UPGRADE HVAC AND BAS COMMUNITY SUPERVISION CENTER
MISSOURI DEPARTMENT OF CORRECTIONS
KENNETT, MISSOURI

OWNER: STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR
DEPARTMENT OF CORRECTIONS

PROJECT MANAGEMENT: OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION

DESIGNER: BRIC PARTNERSHIP, LLC
3636 S. GEYER, SUITE 204
ST. LOUIS, MISSOURI 63126

PROJECT NUMBER: C1910-01

DRAWING INDEX

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M-0301 ENLARGED PLAN - MECHANICAL
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M-0801 PIPING DETAILS
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ELECTRICAL
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VICINITY MAP
LOCATION MAP

FACILITY LOCATION

G-000
1. THESE PLANS ARE DIAGRAMMATIC IN NATURE.

4. OWNER HAS FIRST RIGHT OF REFUSAL FOR PROVIDE A MINIMUM TWO WORKING DAY

5. ALL HYDRONIC SYSTEMS IMPACTED BY THIS SYSTEM SHUT-DOWNS WITH THE FACILITY.

6. OWNER WILL BE PREPARED TO MAKE SOME ALTERATIONS BEING REMOVED BUT NOT RETAINED BY

7. OWNER.

8. ALL EQUIPMENT BEING REMOVED.

9. THE OWNER SHALL HAVE FIRST SALVAGE

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY TEMPORARY FENCING

11. THE CONTRACTOR DOES NOT CLEARLY

12. REQUIREMENTS.

NOTE: NOT ALL SYMBOLS OR ABBREVIATIONS MAY BE USED.

PHASING NOTE:

DATE: 5/1/2020

ISSUE DATE: 5/1/2020

CHECKED BY: CF

REVISION: ______

PHONE: 314.725.5889

MISSOURI CERTIFICATE OF

PARTNERSHIP, LLC

CONSULTING ENGINEERS

ST. LOUIS, MO 63127

PHONE: 314.725.5889

MISSOURI CERTIFICATE OF

CONTRACTOR AT NO ADDITIONAL COST TO

THE CONTRACTOR WILL BE RESPONSIBLE

FOR PROVIDING ANY TEMPORARY FENCING

TO NEW AND/OR EXISTING SERVICES TO FIT

THE EXACT LOCATION OF EXISTING

THEM SHALL BE FURNISHED ELECTRICALLY ONLY

THE OWNER SHALL HAVE FIRST SALVAGE

THE CONTRACTOR WILL BE RESPONSIBLE

NOTE: NOT ALL SYMBOLS OR ABBREVIATIONS MAY BE USED.
MECHANICAL DEMOLITION FLOOR PLAN
KEY NOTES

- CHILLED WATER BYPASS WITH MODULATING CONTROL VALVE.
- NEW CHILLED WATER COIL IN EXISTING AHU. SEE DETAIL.
- CHILLED WATER GLYCOL FILL STATION SHALL BE A PREFABRICATED AUTOMATIC MAKE-UP PACKAGE, WESSELS COMPANY MODEL GMP-13050 (OR EQUAL) WITH; HP PUMP, STEEL FRAME, 50 GALLON SOLUTION CONTAINER WITH REMOVABLE LID AND A 110 VOLT PUMPING ASSEMBLY. SEE DETAIL.
- PROVIDE DESIGNED BY RANSOM PRENDERGAST FOR MECHANICAL REPAIRS TO INCLUDE VALVES: 6" X 10" CAST IRON COLD WATER INLET, 6" X 10" CAST IRON COLD WATER OUTLET, 3" X 6" CAST IRON CHILLED WAT... (CONTINUE)
- PROVIDE DESIGNED BY RANSOM PRENDERGAST FOR MECHANICAL REPAIRS TO INCLUDE VALVES: 6" X 10" CAST IRON COLD WATER INLET, 6" X 10" CAST IRON COLD WATER OUTLET, 3" X 6" CAST IRON CHILLED WAT... (CONTINUE)
- CHILLED WATER BUFFER TANK. TANK SHALL BE WESSELS MODEL CBT-200 (OR EQUAL) WITH INTERNAL BAFFLE AND TOP AIR VENT CONNECTION. PROVIDE AIR VENT. SECURE TANK TO FLOOR WITH SEISMIC ANCHORS.
- CHILLED WATER PIPING THROUGH WALL INTO ATTIC SPACE.
- EACH AHU WILL REQUIRE NEW BMS CONTROLLER.
- CONNECT EXISTING HW SYSTEM (BOILERS AND PUMPS) TO NEW HW SYSTEM.
### CHILLER SCHEDULE

