- The edges of the foil electrode shall be folded, or laser cut to minimize edge stress.
- The solid dielectric material shall consist of a minimum of 2 sheets of polypropylene film.

3.6.2. The capacitor unit shall be equipped with:

- An internal discharge resistor.
- Two glazed wet process bushings; gaskets will not be allowed.
 - The bushing capacitor terminal stud shall be solid-type design.
 - All porcelain shall be ANSI No. 70 light gray finish.
- Tin-plated copper alloy, clamp-type parallel-groove terminals that accommodate copper or aluminum conductors from #8 solid through #2 stranded AWG and shall come with wildlife protection installed.

3.6.3. The dielectric fluid contained in the capacitor unit shall be PCP-free.

3.6.4. The capacitor unit tanks shall:

- Be constructed of type 304 or 409 stainless steel and hermetically sealed by welding.
- Be ANSI No. 70 gray in color.
 - All parts requiring painting shall be guaranteed rust-free for 10 years and meet IEEE C57.12.29.
- Have stainless steel mounting brackets left unpainted on the underside for positive grounding.

3.6.5. Each capacitor unit shall be furnished with heavy-duty stainless steel or aluminum nameplate in accordance with IEEE Std. 18.

3.6.6. Capacitor nameplate shall:

- Face towards the pole mounting bracket.
- Not use of adhesives to attach the nameplate to the capacitor unit.
- Contain the following:
 - Manufacturer Name
 - Manufacturer Model
 - Manufacturer Serial Number
 - Year of Manufacture
 - Rated Reactive Power (kVAR)
 - Rated Voltage, RMS
 - Rated Frequency
 - BIL
 - Statements as to whether insulating fluid is or is not flammable
 - Non-PCB
 - The actual tested production capacitance value
 - Manufacturer range of capacitance value

3.6.7. Approved manufacturers include:

- Eaton/Cooper Power Systems
- ABB
- Equal with prior approval

3.7. CAPACITOR POLE MOUNTED RACK:

3.7.1. The **MOUNTING FRAME** shall be provided to mount the capacitor units. The rack frame shall be made using lightweight, structural aluminum and include the following features:

- Shall be sized to accommodate up to six (6) capacitor units.
- Provisions for grounding to accommodate #4 Copper
- Lifting eyes shall be provided for level lifting and capable of supporting a completely equipped bank.

3.7.2. POLE MOUNTING BRACKET shall be:

- Designed to mount the rack to a round wood pole.
- Shall be pre-mounted to the Capacitor Mounting Frame.

3.7.3. Capacitor rack shall:

- Include arrestors as follows:
 - 9 kV arrestors for 12,470 V racks, and
 - 10 kV arrestors for 13,800 V racks.
- Have decals stating capacitor size and voltage in 3-inch yellow and black reflective decals.
- Utilize stainless steel hardware for mounting capacitor units and required accessories.
- Provide proper clearances for rated kV BIL and rated voltage of application.
- Be provided with sway braces.
- Be self-supporting such that extra bracing is not required to keep the capacitor units from touching the ground during shipment and storage.

3.7.4. The capacitor rack shall be provided with a junction box to terminate all low-voltage wiring. The junction box shall be mounted on the side of the capacitor rack.

3.8. Capacitor Switches, Control Power Transformer (CPT), Junction Box, Sensors, Control and Sensor Cables and Remote Programmable Controller

3.8.1. One **VACUUM SWITCH** shall be provided per phase. Capacitor switches shall:

- Be solid dielectric single-phase vacuum.
 - No porcelain on the external portion of the switch.
- Be manufactured and tested in accordance with the latest revision of ANSI C37.66.
- Be rated as follows:
 - Voltage Class – 15 kV
 - Rated impulse withstand voltage (BIL) – 95 kV
 - Continuous current rating – 200A
 - Nominal control voltage – 120Vac
 - Mechanical operations – open close without maintenance 25,000

- Operating temperature range: -20 to 50 C
- Not require routine maintenance.
- Be equipped with a manual hook-stick operable disconnect handle.
- Approved manufacturers include:
 - Eaton/Cooper Power Systems
 - Equal with prior approval

3.8.2. A control power transformer shall be supplied and mounted to operate the vacuum switches and capacitor controller.

