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CITY OF PORT LAVACA

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INVITATION TO BID

**PROJECT: NAUTICAL LANDINGS IMPROVEMENT**

**BID DATE AND TIME: THURSDAY, DECEMBER 22, 2022, AT 2:00 PM**

Sealed bids for the above referenced project will be received by the City Secretary, 202 N. Virginia Street, Port Lavaca, Texas 77979 until the above stated date and time, when they will be publicly opened and read aloud. All bids must be submitted on the Bid Form provided in the bid documents and shall be sealed in an envelope and clearly marked "**Sealed Bid for NAUTICAL LANDINGS IMPROVEMENT at 2:00 P.M., THURSDAY DECEMBER 22, 2022**". Bids received after this time shall be returned unopened.

A bid bond in the amount of 5% of the bid issued by an acceptable surety shall be submitted with each bid. A certified check or bank draft payable to the City of Port Lavaca may be submitted in lieu of the Bid Bond.

The Bid/Contract Documents, Specifications may be obtained at City Hall, 202 N. Virginia or by emailing Director of Development Services, Derrick Smith, at [dsmith@portlavaca.org](mailto:dsmith@portlavaca.org). To arrange for a site visit, contact Director of Development Services Derrick Smith at 361-408-0193.

Statutory Bonds for performance of the contract and for payments of mechanics and materials will be required in accordance with Article 5160, Vernon's Texas Civil Statutes, in an amount equal to 100% of the accepted bid amount.

The Award of the Construction Contract, which is anticipated to be within thirty (30) calendar days of the Bid Date specified above, shall be made to the responsible Bidder submitting the lowest, qualified, acceptable bid who, in the opinion of the **CITY OF PORT LAVACA**, offers the Bid in the best interests of the City.

The **CITY OF PORT LAVACA** reserves the right to reject any and all bids and to waive informalities in the bidding. Small and minority businesses, women's owned business enterprises, and labor surplus area firms are encouraged to submit bids.

The **CITY OF PORT LAVACA** is an equal opportunity employer without regard to race, color, religion, sex, sexual orientation, gender identity, age, national origin, handicap, or limited English proficiency.

## **INSTRUCTIONS TO BIDDERS**

1.0 LOCATION OF THE PROJECT: The project is located in the city of Port Lavaca, Texas, AT 106 S COMMERCE ST.

2.0 GENERAL DESCRIPTION OF THE PROJECT: The work to be accomplished under the provisions of these Contract Documents is shown on the plans entitled "NAUTICAL LANDINGS IMPROVEMENTS."

- Relocate the two condensing units to expanded deck as specified.
- Install new disconnects and extend refrigerant lines to new location.
- Connect wiring and refrigerant lines to the units and verify the units are in good working order at new location.
- Any new handrails or deck boards that need to be replaced are to be bid by linear foot.
- Remove all wooden siding, soffits and fascia.
- Inspect framing for damage on all three sides.
- The upper section that has the feeders going through is included in the bid. Repair and/or replace any damaged studs, sills and insulation.
- Repairs will be quoted per linear foot of material.
- Walls will be wrapped with Ty-Vex (or comparable material).
- Hardie board siding, trim, soffit and fascia matching adjacent walls will be installed.
- Walls are to be primed and painted to match remainder of building.
- The 8' x 16' section of wood siding on the northwest side of the building will be replaced in the same manner.
- Rosin paper #30 felt are to be properly installed on roof. The standing seam roof above the existing service will be replaced with the same type and color of panels.
- The middle cupula on the main structure will need to be replaced. The dimensions and location are shown in attachment.

3.0 DELIVERY OF BID:

- 3.1 Facsimile transmittal of bids will not be accepted under any circumstances. Bid proposals must be mailed, hand delivered, or delivered by courier and received by the City Secretary's office before the stated date and time.

- 3.2 All bids received by the City of Port Lavaca after the stated date and time will not be opened, read, or recorded and will be returned unopened.
- 3.3 Bids shall be submitted on the Bid Form provided, sealed in an envelope and clearly marked "SEALED BID - NAUTICAL LANDING IMPROVEMENTS PROJECT - DUE BY 2:00 PM, DECEMBER 22, 2022"
- 3.4 A Bid Bond issued by an acceptable surety in the amount of 5% of the maximum bid submitted must accompany each bid. A certified check or cashier's check payable to the City of Port Lavaca may be submitted in lieu of the Bid Bond.
- 3.5 The successful bidder, upon his failure or refusal to execute and deliver the contract, insurance and bonds required within 10 days after he has received Notice of Acceptance of his bid, shall forfeit to the Owner, as liquidated damages for such failure or refusal, the security deposited with his bid.

4.0 OBLIGATION OF BIDDER: At the time of the opening of the bids, each bidder will be presumed to have inspected the site and to have read and to be thoroughly familiar with the Contract Documents (including all addenda). The failure or omission of any bidder to examine any form, instrument or document shall in no way relieve the bidder from any obligation in respect to this bid.

5.0 TIME OF COMPLETION:

5.1 Time of completion of this Contract is of importance to the City and may be considered in the award of the Contract. Payments on the Contract will be made as provided by the Contract. No payment will be made on the Contract after 30 days prior to the completion date set by the Contract, until final completion and acceptance by the Director of Development Services. If there is an extended unforeseen delay, over which the Contractor has no control, such as severe or unseasonable weather, it shall be the Contractor's responsibility to request any extensions of time within the same month as the delay occurs. His/Her failure to make such request within the above time limit may void the possible extension of the Contract time of completion. The Director of Development Services will be the judge as to whether a time extension is to be granted and so notify the Contractor.

5.2 Liquidated Damages:

Contractor shall pay Liquidated Damages in the amount of Two Hundred Dollars (\$200) per each calendar day that the date of substantial completion exceeds the contract completion date.

6.0 RIGHTS OF THE CITY OF PORT LAVACA:

6.1 The City of Port Lavaca reserves the right to separate and accept or eliminate any item(s) listed under this proposal that it deems necessary to accommodate budgetary and/or operational requirements.

