UNIVERSITY OF NEVADA, LAS VEGAS
SHADOW LANE CAMPUS
HEATING HOT WATER REPIPE
 PART 2 - MATERIALS

1. WHERE LOW VOLTAGE POWER IS REQUIRED PROVIDE TRANSFORMERS FROM

2. ALL TRANSVERSE JOINTS SHALL BE SEALED AIRTIGHT WITH HARDCAST DT

3. DUCTWORK MATERIALS AND JOINTS SHALL MEET STANDARDS FOR MEDIUM

4. THE TAPE SHALL EXTEND 

5. NOT TO THICKNESSES LESS THAN 1 INCH (25 MM).

6. INSTALLATION:

7. CONTROLS:

8. - HEATING HOT WATER SYSTEM PIPING FOR CONVERSION TO PRIMARY/SECONDARY SYSTEM

9. - DEMOLITION DRAWINGS OF HEATING HOT WATER SYSTEM PIPING IN CENTRAL PLANT.

10. ALL EQUIPMENT CONTROLLED SHALL HAVE POSITIVE STATUS

11. APPLICATIONS ARE NOT AN ACCEPTABLE METHOD OF

12. MAINTENANCE. BUILDINGS ARE MONITORED AND CONTROLLED

13. THE FILTER PRESSURE DROP ON THE EMCS CENTRAL COMPUTER

14. DIGITAL ALARMS ARE NOT ACCEPTABLE. CALIBRATE SENSORS

15. SYSTEM SHALL BE CAPABLE OF TRENDING AND HISTORICAL DATA

16. BY INDEPENDENT INSTRUMENTS. ALL DATA RETRIEVED BY THE

17. FACILITIES MANAGEMENT PERSONNEL BY THE CONTRACTOR. TO

18. THE HONEYWELL ENTERPRISE BUILDINGS INTEGRATOR SHALL

19. GRAPHICS.

20. 251 - 350 0.29 - 0.32 200 3.0 4.0 4.5 4.5 4.5

21. APPROVED, ENFORCED BUILDING, MECHANICAL, AND PLUMBING

22. COOPERATION WITH THE OTHER TRADES.

23. PRIOR TO START OF ANY WORK.

24. 9. THE CONTRACTOR SHALL COORDINATE FOR CLEARANCES

25. CONSISTENT WITH NORMALLY ACCEPTABLE INDUSTRY

26. SHOULDN'T BE DONE CONTRARY TO THE MANUFACTURER'S

27. MAINTENANCE MANUAL TO THE OWNER.

28. APPURTENANCES, AND OTHER CONTRACTUAL REQUIREMENTS REQUIRED FOR THE

29. INSTALLED SYSTEMS INTERFACE PROTOCOL

30. STATIN THE CAMPUS SERVICES BUILDING. THE PREFERRED

31. PANEL MOUNTED OR (DIN) RAIL MOUNTED TYPE. DOUBLE BACK

32. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

33. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

34. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

35. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

36. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

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39. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

40. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO

41. UNLESS NOTED OTHERWISE, ALL ACTUATORS ARE TO
(E)2" HEATING HOT WATER RETURN DOWN FROM ROOF ADJACENT TO COOLING TOWERS. (E)2" HEATING HOT WATER SUPPLY UP TO ROOF ADJACENT TO COOLING TOWERS.

(E)2 1/2" HEATING HOT WATER SUPPLY TO AHU-1. (E)2 1/2" HEATING HOT WATER RETURN FROM AHU-1. EXISTING DOMESTIC HOT WATER TANK.

EXISTING DOMESTIC HOT WATER PUMP SERVES DOMESTIC HOT WATER TO HOT WATER STORAGE TANK.

(E)2 1/2" HEATING HOT WATER SUPPLY AND RETURN TO THIRD LEVEL.

EXISTING HEATING HOT WATER MOTORIZED CONTROL VALVE TO BE REMOVED.

DEMO EXISTING HEATING HOT WATER PIPING. REFER TO DEMO ELEVATION VIEWS ON SHEET M3.01.
NEW HEATING HOT WATER RETURN DOWN FROM ROOF ADJACENT TO COOLING TOWERS.