<table>
<thead>
<tr>
<th>CHILLER</th>
<th>CAPACITY</th>
<th>PLANT</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>NO.</th>
<th>BUILDING</th>
<th>AIR TEMPERATURE</th>
<th>CAPACITY</th>
<th>TYPE</th>
<th>RATING</th>
<th>STORAGE</th>
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<tr>
<td>CH-1</td>
<td>283</td>
<td>50</td>
<td>TRANE</td>
<td>CGAM</td>
<td>60</td>
<td>995</td>
<td>98.1/69.1</td>
<td>55.0/54.3</td>
<td>53%</td>
<td>R-10</td>
<td>24</td>
<td>67</td>
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<td>CH-2</td>
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<td>50</td>
<td>TRANE</td>
<td>CGAM</td>
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<td>995</td>
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<td>55.0/54.3</td>
<td>53%</td>
<td>R-10</td>
<td>24</td>
<td>67</td>
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<tr>
<td>CH-3</td>
<td>214</td>
<td>50</td>
<td>TRANE</td>
<td>CGAM</td>
<td>60</td>
<td>995</td>
<td>98.1/69.1</td>
<td>55.0/54.3</td>
<td>53%</td>
<td>R-10</td>
<td>24</td>
<td>67</td>
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### CHILLED WATER COIL

<table>
<thead>
<tr>
<th>CHILLED WATER COIL</th>
<th>AIR TEMPERATURE</th>
<th>H20 PROP. FACE VELOCITY</th>
<th>PD(WG)</th>
<th>GPM</th>
<th>PD (WG) GLYCOL</th>
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<tr>
<td>490</td>
<td>0.5&quot;</td>
<td>42</td>
<td>52</td>
<td>61</td>
<td>30%</td>
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### PUMP SCHEDULE

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<th>PUMP</th>
<th>MANUFACTURER</th>
<th>TYPE</th>
<th>RATING</th>
<th>STAGE</th>
<th>VOLT/PH</th>
<th>HP</th>
<th>RPM</th>
<th>P.G.</th>
<th>ST.</th>
<th>KG.</th>
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<tr>
<td>CWP-1</td>
<td>TACO</td>
<td>646</td>
<td>351</td>
<td>8</td>
<td>208/3</td>
<td>52</td>
<td>1750</td>
<td>343</td>
<td>52</td>
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### NOTES
- Variable speed drive provided by EC
- Sectional equipment
- Heavy duty base plate

Product listed is basis of design only.
1. REFER TO SHEET ED-311 FOR FURTHER ELECTRICAL DEMO INFORMATION.

2. PLANS ARE DIAGRAMMATIC IN NATURE. THEY REFLECT THE AVAILABLE INFORMATION OBTAINED FROM FIELD OBSERVATION AND EXISTING EQUIPMENT, WIRING, AND COMPONENTS BACK TO SOURCE.

3. DEMOLITION REFERS TO THE DISCONNECTION AND REMOVAL OF ALL ITEMIZED ASSETS AND COMPONENTS FROM THE BUILDING STRUCTURE AND ITS ENVIRONMENT.

4. WHILE MOST DEMOLITION WORK IS CONFINED TO CERTAIN AREAS OF THE BUILDING, WORK FOR OTHER ASSETS MAY EXTEND TO OTHER AREAS OF THE BUILDING. THIS EXTENDED WORK MAY BE PERMITTED AS LONG AS IT IS IN ADHENCE TO PERMITTING PROVISIONS OUTSIDE THE SCOPE OF WORK.

5. DEMOLITION REFERS TO THE DISCONNECT AND REMOVAL OF ALL ITEMIZED ASSETS AND COMPONENTS BACK TO SOURCE.

6. CONTRACTORS SHALL PROVIDE ALL CUTTING AND PERMANENT DISCONNECTION AT MEASUREMENT OF DEMOLITION WORK AND INSTALLATION OF NEW EQUIPMENT, WIRING, AND COMPONENTS BACK TO SOURCE.

