## MXL FACP - LOOP SCHEDULE

| LOOP NUMBER | PANEL | LOOP DESCRIPTION | LOCATION |
|---|---|---|---|
| L1 | MXL (MMB-3) | INITIATING DEVICES | FLOOR 1 |
| L2 | MXL (MMB-3) | INITIATING DEVICES | FLOOR 2 |
| L3 | ALD-2I | INITIATING DEVICES | FLOOR 3 & ROOF |
| L4 | ALD-2I | INITIATING DEVICES | FLOOR 4 |
| L5 | ALD-2I | INITIATING DEVICES | FLOOR 3 |

## MXL BATTERY CALCULATION

**SUPERVISORY CURRENT**

| DESCRIPTION | Quantity | Standby 24 VDC Module /Card Current | Load Current Per Circuit: End of Line Device | Load Current Per Circuit: Device Current | Total Standby 24VDC Module Current |
|---|---|---|---|---|---|
| **ALD-2I** ANALOG LOOP DRIVER | 2 | 0.105 | | | 0.210 |
| 1.1mA per device (2 loops per card) | 4 | | | 0.065 | 0.264 |
| **CSM-4** CONTROLLABLE SIGNAL MODULE | 4 | 0.010 | | | 0.040 |
| 12mA per NAC circuit (2 ckt. per card) | 8 | | 0.012 | | 0.096 |
| **CZM-1B6** CONVENTIONAL ZONE MODULE | 10 | 0.050 | | | 0.500 |
| **MKB-2** ANNUNCIATOR/KEYBOARD | 1 | 0.005 | | | 0.005 |
| **MMB-3** MAIN CONTROL BOARD | 1 | 0.280 | | | 0.280 |
| 1.1mA per device - Analog Loop | 2 | | | 0.066 | 0.132 |
| 12mA per NAC circuit | 2 | | 0.012 | | 0.024 |
| **TOTAL SUPERVISORY CURRENT** | | | | | **1.551** |

| MXL NOTIFICATION CIRCUITS | | | TOTAL CKT CURRENT LOAD |
|---|---|---|---|
| MPS-12 | 8.996 | CIRCUIT AV1 | 0.979 |
| | | CIRCUIT AV2 | 1.108 |
| | | CIRCUIT AV3 | 0.929 |
| | | CIRCUIT AV4 | 1.107 |
| | | CIRCUIT AV5 | 1.071 |
| | | CIRCUIT AV6 | 1.26 |
| | | CIRCUIT AV7 | 1.168 |
| | | CIRCUIT AV8 | 1.334 |
| | | CIRCUIT DH | 0.04 |
| | | **TOTAL ALARM CURRENT (AMPS)** | **8.996** |

**SUMMARY**

A = TOTAL SUPERVISORY CURRENT
x SUPERVISORY TIME REQUIRED
**1.551** AMPS x 24 HR
= **37.224** (AMP-HR)

B = TOTAL ALARM CURRENT
x ALARM TIME REQUIRED
**8.996** AMPS x .083 HR
= **0.747** (AMP-HR)

C = A + B
= **37.971** (AMP-HR)

SUPERVISORY TIME REQUIRED--------24 HR
ALARM TIME REQUIRED------5 MINS. or .083 HR

BATTERY PROVIDED..... **PS-12550 (2)**
BATTERY SIZE..... **55** (AMP-HR)

TOTAL SYSTEM REQUIRED (A/H)
= **37.971** **AMP/HOUR**
BATTERY RESERVE AFTER
24 HOURS SUPERVISORY
& 5 MINUTES ALARM (AMP-HOUR)

= **17.029** **AMP-HOUR**

## MXL FACP - NAC SCHEDULE

| CKT DESIGNATION | PANEL/CARD | CKT DESCRIPTION | LOCATION |
|---|---|---|---|
| HS | MXL (MMB-3) | HORN SILENCE | MXL |
| S | MXL (MMB-3) | DSC SYCHRONIZATION | MXL |
| AV1 | CSM-4 #1 | NAC DEVICES | FLOOR 1 |
| AV2 | CSM-4 #1 | NAC DEVICES | FLOOR 1 |
| AV3 | CSM-4 #2 | NAC DEVICES | FLOOR 1 |
| AV4 | CSM-4 #2 | NAC DEVICES | FLOOR 2 |
| AV5 | CSM-4 #3 | NAC DEVICES | FLOOR 2 |
| AV6 | CSM-4 #3 | NAC DEVICES | FLOOR 2 |
| AV7 | CSM-4 #4 | NAC DEVICES | FLOOR 2 |
| AV8 | CSM-4 #4 | NAC DEVICES | FLOOR 3 |
| AV9 | CSM-4 #5 | NAC DEVICES | FLOOR 3 |
| AV10 | CSM-4 #6 | NAC DEVICES | FLOOR 3 |
| AV11 | CSM-4 #6 | NAC DEVICES | FLOOR 3 & ROOF |
| | | | |
| | | | |
| | | | |