NEW HEATING HOT WATER SUPPLY UP TO ROOF ADJACENT TO COOLING TOWERS.

NEW HEATING HOT WATER SUPPLY AND RETURN TO THIRD LEVEL.

NEW HEATING HOT WATER BUFFER TANK.

NEW HEATING HOT WATER PRIMARY PUMP.

VFD LOCATION FOR NEW HEATING HOT WATER PUMP SERVING DOMESTIC HOT WATER HEAT EXCHANGER.

LOCATION FOR ONICON F-3500 FLOW METER ON SECONDARY LOOP HEATING HOT WATER SUPPLY PIPING.

LOCATION FOR ONICON F-3500 FLOW METER ON PRIMARY LOOP HEATING HOT WATER RETURN PIPING DOWNSTREAM OF BUFFER TANK.

REFER TO ELEVATION VIEWS ON SHEET M3.01.

NEW 4-INCH EXHAUST FLUE DUCT UP THROUGH CEILING OPENING.

NEW 4-INCH DUCT UP THROUGH CEILING OPENING FOR WATER HEATER COMBUSTION AIR.
### CENTRIFUGAL PUMP SCHEDULE

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1. EXISTING HEATING HOT WATER PUMP TO REMAIN.
2. REFER TO SHEET M5.01 FOR EQUIPMENT DETAILS.
3. PUMP TO BE SECURED TO EQUIPMENT THROUGH THE USE OF PIPE SUPPORTS.
4. PROVIDE WITH ECCENTRIC REDUCER ON DISCHARGE/SUCTION SIDE.

### HOT WATER BOILER SCHEDULE

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<tr>
<td></td>
<td></td>
<td>(E)B-1 P-K THERMIFIC NM-2000</td>
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<td>2,000</td>
<td>1,700</td>
<td>1,190</td>
<td>150</td>
<td>120</td>
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<td>1,200</td>
<td>1,700</td>
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<td>190</td>
<td>1,200</td>
<td>1,700</td>
<td>1,190</td>
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1. EXISTING BOILER
2. BOILER HAS MAXIMUM SUPPLY TEMPERATURE OF 190°F AND MINIMUM OF 160°F.

### HEATING HOT WATER BUFFER TANK

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<td>HBT-210</td>
<td>2-PORT</td>
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<td>450</td>
<td>125</td>
<td>4</td>
<td>458</td>
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1. BODY OF TANK MADE WITH ASME APPROVED CARBON STEEL
2. INCLUDE 1/2" ELASTOMERIC INSULATION.
3. AUXILIARY CONNECTION: 3/4" NPT TOP VENT
4. AUXILIARY CONNECTION: 1" NPT BOTTOM DRAIN
5. DESIGNED AND CONSTRUCTED PER ASME CODE SECTION VII I, DIVISION 1.
HEATING HOT WATER SYSTEM SEQUENCE OF OPERATIONS

1. MINIMUM TEMPERATURE OF 140°F HEATING HOT WATER RETURN.

2. MINIMUM FLOW OF 120 GPM TO ASSOCIATED BOILER.

M. MAINTAIN BOTH OF THE FOLLOWING:
   - EACH MINUTE. IF THE DP SENSOR INDICATES MORE THAN 2 PSI UNDER SETPOINT INCREASE THE SETPOINT 1 PSI EACH MINUTE.
   - EACH PRIMARY PUMP WILL ENABLE WHEN ASSOCIATED BOILER IS ENABLED. PRIMARY PUMP WILL MODULATE TO
     MAINTAIN BOTH OF THE FOLLOWING:
     - SLOWLY INCREASE THE SPEED TO MATCH THE LEAD PUMP. IF THE DP SENSOR INDICATES MORE THAN 2 PSI
       OVER SETPOINT DECREASE THE SETPOINT 1 PSI.

BOILER WILL MODULATE BETWEEN HIGH AND LOW FIRE TO MAINTAIN 180°F HEATING HOT WATER SUPPLY.

