FIRE ALARM SYSTEM NOTES:

1. A FULLY ADDRESSABLE CLASS A U.L. LISTED AND APPROVED FIRE ALARM CONTROL SYSTEM IN ACCORDANCE WITH PROJECT SPECIFICATIONS SHALL BE UTILIZED FOR ENTIRE BLDG. FIRE DETECTION AND ALARM SYSTEM/MASS NOTIFICATION SYSTEM SHALL UTILIZE ANALOG TYPE "SMART" SMOKE SENSORS AND OTHER ADDRESSABLE DEVICES AS INDICATED ON PLANS AND SPECIFICATIONS.

2. THE FIRE ALARM AND CONTROL SYSTEM SHALL CONFORM TO PROJECT AND JURISDICTIONAL REQUIREMENTS OF NASA-AMES FIRE MARSHAL. LAYOUT AND REQUIREMENTS FOR FIRE ALARM SYSTEM ARE AS INDICATED ON PLANS AND IN SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR FINAL DESIGN OF FIRE CONTROL SYSTEM. GENERAL REQUIREMENTS ARE AS FOLLOWS:

   A) FIRE ALARM CONTROL PANEL (FACP) SHALL MONITOR AND CONTROL ALL SMOKE AND HEAT DETECTORS, MANUAL ALARM PULL STATIONS, DUCT SMOKE DETECTORS, EVACUATION ALARM DEVICES (HORNS, STROBES, ETC), ADDRESSABLE RELAY MODULES AND AS REQUIRED RELAY OUTPUTS.

   B) THE FIRE ALARM SYSTEM SHALL PROVIDE FOR FOLLOWING INTERFACE FUNCTIONS:

      1. FACP SHALL PROVIDE OUTPUT CONTROL TO ALL FIRE ANNUNCIATORS AS INDICATED ON PLANS.

      2. SYSTEM AND DEVICES SHALL BE IN COMPLIANCE WITH ADA REQUIREMENTS.

      3. MONITOR FIRE WATER SUPPLY VALVE TAMPER SWITCHES INCLUDING REMOTE PIV VALVES.

      4. PROVIDE MASS NOTIFICATION FEATURES. SEE SPECIFICATION 283111.

3. THE FIRE ALARM SYSTEM WIRING AND CONDUIT SYSTEM SHALL BE IN STRICT ACCORDANCE WITH BUILDING CODE, NFPA 70 (NEC), NFPA 72, MANUFACTURERS, CALIFORNIA STATE FIRE MARSHAL (CSFM) AND LOCAL CODE REQUIREMENTS. ADDRESSABLE SIGNAL "LOOPS" SHALL CONFORM TO "STYLE D" REQUIREMENTS OF NFPA 72 2007. THE INDICATING APPLIANCE CIRCUITS (HORNS/STROBES, REMOTE RELAY OUTPUTS, ETC) SHALL CONFORM TO "STYLE Z" REQUIREMENTS.

4. CONDUCTORS FOR THE FIRE DETECTORS AND ALARM SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NEC. THE CONDUCTORS SHALL BE INSTALLED IN CONDUIT. FIRE ALARM CONDUCTORS SHALL NOT BE INSTALLED IN JUNCTION BOXES, OUTLET BOXES, OR CONDUITS WITH CONDUCTORS OF LIGHTING AND POWER SYSTEMS. THE SUM OF THE CROSS-AREAS OF INDIVIDUAL CONDUCTORS SHALL NOT EXCEED 40 % OF THE INTERIOR CROSS-SECTIONAL AREA OF THE CONDUIT. FIRE DETECTION AND ALARM CONDUIT SHALL NOT BE LESS THAN 3/4". FOR ADDRESSABLE LOOP CIRCUITS, UTILIZE TWISTED SHIELDED PAIR, APPROVED WIRE #14 AWG AS A MINIMUM. ALL WIRING MUST BE COLOR CODED AND LABELED.

5. THE FIRE ALARM EQUIPMENT LAYOUT PLANS SHOW APPROXIMATE DEVICE LOCATION. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM DIMENSIONS AND CONSTRUCTION INFORMATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO COORDINATE LOCATION OF ALL DEVICES WITH OTHER TRADES AND TO INSURE THAT ALL APPLICABLE NFPA REQUIREMENTS ARE MET (NEC, NFPA 13, ETC). REQUIRED COORDINATION SHALL INCLUDE LOCATION OF ALL FIRE PROTECTION EQUIPMENT WITH THE BUILDING STRUCTURAL, MECHANICAL, AND ELECTRICAL ELEMENTS INCLUDING, BUT NOT LIMITED TO, STRUCTURAL MEMBERS AND SYSTEM AIR DUCTS AND OUTLETS, LIGHT FIXTURES AND SIMILAR EQUIPMENT AND MATERIAL THAT MAY INTERFERE WITH THE PROPER INSTALLATION AND OPERATION OF THE SYSTEM. CONTRACTOR'S INSTALLATION DRAWINGS SUBMITTED FOR APPROVAL SHALL BE COORDINATED WITH ALL TRADES.

6. AREA SMOKE DETECTORS ARE NOT TO BE LOCATED IN DIRECT PATH OF BUILDING'S SUPPLY AIR REGISTERS. LOCATE AT LEAST 3 FEET AWAY FROM REGISTERS. ALL AREA FIRE DETECTORS AT T-BAR CEILING AREAS ARE TO BE LOCATED AT CENTER OF TILE.

