## NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP & POWER REQUIREMENTS

| CKT AV3: RM 163 HALON DESCRIPTION | QTY | CURRENT PER ITEM (AMPS) | TOTAL CURRENT PER ITEM |
|---|---|---|---|
| WHEELOCK STROBE 15 cd | – | 0.5010 | 0.0000 |
| WHEELOCK HORN/STROBE 15cd | – | 0.0000 | 0.0000 |
| WHEELOCK STROBE 30 cd | – | 0.0300 | 0.0000 |
| WHEELOCK HORN/STROBE 30 cd | – | 0.0450 | 0.0000 |
| WHEELOCK STROBE 75 cd | – | 0.1650 | 0.0000 |
| WHEELOCK HORN/STROBE 75 cd | – | 0.1100 | 0.0000 |
| WHEELOCK STROBE 110 cd | – | 0.1100 | 0.0000 |
| WHEELOCK HORN/STROBE 110 cd | – | 0.1750 | 0.0000 |
| WHEELOCK HORN | 1 | 0.0870 | 0.0870 |
| AUTOCALL BELL | 1 | 0.0500 | 0.0500 |
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| TOTAL NOTIFICATION APPLIANCES CURRENT | | | 0.1370 |

VOLTAGE DROP (VD) CALCULATIONS

VD = {(I) (D) (21.6)}/CM

WHERE: I = CIRCUIT CURRENT

D = CONDUCTOR LENGTH (FT) ONE WAY

21.6 = CONSTANT

CM = WIRE CROSS-SECTIONAL AREA (CIRCULAR MILS)

VD = {(0.137 A) (160 FT) (21.64)}/4110 = 0.115 V

%VD = {0.115 V / 24 V} X 100 = 4.596 %

REMAINING VOLTS = 23.885

| WIRE SIZE | CIRCULAR MILS |
|---|---|
| 12AWG | 6530 |
| 14AWG | 4110 |
| 16AWG | 2580 |
| 18AWG | 1620 |
| 20AWG | 1020 |

## NOTIFICATION APPLIANCE CIRCUIT VOLTAGE DROP & POWER REQUIREMENTS

| CKT AV4: 56W DESCRIPTION | QTY | CURRENT PER ITEM (AMPS) | TOTAL CURRENT PER ITEM |
|---|---|---|---|
| WHEELOCK STROBE 15 cd | – | 0.5010 | 0.0000 |
| WHEELOCK HORN/STROBE 15cd | – | 0.0000 | 0.0000 |
| WHEELOCK STROBE 30 cd | – | 0.0300 | 0.0000 |
| WHEELOCK HORN/STROBE 30 cd | – | 0.0450 | 0.0000 |
| WHEELOCK STROBE 75 cd | – | 0.1650 | 0.0000 |
| WHEELOCK HORN/STROBE 75 cd | – | 0.1100 | 0.0000 |
| WHEELOCK STROBE 110 cd | 1 | 0.2200 | 0.2200 |
| WHEELOCK HORN/STROBE 110 cd | – | 0.1750 | 0.0000 |
| WHEELOCK HORN | – | 0.0000 | 0.0000 |
| AUTOCALL BELL | 1 | 0.0500 | 0.0500 |
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| | | | |
| TOTAL NOTIFICATION APPLIANCES CURRENT | | | 0.2700 |

VOLTAGE DROP (VD) CALCULATIONS

VD = {(I) (D) (21.6)}/CM

WHERE: I = CIRCUIT CURRENT

D = CONDUCTOR LENGTH (FT) ONE WAY

21.6 = CONSTANT

CM = WIRE CROSS-SECTIONAL AREA (CIRCULAR MILS)

VD = {(0.2700 A) (1000 FT) (21.64)}/4110 = 1.419 V

%VD = {1.419 V / 24 V} X 100 = 5.912 %

REMAINING VOLTS = 22.581

| WIRE SIZE | CIRCULAR MILS |
|---|---|
| 12AWG | 6530 |
| 14AWG | 4110 |
| 16AWG | 2580 |
| 18AWG | 1620 |
| 20AWG | 1020 |

PROFESSIONAL SEAL (IF REVISION, APPLIES ONLY TO REVISED WORK)

ISSUE (PROGRESS, ESTIMATE, BID, CONSTRUCTION, CONFORMED, REVISION, RECORD)

AS BUILT
–
–
10/29/13

| REVISION NUMBER | DRAWN BY | CHECKED BY | APPR'D BY | DATE | REMARKS |
|---|---|---|---|---|---|
| – | LDD | LDD | MCD | 10/29/13 | AS BUILT |

BLDG 88, B56W FIRE ALARM CALCULATIONS

UNIVERSITY OF CALIFORNIA
LAWRENCE BERKELEY NATIONAL LABORATORY
FACILITIES DIVISION

| | | |
|---|---|---|
| DRAWN BY | LDD | DATE 10/29/2013 |
| CHECKED BY | LDD | 10/29/2013 |
| APPROVED BY | MCD | 10/29/2013 |
| SCALE | AS NOTED | |
| DRAWING NO. | 4B88E149_ | SHEET FA |
| PROJECT NO. | 000000 | 2 OF 2 |