7. COORDINATE THE DISCONNECT AND REMOVAL OF ALL ITEMIZED ASSETS AND COMPONENTS BACK TO SOURCE.

8. REFER TO SHEET ED-401 FOR FURTHER ELECTRICAL DEMO WORK IN THIS AREA.

9. SMALL ENLARGED DEMO PLAN SHEET ED-311 FOR DEMO WORK IN THE AREA.

PROJECT TITLE: HVAC AND BAS UPGRADE

PROJECT NUMBER: 180 LAURA DRIVE

KINNETT, MO

PROJECT F (CH08)

STATE OF MISSOURI
GOVERNOR

AUTHORITY #2002028690
PHONE: 314.725.5889

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
DEPARTMENT OF CORRECTIONS

PROJECT TITLE: HVAC AND BAS UPGRADE

CITY OF KINNETT

ISSUE DATE: 4/24/2020

REVISED: DATE: 4/25/2020

SHEET NUMBER: DEMO PLANS - ELECTRICAL

ED-101
\[\text{GENERAL NOTES}\]

1. PLANS ARE DIAGRAMMATIC IN NATURE. THEY REFLECT THE AVAILABLE INFORMATION OBTAINED FROM FIELD OBSERVATION AND EXISTING DOCUMENTATION. ACTUAL LOCATION OF ELEMENTS AND EQUIPMENT MAY DEVIATE FROM THE LOCATION AND QUANTITIES SHOWN.

2. REMOVE EXISTING DISCONNECT, REMOVE EXISTING FEEDERS, AND REMOVE EXISTING ACCESSIBLE CONDUIT BACK TO MDP-1.

3. REMOVE EXISTING 200 AMP FUSED SWITCHES FOR CU-1, CU-2, AND CU-3.

4. REMOVE CONDUIT AND WIRES FROM DISCONNECT TO CONDENSING UNIT.

\[\text{KEYED NOTES}\]

1. REMOVE EXISTING DISCONNECT, REMOVE EXISTING FEEDERS, AND REMOVE EXISTING ACCESSIBLE CONDUIT BACK TO MDP-1.

2. REMOVE EXISTING 200 AMP FUSED SWITCHES FOR CU-1, CU-2, AND CU-3.

3. REMOVE CONDUIT AND WIRES FROM DISCONNECT TO CONDENSING UNIT.
GENERAL NOTES:
1. FOR FURTHER MECHANICAL INFORMATION, REFER TO SHEET M-601.
2. FOR FURTHER ELECTRICAL INFORMATION, REFER TO SHEET E-501.

KEYED NOTES:

1. PROVIDE A 400 AMP 3-POLE FUSE-OUT SWITCH, FUSED AT 300 AMP AS DIRECTED ON SHEET M-601. PROVIDE ALL NECESSARY FUSER PANEL AND FUSE CONSUMABLES TO MEET 300 AMP REQUIREMENTS.

2. PROVIDE A 400 AMP 3-POLE DISCONNECT FOR CH-1.

3. PROVIDE A 400 AMP 3-POLE DISCONNECT FOR CHILLER PUMP.

4. PROVIDE (3) #8 AND (1) #10 GROUND IN 3/4" CONDUIT. EXTEND CHILLER PUMP CIRCUIT TO EXISTING PANEL MDP-1, TO FUSED SPARE SWITCH DESCRIBED IN KEYED NOTE 5.

5. PROVIDE 40 AMP FUSES IN EXISTING SPARE FUSED SWITCHES IN PANEL MDP-1, FOR CWP-1 AND CWP-2.

6. ELECTRICAL CONTRACTOR SHALL PROVIDE A TEMPORARY MEANS OF MAINTAINING POWER AND CIRCUIT PROTECTION TO THE THREE EXISTING CONDENSING UNITS DURING Tie IN TO NEW CHILLER CIRCUIT.

7. MECHANICAL CONTRACTOR SHALL PROVIDE A TEMPORARY MEANS OF MAINTAINING POWER AND CIRCUIT PROTECTION TO THE THREE EXISTING CONDENSING UNITS DURING THE INSTALLATION OF NEW CHILLER CIRCUIT.

8. PROVIDE (3) 500KCM AND (1) #2 GROUND IN 3" CONDUIT. EXTEND CH-1 CIRCUIT TO 400 AMP 3-POLE FUSE-OUT SWITCH REFERENCED IN KEYED NOTE 1.