7. EACH FIRE ALARM SYSTEM ADDRESS POINT SHALL HAVE A CUSTOM IDENTIFYING MESSAGE PROGRAMMED AT FACP. SOFTWARE MESSAGE SHALL APPEAR AT PANELS 32 CHARACTER LCD DISPLAY IF AN ALARM OR TROUBLE CONDITION OCCURS AT ADDRESS. CONTRACTOR SHALL BE RESPONSIBLE TO GENERATE PROPOSED CUSTOM DEVICE MESSAGE IN TABULATED FORM AND OBTAIN FIELD ENGINEER'S APPROVAL PRIOR TO PROGRAMMING OF MESSAGES. THE FIRE ALARM CONTRACTOR IS ALSO RESPONSIBLE FOR COMPLETE PROGRAMMING AND FUNCTIONAL TESTING OF ENTIRE SYSTEM.

8. ALL SPRINKLER SYSTEM SWITCHES (TAMPER, WATERFLOW, SUPERVISORY AIR, ETC) ARE TO BE FURNISHED AND INSTALLED BY SPRINKLER CONTRACTOR (SECTION 211313). ALL ELECTRICAL WIRING TERMINATIONS AND CHECKOUT AT DEVICE AND FACP SHALL BE BY FIRE ALARM CONTRACTOR.

9. DUCT TYPE SMOKE DETECTORS WITH PROPERLY SIZED SAMPLING TUBES SHALL BE FURNISHED AND INSTALLED WHERE INDICATED IN ACCORDANCE WITH NFPA 72 2007, CBC AND MANUFACTURER'S REQUIREMENTS. UPON ACTIVATION OF A DUCT DETECTOR, THE ASSOCIATED HVAC UNIT SHALL SHUTDOWN AUTOMATICALLY THROUGH OPERATION OF RELAY CONTACTS AT DETECTOR AND AN ALARM CONDITION SHALL OCCUR AT FACP. IF AIR HANDLING UNIT HAS A "SMOKE PURGE" MODE, ACTIVATION OF THE PURGE MODE SHALL OVERRIDE THE UNIT SHUT-DOWN. THE SMOKE DETECTION AND CONTROL FUNCTIONS FOR HVAC UNITS SHALL HAVE THE HIGHEST PRIORITY OVER ALL OTHER HVAC CONTROL MODES. WHERE DUCT DETECTORS ARE INSTALLED ABOVE A DROP CEILING, A REMOTE ALARM INDICATING LAMP SHALL BE FLUSH MOUNTED IN CEILING DIRECTLY BELOW DETECTOR. COORDINATE INSTALLATION AND LOCATION OF EACH DUCT DETECTOR WITH MECHANICAL CONTRACTOR. DETECTOR MUST BE INSTALLED IN A SERVICE ACCESSIBLE LOCATION. PROVIDE ALL ELECTRICAL CONNECTIONS INCLUDING SHUTDOWN WIRING TO AIR HANDLER STARTERS AND SMOKE DAMPERS. COORDINATE SHUTDOWN WIRING WITH HVAC CONTROLS AND ELECTRICAL CONTRACTORS.

10. ALL FIRE ALARM CONTROL PANELS, ANNUNCIATOR PANELS AND DEVICES SHALL BE NEATLY FLUSH MOUNTED WITH CONCEALED ELECTRICAL CONDUIT IN AREAS WITH FINISHED WALLS AND CEILINGS. FIRE DETECTOR AND ALARM SYSTEM CONDUIT RUNS SHALL BE STRAIGHT, NEATLY ARRANGED, PROPERLY SUPPORTED AND PERPENDICULAR TO WALLS, CEILINGS AND PARTITIONS. ALL CONDUIT AND WIRING SHALL BE ROUTED IN SUCH A MANNER THAT IT WILL BE CONCEALED FROM VIEW SUCH AS ABOVE CEILING, IN WALLS AND BELOW ACCESS FLOORS. IN UNFINISHED AREAS SUCH AS MECHANICAL ROOMS AND SIMILAR SPACES CONDUIT NEED NOT BE CONCEALED.

11. LOCATION AND INSTALLATION METHODS FOR "ADDRESSABLE POINT MONITOR MODULES" MUST BE INDICATED ON SHOP DRAWING SUBMITTALS. MODULES ARE TO BE INSTALLED IN APPROVED NEMA JUNCTION BOX OR ENCLOSURE IN ACCESSIBLE LOCATIONS. WEATHERPROOF ENCLOSURES WITH SEALTIGHT FLEXIBLE CONDUIT ARE REQUIRED AT AREAS SUBJECT TO HIGH MOISTURE (I.E. RISER AND EQUIPMENT ROOMS).