## MXL PANEL ACTUAL VOLTAGE DROP CALCULATIONS

WIRE SIZE USED: #14 AWG DROP: 5 FEET

| CKT | DISTANCE (ft.) | CURRENT LOAD (AMPS) | VOLTAGE DROP | REMAINING VOLTAGE |
|---|---|---|---|---|
| AV1 | 300 | 0.979 | 1.544 | 22.456 |
| AV2 | 385 | 1.108 | 2.242 | 21.758 |
| AV3 | 470 | 0.929 | 2.295 | 21.705 |
| AV4 | 350 | 1.107 | 2.036 | 21.964 |
| AV5 | 475 | 1.071 | 2.674 | 21.326 |
| AV6 | 500 | 1.26 | 3.311 | 20.689 |
| AV7 | 580 | 1.168 | 3.560 | 20.440 |
| AV8 | 400 | 1.334 | 2.804 | 21.196 |

[(I) (D) (21.6)]/CM
WHERE: I = CIRCUIT POWER LOAD
D = CONDUCTOR ONE WAY DISTANCE
21.6 = CONSTANT
CM = CROSS SECTION AREA OF WIRE (4110 FOR AWG#14)

NAC AV1: [(0.979 AMP)(300 FT)(21.6)]/4110 VOLTAGE DROP: 1.544 VOLTS REMAINING VOLTAGE: 22.456 VOLTS

NAC AV2: [(1.108 AMP)(385 FT)(21.6)]/4110 VOLTAGE DROP: 2.242 VOLTS REMAINING VOLTAGE: 21.758 VOLTS

NAC AV3: [(0.929 AMP)(470 FT)(21.6)]/4110 VOLTAGE DROP: 2.295 VOLTS REMAINING VOLTAGE: 21.705 VOLTS

NAC AV4: [(1.107 AMP)(350 FT)(21.6)]/4110 VOLTAGE DROP: 2.036 VOLTS REMAINING VOLTAGE: 21.964 VOLTS

NAC AV5: [(1.071 AMP)(475 FT)(21.6)]/4110 VOLTAGE DROP: 2.674 VOLTS REMAINING VOLTAGE: 21.326 VOLTS

NAC AV6: [(1.260 AMP)(500 FT)(21.6)]/4110 VOLTAGE DROP: 3.311 VOLTS REMAINING VOLTAGE: 20.689 VOLTS

NAC AV7: [(1.168 AMP)(580 FT)(21.6)]/4110 VOLTAGE DROP: 3.560 VOLTS REMAINING VOLTAGE: 20.440 VOLTS

NAC AV8: [(1.334 AMP)(400 FT)(21.6)]/4110 VOLTAGE DROP: 2.804 VOLTS REMAINING VOLTAGE: 21.196 VOLTS

THE CIRCUITS' AVAILABLE VOLTAGE IS ABOVE THE MINIMUM LISTED VOLTAGE FOR THE APPLIANCES.