CONSTANT FLOW HEATING HOT WATER PRIMARY PUMPS:
LEAD / LAG SEQUENCE:
- Each Primary Pump Will Operate With The Associated Boiler.
- Enable The
- (E)5" HHWS
- WITH THE ASSOCIATED BOILER.
- ENABLING THE
- (E)5" HHWS
- WITHOUT THE ASSOCIATED BOILER.

EMERGENCY SHUT-DOWN:
- HARDWIRE THE BOILER SHUT-DOWN SWITCHES TO THE BOILER CONTROL PANEL.

BOILER WHEN THE OUTDOOR AIR TEMPERATURE IS BELOW THE USER SELECTED SETPOINT (INITIALLY 70°F, WITH A 10°F DEAD-BAND, OFF AT 80°F; ADJUSTABLE), THE
- ASSOCIATED PUMP SHALL BE UNDER NORMAL CONTROL.
- EACH PRIMARY PUMP WILL OPERATE WITH THE ASSOCIATED BOILER.

IF THE LEAD SECONDARY PUMP CANNOT MEET SETPOINT AFTER 4 MINUTES ENABLE THE LAG PUMP. START THE LAG PUMP AT ITS MINIMUM SPEED AND
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1. HEATING HOT WATER SUPPLY TEMPERATURE SETPOINT.
2. HEATING HOT WATER SYSTEM DIFFERENTIAL PRESSURE SETPOINT OF 10 PSI (ADJUSTABLE).
   - DIFFERENTIAL PRESSURE IS LOCATED ON 3RD LEVEL IN LOCKER ROOM.

EXISTING 2 1/2" HEATING HOT WATER SUPPLY TO AHU-1
EXISTING ONICON

VARIABLE FLOW HEATING HOT WATER SECONDARY PUMPS:
- LEAD / LAG SEQUENCE:
- Each Primary Pump Will Operate With The Associated Boiler.
- Enable The
- (E)5" HHWS
- WITH THE ASSOCIATED BOILER.
- ENABLING THE
- (E)5" HHWS
- WITHOUT THE ASSOCIATED BOILER.

NEW 210 GALLON BUFFER TANK

GRAPHICALLY INDICATE THE TEMPERATURE OF THE HEATING HOT WATER SUPPLY AND RETURN LEAVING AND ENTERING THE CENTRAL PLANT AS SENSED BY
- THE DP SENSOR.

HEAT TRANSFER UNIT ALARM LED AT ALARM PANEL

NEW 210 GALLON BUFFER TANK

EXISTING 3" HEATING HOT WATER RETURN FROM NORTH SIDE OF BUILDING
EXISTING ONICON

EXISTING 2 1/2" HEATING HOT WATER RETURN FROM SYSTEM DOWN FROM UPPER LEVEL
PLUMBING SPECIFICATIONS

1.01 CONDITIONS

1.02 REVISIONS

1.03 DESIGN DRAWINGS

1.04 MATERIALS

1.05 ACCESSORIES

1.06 SUBMITTALS

1.07 TESTS

1.08 INSTALLATION

1.09 COMMISSIONING

1.10 TESTING

1.11 MAINTENANCE

1.12 WASTE WATER

1.13 GASEOUS

1.14 WATER SUPPLY

1.15 GENERAL NOTES

PLUMBING GENERAL NOTES AND CODE NOTES

GENERAL NOTES

SHEET LIST

APPENDIX

DRAWN BY

ISSUE FOR PERMIT

PLUMBING GENERAL NOTES AND CODE NOTES

GENERAL NOTES

SHEET LIST

APPENDIX
### List of Systems (Size + Abbreviation)

<table>
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<tr>
<th>Type ID</th>
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<td>STORM OVERFLOW DRAIN</td>
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<td>CONDENSATE</td>
<td>PLUMBING SYSTEMS</td>
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### Equipment Instance Tag

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### Symbol

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### UPC Appendix A Water Pressure Calculation

#### Minimum Water Fixture Units - Domestic Cold Water

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<th>Pipe Size</th>
<th>Size</th>
<th>GPM</th>
<th>Velocity</th>
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#### Minimum Water Fixture Units - Domestic Hot Water