12. PRIOR TO BEGINNING INSTALLATION CONTRACTOR IS RESPONSIBLE TO OBTAIN APPROVAL OF SHOP DRAWINGS FROM CONTRACTING OFFICER. A SET OF APPROVED DRAWINGS IS TO BE KEPT AT JOB SITE FOR INSPECTIONS AT ALL TIMES. IN ADDITION, CONTRACTOR IS RESPONSIBLE TO MAINTAIN A CURRENT "AS-BUILT" WORKING SET OF DRAWINGS AT JOB SITE. AS-BUILT DRAWINGS SHALL INDICATE EXACT CONDUIT ROUTING AND SIZING, JUNCTION BOX LOCATION, CONDUCTOR COLORS, COUNTS AND SIZES. AS-BUILT DRAWINGS SHALL ALSO CLEARLY INDICATE LOCATION OF ALL DEVICES AND DETAILS OF INTERFACE WITH AUXILIARY EQUIPMENT. (HVAC SHUTDOWN, SUPPRESSION SYSTEM INTERFACE CENTRAL MONITORING, ETC.).

13. ALL FIRE ALARM EQUIPMENT SUPPLIED SHALL BE LISTED BY CSFM.

14. REFER TO PROJECT SPECIFICATIONS AND FIRE ALARM AND OPERATION MATRIX FOR FURTHER REQUIREMENTS.

FIRE ALARM SYSTEM OPERATION MATRIX

	MANUAL PULL STATION	AREA COVERAGE FIRE SENSOR	HVAC UNIT DUCT SMOKE SENSOR	SPRINKLER WATER FLOW SWITCH	SPRINKLER VALVE TAMPER SWITCH	POWER FAILURE
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM OR TROUBLE)	●	●	●	●	●	●
ANNUNCIATE AT 24 HOUR ATTENDED REMOTE LOCATION AND BLDG ENTRANCE ANNUNCIATOR PANELS (1)	●	●	●	●	●	●
ACTIVATE AUDIBLE/ VISUAL ALARM SIGNAL THROUGHOUT BLDG.	●	●	●	●		
SHUT-DOWN LOCAL BUILDING AIR HANDLING UNT(S)		●	●			
ACTIVATE (CLOSE) LOCAL FIRE/SMOKE DAMPER		●	●			
ELEVATOR RECALL/ ELEVATOR SHUTDOWN	●	●	●	●	●	●
MASS NOTIFICATION SYSTEM OPERATION	●	●	●	●	●	●

FOOTNOTES

(1) BUILDING FIRE ALARM PANEL SHALL BE CONNECTED TO THE BASE "MONACO" RADIO TRANSMITTER SYSTEM. SYSTEM FIRE ALARM AND TROUBLE SIGNALS SHALL BE TRANSMITTED TO BASE FIRE CONTROL (24 HOUR/7 DAY FACILITY).

(2) THE BUILDING WILL BE COMPLETELY SPRINKLED AND MONITORED BY THE FIRE ALARM CONTROL PANEL.

SCOPE OF WORK

- DESIGN, PROVIDE, INSTALL AND TEST NEW ADDRESSABLE FIRE ALARM SYSTEM PER NFPA 72 (2007), PROJECT CONSTRUCTION SPECIFICATIONS AND DRAWINGS. SEE FIRE ALARM SYSTEM NOTES, THIS DRAWING, FOR DESCRIPTION OF FIRE ALARM SYSTEM.

ELEVATOR OPERATION REQUIREMENTS

- ACTIVATION OF SMOKE DETECTOR IN ELEVATOR LOBBY SHALL INITIATE AN ALARM, CUSTOM MESSAGE, AND ELEVATOR RECALL OPERATION.
- ACTIVATION OF ELEVATOR LOBBY OR ELEVATOR MACHINE ROOM DETECTOR SHALL RECALL ELEVATOR TO ITS PRIMARY POSITION.
- ACTIVATION OF GROUND FLOOR ELEVATOR LOBBY DETECTOR SHALL RECALL ELEVATOR TO ITS SECONDARY POSTION.
- SHUNT TRIP SHALL BE ACTIVATED AFTER ELEVATOR RETURNS TO GROUND FLOOR.

FIRE ALARM SYSTEM ABBREVIATIONS

A	AMPERE
ADAAG	AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES
AF	AMPERE FRAME OR FUSE RATING
AFF	ABOVE FINISHED FLOOR
AT	AMPERE TRIP (BREAKER SETTING)
C	CONDUIT
CB	CIRCUIT BREAKER
CEC	CALIFORNIA ELECTRICAL CODE
CKT, CKTS	CIRCUIT
CLG.	CEILING
CNTL	CONTROL
CO	CONDUIT ONLY
CONF	CONFERENCE (ROOM)
CORR	CORRIDOR
DWG	DRAWING
EL	ELEVATOR
ELEC	ELECTRIC(AL)
EMT	ELECTRICAL METALLIC TUBING
EQPM	EQUIPMENT
EXIST; (E)	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLEX	FLEXIBLE
G; GND	GROUND(ED)
GFI	GROUND FAULT INTERRUPTER
JB	JUNCTION BOX
mm	MILLIMETERS
MEC	MECHANICAL
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
(N)	NEW
NAC	NOTIFICATION APPLIANCES CIRCUIT
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
P	POLE
PB	PULLBOX
PBS	PUSHBUTTON STATION
PH	PHASE
PIV	POST INDICATOR VALVE
PNL	PANEL
PWR	POWER
(R)	RELOCATED
RECP	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
RSC	RIGID STEEL CONDUIT
SPEC	SPECIFICATIONS
SLC	SIGNALING LINE CIRCUIT
TEL	TELEPHONE
TP	TWISTED PAIR CABLE
TPS	TWISTED PAIR, SHIELDED CABLE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	VOLT
VAV	VARIABLE AIR VOLUME
VB	VAV BOX
W	WIRE
WP	WEATHERPROOF
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
ZAM	ZONAL ADDRESSABLE MODULE
ZCA	ZONE CONTROL ASSEMBLY