## NOTIFICATION APPLIANCE CIRCUIT POWER REQUIREMENTS & VOLTAGE DROP CALCULATIONS

| DESCRIPTION | CURRENT PER APPLIANCE | # OF APPLIANCES: CIRCUIT AV1 | CIRCUIT AV2 | CIRCUIT AV3 | CIRCUIT AV4 | CIRCUIT AV5 | CIRCUIT AV6 | CIRCUIT AV7 | CIRCUIT AV8 |
|---|---|---|---|---|---|---|---|---|---|
| SIEMENS ZR WALL STROBE 15 cd | 0.064 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 2 |
| SIEMENS ZR WALL STROBE 30 cd | 0.098 | 1 | 1 | 2 | 0 | 0 | 1 | 2 | 2 |
| SIEMENS ZR WALL STROBE 75 cd | 0.175 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| SIEMENS ZR WALL STROBE 110 cd | 0.233 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SIEMENS ZH WALL HORN/STROBE 15 cd | 0.078 | 3 | 4 | 4 | 3 | 4 | 2 | 4 | 4 |
| SIEMENS ZH WALL HORN/STROBE 30 cd | 0.113 | 4 | 1 | 2 | 1 | 1 | 2 | 2 | 1 |
| SIEMENS ZH WALL HORN/STROBE 75 cd | 0.195 | 1 | 1 | 1 | 3 | 0 | 4 | 1 | 3 |
| SIEMENS ZH WALL HORN/STROBE 110 cd | 0.259 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 |
| SIEMENS ZH CEILING HORN/STROBE 15 cd | 0.078 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SIEMENS ZH CEILING HORN/STROBE 30 cd | 0.113 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| SIEMENS ZH CEILING HORN/STROBE 75 cd | 0.195 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SIEMENS ZH CEILING HORN/STROBE 95 cd | 0.259 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL CIRCUIT CURRENT | | 0.979 | 1.108 | 0.929 | 1.107 | 1.071 | 1.260 | 1.168 | 1.334 |