6.2 The City of Port Lavaca reserves the right to reject any or all bids submitted, to waive any formalities or irregularities and to make whatever award is in the best interest of the City of Port Lavaca.

7.0 BONDS: Statutory Bonds for performance of the contract and for payments of mechanics and materials will be required in accordance with Article 5160, Vernon's Texas Civil Statutes, in an amount equal to 100% of the accepted bid amount.

8.0 TAX EXEMPTIONS: The City of Port Lavaca is exempt from State Tax and Local Tax. DO NOT include tax in your bid. Tax exemption certificates will be furnished upon request.

9.0 PAYMENT PROCEDURES: The City of Port Lavaca will accept requests for partial payment on a monthly basis for 90% of the Work completed (with the balance being retainage.) Retainage shall be held until 100% of all the authorized work is completed and the contractor has submitted an "Affidavit of all Bills Paid" to the City.

10.0 STATEMENT OF QUALIFICATIONS: IF the Bidder has not performed a similar scope of work for the City of Port Lavaca within the past 5 years, the Bidder must complete and submit with the Bid the provided Statement of Qualifications.

END OF SECTION

**BID FORM**

Bidding Firm: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Project: NAUTICAL LANDINGS IMPROVEMENTS BID DATE DECEMBER 22, 2022, 2:00 PM

1. The undersigned bidder proposes to furnish all labor, equipment, insurance, bonds and all other things necessary to construct the Work, as shown on the plans and specifications and as outlined in the following Bid Form.
2. If awarded this contract, the undersigned will provide proof of insurance coverage, a 100% Performance and Payment Bond, as applicable, and execute a satisfactory Construction Contract with the City of Port Lavaca within 15 days after the Notice of Award. It is agreed that this bid shall remain subject to acceptance by the City of Port Lavaca for a period of thirty (30) days from the bid opening date.
3. Enclosed is a Certified Check or Bid Bond in the amount of 5% of the highest amount bid, In compliance with the specifications.
4. The undersigned BIDDER agrees to the following:
  - A To perform all Work with skilled craftsmen experienced in the applicable trades and in conformance with the plans, specifications, and the Texas Accessibility Standards.
  - B. To complete the Work within \_\_\_\_\_ calendar days from the Notice to Proceed.
5. In submitting this Bid, BIDDER represents, as more fully set forth in the Agreement, that:
  - A. BIDDER has examined copies of all Contract Documents and the following Addenda receipt of which is hereby acknowledged.  
  
Addendum No. \_\_\_\_\_  
  
Date Rec'd: \_\_\_\_\_
  - B. BIDDER has examined the site and locality where the Work is to be performed, the legal requirements (federal, state, and local laws, ordinances, rules and regulations) and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as BIDDER deems necessary.

City of Port Lavaca  
2022 NAUTICAL LANDING IMPROVEMENTS  
SECTION 00300

- C. This Bid is genuine and not made in the interest of or on behalf of any undisclosed person, firm or corporation and is not submitted in conformity with any agreement or rules of any group, association or corporation. BIDDER has not directly or indirectly solicited or induced any person, firm, or corporation to refrain from bidding; and BIDDER has not sought by collusion to obtain for himself any advantage over any other Bidder or over the City of Port Lavaca.
  
- 6. A completed Bidder's qualification statement is attached (required only from bidders who have never performed a similar scope of work for the City of Port Lavaca in the last 5 years).
  
- 7. Communication about this BID shall be directed to the BIDDER'S address indicated above.

SUBMITTED this \_\_\_\_\_ day of \_\_\_\_\_, 2022

By \_\_\_\_\_

Signature

Title

Seal if Bidder is Corporation

**END OF SECTION**

**STATEMENT OF QUALIFICATION**

**(Required ONLY if Bidder has not performed a similar scope of work for the City of Port Lavaca within the past 5 years.)**

The undersigned certifies under oath that the information provided herein is true and sufficiently complete so as not to be misleading. (Attach additional sheets as necessary)

Date: \_\_\_\_\_

Bidder: (Legal Name of Firm) \_\_\_\_\_

Address: \_\_\_\_\_ website (if applicable): \_\_\_\_\_

Check which applies: ( ) Corporation ( ) Partnership ( ) Individual ( ) Joint Venture ( ) Other

- Number of years has your organization been in business as a Contractor. \_\_\_\_\_
- Number of years your organization been in business under its present name? \_\_\_\_\_
- List all other names under which your business has operated in the last 10 years.  
\_\_\_\_\_

List the categories of work your organization normally performs with its own forces.

Total Staff employed by firm (break down by managers and trades)

Has your organization ever failed to complete any work awarded to it? (If yes, provide details)

Are there any judgments, claims, arbitration proceedings or suits pending or outstanding against your organization or its officers? (If yes, provide details)

Has your organization filed any lawsuits or requested arbitration with regard to construction contracts within the last 5 years? (If yes, provide details)

On a separate sheet, list work your organization currently has under contract and a recently completed project, including valid contact information for owners and/or architect/engineer and dollar amount of contract.

On a separate sheet, list at least 3 projects completed in the past 3 years, comparable in size or greater to the project being bid. Provide name of project, architect/engineer and/or owner with valid contact information, and date of completion.

