PHASE "A" PHASE "B" PHASE "C" NEUTRAL

A. 1. HOUSE LOADS (EXTERIOR LIGHTS)
   B. LAUNDRY/MEETING RMS/LOBBY
   C. CORRIDORS, STAIRS/KITCHEN
   D. MECH., STORAGE

TOTAL 39.095 109109 109

2 A. 25% OF 1 9.77375 27272727
   B. 1. 33,894 SF x 2W = 67,788 W  - FIRST 20,000W @ 50%
      REMAINING 47,788W @ 40%
   C. A/C, COOLING NON-COINCIDENT LOAD
      HEAT GREATER @ 2.0KW x 100 UNITS 200
   D. MECHANICAL FANS

E. GUEST LAUNDRY DRYER 1 @ 5000W
   F. GUEST LAUNDRY WASHER 1 @ 3.0KW
   G. VENDING/ICE MACHINES
   H. GENERAL RCPTS 383@180 VA
   I. MISCELLANEOUS

D. 1. MECHANICAL FANS
   2. AHU'S (HEATING) 37.3
   3. KITCHEN LOAD 50.47
   4. PUMPS 9.15
   5. SWIMMING POOL 14.52
   6. 25% LARGEST MOTOR (FREEZER) 1.60

E. 20.0338 1,721 1,721 1,721

F. 4-750KCMIL CU, THWN

G. 1,900

H. 2,000

I. 1,721 1,721 1,721 800

LIGHTING LOAD:
GUEST ROOMS UNIT LOADS: (Table 220.12 & 42)

ELECTRICAL LOAD ANALYSIS (NEC 2008 ARTICLE 220)

LOADKW AMP @ 208/120V, 3P, 4W

PANEL "LDP" (A)
DEMAND LOAD (A)
SPARE CAPACITY (A)

HOUSE LOADS:
MECHANICAL LOADS:
TOTAL DEMAND LOAD:

WIRE: (TABLE 310.16) @ 75°C (167°F) RATING
AMPACITY

SWITCHGEAR PANEL "MDP" (A)

DEMAND LOAD (A)
SPARE CAPACITY (A)

700 KVA STEP DOWN TRANSFORMER FROM
TRANSFORMER FULL LOAD AMPERES: TRANSFORMER MULTIPLIER:

I_L-L = (KVA X 1000)/(E_L-L X 1.732) M
TRANS = 100/%Z TRANS
E_L-L = 480 V 208
%Z TRANS = 3.5%

KVA = 1000 KVAM
TRANS = 28.57

I_L-L = 1203 A

LET-THRU SHORT-CIRCUIT CURRENT:
I_S.C. = 66902 A (L-L SCA ESTIMATED AT UTILITY TRANSFORMER SECONDARY)

F FACTOR, M & I_S.C. SYM:
F = (1.732 X L X I_3PH) /(C X E_L-L)
L = LENGTH OF CONDUCTOR TO THE FAULT
C = CONSTANT FROM TABLE B (COOPER BUSSMANN) FOR CONDUCTORS & BUSWAY
I_3PH = AVAILABLE SHORT-CIRCUIT CURRENT IN AMPERES AT BEGINNING OF CIRCUIT.
M = 1/(1+F)
I_S.C. SYM = I_3PH X M

FAULT #1 (AT MAIN DS): FAULT #2 (AT MDP): FAULT #3 (AT TA):
I_3PH = 66902 A
I_3PH = 44599 A
I_3PH = 42701 A
L = 150 FT
L = 20 FT
L = 30 FT
C = 24137
C = 24137
C = 24137
COND./PH = 3
COND./PH = 3
COND./PH = 2
C
RESULT
72411 C
RESULT
72411 C
RESULT
48274
F = 0.5001
F = 0.0444
F = 0.0958
M = 0.6666
M = 0.9574
M = 0.9126
I_S.C. SYM
44599 A
I_S.C. SYM
42701 A
I_S.C. SYM
38970 A

FAULT #5 (AT HV): FAULT #4 (AT LDP):
I_3PH = 42701 A
I_3PH = 38970
L = 15 FT
L= 30
C = 16483
C = 24137
COND./PH = 2
COND./PH = 4
C
RESULT
32966 C
RESULT
96548
F = 0.0701
F = 0.1008
M = 0.9345
M = 0.9084
I_S.C. SYM
39904 A
I_S.C. SYM
35400