9. PROVIDE A NEMA 3R 400 AMP DISCONNECT FOR CH-1.

STATE OF MISSOURI
MICHAEL L. PARSON, GOVERNOR

OFFICE OF ADMINISTRATION
DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
DEPARTMENT OF CORRECTIONS

PROJECT TITLE: HVAC AND BAS UPGRADE
1401 LAURA DRIVE
KENNATT, MO

PROJECT # (C1960-01

REVISION: DATE:

ISSUE DATE: 4/24/2020
CAD DWG FILE: DRAWN BY:
CHECKED BY:
DESIGNED BY:

SHEET TITLE: ENLARGED PLANS - ELECTRICAL
SHEET NUMBER: E-401
### EQUIPMENT DATA SCHEDULE

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<th>SHEET NUMBER</th>
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<tr>
<th>MODEL</th>
<th>CHILLER</th>
<th>LOCATION</th>
<th>3RD PIPED NAME</th>
<th>VOLTS</th>
<th>AMPS</th>
<th>HP</th>
<th>TYPE</th>
<th>SPECIFICATION DIVISION NUMBER</th>
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<tbody>
<tr>
<td>CH-1</td>
<td>CWP-1 PUMP</td>
<td>MECHANICAL ROOM 137</td>
<td>230V</td>
<td>208/3</td>
<td>5HP</td>
<td>208/3</td>
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**SPECIFICATION DIVISION NUMBER:**
- DIVISION 22 - PLUMBING
- DIVISION 23 - MECHANICAL
- DIVISION 26 - ELECTRICAL

**STARTER TYPE:**
- COMB1 - COMBINATION FULL VOLTAGE NON-REVERSING MAGNETIC STARTER WITH FUSED DISCONNECT SWITCH
- COMB2 - COMBINATION FULL VOLTAGE NON-REVERSING MAGNETIC STARTER WITH UNFUSED DISCONNECT SWITCH
- COMB3 - COMBINATION FULL VOLTAGE NON-REVERSING MAGNETIC STARTER WITH THERMAL MAGNETIC MOLDED CASE CIRCUIT BREAKER DISCONNECT
- COMB4 - COMBINATION FULL VOLTAGE NON-REVERSING MAGNETIC STARTER WITH MAGNETIC ONLY MOLDED CASE CIRCUIT BREAKER DISCONNECT

**ACCESSORIES:**
- HOAP - HOA WITH PILOT LIGHT
- MAN - MANUAL STARTER WITH PILOT LIGHT
- PWCP - STAR DELTA STARTER
- VFD - VARIABLE FREQUENCY DRIVE
- 2S2W - 2 SPEED 2 WINDING
- 2S1W - 2 SPEED SINGLE WINDING

**FUSE SIZE:**
- 400A/300A
- 60A/40A

**REMARKS:**
- (1) FIRE ALARM INTERLOCK
- (2) INTEGRAL DISCONNECT SWITCH
- (3) MOUNT DISCONNECT SWITCH ON EQUIPMENT HOUSING
- (4) INTEGRAL MOTOR STARTER
- (5) INTEGRAL CONTROLLER
- (6) VFD PROVIDED BY AHU MANUFACTURER

**STATE OF MISSOURI**
- MICHAEL L. PARSON, GOVERNOR

**MISSOURI CERTIFICATE OF AUTHORITY #2002028690**
- CARL V. HAUCK, PE
- LICENSE #: 016688
- EXP: 12/31/2021

**PARTNERSHIP, LLC**
- CONSULTING ENGINEERS
- 3636 S. GEYER ROAD
- SUITE 305
- ST. LOUIS, MO 63127
- PHONE: 314.725.5889

**OFFICE OF ADMINISTRATION**
- DIVISION OF FACILITIES MANAGEMENT, DESIGN AND CONSTRUCTION
- DEPARTMENT OF CORRECTIONS

**PROJECT TITLE:**
- HVAC AND BAS UPGRADE

**PROJECT #:**
- C1910-01

**REVISION:**
- DATE: __

**ISSUE DATE:**
- 4/24/2020

**CAD DWG FILE:**
- DRAWN BY: TSM
- CHECKED BY: CVR
- DESIGNED BY: TSM

**SHEET TITLE:**
- SCHEDULES

**SHEET NUMBER:**
- E-501