\_\_\_\_\_  
Bidder

\_\_\_\_\_  
Date



**BOND AND INSURANCE REQUIREMENTS**

- 1.0 Prior to commencement of the Work, CONTRACTOR shall comply with the following insurance requirements:
- 1.1 Furnish the CITY OF PORT LAVACA with a Certificate of insurance, containing a THIRTY-DAY CANCELLATION CLAUSE, showing CONTRACTOR as the named insured, naming "CITY OF PORT LAVACA" AS ADDITIONAL INSURED and showing at least the following coverages:
- 1.1.1 Workman's Compensation and Employers' Liability: State and Federal Statutory Limits
- 1.1.2 Bodily Injury and Property Damage: \$1,000,000.00 Combined Single Limit Each Occurrence/Policy Aggregate
- 1.1.3 Comprehensive General Liability: Shall include, but not be limited to, Independent Contractor's Liability; Contractual Liability; Completed Operations and Products Liability, all on an occurrence basis, with Personal Injury Coverage and broad form Property Damage, with XCU exclusions eliminated. Completed Operations Liability shall be kept in force for at least one (1) year after the date of final completion.
- \$1,000,000.00 each occurrence; \$2,000,000.00 Aggregate
- 1.1.4 Automobile Liability: CONTRACTOR shall have (or purchase) and shall maintain in force during the duration of the Work, coverage for cars and trucks owned, rented, hired, or leased, and others of non-ownership nature used by employees in and around or in connection with the particular contract. Coverage shall have at least the following limit:
- Combined Single Limit: \$1,000,000.00
- 1.1.5 No deductible on any coverage in excess of \$500.00 per occurrence is acceptable.
- 1.2 In the event that the CITY OF PORT LAVACA is notified of cancellation of all or any part, the CITY OF PORT LAVACA may stop all Work on the Contract or secure insurance at its will and charge CONTRACTOR the cost thereof, deducting the cost from CONTRACTOR's Contract Amount.
- 2.0 If the Contract Amount is equal to or exceeds \$50,000, (or as otherwise stipulated by Texas statute), Contractor shall, prior to commencement of the Work, provide a Payment Bond, and if the Contract Award is \$100,000 or greater, a Performance Bond, each in the amount of 100% of the Contract Amount, in accordance with Article 5160 of Vernon's Texas Civil Statutes.

END OF SECTION

**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

**THIS CONTRACT** is made, and entered into this the \_\_\_\_-\_\_\_\_-2022 by and between the **CITY OF PORT LAVACA**, a political subdivision of the State of Texas, (hereinafter refer to as "CITY") and \_\_\_\_\_, a \_\_\_\_\_ duly authorized to do business in the State of Texas, (hereinafter referred to as "CONTRACTOR").

For and in consideration of mutual promises to each as herein after setting forth, the parties hereto do mutually agree as follows:

1. **SCOPE OF SERVICES.** CONTRACTOR hereby agrees to provide the services and/or materials under this Contract pursuant to the Bid Scope and Specifications identified herein. The Contract Amount is hereby established at \$ \_\_\_\_\_. Any and all fully executed Work Authorization documents or Addenda are hereby incorporated herein and made a part of this Contract.
2. **CONTRACT TIMES:** The work will be substantially complete within \_\_\_\_calendar days after the date when the Contract Times commence to run, plus any approved time extension requests.
3. **PAYMENT TO CONTRACTOR.** CONTRACTOR shall submit a schedule of Values and the CITY will accept requests for partial payment based upon this schedule, on a monthly basis, for 90% of the Work completed (with the balance being retainage). Retainage shall be held until 100% of all the authorized work is completed and accepted and CONTRACTOR has submitted a One-Year Warranty and Affidavit of all bills Paid to the City.
4. **INDEPENDENT CONTRACTOR.** CITY and CONTRACTOR agree that CONTRACTOR is an independent contractor and shall not represent itself as an agent or employee of CITY for any purpose in the performance of CONTRACTOR's duties under this Contract. Accordingly, CONTRACTOR shall be responsible for payment of all federal, state and local taxes as well as business license and any and all other fees arising out of CONTRACTOR's activities in accordance with this Contract. For purposes of this Contract taxes shall include, but not be limited to, Federal and State Income, Social Security and Unemployment Insurance taxes. CONTRACTOR, as an independent contractor, shall perform the Services required hereunder in a professional manner and in accordance with the standards of applicable professional organizations and licensing agencies.
5. **INSURANCE AND INDEMNITY.** To the fullest extent permitted by laws and regulations, CONTRACTOR shall indemnify and hold harmless the CITY and its officials, agents, and employees from and against all claims, damages, losses, and expenses, direct, indirect, or consequential (including but not limited to fees and charges of engineers or architects, attorneys, and other professionals and costs related to court action or arbitration) arising out of or resulting from CONTRACTOR's performance of this Contract or the actions of the CONTRACTOR or its officials, employees, or contractors under this Contract or under contracts entered into by the CONTRACTOR in connection with this Contract. This indemnification shall survive the termination of this Contract.

In addition, CONTRACTOR shall comply with the Texas Workers' Compensation Act and shall provide for the payment of workers' compensation to its employees in the manner and to the extent required by such Act. CONTRACTOR shall also maintain Employers' Liability insurance limits of not less than \$1,000,000 per accident and \$1,000,000 each employee for injury by disease.

Additionally, CONTRACTOR shall maintain, at its expense, the minimum insurance coverage REQUIRED IN Section 00820 of the contract documents and include a waiver of subrogation.

CONTRACTOR, upon execution of this Agreement, shall furnish to the CITY a Certificate of Insurance reflecting the minimum limits stated above. The Certificate shall provide for thirty (30) days advance written notice in the event of a decrease, termination or cancellation of coverage and shall show the CITY OF PORT LAVACA as Additional Insured. Providing and maintaining adequate insurance coverage is a material obligation of the CONTRACTOR. All such insurance shall meet all laws of the State of Texas. Such insurance coverage shall be obtained from companies that are authorized to provide such coverage and that are authorized by the Texas Department of Insurance to do business in Texas. The CONTRACTOR shall at all times comply with the terms of such insurance policies, and all requirements of the insurer under any such insurance policies, except as they may

conflict with existing Texas laws or this Contract. The limits of coverage under each insurance policy maintained by the CONTRACTOR shall not be interpreted as limiting the CONTRACTOR's liability and obligations under the Contract.