SHORT-CIRCUIT CALCULATIONS
<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>DESCRIPTION</th>
<th>MOUNTING OR AS INDICATED</th>
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<tbody>
<tr>
<td>FL</td>
<td>FLUSH LIGHTING</td>
<td>WALL AS INDICATED</td>
</tr>
<tr>
<td>FC</td>
<td>CEILING LIGHT</td>
<td>CEILING AS INDICATED</td>
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</tbody>
</table>

**SYMBOL LIST**
- **FL**: Flush lighting, intended for installation in ceilings or walls.
- **FC**: Ceiling lighting, designed to be mounted directly to the ceiling structure.

**SPECIAL OUTLET SCHEDULE**

**OUTLET**
- **FOCOS**: Track lighting fixtures, normally used for accent or decorative purposes.
- **FOCO**: Downlights, recessed in ceilings for general illumination.
- **FOC**: Track lighting, non-directional beam for broad illumination.
- **FDO**: Recessed lighting, adjustable for precise control.
- **FDL**: Surface mounted lights, ideal for task lighting.
- **FDC**: Dimmable track lighting, for adjustable brightness.

**ELECTRIC FIXTURE SCHEDULE**

**DESCRIPTION**
- **LINEAR**: Linear lighting fixtures, suitable for industrial settings.
- **SQUARE**: Square lighting, often used for architectural or decorative purposes.
- **ROUND**: Round lighting, commonly used in industrial or commercial environments.
- **TRIANGLE**: Triangular lighting, often used in creative or modern designs.
- **HEXAGONAL**: Hexagonal lighting, providing a unique aesthetic.

**OUTLET**
- **WALL**: Wall-mounted fixtures, designed for specific applications.
- **CEILING**: Ceiling-mounted fixtures, providing broad illumination.
- **BASE**: Base-mounted fixtures, useful for specialized installations.
- **SUBJECT**: Subject-oriented fixtures, highlighting specific areas or objects.

**SPECIFICATIONS**
- **DIMENSIONS**: Critical for ensuring compatibility with existing structures.
- **MATERIALS**: Reflects durability and maintenance needs.
- **INSTALLATION**: Guides the proper placement and orientation.
- **DISCONTINUED**: Indicates outdated models, replaced by newer versions.

**NOTES**
- **ELECTRICAL**: Important for safe and efficient operation.
- **MECHANICAL**: Pertains to structural integrity and durability.
- **ACOUSTICAL**: Influences noise levels in the environment.
- **HEATING**: Considerations for temperature regulation.

**ACCESSORIES**
- **SPARES**: Essential for maintenance and replacement.
- **OPTIONS**: Available for customization.

**DATA SHEET**
- **DATE**: September 9, 2010
- **PROJECT NUMBER**: E1.1
- **ELECTRICIAN**: [Name]
- **ENGINEER**: [Name]
- **ARCHITECT**: [Name]
5 STORY HOTEL
100 GUEST ROOMS
125 SPACES

GENERAL SITE NOTES:

1. FOR PARKING LOT LIGHTING CONTROL DIAGRAM SEE E6.0
2. PROVIDE WATER AND SEW FOR UTILITY CO. SPECIFICATIONS
3. INSTALL PVC MOUNTED TRANSFORMERS P/F USE & DETERMINE LOCATION
4. INSTALL PVC MOUNTED TRANSFORMERS P/F USE & DETERMINE LOCATION
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL UTILITY SERVICES TO THE BUILDING WITH THE REQUIREMENTS PER THE CONTRACTOR SHALL P/F USE & DETERMINE LOCATION
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING ALL UTILITY SERVICES TO THE BUILDING WITH THE REQUIREMENTS PER THE CONTRACTOR SHALL P/F USE & DETERMINE LOCATION
7. SEE SHEET E6.1 FOR LIGHTING FUTURE SCHEDULE
### Electrical Panels

#### FOUR POINTS-SHERATON

**19066 DAVENPORT DR**

**SHERRY, TX 77386**

**PROJECT NAME:** FOUR POINTS-SHERATON

**ARCHITECT:** D.R. ASSOCIATES

**DATE:** JUL 18, 2010

---

#### Panel A

<table>
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<tr>
<th>Device</th>
<th>Type</th>
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---