3.8.3. The **CONTROL POWER TRANSFORMER (CPT)** shall:

- Have solid dielectric bushings which shall be resistant to impact, ozone tracking, and damage from UV light.
- Minimum 1.5kVA
- High side bushings to be pre-wired.
- 90C rated secondary connector, 120 volts.
- Be rated for 65C temperature rise.
- Have an external tank-grounding lug.
- Be pre-wired to the junction box.
- Include a 9 kV, or 10 kV polymer housed arrester determined by voltage mounted on the transformer adjacent to the H1 (H2, 13,800 V racks) bushing.
- Approved manufacturers include:
 - Eaton/Cooper Power Systems
 - ABB
 - Equal with prior approval

3.8.4. The **JUNCTION BOX** supplied shall:

- Be Eaton/Cooper Junction Box with 19-pin control cable connector for connectivity to vacuum switches and control power transformer (120VAC); or approved similar.
- Be NEMA 4x with hinged cover utilizing screws for securing the cover closed.
- Be liquid strain relief type for all cable entry bushings between junction box and switches and control power transformer.

3.8.5. The SENSORS shall:

- Be Lindsey Manufacturing 9650/E1X04A/720/10M for combination phase voltage and current measurement
- Be Lindsey Manufacturing R-22981S for neutral current sensing
 - Neutral current sensor shall not be included on 13,800 V racks

3.8.6. The CONTROL CABLE shall:

- Be minimum of 45 Ft. in length
- Be SEL-C556 Cable; or approved similar
- Include UV protected jacket
- Include waterproof connectors from the junction box to the capacitor controller.
- Be standardized control cable to connect controller to junction box.

3.8.7. The SENSOR CABLE shall:

- Be minimum of 45 Ft. in length
- Be Lindsey Manufacturing R-22748/45,35 Cable; or approved similar for 12,470 V racks
- Be Lindsey Manufacturing 9-587/45/R-22012 Cable; or approved similar for 13,800 V racks
- Include UV protected jacket
- Include waterproof connectors from each sensor to the capacitor controller
- Be standardized combined sensor cable with a 14-pin plug (controller end) for controller connectivity.
- Be standardized combined sensor cable with 4-pin plug (sensor end, phase combination sensor), 7-pin plug (sensor end, neutral current sensor) for connectivity to Lindsey Manufacturing sensors outlined in Section 3.6.5 above.

3.8.8. The vendor shall provide a remote programmable controller.

3.8.9. The REMOTE PROGRAMMABLE CONTROLLER shall have the following characteristics:



Material Specification PT22-0226N Distribution Capacitor Bank

- SEL-734B FULL-SIZE OUTDOOR ENCLOSURE FOR CAPACITOR BANK CONTROL
 - P/N 07340R9F1D3626EXX6D3A000G
- Enclosure includes 14-pin Combined Sensor Cable Connection
- Enclosure includes 19-pin Universal Control Cable Connection
- Integrated SEL-9322, 15VDC Power Supply (15W)
- 120Vac, 60 Hz nominal operating voltage
- All sensor, control and auxiliary cables shall enter the enclosure on the bottom
- Enclosure Shall provide space for mounting communication equipment
 - DIN Rail for Cellular Modem (to be installed by TPWR)
- Equipped with 10/100 BASE-T copper Ethernet port for communication connectivity
- Approved manufacturers include:
 - Schweitzer Engineering Laboratories (SEL)
 - No substitutions without prior approval