6. **HEALTH AND SAFETY.** CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs required by OSHA and all other regulatory agencies while providing Services under this Contract. Contractor shall assign a safety officer to the project for the duration of the contract.
7. **GOVERNING LAW.** This Contract shall be governed by and in accordance with the laws of the State of Texas. All actions relating in any way to this Contract shall be brought in the State Courts in Calhoun County in the State of Texas.
8. **TERMINATION OF CONTRACT.** This Contract may be terminated, without cause, by either party upon thirty (30) days written notice to the other party. This termination notice period shall be beginning upon receipt of the notice of termination. Such a termination does not bar either party from pursuing a claim for damages for breach of the contract

This Contract may be terminated, for cause, by the non-breaching party notifying the breaching party of a substantial failure to perform in accordance with the provisions of this Contract and if the failure is not corrected within ten (10) days of the receipt of the notification. Upon such termination, the parties shall be entitled to such additional rights and remedies as may be allowed by relevant law.

Termination of this Contract, either with or without cause shall not form the basis of any claim for loss of anticipated profits by either party.

The CITY may terminate this Agreement for any reason at any time by written notice. The notice shall specify the date upon which such termination becomes effective and the CITY shall pay the Contractor for Services rendered prior to the effective date of termination.

9. **SUCCESSORS AND ASSIGNS.** CONTRACTOR shall not assign its interest in this Contract without the written consent of CITY. CONTRACTOR has no authority to enter into contracts on behalf of CITY.
10. **COMPLIANCE WITH LAWS.** CONTRACTOR represents that it is in compliance with all federal, state, and local laws, regulations or orders, as amended or supplemented, including but not limited to HB 89, requiring the contractor to state that it does not and will not boycott Israel for the term of the contract. The implementation of this Contract shall be carried out in strict compliance with all federal, state, or local laws.
11. **NOTICES.** All notices which may be required by this contract or any rule of law shall be effective when received by certified mail sent to the following addresses:
12. **E-VERIFY.** As a condition of payment for services rendered under this agreement, CONTRACTOR shall comply with the requirements of Article 2 of Chapter 64 of the General Statutes. Further, if CONTRACTOR provides the services to the County utilizing a subcontractor, CONTRACTOR shall require the subcontractor to comply with the requirements of Article 2 of Chapter 64 of the General Statutes as well. CONTRACTOR shall verify, by affidavit, compliance of the terms of this section upon request by the County.
13. **CITY NOT RESPONSIBLE FOR EXPENSES.** CITY shall not be liable to CONTRACTOR for any expenses paid or incurred by CONTRACTOR, unless otherwise agreed in writing.
14. **EQUIPMENT.** CONTRACTOR shall supply, at its sole expense, all equipment, tools, materials, and/or supplies required to provide Services hereunder, unless otherwise agreed in writing.
15. **ENTIRE CONTRACT.** This Contract shall constitute the entire understanding between CITY and CONTRACTOR and shall supersede all prior understandings and agreements relating to the subject matter hereof and may be amended only by written mutual agreement of the parties:
16. **HEADINGS.** The subject headings of the sections are included for purposes of convenience only and shall not affect the construction or interpretation of any of its provisions. This Contract shall be deemed to have been drafted by both parties and no interpretation shall be made to the contrary.

**17. EXISTENCE.** CONTRACTOR warrants that it is a corporation duly organized, validly existing, and in good standing under the laws of the State of Texas and is duly qualified to do business in the State of Texas and has full power and authority to enter into and fulfill all the terms and conditions of this contract.

**18. CORPORATE AUTHORITY.** By execution hereof, the person signing for CONTRACTOR below certifies that he/she has read this Contract and that he/she is duly authorized to execute this Contract on behalf of the CONTRACTOR.

**19. WRITTEN NOTICE TO PROCEED.** The CITY shall issue an official written Notice to Proceed for the services referenced in this contract. The notice shall be sent via email followed by regular mail. Under no circumstances shall the CITY be liable for any services rendered unless the written Notice to Proceed has been sent and received by the CONTRACTOR. CONTRACTOR must acknowledge receipt of the written Notice to Proceed.

**20. AMENDMENTS.** This Agreement shall not be modified or otherwise amended except in writing signed by authorized personnel on behalf of both parties. All change orders shall be in writing. Oral changes are expressly prohibited and will not be recognized.

IN TESTIMONY WHEREOF, the parties have expressed their agreement to these terms by causing this Agreement to be executed by their duly authorized officer or agent.

CITY OF PORT LAVACA  
202 N. Virginia St.  
Port Lavaca, Texas 77979  
361-552-9793

CONTRACTOR

By: \_\_\_\_\_

By: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

# TESTENGEER INCORPORATED

ENGINEERING AND TECHNICAL SERVICES

P.O. BOX 557, 3777 HWY. 35 SOUTH, PORT LAVACA, TEXAS 77979  
PHONE: (361) 552-7621 FAX: (361) 552-6976

## New Electrical Service Project- Nautical Landing Marina

City of Port Lavaca  
DOCUMENT TRANSMITTAL NO.: 221016834  
TESTENGEER NO. 20113996

MAJOR SUBJECT: Electrical Service Design

ISSUED FOR: Construction

DISTRIBUTION BY:

DATE ISSUED: 10/24/2022

- CLIENT  
 TESTENGEER

DISTRIBUTION	LOCATION	TRANS	BOND COPIES	ORIG.s	ELEC. FILES
Tim Dent	City of Port Lavaca	1			1
Derrick Smith	City of Port Lavaca	1			1
Jody Weaver	City of Port Lavaca	1			1
Patrick Uresti	Testengeer	1			1
Kirk Klinkerman	Testengeer	1			1
Project Folder	Testengeer	1		1	1

**ISSUED BY:**

ORIGINATOR: Kirk A. Klinkerman, P.E.  
Kirk Klinkerman, PE

TECHNICAL APPROVAL: Kirk A. Klinkerman, P.E.  
Kirk Klinkerman, PE # 91026

PROJECT MANAGER: Patrick W. Uresti  
Patrick Uresti

Texas Board of Professional Engineers - Testengeer, Inc. Registration # F-3273

**Issue Record:**

<input type="checkbox"/> 10% Review	<input type="checkbox"/> Review & Comment	<input checked="" type="checkbox"/> Construction	<input type="checkbox"/> Fabrication
<input type="checkbox"/> 50% Review	<input type="checkbox"/> Approval	<input type="checkbox"/> Construction Revised	
<input type="checkbox"/> 90% Review	<input type="checkbox"/> Bid	<input type="checkbox"/> Record/File	

NEW ELECTRICAL SERVICE  
OF  
NAUTICAL LANDING MARINA BUILDING  
CITY OF PORT LAVACA

AT

PORT LAVACA, TEXAS

PREPARED BY  
Kirk A. Klinkerman, P.E.