#### Notes

1. Provide and verify circuit breakers for all branch circuits in guest rooms (Article 210.1238 & 210.12 - NEC 2008)

---

**Sheet Title:** E17:0.5

**Scale:** 1/4" = 1'-0"

**Project Number:** 0906

**Date:** JUL 18, 2010

---

**Notice:**

1. Controlled by a master V. M. G. time clock (which is controlled by a clock in the club lounge and is battery-powered).
<table>
<thead>
<tr>
<th>PROJECT NAME</th>
<th>LOCATION</th>
<th>UTILITIES</th>
<th>VOLTS</th>
<th>AMPS</th>
<th>MORE</th>
<th>MAINTENANCE ACCESS</th>
<th>LUMINARY</th>
<th>WIRING</th>
<th>COMPUP MAR 04</th>
<th>TEST</th>
<th>TEST</th>
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</table>

**NOTES:**
- PROVIDE AND labeled CIRCUIT BREAKERS FOR ALL BRANCH CIRCUITS IN GUEST ROOMS (ARTICLE 422.61 & 422.62 E7.1 CE 2000)

---

**ELECTRICAL PANELS**

**SHEET TITLE:**

**SCALE:**

**SHEET NUMBER:**

**DATE:**

E7.1
### Switchboard Location: Sheraton

#### Electrical Panel Schedule

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Electrical Panel Schedule</th>
<th>Electrical Panel Schedule</th>
<th>Electrical Panel Schedule</th>
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<td>Part 2</td>
<td>Part 3</td>
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#### Notes
- Provide and fault circuit breakers for all branch circuits in accordance with Article 903.24(a) of the NEC 2001.

---

#### Circuit Breaker Schedule

<table>
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<th>Electrical Panel Schedule</th>
<th>Electrical Panel Schedule</th>
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#### Notes
- Provide and fault circuit breakers for all branch circuits in accordance with Article 903.24(a) of the NEC 2001.
### SUB-FEED PANELS:

<table>
<thead>
<tr>
<th>PANEL NAMES</th>
<th>F.</th>
<th>KVA</th>
<th>LOAD FACTORS</th>
<th>DES. KVA</th>
<th>DES. AMP</th>
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<tr>
<td>LIGHTS RECEP. EQUIP. MOTORS EL. HEAT PHASE</td>
<td>20/1</td>
<td>37</td>
<td>A</td>
<td>38</td>
<td>20/1</td>
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<tr>
<td>SPARE</td>
<td>20/1</td>
<td>41</td>
<td>C</td>
<td>42</td>
<td>20/1</td>
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<tr>
<td>LIGHTS</td>
<td>20/1</td>
<td>39</td>
<td>B</td>
<td>40</td>
<td>20/1</td>
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<tr>
<td>SPARE</td>
<td>20/1</td>
<td>33</td>
<td>B</td>
<td>34</td>
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<td>RCPTS - LIFT LOBBY</td>
<td>900</td>
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<td>12720 WP RCPTS - WATER HEATER RM</td>
<td>20/1</td>
<td>35</td>
<td>C</td>
<td>36</td>
<td>20/1</td>
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<tr>
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<td>31</td>
<td>A</td>
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<td>20</td>
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<td>C</td>
<td>18</td>
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<td>12720 RCPTS - PANTRY</td>
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<td>16</td>
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</table>

**CODES:**
- 0 = LIGHTS
- 1 = RECEP
- 2 = EQUIP
- 3 = A/C
- 4 = HTG
- 5 = 125% LGST MTR
- 6 = KITCHEN
- 7 = PREVIOUSLY CALCULATED

**Codes and Wire:**
- NEMA-1COPPERM.C.B
- LOCATION: ELEC- 1st FLOOR
- VOLTAGE: 120/208V, 3PH, 4W
- BUS: 125 AMP
- MAINS: 125 AMP
- MOUNTING: SURFACE MOUNTED
- PANEL: LKA.I.C
- RATING: 10 KA

**MEPGreen10-04-01**
- PROJECT NUMBER:
- PROJECT NAME: FOUR POINTS BY SHERATON- SHENANDOAH, TX

---

**NOTES:**
- 1 controllable by a 20A, 6P, N-1, MECH. HELD LIGHTING CONTACTORS which is controllable by a TG, 1T, TIME CLOCK WITH A 12/12/12.

---

**E7.4**