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<tr>
<th>Pipe Size</th>
<th>Size</th>
<th>GPM</th>
<th>Velocity</th>
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</thead>
</table>

### Drawn By

**Scale**

**PL0.02**

**12" = 1'-0"**

**Date**

**8/15/2017 4:22:09 PM**

**NOTE:**

- PIPE SIZE GPM VELOCITY
- PIPE SIZE GPM

### Existing Booster Pump Pressure

**HORZ PIPE LENGTH METER TO BUILDING**

**25' X 0.433 P.S.I. PER FOOT = 10.825 P.S.I.**

### Existing Booster Pump Pressure

**TOTAL 55.825 PSI**

### Pipes

- **1 1/2"**
  - 28
  - 4.99
  - 48
  - 11
- **1"**
  - 10
  - 4.02
  - 14
  - 0

### Pipes

- **2 1/2"**
  - 74
  - 5.00
  - 143
  - 57
- **1 1/4"**
  - 17
  - 4.47
  - 25
  - 0

### Pipes

- **4"**
  - 187
  - 5.00
  - 367
  - 170
- **6"**
  - 669
  - 8.00
  - 1332
  - 652

### Pipes

- **2 1/2"**
  - 101
  - 6.76
  - 195
  - 84
- **1 1/2"**
  - 28
  - 4.99
  - 48
  - 11
- **1"**
  - 10
  - 4.02
  - 14
  - 0
EXISTING 2" DOMESTIC COLD WATER FROM BOOSTER PUMP ASSEMBLY. (E)3" NATURAL GAS PIPING UP TO ROOF TO SERVE EXISTING POWER GENERATOR REFER TO PLUMBING DETAIL SHEET PL5.01 FOR (E)2 1/2" NATURAL GAS PIPING DIAGRAM

EXISTING DOMESTIC WATER CHECK VALVE TO BE EXAMINED AND REPLACED IF NECESSARY. EXISTING DOMESTIC HOT WATER AND DOMESTIC HOT WATER RETURN TO/FROM SOUTH SIDE OF BUILDING.

EXISTING DOMESTIC HOT WATER STORAGE TANK. EXISTING DOMESTIC HOT WATER RECIRCULATION PUMP.

EXISTING 2" DOMESTIC HOT WATER PIPING TO EXISTING GAS METER AND REGULATOR ASSEMBLY.

(E)1" DOMESTIC HOT WATER PIPING TO BUILDING. (E)1/2" DOMESTIC HOT WATER SERVING SINK.

(E)2" NATURAL GAS PIPING IS CAPPED. (E)2 1/2" NATURAL GAS PIPING UP TO UPPER LEVELS.

(E)2 1/2" NATURAL GAS PIPING TO EXISTING GAS METER AND REGULATOR ASSEMBLY.

(E)2 1/2" NATURAL GAS PIPING TO EXISTING GAS METER AND REGULATOR ASSEMBLY.
EXISTING 2" DOMESTIC COLD WATER FROM BOOSTER PUMP ASSEMBLY (E)3" NATURAL GAS PIPING UP TO ROOF TO SERVE EXISTING POWER GENERATOR REFER TO PLUMBING DETAIL SHEET PL5.01 FOR (E)2 1/2" NATURAL GAS PIPING DIAGRAM.

EXISTING DOMESTIC WATER CHECK VALVE TO BE EXAMINED AND REPLACED IF NECESSARY. EXISTING DOMESTIC HOT WATER AND DOMESTIC HOT WATER RETURN TO/FROM SOUTH SIDE OF BUILDING. EXISTING DOMESTIC HOT WATER RETURN RECIRCULATION PUMP SEE SHEET PL5.01 FOR GAS PRESSURE REDUCING VALVE DETAIL.

EXISTING 2" DOMESTIC COLD WATER FROM BOILER ASSEMBLY (E)2" DOMESTIC HOT WATER FROM BOILER ASSEMBLY (E)2" DOMESTIC HOT WATER RETURN FROM BOILER ASSEMBLY (E)2" DOMESTIC HOT WATER RETURN TO SOUTH SIDE OF BUILDING.