*Kirk A. Klinkerman, P.E.*  
*10/24/2022*

TESTENGEER ENGINEERING, INC.  
TEXAS P. E. # F3273  
October, 2022

**PREFACE**

**ISSUED FOR**  
**OCTOBER 24, 2022**  
**CONSTRUCTION**

This package provides the design documents necessary for the new electrical service to the Nautical Landing Marina Facility located in Port Lavaca, Texas. Data collected from the City of Port Lavaca, a site visit, and photos were used in the development of this design. A job scope, drawing showing utility service details, photo sketches, calculations and reference documents are included in this package. This work is recorded within the following documents:

## TABLE OF CONTENTS

- Job Scope
- Photo Sketches
- Drawing – Utility service details

### TAB A

- Calculations
- Reference data

Testengeer, Inc.  
Transmittal # 221016834

**ATTACHMENTS:**

P.E. Sealed - Electrical Service Design Package

DRAWING NO.	REV	DESCRIPTION	CAD SAVE NAME:
E-20113996-01	0	RISER DIAGRAM, DETAILS, & PANEL SCHEDULE	PDF



SCOPE OF WORK  
NAUTICAL LANDING MARINA BUILDING  
NEW ELECTRICAL SERVICE  
PORT LAVACA, TEXAS  
DATE: 09/28/2022

I. TITLE

NAUTICAL LANDING MARINA BUILDING NEW ELECTRICAL SERVICE SCOPE

II. LOCATION

Port Lavaca, Texas

III. SCOPE

This scope of work is issued to describe the work required for the installation of a proposed new 240/120V service of the Nautical Landing Marina Building at Port Lavaca, Texas.

IV. SAFETY AND GENERAL

When necessary, isolate all electrical power and verify that the proper LOTO is followed before any work is done on potentially energized circuits. A successful project means "NO INCIDENTS, NO ACCIDENTS AND ZERO INJURIES". Test before touch.

V. INSTALLATION OF NEW SERVICE

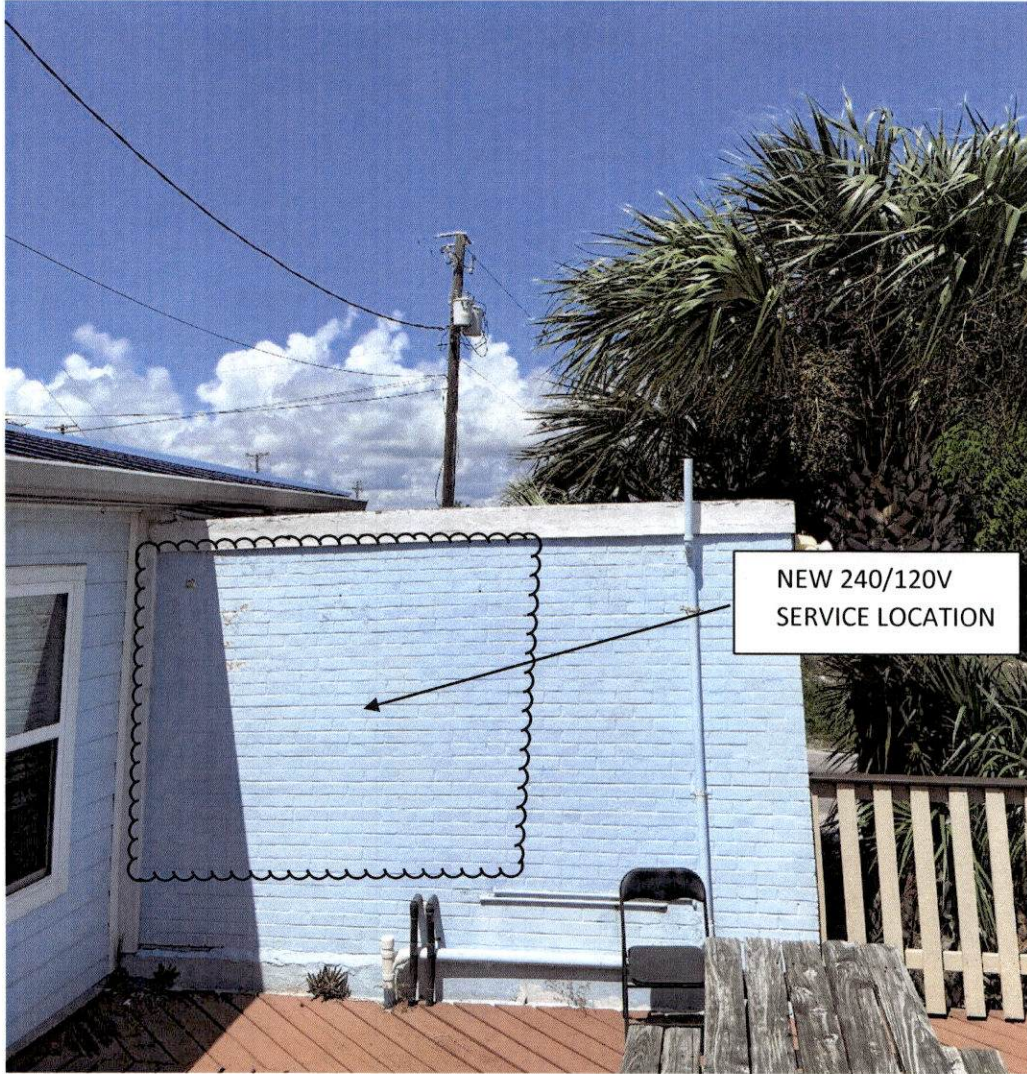
1. The location of the new service equipment will be on the southeast facing blue brick wall shown on Sketch SK-20113996-ELEC-01
2. Install the new service equipment as shown on Drawing E-20113996-01.
3. Install two new disconnects at a location within sight and readily accessible from the two existing outside A/C condenser units. For the condenser unit protected by the 50A breaker, run 2 - #8 copper THWN-2 90°C conductors with a single #10 copper AWG green insulated equipment ground conductor. For the condenser unit protected by the 30A breaker, run 2 - #10 copper THWN-2 90°C conductors with a single #10 copper AWG green insulated equipment ground conductor. The conductors can be run in a single 1" rigid metal conduit from the 400A Panel to a NEMA 3R junction box in close proximity to the two new disconnects. Make connections at the 400A panel breakers and A/C disconnects including equipment ground conductors. See 400A Panel Schedule on Drawing E-20113966-01.