FIRE ALARM SYSTEM SYMBOLS

101	SMOKE DETECTOR, CEILING MOUNTED, WITH ADDRESS NUMBER.
101	DUCT SMOKE DETECTOR WITH ADDRESS NUMBER.
101	HEAT DETECTOR, CEILING MOUNTED, WITH ADDRESS NUMBER.
P	MANUAL PULL STATION, WITH ADDRESS NUMBER, WALL MOUNTED WITH OPERABLE PART NOT LESS THAN 42" AND NOT MORE THAN 54" AFF
15cd N101	SPEAKER/STROBE, WITH ADDRESS NUMBER, WALL MOUNTED WITH ITS ENTIRE LENS NOT LESS THAN 80" AND NOT GREATER THAN 96" AFF PER NFPA 72. STROBE CANDELA RATING AS SHOWN.
N101	FIRE ALARM BELL WITH ADDRESS NUMBER (WATER FLOW)
FCP	FIRE ALARM CONTROL PANEL (FACP)
FSA	FIRE SYSTEM ANNUNCIATOR
FTR	FIRE ALARM TRANSCEIVER OR TRANSMITTER
PAD	AUXILIARY POWER SUPPLY-NOTIFICATION APPLIANCE EXTENDER
101 FS	FLOW SWIITCH WITH ADDRESS NUMBER
101 TS	TAMPER SWIITCH WITH ADDRESS NUMBER
101 PS	PRESSURE SWIITCH WITH ADDRESS NUMBER
101 FSD	FIRE/SMOKE DAMPER BY MECHANICAL WITH ADDRESS NUMBER
DH	MAGNETIC DOOR HOLDER
M L,R	MICROPHONE, LOCAL OR REMOTE
MM	ADDRESSABLE MONITOR MODULE
EVAC	LED EVACUATION SIGN

PROJECT STATUS

BID SET 04/27/09

ISSUE

MARK	DATE	DESCRIPTION

DRAWN R. LENO	DATE 04/27/09	Ames Research Center, Moffet Field, California
DESIGNED D. CRAWFORD	DATE 04/27/09	
CHECKED E. MIYODA	DATE 04/27/09	N232 COLLABORATIVE SUPPORT FACILITY
PROJMGR J. GRANT	DATE 04/27/09	FIRE ALARM LEGEND AND ABBREVIATIONS
REQUESTOR R. SCHULER	DATE 04/27/09	
RMQA	DATE	
SAFETY	DATE	
SUPERVISOR S. FRANKEL	DATE 04/27/09	

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA001	
SCALE		INDEX	SHEET OF

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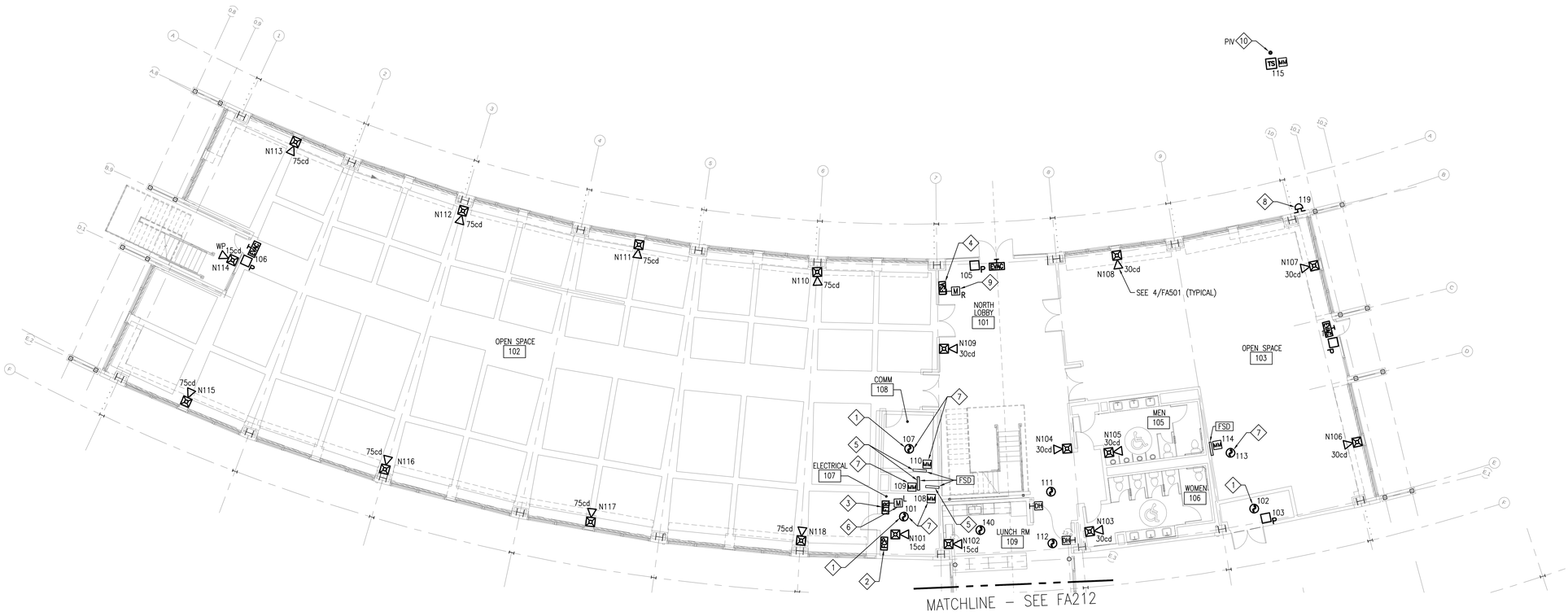
Xrefs: 7KBIR-SHORT