EXISTING NATURAL GAS METER. EXISTING DOMESTIC HOT WATER RETURN RECIRCULATION PUMP SEE SHEET PL5.01 FOR GAS PRESSURE REDUCING VALVE DETAIL.

EXISTING 2" DOMESTIC COLD WATER FROM BOOSTER PUMP ASSEMBLY (E)3" NATURAL GAS PIPING UP TO ROOF TO SERVE EXISTING POWER GENERATOR REFER TO PLUMBING DETAIL SHEET PL5.01 FOR (E)2 1/2" NATURAL GAS PIPING DIAGRAM.

EXISTING DOMESTIC WATER CHECK VALVE TO BE EXAMINED AND REPLACED IF NECESSARY. EXISTING DOMESTIC HOT WATER AND DOMESTIC HOT WATER RETURN TO/FROM SOUTH SIDE OF BUILDING. EXISTING DOMESTIC HOT WATER RETURN RECIRCULATION PUMP SEE SHEET PL5.01 FOR GAS PRESSURE REDUCING VALVE DETAIL.
### DOMESTIC BOILER SCHEDULE

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<th>Type</th>
<th>Location</th>
<th>Service Cap.</th>
<th>Recovery</th>
<th>Temp Rise</th>
<th>LWT</th>
<th>Input</th>
<th>Vent</th>
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**Notes**

1. COMBUSTION AIR INTAKE AND EXHAUST PIPED OUTDOORS WITH PVC PIPER PER MANUFACTURER’S RECOMMENDATIONS
2. TWO UNITS MANIFOLDED TOGETHER TO PROVIDE DOMESTIC HOT WATER

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### GAS PRESSURE REGULATOR SCHEDULE

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<th>Outlet Pressure</th>
<th>Pipe Inlet</th>
<th>Pipe Outlet</th>
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<th>Orifice Size</th>
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<td>WATER</td>
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<td>11</td>
<td>3/4</td>
<td>1 1/2</td>
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**Notes**

1. GAS REGULATOR SHALL COMPLY WITH CSA 6.22 FOR LINE PRESSURE VENTLESS REGULATORS
2. OVER PRESSURE DEVICE REQUIRED

---

### THERMOSTATIC MIXING VALVE SCHEDULE

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**Notes**

1. ASSE 1017 CERTIFIED
2. TOP OR BOTTOM SUPPLY CONNECTIONS
3. CUPC CERTIFIED
NEW WATER HEATER-1 (400 MBTU)

EXISTING 200 GALLON DOMESTIC HOT WATER STORAGE TANK

1 1/2" NATURAL GAS

2" DOMESTIC HOT WATER TO WATER HEATERS

2" DOMESTIC HOT WATER FROM WATER HEATERS

(E)5" NATURAL GAS

3/4" NATURAL GAS

NEW SELF CONTAINED PRESSURE REGULATOR

1 1/2" NATURAL GAS

1 1/2" NATURAL GAS

1" DOMESTIC HOT WATER RETURN FROM BUILDING

2" DOMESTIC HOT WATER TO BUILDING

2" DOMESTIC COLD WATER FROM BOOSTER PUMP

2" DOMESTIC HOT WATER TO BUILDING

140°F

130°F

EXISTING DOMESTIC HOT WATER RECIRCULATION PUMP

NEW TEMPERATURE MIXING VALVE

1 1/2" DHW

1 1/2" DHW

2" DHW

2" DHW

(E)1" DHWR

(E)1" DCW

(E)2" DHW

2" DHWR

THERM CHECK VALVE

BALL VALVE

CHECK VALVE

BALL VALVE

CHECK VALVE

BALL VALVE

GPR-

TMV-

1 1/2" DHW

1 1/2" DHW

2" DHW

2" DHW

(E)5" NATURAL GAS TO BOILER ROOM

(E)5" NATURAL GAS

NEW WATER HEATER-2 (400 MBTU)
ELECTRICAL EQUIPMENT SYMBOLS

POWER DEVICE SYMBOLS

SINGLE LINE SYMBOLS

GENERAL CIRCUITING INFORMATION

BASIS OF SYMBOL

LIGHT FIXTURES (TYP.)