VI. TIE-IN OF AEP AND NAUTICAL LANDING LOADS TO NEW SERVICE

1. After the new service equipment has been installed and inspected by Testengeer Engineering and approved by AEP, utility power feeding the existing Nautical Landing Building Service will be disconnected by AEP.

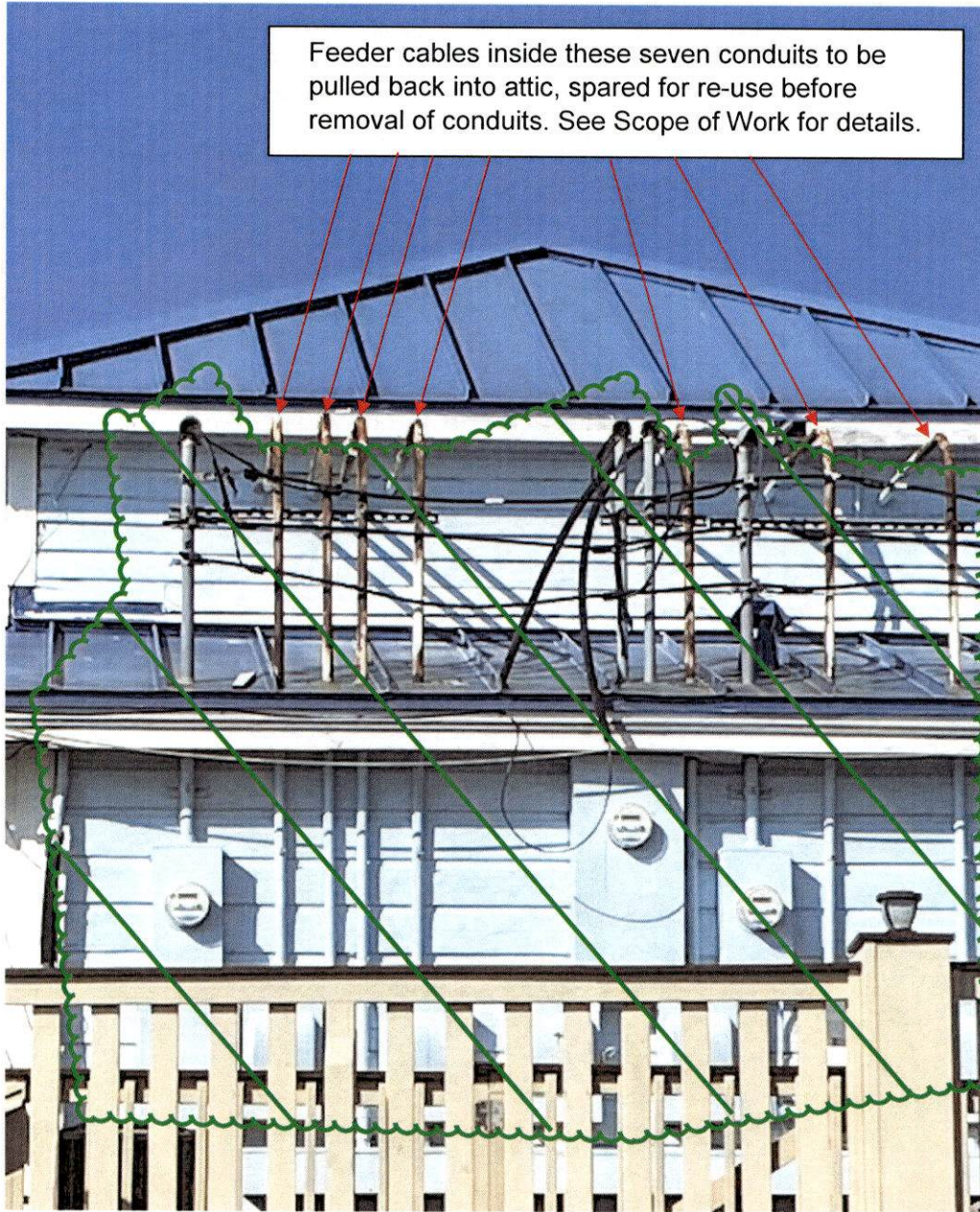
**ISSUED FOR  
OCTOBER 24, 2022  
CONSTRUCTION**

2. Disconnect load feeder cables at the existing service 100A fused disconnects. The conduits associated with 7 sets of feeder cables will be disconnected/separated without damaging the cables at a site specified location inside the building attic. Pull these cables back into the attic, coil and spare for later use and remove the empty conduits. See Sketch SK-20113996-ELEC-02.
3. Route the 7 sets of spared load feeder cables described in previous Step 2 to the cable trough associated with the new junction boxes (JB-1 through JB-6) installed in the attic and shown on drawing E-20113996-01. These cables will need to be protected from physical damage through conduit or other approved means. City of Port Lavaca will provide guidance on where to land the wires. Per guidance, properly make connections including lines, neutrals, and equipment ground conductors at JB1 through JB6.
4. Disconnect and remove the feeder cables and conduits to the two existing HVAC condenser units located at the existing service area.
5. Run new properly sized feeder cables/flexible conduit from the two newly installed HVAC disconnects to their appropriate HVAC units. Properly make connections.
6. Remove all of the existing electrical service equipment from the east facing blue wood paneled wall and associated roof including weather-heads, conduits, meter cans, disconnect switches, panels, boxes, overhead cables, etc. so that all equipment is removed from the wall. Note: the deteriorated blue wooden paneling is going to be replaced in the future. See Sketch SK-20113996-ELEC-02.
7. AEP will make connections at the new service weather-heads and make necessary installations and connections within the CT box and meter can. Once complete, AEP will restore power to the Nautical Landing Building through the new service equipment.