## FIRE ALARM EQUIPMENT LIST

| CATEGORY | ITEM NO. | SYMBOL | QTY | MODEL NUMBER | DESCRIPTION | MANUFACTURER | DATA SHEET NUMBER | CALIFORNIA STATE FIRE MARSHAL LISTING NUMBER |
|---|---|---|---|---|---|---|---|---|
| MXL - FIRE ALARM CONTROL PANEL | 1 | FACP | 1 | MLE-KIT | MLE-KIT (LARGE ENCLOSURE) CONSISTS OF: | SIEMENS | 5056 | 7300-0067:0172 |
| | 2 | | | | 1 MBR-MP MODULE MOUNTING PLATE | SIEMENS | 5056 | 7300-0067:0172 |
| | 3 | | | | 1 MBR-3MP CARDCAGE EXPANDER MOUNTING PLATE | SIEMENS | 5056 | 7300-0067:0172 |
| | 4 | | | | 1 MLE-6 ENCLOSURE / DOOR PACKAGE | SIEMENS | 5056 | 7300-0067:0172 |
| | 5 | | 1 | MER-8 | RIBBON CABLE ASSEMBLY | SIEMENS | --- | --- |
| | 6 | | 1 | MLE-CABLES | MLE-6 CABLES | SIEMENS | --- | --- |
| | 7 | | 1 | MDL-1 | CLEAR PLEXIGLAS LENS (Door Opening) | SIEMENS | 5056 | --- |
| | 8 | | 1 | MDB-1 | DEAD FRONT PANEL (Door Opening) | SIEMENS | 5056 | --- |
| | 9 | | 1 | MKB-2 | MXL DISPLAY / KEYPAD | SIEMENS | 5026 | 7165-0067:0144 |
| | 10 | | 2 | MHD-1 | DEAD FRONT PANEL | SIEMENS | 5056 | 7300-0067:0172 |
| | 11 | | 2 | MHD-2 | DEAD FRONT PANEL | SIEMENS | 5056 | 7300-0067:0172 |
| | 12 | | 1 | MMB-3 | MXL MAIN CONTROL BOARD | SIEMENS | 5079 | 7165-0067:0144 |
| | 13 | | 4 | MOM-4 | OPTION MODULE CARD CAGE | SIEMENS | 5004 | 7300-0067:0172 |
| | 14 | | 2 | ALD-2I | ANALOG LOOP DRIVER MODULE | SIEMENS | 5036 | 7300-0067:0172 |
| | 15 | | 1 | NIM-1W | NETWORK INTERFACE MODULE | SIEMENS | 5072 | 7300-0067:0172 |
| | 16 | | 2 | D2300CPS | FIBER OPTIC INTERFACE MODULE | SIEMENS | 5080 | 7300-0067:0172 |
| | 17 | | 1 | MXL-MFPO | FIBER MODULE MOUNTING PLATE | SIEMENS | 5080 | --- |
| | 18 | | 6 | CSM-4 | CONTROLLABLE SIGNAL MODULE | SIEMENS | 5001 | 7165-0067:0144 |
| | 19 | | 1 | CZM-4 | CONVENTIONAL ZONE MODULE | SIEMENS | 5003 | 7165-0067:0144 |
| | 20 | | 1 | MPS-12 | POWER SUPPLY w/ TRANSFORMER, 12 AMPS | SIEMENS | 5000 | 7165-0067:0144 |
| | 21 | | 1 | CP2341 | SURGE SUPPRESSOR | SIEMENS | --- | 7300-0067:0172 |
| | 22 | | 2 | PS-12550 | 55 AMP/HOUR BATTERY (12 VDC) | POWER SONIC | --- | Not Applicable |
| | 23 | | 1 | BB-55 | BATTERY CABINET | SIEMENS | 3326 | 7300-0067:0172 |
| POWER SUPPLY | 24 | PSP | 1 | #AL600ULXR | POWER SUPPLY | ALTRONIX | --- | 7315-1335:0104 |
| | 25 | | 2 | PS-12180 | 18.0 AMP/HOUR BATTERY (12VDC) | POWER SONIC | --- | Not Applicable |
| FIELD DEVICES | 26 | TRI-R | 55 | TRI-R | INTERFACE MODULE, SINGLE INPUT w/RELAY | SIEMENS | 6179 | 7300-0067:0146 |
| | 27 | TRI-D | 11 | TRI-D | INTERFACE MODULE, DUAL INPUT | SIEMENS | 6179 | 7300-0067:0146 |
| | 28 | TRI-S | 7 | TRI-S | INTERFACE MODULE, SINGLE INPUT | SIEMENS | 6179 | 7300-0067:0146 |
| | 29 | TRI-M | 14 | TRI-B6M | INTERFACE MODULE, SINGLE INPUT (MINIATURE) | SIEMENS | 6179 | 7300-0067:0146 |
| | 30 | | 13 | MSM-KD | MANUAL STATION, METAL w/KEY, DOUBLE ACTION | SIEMENS | 6184 | 7150-0067:0215 |
| | 31 | | 13 | MSM-BOX | SURFACE BACKBOX FOR MSM-SERIES MANUAL STATIONS | SIEMENS | 6184 | --- |
| | 32 | WP | 1 | MSM-KD-WP | MANUAL STATION, METAL w/KEY, WEATHERPROOF DOUBLE ACTION | SIEMENS | 6184 | 7150-0067:0215 |
| | 33 | | 1 | MSM-BOX | SURFACE BACKBOX FOR MSM-SERIES MANUAL STATIONS | SIEMENS | 6184 | --- |
| | 34 | | 24 | FP-11 | INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR | SIEMENS | 6175 | 7272-0067:0203 |
| | 35 | | 24 | DB-11 | DETECTOR BASE FOR FP-11 DETECTOR | SIEMENS | 6175 | 7300-0067:0134 |