Figure 1 – 12,470 V Rack Connection Overview

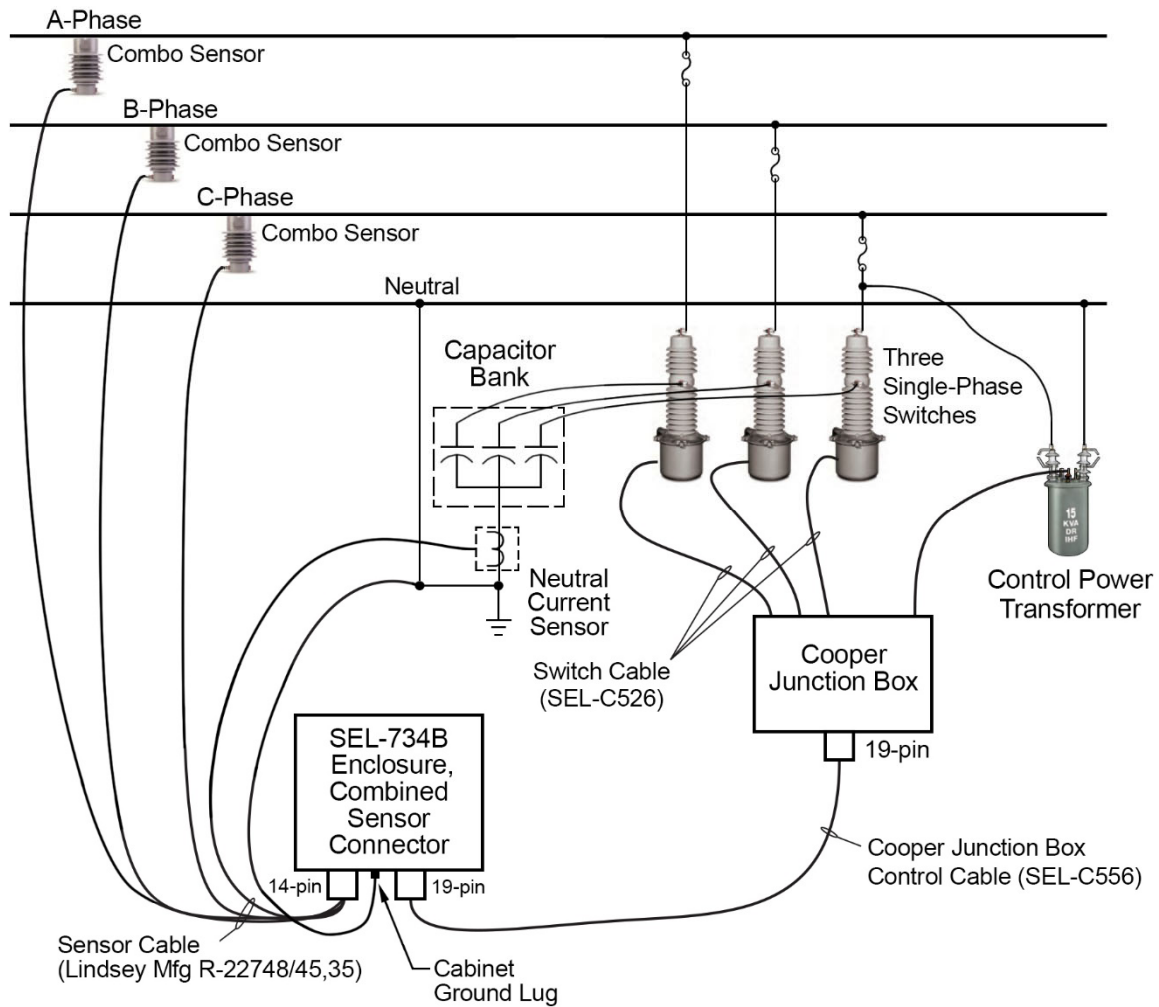
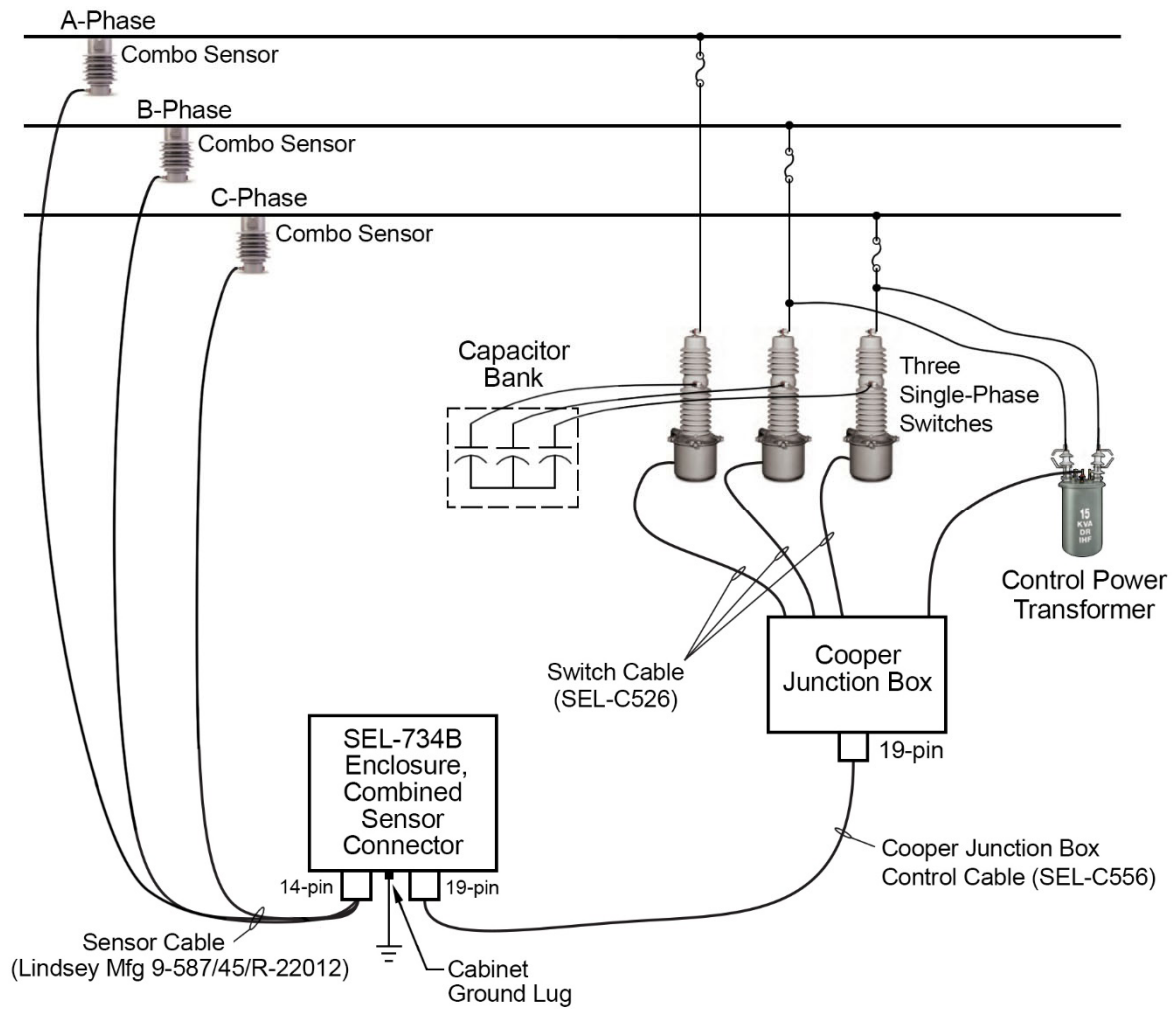