CIRCUIT (TYP.)

OFF-THE-peg TYPES

CIRCUIT BREAKER

RECEPTACLE

EQUIPMENT MANUFACTURER'S SIZE INDICATES AMPERE RATING, SECOND NUMBER INDICATES POLES, AND * INDICATES FUSE SIZES TO BE COORDINATED WITH MANUFACTURER OF ELECTRICAL METER (PLAN).
## Electrical Specifications

### General Conditions
- Shop drawings...
- Coordinate with owner... working hours...
- Submit his plan...
- Work will not start...
- Work will not start...
- Electrical, communication, fire alarm system, etc.
- Relocation or modification necessary...
- Submit all equipment and devices...
- Submit documentation to the architect/engineer...
- Carefully evaluate all existing materials...
- Current code requirements...
- Submitting bid...
- National Electric Code...
- Provide shop drawing layout...
- Each item by designation appearing on the drawings...
- Conduit subject to physical damage...
- National Electrical Manufacturer's Association...
- The national electric code...
- Use for switching...
- Series rated circuit breakers and equipment not...
- Circuit breakers used for switching...
- Not...
- Motor starters and disconnects...
- #6 AWG 181-315FT.
- #12 AWG 0-70FT.
- 208V
- 120/240V
- 3ϕ
- 4W
- Black, Red, Orange, White, Green...
- Wiring devices shall be commercial specification grade...
- Aluminum conductors not used unless specified...
- Conduit (RGS).
- Raceways passing through fire rated construction...
- Raceways labeled per as-built drawings...
- Electrical specifications...
- Southland Industries are the exclusive property of Southland Industries...
- Any use thereof without the express written consent of Southland Industries...
- Any unauthorized use of the drawings...
- All drawing prepared by Southland Industries...
- Job No.
- Scale...
EXISTING MOTOR CONTROL CENTER "MCCA"
EXISTING SWITCHBOARD "MS"
EXISTING MAIN SWITCHBOARD "MSA"

MINI POWER CENTER 'MPCB'
MPCB - 1, 3, 5
MPCB - 7, 9, 11

VIA MOTOR STARTER
VFD

EXIST. MECH 104B
EXIST. MECH 104A
EXIST. DATA 106
EXIST. TELE 104C
SUPPORT 104E
ELEV. MECH 100E
VEST. 104D

MPCB-8

WH 2
WH 2
WH 2

As indicated
C:\Users\JBenavente\My Documents\Autodesk\My Projects\Revit\2017\UNLV Shadow Lane Heating Hot Water Repipe_jbenavente@southlandind.com.rvt
8/15/2017 2:16:19 PM
E2.01
UNLV SHADOW LANE HEATING HOT WATER REPIPE
1001 SHADOW LANE, LAS VEGAS, NV 89106
5221687
08/15/2017
JB
SP
SP
UNLV
FIRST LEVEL ELECTRICAL POWER PLAN
0 2' 4' 8'
1/4" = 1'-0"

1. REMOVE EXISTING STARTER IN MOTOR CONTROL "MCCA" AND PROVIDE FEEDER TO NEW VFD. EXTEND CONDUIT AND PROVIDE NEW CONDUCTORS.

2. VFD TO BE FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE NEMA SIZE 0 COMBINATION MOTOR STARTER-FUSED DISCONNECT SWITCH. PROVIDE TWO (2) N.O. AND N.C. CONTACTS.

3. INSTALL OR REPLACE CONDUIT AND WIRE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR CORRECT WIRE SIZES AND CONDUIT SIZES FOR VOLTAGE DROP.

4. PROVIDE TWO (2) CONDUIT TO MOTOR STARTER OR VFD TO BE CONNECTED AT MOTOR CONTROL CENTER (MCCA) OR MAIN SWITCHBOARD (MSA).