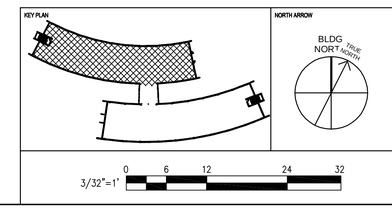


SHEET NOTES:

1. ALL DEVICES SHOWN ARE NEW. PROVIDE CONDUIT , J-BOX AND WIRING FROM ALL FIRE ALARM DEVICES TO THE NEW FIRE ALARM CONTROL PANEL.
2. FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL.
3. MINIMUM SIZE OF CONDUIT SHALL BE 3/4".
4. SEE DRAWING FA401 FOR FIRE ALARM RISER DIAGRAM.
5. LIGHT LINES INDICATE BACKGROUND WORK BY OTHER DISCIPLINES, DARK LINES INDICATE NEW WORK, UNO.
6. SEE DRAWING FA001 FOR THE FOLLOWING ELECTRICAL INFORMATION:
   a) GENERAL NOTES
   b) ABBREVIATIONS
   c) SCOPE OF WORK
   d) SEQUENCE OF OPERATION
   e) FIRE ALARM SYMBOLS
   f) ELEVATOR OPERATION REQUIREMENTS
7. REFER TO FIRE PROTECTION (FP) DRAWINGS FOR THE CEILING HEIGHTS.
8. THE DRAWING SHOWS THE APPROXIMATE LOCATION OF THE FIRE ALARM DEVICES. CONTRACTOR SHALL FIELD VERIFY, DETERMINE, AND PROVIDE THE FINAL LOCATION OF FIRE ALARM DEVICES BASED ON THE SUPPLIED EQUIPMENT/SYSTEM AND AS PER NFPA 72.
9. STROBES SHALL BE SYNCHRONIZED AS PER NFPA 72. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR SYNCHRONIZATION. NOTIFICATION CIRCUITS AND APPLIANCES SHALL MEET ADAAG REQUIREMENTS.

KEY NOTES:

1. PHOTOELECTRIC SMOKE DETECTOR MOUNTED OVERHEAD.
2. FIRE ALARM CONTROL PANEL.
3. FIRE ALARM TRANSCEIVER OR TRANSMITTER. SEE 1/FA501.
4. FIRE SYSTEM ANNUNCIATOR.
5. FIRE SMOKE DAMPER WITH ADDRESSABLE MONITOR MODULE. COORDINATE LOCATION WITH MECHANICAL. TAG AS N1108, N1109, AND N1110.
6. MICROPHONE LOCATED INSIDE FIRE ALARM CONTROL PANEL.
7. SMOKE DETECTOR SHALL BE LOCATED WITHIN 5'-0" OF FIRE/SMOKE DAMPER(S).
8. FIRE ALARM BELL.
9. INSTALL MICROPHONE IN LOCKABLE ENCLOSURE KEYED TO FIRE DEPARTMENT STANDARD. INSTALL SIGN ABOVE ENCLOSURE THAT READS "FIRE FIGHTERS MICROPHONE".
10. PIV WITH TAMPER SWITCH AND ADDRESSABLE MONITOR MODULE IN NEMA 3R ENCLOSURE. REFER TO C-401 FOR EXACT LOCATION.



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PROJMGR	J. GRANT	DATE 04/27/09
REQUESTOR	R. SCHULER	DATE 04/27/09
RSQA		DATE
SAFETY		DATE
SUPERVISOR	S. FRANKEL	DATE 04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
FIRST FLOOR
FIRE ALARM PLAN
NORTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA211	
SCALE	INDEX	SHEET OF	

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   b) ABBREVIATIONS
   c) SCOPE OF WORK
   d) SEQUENCE OF OPERATION
   e) FIRE ALARM SYMBOLS
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9. STROBES SHALL BE SYNCHRONIZED AS PER NFPA 72. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR SYNCHRONIZATION. NOTIFICATION CIRCUITS AND APPLIANCES SHALL MEET ADAAG REQUIREMENTS.