Figure 2 – 13,800 V Rack Connection Overview





Material Specification PT22-0226N
Distribution Capacitor Bank

APPENDIX #1

SUBSTITUTION REQUEST FORM



Tacoma Public Utilities

SUBSTITUTION REQUEST FORM

Specification No. PT22-0226F
Distribution Capacitor Bank

Prospective bidders may request the use of substitute materials below.

All requests must be submitted electronically, via e-mail to rlewis4@cityoftacoma.org no later than ten (10) business days prior to the submittal deadline.

Manufacturer/Model: _____

Manufacturer Contact Information

Name/Title: _____

Phone Number: _____

E-Mail: _____

Describe the differences between the proposed substitution and specified material:

Please attach documentation from manufacturer that certifies the material meets all the criteria outlined in Technical Specifications of this bid specification.

Contractor Name: _____

Preparer Name/Title: _____

Mailing Address: _____

Phone Number: _____

E-Mail: _____

Signature: _____



Tacoma Public Utilities

INTERNAL USE ONLY

- ☐ Approved as Substitute*
- ☐ Rejected – Material Not Acceptable
- ☐ Rejected – Inadequate Information
- ☐ Rejected – Request Received After Deadline

**Subject to review and approval of submittal documents*

Remarks

Reviewer Name/Title: _____

Signature: _____ Date: _____

APPENDIX #2

SAMPLE CONTRACT

CONTRACT

Resolution No.
Contract No.

This Contract is made and entered into effective this _____ day of Choose an item. 20____, ("Effective Date") by and between the City of Tacoma, a Municipal Corporation of the State of Washington ("City"), and ("Contractor").

That in consideration of the mutual promises and obligations hereinafter set forth the Parties hereto agree as follows:

- I. Contractor shall fully execute and diligently and completely perform all work and provide all services and deliverables described herein and in the items listed below each of which are fully incorporated herein and which collectively are referred to as "Contract Documents":

-
1. Specification No. _____ and _____ together with all authorized addenda.
 2. Contractor's submittal (or specifically described portions thereof) dated _____ submitted in response to Specification No. _____ and _____.
 3. Describe with specific detail and list separately any other documents that will make up the contract (fee schedule, work schedule, authorized personnel etc.) or any other additional items mutually intended to be binding upon the parties.
-

Remove this paragraph and #1 and #2 if there are no additional attachments to the contract (attachments would be things other than a specific, contract, or bonds).

In the event of a conflict or inconsistency between the terms and conditions contained in this document entitled Contract and any terms and conditions contained the above referenced Contract Documents the following order of precedence applies with the first listed item being the most controlling and the last listed item the least controlling:

1. Contract
2. List remaining Contract Documents in applicable controlling order.

- II. The total price to be paid by City for Contracts full and complete performance hereunder may not exceed: _____, plus applicable sales tax.
- III. Contractor agrees to accept as full payment hereunder the amounts specified herein and in Contract Documents, and the City agrees to make payments at the times and in the manner and upon the terms and conditions specified. Except as may be otherwise provided herein or in Contract Documents Contractor shall provide and bear the expense of all equipment, work and labor of any sort whatsoever that may be required for the transfer of materials and for constructing and completing the work and providing the services and deliverables required by this Contract.
- IV. Contractor acknowledges, and by signing this Contract agrees, that the Indemnification provisions set forth in the controlling Contract Documents, including the Industrial Insurance immunity waiver (if applicable), are totally and fully part of this Contract and, within the context of the competitive bidding laws, have been mutually negotiated by the Parties hereto.
- V. Contractor and for its heirs, executors, administrators, successors, and assigns, does hereby agree to the full performance of all the requirements contained herein and in Contract Documents.
- VI. It is further provided that no liability shall attach to City by reason of entering into this Contract, except as expressly provided herein.

IN WITNESS WHEREOF, the Parties hereto have accepted and executed, as of the Effective Date stated above, which shall be Effective Date for bonding purposes as applicable.

CITY OF TACOMA:

CONTRACTOR:

By: _____
Enter title of dept or div staff w/auth to sign for this \$ amt

By: _____
Signature

By: _____
Choose an item.

Printed Name

By: _____
Director of Finance

Title

APPROVED AS TO FORM:

By: _____
City Attorney

Sample