| | 36 | | 117 | FPT-11 | INTELLIGENT THERMAL FIRE DETECTOR (DETECTORS ON CEILING) | SIEMENS | 6176 | 7270-0067:0202 |
| | 37 | | 117 | DB-11 | DETECTOR BASE FOR FP-11 DETECTOR | SIEMENS | 6176 | 7300-0067:0134 |
| | 38 | | 17 | FP-11 | INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR | SIEMENS | 6175 | 7272-0067:0203 |
| | 39 | | 17 | AD2-P | AIR DUCT HOUSING | SIEMENS | 6185 | 3240-0067:0245 |
| | 40 | | 17 | ST-50 | DUCT DETECTOR SAMPLING TUBE | SIEMENS | 6185 | --- |
| | 41 | | 23 | ZR-MC-R | MULTI CANDELA STROBE, 15cd (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0252 |
| | 42 | | | | MULTI CANDELA STROBE, 30cd (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0252 |
| | 43 | | | | MULTI CANDELA STROBE, 75cd (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0252 |
| | 44 | | | | MULTI CANDELA STROBE, 110cd (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0252 |
| | 45 | | 81 | ZH-MC-R | MULTI CANDELA HORN/STROBE, 15CD (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 46 | | | | MULTI CANDELA HORN/STROBE, 30CD (Red) Wall Mtd | SIEMENS | 2584 | 7125-0067:0248 |
| | 47 | | | | MULTI CANDELA HORN/STROBE, 75CD (Red) Wall Mtd | SIEMENS | 2584 | 7125-0067:0248 |
| | 48 | | | | MULTI CANDELA HORN/STROBE, 110CD (Red) Wall Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 49 | | 1 | AS-75-R-WP | WEATHERPROOF HORN/STROBE, (Red) Wall Mtd. | SIEMENS | 2578 | 7125-0067:0247 |
| | 50 | | 1 | WPBBS-R | WEATHERPROOF BACKBOX | SIEMENS | 2585 | --- |
| | 51 | | 6 | FM-998 | TRI-VOLT MAGNETIC DOOR HOLDER (24VDC) | RIXSON | --- | 3550-0047:0001 |
| | 52 | | 6 | ILP-1 | INTELLIGENT PHOTOELECTRIC DETECTOR | SIEMENS | 6164 | 7272-0067:0162 |
| | 53 | | 6 | AD-3ILP | DUCT DETECTOR HOUSING | SIEMENS | 6124 | 3240-0067:0116 |
| | 54 | WP | 6 | EAD-3 | WEATHERPROOF ENCLOSURE | SIEMENS | 6124 | --- |
| | 55 | | 6 | STA-10 | DUCT DETECTOR SAMPLING TUBE | SIEMENS | 6124 | --- |
| | 56 | DSC | 11 | DSC | DUAL SYNCHRONIZATION CONTROL MODULE | SIEMENS | 2553 | 7300-0067:0212 |
| | 57 | RB | 2 | FP-11 | INTELLIGENT PHOTOELECTRIC SMOKE DETECTOR | SIEMENS | 6175 | 7272-0067:0203 |
| | 58 | | 2 | DB-X11RS | DETECTOR BASE W/RELAY FOR FP-11 DETECTOR | SIEMENS | 6175 | 7300-0067:0134 |
| | 59 | C | 1 | ZH-MC-CR | MULTI CANDELA HORN/STROBE, 15cd (Red) Ceiling Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 60 | | | | MULTI CANDELA HORN/STROBE, 30cd (Red) Ceiling Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 61 | | | | MULTI CANDELA HORN/STROBE, 75cd (Red) Ceiling Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 62 | | | | MULTI CANDELA HORN/STROBE, 95cd (Red) Ceiling Mtd. | SIEMENS | 2584 | 7125-0067:0248 |
| | 63 | UHD | 2 | PHSC-135-XLT | 1000FT PROTECTOWIRE LINEAR HEAT DETECTOR-135°F RATING (DETECTOR ABOVE CEILING) | PROTECTOWIRE | --- | 7270-0854-0101 |
| | 64 | | 1 | PHSC-135-XLT | 500FT PROTECTOWIRE LINEAR HEAT DETECTOR-135°F RATING (DETECTOR ABOVE CEILING) | PROTECTOWIRE | --- | 7270-0854-0101 |
| | 65 | J | 18 | SR 502 | SERIES STRAIN RELIEF CONNECTORS | PROTECTOWIRE | --- | --- |
| | 66 | | 18 | ZB-4-QC-MP | JUNCTION BOX | PROTECTOWIRE | --- | --- |
| | 67 | EL | 9 | ELR-HD-1A-QC | END OF LINE WITH TEST SWITCH | PROTECTOWIRE | --- | --- |
| | 68 | CZM | 10 | CZM-1B6 | REMOTE CONVENTIONAL ZONE MODULE | SIEMENS | 5066 | 7300-0067:0172 |