KEY NOTES:

1. PHOTOELECTRIC SMOKE DETECTOR MOUNTED OVERHEAD.
2. PHOTOELECTRIC SMOKE DETECTOR MOUNTED IN ELEVATOR LOBBY.
3. HEAT DETECTOR MOUNTED IN ELEVATOR PIT WITHIN 2' OF SPRINKLER HEAD.
4. PHOTOELECTRIC SMOKE DETECTOR MOUNTED IN ELEVATOR MACHINE ROOM.
5. HEAT DETECTOR MOUNTED IN ELEVATOR MACHINE ROOM.
6. FLOW SWITCH AND TAMPER SWITCH ON INCOMING FIRE PROTECTION MAIN.
7. TYPICAL ZONE CONTROL FLOW AND TAMPER SWITCH FOR EACH OF FOUR ZONES (Z1N, Z1S, Z2N, AND Z2S).
8. SMOKE DETECTOR SHALL BE LOCATED WITHIN 5'-0" OF FIRE/SMOKE DAMPER(S).
9. PHOTOELECTRIC DUCT SMOKE DETECTOR LOCATED IN MECHANICAL ROOM.
10. ELEVATOR RECALL STATUS PANEL.
11. FIRE/SMOKE DAMPER WITH ADDRESSABLE MONITOR MODULE. COORDINATE WITH MECHANICAL.

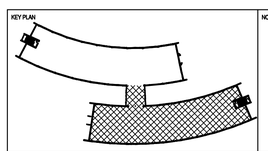
PROJECT STATUS

BID SET 04/27/09

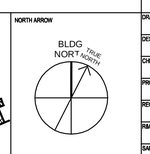
ISSUE

MARK	DATE	DESCRIPTION

KEY PLAN



NORTH ARROW



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DRAWN	R. LENO	04/27/09
DESIGNED	D. CRAWFORD	04/27/09
CHECKED	E. MIYODA	04/27/09
PROJMGR	J. GRANT	04/27/09
REQUESTOR	R. SCHULER	04/27/09
R&QA		
SAFETY		
SUPERVISOR	S. FRANKEL	04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
FIRST FLOOR
FIRE ALARM PLAN
SOUTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA212	

SCALE INDEX SHEET OF

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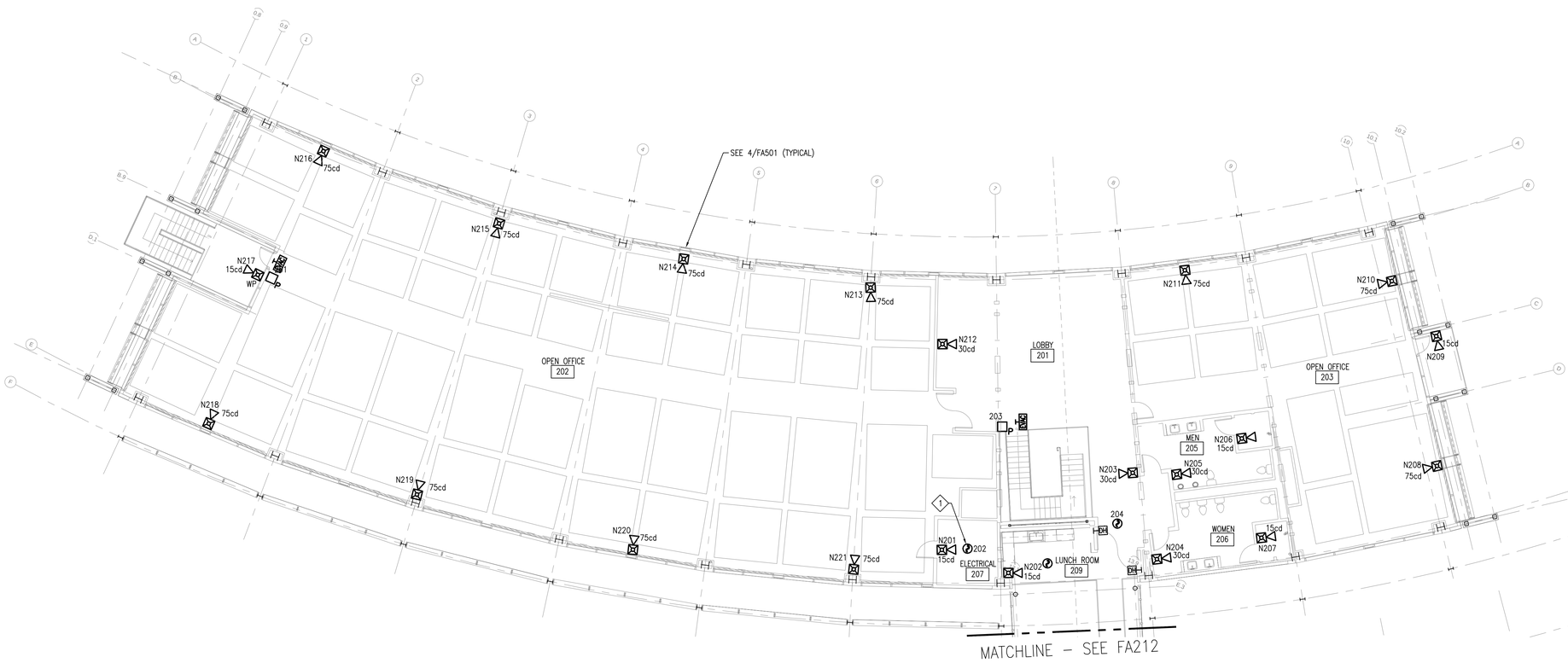

SHEET NOTES:

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2. FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL.
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KEY NOTES:

1. PHOTOELECTRIC SMOKE DETECTOR MOUNTED OVERHEAD.

KEY PLAN

NORTH ARROW

BLDG NORTH (TRUE NORTH)

3/32"=1' 0 6 12 24 32

PROJECT STATUS

BID SET 04/27/09

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REQUESTOR	R. SCHULER	04/27/09
RSQA		
SAFETY		
SUPERVISOR	S. FRANKEL	04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
SECOND FLOOR
FIRE ALARM PLAN
NORTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA213	
SCALE	INDEX	SHEET OF	

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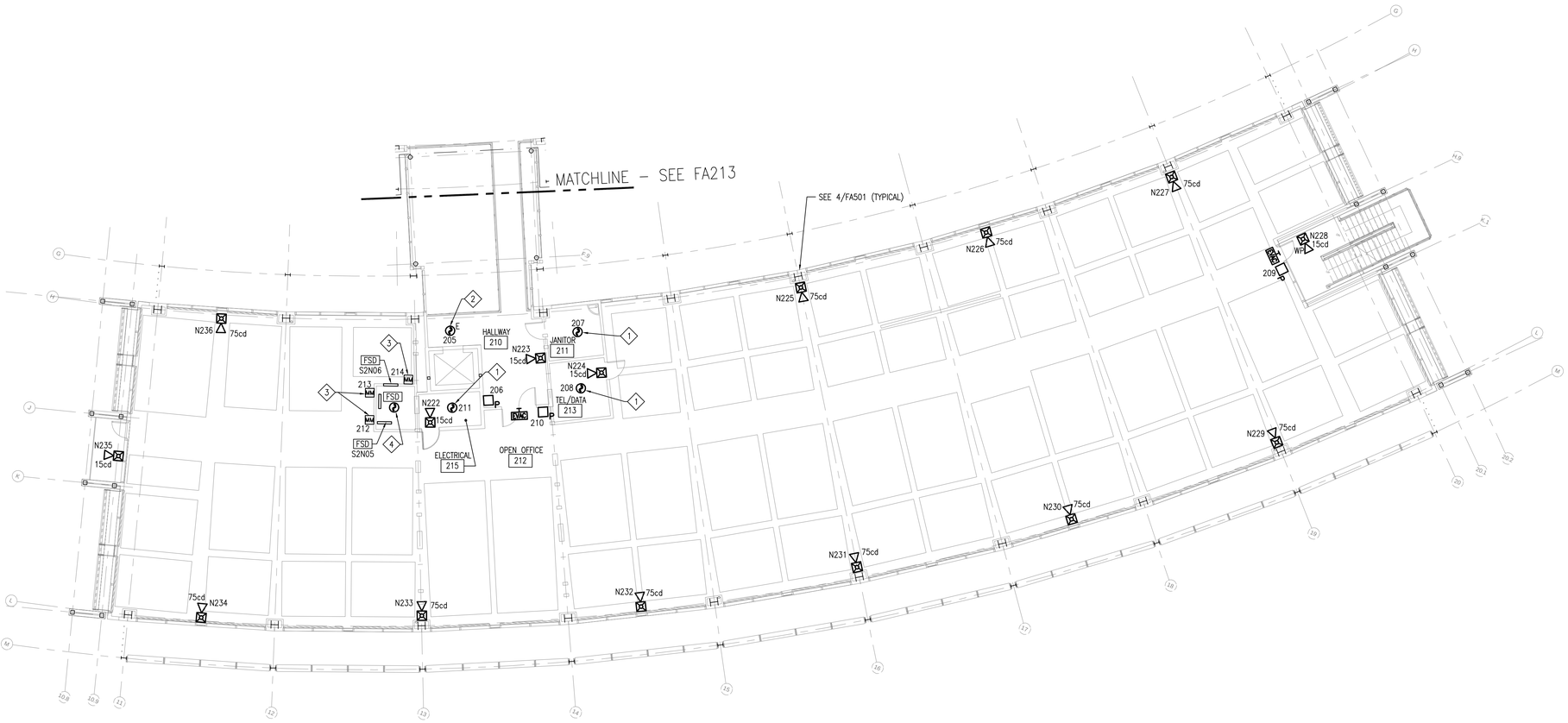
Xrefs: xatp02* XFFP02* xmtp02* *ABBR-SHORT



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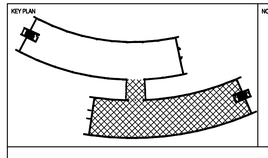
   f) ELEVATOR OPERATION REQUIREMENTS
7. REFER TO FIRE PROTECTION (FP) DRAWINGS FOR THE CEILING HEIGHTS.
8. THE DRAWING SHOWS THE APPROXIMATE LOCATION OF THE FIRE ALARM DEVICES. CONTRACTOR SHALL FIELD VERIFY, DETERMINE, AND PROVIDE THE FINAL LOCATION OF FIRE ALARM DEVICES BASED ON THE SUPPLIED EQUIPMENT/SYSTEM AND AS PER NFPA 72.
9. STROBES SHALL BE SYNCHRONIZED AS PER NFPA 72. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR SYNCHRONIZATION. NOTIFICATION CIRCUITS AND APPLIANCES SHALL MEET ADAAG REQUIREMENTS.

