CENRAL PLANT IMPROVEMENTS
CHAPARRAL BUILDING - 2023
TEXAS A&M UNIVERSITY CORPUS CHRISTI
223 N. CHAPARRAL
CORPUS CHRISTI, TX 78401
OCTOBER 11, 2023

DESCRIPTION OF WORK:

- Scope of work includes the installation of a new chilled water system and
- energy management controls as well as all new electrical service.
- All new chilled water piping, valves, and sensors will be installed, and the
- existing chilled water piping will be replaced.
- New electrical service will be installed to the CHAPARRAL BUILDING.
- The new systems and equipment will be designed and sized to meet the
- current and future needs of the building.
- All new systems and equipment will be installed to meet all codes and
- standards.

- Where required, the contractor will provide and install all new
- chilled water piping, valves, and sensors.
- The contractor shall be responsible for all electrical work,
- including but not limited to, the installation of all new electrical
- systems and equipment.
- The contractor shall be responsible for all chilled water piping and
- sensors, including all necessary connections.
- All new electrical systems and equipment shall be installed to meet all
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- codes and standards.
1. COORDINATE ALL MATERIALS AND METHODS OF INSTALLATION OF ROOFING MATERIALS BEFORE PROCEEDING WITH ANY PHASE OF THE WORK AS HE MAY REQUIRE.

2. THE GENERAL CONTRACTOR MUST COORDINATE ALL PLATFORM DIMENSIONS WITH THE SHOP DRAWINGS OF THE STRUCTURAL ENGINEER. ERRORS THAT MAY OCCUR HEREON.

3. THE STRUCTURAL ENGINEER MUST BE ALLOWED TO INSPECT THE INSTALLATION OF ALL ROOFING MATERIALS. CORRECTIONS MADE BY THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL CONNECTIONS HAVE BEEN TENDED.

4. THE CONTRACTOR MUST SUBMIT ALL SHOP DRAWINGS FOR REVIEW A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THEIR DUE DATE BACK TO THE SUPPLIER. FAILURE TO DO SO WILL BE CONSIDERED A VIOLATION OF THE CONTRACT.

5. THE CONTRACTOR MUST SUBMIT TDI COMPLIANT ROOFING DOCUMENTATION ON PROPOSED RE-ROOF MATERIALS. TDI WILL REVIEW THIS DOCUMENTATION AND PROVIDE FEEDBACK ON ITS COMPLIANCE WITH TDI STANDARDS.

6. THE CONTRACTOR MUST SUBMIT ROOF INFILL SLABS TO THE ENGINEER AND TESTING LAB A MINIMUM OF SEVEN (7) WORKING DAYS BEFORE INSTALLATION TOGO BACK TO THE SUPPLIER. FAILURE TO DO SO WILL BE CONSIDERED A VIOLATION OF THE CONTRACT.

7. THE STRUCTURAL ENGINEER WILL MAKE REGULAR SITE OBSERVATIONS TO CHECK THE WORK OF THE CONTRACTOR. THESE LIMITS SITE OBSERVATIONS SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE WORK.

8. THE CONTRACTOR MUST SUBMIT ALL SHOP DRAWINGS FOR REVIEW A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THEIR DUE DATE BACK TO THE SUPPLIER. FAILURE TO DO SO WILL BE CONSIDERED A VIOLATION OF THE CONTRACT.

9. THE CONTRACTOR MUST FIELD CHECK ALL CONNECTION DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER THE DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER THE DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER THE DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER THE DETAIL OR NOTES ON THE DETAIL. TYPICAL DETAILS SHALL APPLY REGARDLESS OF WHETHER THE DETAIL OR NOTES ON THE DETAIL.

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**MECHANICAL SCHEDULES**

### AIR COOLED CHILLER SCHEDULE

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<th>Item</th>
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### NOMEN CLAIRE INSULATION (IN)

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### EXPANSION TANK SCHEDULE

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### PUMP SCHEDULE

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### AUTOACT THERMZO AMP AND CONTROLS

1. **Mechanical equipment package**
2. **Expansion tank**
3. **Pump schedule**

### GENERAL HYDRONIC PIPING NOTES

- **1. Use successive piping runs with separate valves and control systems.**
- **2. Provide a minimum of two size run-in runs where applicable.**

### AIR AND DIRT SEPARATOR SCHEDULE

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*Notes for each section vary depending on the specific requirements.*

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*Figures and descriptions are placeholders for actual mechanical systems.*

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*All relevant information is listed in the respective sections.*

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*For complete information, please refer to the original mechanical schedules.*
CHILL WATER SYSTEM SEQUENCE OF OPERATIONS

CHILLED WATER PUMP SYSTEM - RUN CONDITIONS:

- THE TWO VARIABLE SPEED CHILLED WATER PUMPS SHALL OPERATE IN A LEAD/LAG FASHION.
- THE PUMPS SHALL RUN FOR FREEZE PROTECTION ANYTIME THE OUTSIDE AIR TEMPERATURE IS LESS THAN 38°F (ADJ.).
- THE CHILLED WATER PUMPS SHALL BE ENABLED WHENEVER:
  - THE LEAD CHILLER IS IN SERVICE AND THE LAG CHILLER IS ON.
  - ON RISING CHILLED WATER DIFFERENTIAL PRESSURE, THE VFDS SHALL STAGE OFF AS FOLLOWS:
    - ON FAILURE OF THE LEAD PUMP, THE LAG PUMP SHALL RAMP UP TO MATCH THE LEAD PUMP SPEED AND THEN RUN IN UNISON WITH THE LEAD PUMP TO MAINTAIN CHILLED WATER DIFFERENTIAL PRESSURE SETPOINT.
  - THE CONTROLLER SHALL MODULATE THE CHILLED WATER PUMP SPEEDS TO MAINTAIN A CHILLED WATER DIFFERENTIAL PRESSURE OF 0.25 PSI (MIN.) OR 0.75 PSI (MAX.) BETWEEN THE TWO CHILLER LOOP PUMPS.
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<th>PANEL</th>
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<th>PANEL SCHEDULE</th>
<th>4000 AMP. 3 ph. 400/230 V 60 Hz</th>
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**General Schedules**

**Panel Schedules**

**Lighting Schedule**

**Equipment Schedule**

**Main Switch Schedule**

**Pole Schedule**

**Implements Schedule**

**Central Plant Improvements**

**NRG Engineering**

**E7.2**
ELECTRICAL LEGEND

1. 208V, 3PH, 4W, 60HZ CONDUCTOR
2. 208V, 3PH, 4W, 60HZ CONDUCTOR
3. 208V, 3PH, 4W, 60HZ CONDUCTOR
4. 208V, 3PH, 4W, 60HZ CONDUCTOR
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26. 208V, 3PH, 4W, 60HZ CONDUCTOR
27. 208V, 3PH, 4W, 60HZ CONDUCTOR
28. 208V, 3PH, 4W, 60HZ CONDUCTOR
29. 208V, 3PH, 4W, 60HZ CONDUCTOR
30. 208V, 3PH, 4W, 60HZ CONDUCTOR

TYPICAL DEVICE ELEVATIONS UNLESS NOTED OTHERWISE

1. Grounding electrode system detail
2. Installation of service entrance SPD
3. Installation of branch panel SPD
4. Duct bank detail
5. Typical device elevation notes

E8.1 ELECTRICAL LEGEND & DETAILS

30