## FIRE ALARM SYSTEM FUNCTION CHART

SPECIAL NOTE:

REFER TO SHEET FA-13 FOR FUNCTIONS ASSOCIATED WITH THE HSSD SYSTEMS.

| SYSTEM EVENT / RESPONSE | ANNUNCIATE EVENT AT FACU | FIRE SIGNAL TO LBNL RECEIVER | TROUBLE SIGNAL TO LBNL | SUPERVISORY SIGNAL TO LBNL | OPERATE NOTIFICATION APPLIANCES | RECALL ELEVATOR PRIMARY FLOOR | RECALL ELEVATOR SECONDARY FLOOR | OPERATE ELEVATOR POWER SHUNT | SHUT DOWN HVAC FAN UNIT | CLOSE DOOR | OPEN DOOR | CLOSE FIRE/SMOKE DAMPER | CLOSE FUME HOOD SASH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FIRE CALL BOX | ● | ● | | | ● | | | | | | | | ● |
| SMOKE DETECTOR | ● | ● | | | ● | | | | | | | | ● |
| HEAT DETECTOR | ● | ● | | | ● | | | | | | | | ● |
| PROTECTO WIRE | ● | ● | | | ● | | | | | | | | ● |
| FIRE SPRINKLER WATERFLOW SWITCH | ● | ● | | | ● | | | | | | | | ● |
| ELEVATOR LOBBY DETECTOR 1ST FLOOR | ● | ● | | | ● | | ● | | | | | | ● |
| LOBBY DETECTOR REMAINING FLOORS | ● | ● | | | ● | ● | | | | | | | ● |
| GENERAL SPOT HEAT DETECTOR | ● | ● | | | ● | | | | | | | | |
| ELEVATOR MACHINE RM SMOKE | ● | ● | | | ● | ● | | | | | | | |
| ELEVATOR MACHINE RM WATERFLOW | ● | ● | | | ● | | | ● | | | | | |
| ELEVATOR MACHINE RM HEAT DETECTOR | ● | ● | | | ● | | | ● | | | | | |
| HVAC DUCT SMOKE DETECTOR | ● | ● | | | ● | | | | ● | | | | ● |
| FSD DUCT SMOKE DETECTOR | ● | ● | | | ● | | | | | | | ● | |
| DETECTOR AT OPENING/DOOR | ● | ● | | | ● | | | | | ● | ● | | |
| VALVE POSITION SUPERVISORY SWITCH | ● | | | ● | | | | | | | | | |
| AC POWER FAILURE | ● | | ● | | | | | | | | | | |
| SYSTEM FAULT | ● | | ● | | | | | | | | | | |

## DRAWING INDEX



| SHEET # OF 20 | DRAWING No. | TITLE |
|---|---|---|
| 1 | 4B74E302 | FUNCTION CHARTS, CALCULATIONS & EQUIPMENT/SYMBOL LISTS |
| 2 | 4B74E303 | FAP-01-074 DETAIL & WIRING, BATTERY & POWER CALCULATIONS |
| 3 | 4B74E304 | POWER SUPPLY PANEL AND CALCULATIONS |
| 4 | 4B74E305 | DSC DUAL SYNCHRONIZATION |
| 5 | 4B74E306 | RISER DIAGRAM |
| 6 | 4B74E307 | 1ST FLOOR PLAN |
| 7 | 4B74E308 | 1ST FLOOR PLAN (PROTECTOWIRE) |
| 8 | 4B74E309 | 2ND FLOOR PLAN |
| 9 | 4B74E310 | 2ND FLOOR PLAN (PROTECTOWIRE) |
| 10 | 4B74E311 | 3RD FLOOR PLAN |
| 11 | 4B74E312 | 3RD FLOOR PLAN (PROTECTOWIRE) |
| 12 | 4B74E313 | ROOF PLAN |
| 13 | 4B74E314 | HSSD FUNCTION CHART, CALCULATIONS, VESDA PWR SUPPLY #1, DETECTOR WIRING |
| 14 | 4B74E315 | VESDA PWR SUPPLY#2, DETECTOR WRG & CALCULATIONS |
| 15 | 4B74E316 | 1ST FLOOR HSSD PIPING PLAN |
| 16 | 4B74E317 | 2ND FLOOR HSSD PIPING PLAN |
| 17 | 4B74E318 | 3RD FLOOR HSSD PIPING PLAN |
| 18 | 4B74E319 | 1ST FLOOR HSSD PIPING SCHEMATIC |
| 19 | 4B74E320 | 2ND FLOOR HSSD PIPING SCHEMATIC |
| 20 | 4B74E321 | 3RD FLOOR HSSD PIPING SCHEMATIC |



AS BUILT
—
08/28/13

| REVISION NUMBER | DRAWN BY | CHECKED BY | APPR'D BY | DATE | REMARKS |
|---|---|---|---|---|---|
| _ | DSV | LDD | MCD | 08/28/13 | AS BUILT FROM A/E RECORD DWGS |

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

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

74 FIRE ALARM SYSTEM
FUNCTION CHARTS CALCULATIONS
& EQUIPMENT/SYMBOL LIST

UNIVERSITY OF CALIFORNIA
LAWRENCE BERKELEY NATIONAL LABORATORY
FACILITIES DIVISION

| | | | |
|---|---|---|---|
| DRAWN BY | DSV | DATE | 08/28/13 |
| CHECKED BY | LDD | | 09/03/2013 |
| APPROVED BY | MCD | | 09/03/2013 |
| SCALE | AS NOTED | | |
| DRAWING NO. | 4B74E302 | SHEET | 1 OF 20 |
| PROJECT NO. | FN9200 | | |