5. PROVIDE AREA FOR FUTURE ELECTRICAL ENHANCEMENTS.

6. FOR ADDITIONAL INFORMATION AND REQUIREMENTS, REFER TO MECHANICAL DRAWINGS OR MECHANICAL CONTRACTOR.

7. PROVIDE MACHINERY AND EQUIPMENT ELECTRICAL CONNECTION TO MECHANICAL CONTRACTOR. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR CORRECT WIRE SIZES AND CONDUIT SIZES FOR VOLTAGE DROP.

8. PROVIDE ELECTRICAL CONNECTION TO GAS WATER HEATER, 120V, 500W MAX. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.

9. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR CONDUIT AND WIRE SIZES REQUIRED FOR VOLTAGE DROP. B. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR VOLTAGE DROP. B.

10. DIFFER PRIOR TO THE COMMENCEMENT OF CONSTRUCTION; INCLUDE ALL COSTS IN BASE BID FOR VERIFICATION OF EXISTING CONDITIONS.

11. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR CORRECT WIRE SIZES AND CONDUIT SIZES FOR VOLTAGE DROP.

12. REFER TO ELECTRICAL SPECIFICATIONS ON SHEET E0.03 FOR CORRECT WIRE SIZES AND CONDUIT SIZES FOR VOLTAGE DROP.

13. REFER TO MECHANICAL DRAWINGS FOR MORE INFORMATION.
FOR MOTOR CIRCUITS PER NEC 250.122 AND 430 BASED ON MOTOR CIRCUIT OVERCURRENT RATING

COPPER CONDUCTORS, 600V THHN/THWN INSULATION, UON TO EXISTING NEVADA ENERGY TRANSFORMER 480Y/277V, 2000A BUS SWITCHBOARD “MS” TO EXISTING

CONNECTED LOAD COLUMN INCLUDES SUBFED PANELS.

Circuit Description

C

19 SPARE 20 3

B

15 - 15 3

3 - 20 3

3#10, #10G, 3/4" C M 820

HEATING (H) 0.0 1.25 0.0 18

FIRST 10 KW RECEPTACLES (R) PER NEC 220.44 0.0 1.00 0.0

LARGEST MOTOR 2.5 1.25 3.1

ELEVATORS (E) 0.0 1.00 0.0

PROTECTION: 50 KITCHEN EQUIPMENT (K) 0.0 1.00 0.0

OVERCURRENT EQUIPMENT DEMAND CALCULATION PER NEC ARTICLE 220 TOTAL CONN.

EQUIPMENT DEMAND CALCULATION PER NEC ARTICLE 220 TOTAL CONN.

Panel Designation:

(E)800A

1,479.0 KVA (1,472 KVA)

TRIP PHASE:

VA

3 BUS RATING: 100A

25A

20 1 SPARE 10

20 1 SPARE 6

C

480V, 3-PHASE, 3-WIRE, 800A BUS

EXISTING MOTOR CONTROL CENTER “MCCA” (E)HWP

VFD

LOAD

I.

H.

G.

C.

A.

LAYOUTS IN COMPLIANCE WITH NEC ART 110 REQUIREMENTS BASED ON PROVIDE SHOP DRAWINGS SHOWING ELECTRICAL EQUIPMENT ROOM CONSTRUCTION; INCLUDE ALL COSTS IN BASE BID FOR VERIFICATION OF INFORMATION PROVIDED BY OWNER, CONTRACTOR IS RESPONSIBLE TO ALL ELECTRICAL EQUIPMENT AND DEVICES LOCATED OUTDOORS SHALL BE ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE FULLY RATED TO TOTAL DEMAND LOAD: 7.0 KVA

DESCRIPTION CKT

UNLV SHADOW LANE HEATING E5.01

3 702.736.4041 JF

DRAWN BY

SCALE

HOT WATER REPIPE

SUPPLIER AND PROVIDE NEW FUSES AND WIRING AS REQUIRED. REMOVE EXISTING STARTER AND PROVIDE NEW FUSES IN EXISTING ...

... TO VERIFY EXISTING LOADS IN COMPLIANCE WITH SPECIFICATIONS ON SHEET E0.03 PRIOR TO THE CONNECTION OF ANY NEW LOADS.