**ISSUED FOR  
 OCTOBER 24, 2022  
 CONSTRUCTION**

	BY	DATE	NAUTICAL LANDING MARINA BUILDING	CITY OF PORT LAVACA PORT LAVACA, TEXAS
DRAWN	KAK	09-23-22	ELECTRICAL	
CHKD	KAK		NEW 240/120V SERVICE LOCATION	SK-20113996-ELEC-01
APPD				
				SHEET: 1 of 1



Feeder cables inside these seven conduits to be pulled back into attic, spared for re-use before removal of conduits. See Scope of Work for details.

Remove all electrical equipment from east facing wall and roof. See Scope of Work.

**ISSUED FOR  
OCTOBER 24, 2022  
CONSTRUCTION**

	BY	DATE	NAUTICAL LANDING MARINA BUILDING	CITY OF PORT LAVACA PORT LAVACA, TEXAS
DRAWN	KAK	09-23-22	ELECTRICAL	
CHKD	KAK		EXISTING 240/120V SERVICE	SK-20113996-ELEC-02
APPD			EQUIPMENT REMOVAL	
				SHEET: 1 of 1



Calculations

Kirk Klinkerman, P.E.

9/23/22

**Background information:**

The electrician working with the City of Port Lavaca took voltage measurements on 9/8/22 at all of the existing service fused disconnects. The hot leg of the AEP open delta supply is not used in the Nautical Landing Marina Building. All line to ground measurements were 120V. Therefore, the AEP supply is via the single 50kVA 120/240V transformer. Therefore the supply transformer FLA is  $50,000\text{VA} / 240\text{V} = 208\text{A}$ . No new loads are being added to the Nautical Landing Marina Building and there have been no issues with the existing service. We will be replacing the existing 6 – 100A fused disconnect service (600A total) with a new 400A service. The AEP transformer is protected with primary fuses and the secondary conductors appear to be ~2/0 - 4/0 in size from site visit and photos. It is not known if the AEP secondary conductors are overload protected by the primary fuses. However, we are reducing the overall service overcurrent protection and NEC230.90 allows for the sum of the rating of service overcurrent protection to exceed the ampacity of the service conductors if the load does not exceed the ampacity of the service conductors.

**Service conductor/conduit sizing:**

For 400 amp service in conduit, a single 500 kcmil 90°C copper conductor per line would be required. However, after speaking with the City of Port Lavaca and electrician, due to availability of conductors, we will install two parallel 3/0 copper 90°C conductors per line.

For 2 - 3/0 copper conductors with 90°C insulation in conduit adjusted for 104°F ambient:

NEC Table 310.15(B)(16):

$(225\text{A} * 2 * .91) = 409.5\text{ amps}$ . (The 75°C rating for 2- 3/0 copper conductors is 400 amps)

We will provide two conduit / weather-head runs for the AEP tie-in. Each conduit will be two inches RMC. Per RMC conduit fill NEC Table C.9, a 1.5" can handle no more than three THWN-2 3/0 conductors. I will choose 2" for a little extra space.

Note: The 400A panel called out in the design is an Eaton BR4242B400R or equivalent. This panel has a 400A main breaker with a 250kcmil conductor lug limitation. The large 400A panel is considered a free air space so NEC table 310.15(B)(17) applies. Adjusted for 104°F, the 250kcmil 90°C copper conductor free air rating is 414 amps. The 75°C free air rating for 250kcmil copper is 405 amps. We will transition from 2-3/0 copper 90C to 1-250 kcmil copper 90C within the 400A panel. A lot of room is available in the panel.

**Service Bonding Jumper and Grounding Electrode Conductor Sizing:**

The bonding jumper and grounding electrode conductor sizes are based on the area of the service conductors coming into the system. For 2 - 3/0 copper conductors the equivalent area is  $2 * 167.8\text{ kcmil} = 335.6\text{ kcmil}$ . Per NEC Tables 250.66 and 250.102, both the bonding jumper and grounding electrode conductor will be #2 copper conductor.

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**Conduit Size between CT Box and 400A Panel:**

For a 2 ½" RMC, per NEC Table C.9, 7 - 3/0 THWN-2 conductors can fit.

**Conductor/conduit Sizing for 100A Feeders:**

For the 100A feeders we will use #2 AWG copper 90C conductor. From NEC Table 310.15(B)(16) and adjusted for 104°F ambient:  $(130A * .91) = 118$  amps. We will be supplying 6 feeders at 3 #2 AWG conductors per feeder or 18 #2AWG THWN conductors. Per NEC Table C.9, a 3" RMC conduit can handle 26 #2 THWN-2 conductors. The next size lower was barely large enough. The EGC is based on 100A protection and per 250.122, a #8 copper EGC will be used. NEC 250.122 (C) allows for one EGC in raceway if based on the largest overcurrent protection.

**HVAC Condenser Unit Feeder Conductor/Conduit Sizing:**

Per nameplate, one of the condenser units has an RLA - 26.4A and LRA - 134.0A; for a #8 copper conductor at 60 feet, the voltage drop is 1% for RLA and 3% for LRA.

Per nameplate, one of the condenser units has an RLA - 15.3A and LRA - 77.0A; for a #10 copper conductor at 60 feet, the voltage drop is 0.7% for RLA and 2.5% for LRA.

Per NEC 250.122 a #10 copper EGC is good for both circuits. Per NEC Table C.9, A 1" rigid metal conduit can handle up to nine #8 THWN-2 conductors.

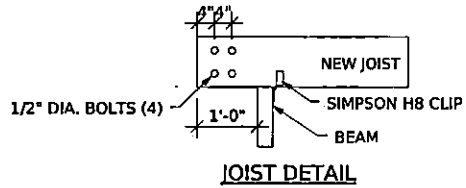
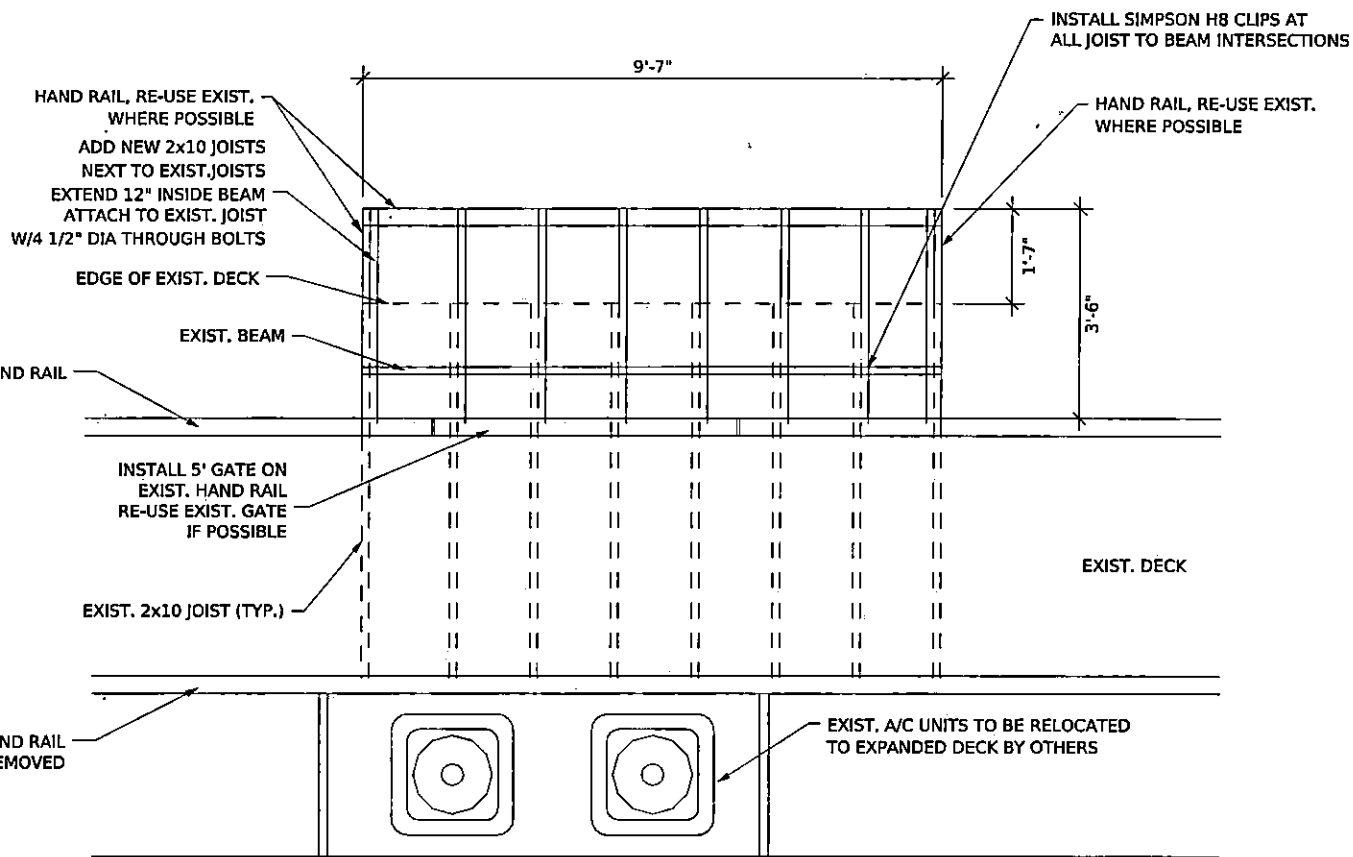
**Available Fault on Service Equipment:**

Typical Z for a pole mounted oil filled 50kVA single phase transformer is ~2.5%. Assuming infinite primary available fault will produce a maximum fault level at or below 8.3kA at 240V.

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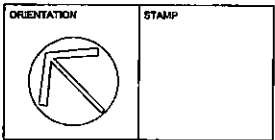




**GENERAL NOTES**

- Contractor to re-use as much of the existing railing as possible.
- All hardware shall be either hot dipped galvanized or stainless steel.
- All lumber shall be pressure treated, No. 2 SYP or stronger.

No.	REVISION/ISSUE	DATE



ALL DRAWINGS ARE THE PROPERTY OF THE DESIGNER AND THEY ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN CONSENT OF THE DESIGNER.  
 CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS BEFORE COMMENCING WORK AND TO REPORT ANY DISCREPANCIES TO THE DESIGNER.

**VEF Engineering**  
 527 Einhurst Drive  
 Port Lavaca, TX 77979  
 (361) 920-6240  
 TX Firm No. 17596

**PROJECT NAME:**  
 Nautical Landing  
 106 S Commerce St.  
 Port Lavaca, TX

**CLIENT:**  
 City of Port Lavaca

**DRAWING:**  
 DECK EXPANSION PLAN  
 SCALE: 1"=1'      DATE: OCT, 2022

<b>DRAWN BY:</b> vef	<b>SHEET:</b>  <b>1</b>
<b>CHECKED BY:</b> vef	
<b>APPROVED BY:</b> vef	

10/13/2022