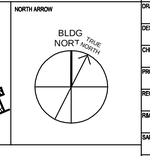
KEY NOTES:

1. PHOTOELECTRIC SMOKE DETECTOR MOUNTED OVERHEAD.
2. PHOTOELECTRIC SMOKE DETECTOR MOUNTED IN ELEVATOR LOBBY.
3. FIRE/SMOKE DAMPER WITH ADDRESSABLE MONITOR MODULE. COORDINATE WITH MECHANICAL.
4. SMOKE DETECTOR SHALL BE LOCATED WITHIN 5'-0" OF FIRE/SMOKE DAMPER(S).

KEY PLAN



NORTH ARROW



3/32"=1' 0 6 12 24 32

PROJECT STATUS

BID SET 04/27/09

ISSUE

MARK	DATE	DESCRIPTION

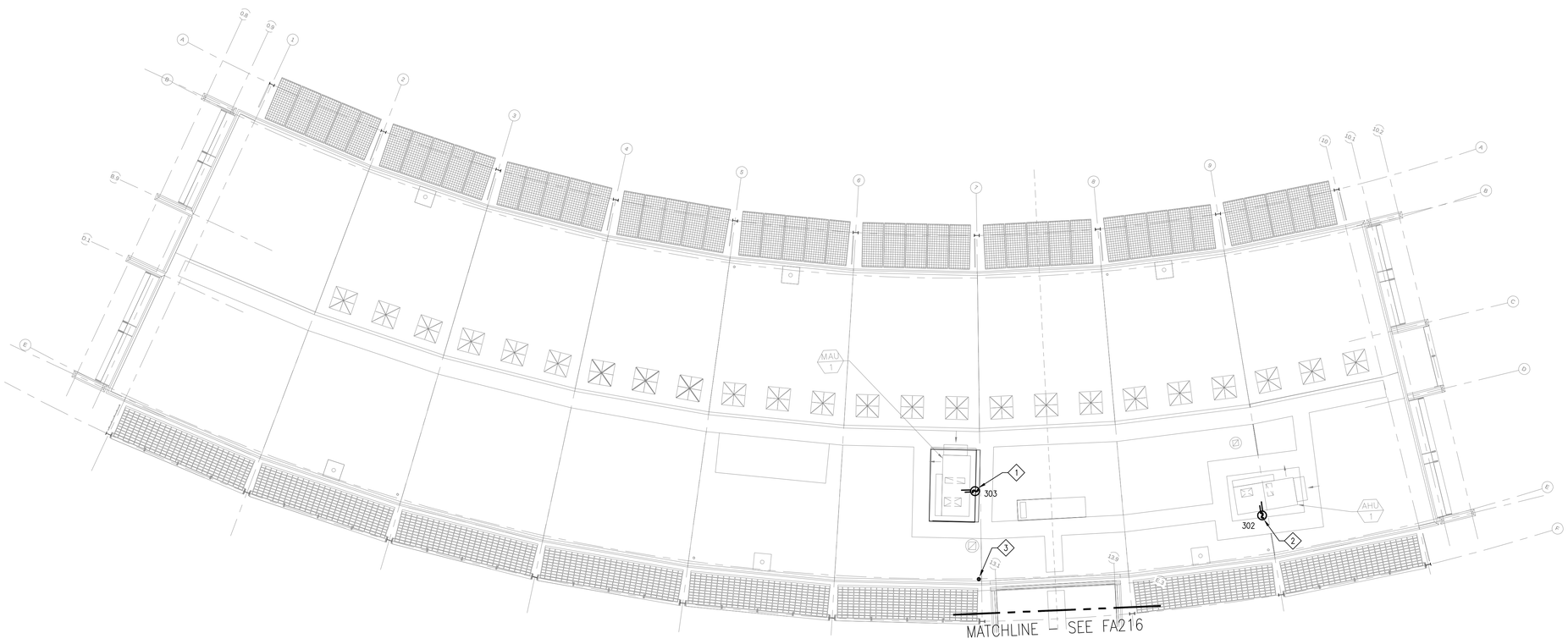
DRAWN	R. LENO	DATE 04/27/09
DESIGNED	D. CRAWFORD	DATE 04/27/09
CHECKED	E. MIYODA	DATE 04/27/09
PROJMGR	J. GRANT	DATE 04/27/09
REQUESTOR	R. SCHULER	DATE 04/27/09
R&QA		DATE
SAFETY		DATE
SUPERVISOR	S. FRANKEL	DATE 04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
SECOND FLOOR
FIRE ALARM PLAN
SOUTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA214	
SCALE	INDEX	SHEET OF	

DWG: P:_TECHNOLOGY\60048683 – Nasa Ames – N232 Fire Alarm\500 CAD\F\Sheet\FA214.dwg User: LenoR
DATE: Apr 27, 2009 – 8:28:56 am Images:
Xrefs: "xafp02" "xFFP02" "xmfp02" "XBDR-SHORT



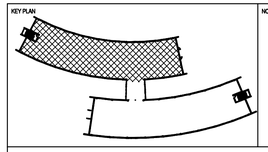
SHEET NOTES:

1. ALL DEVICES SHOWN ARE NEW. PROVIDE CONDUIT , J-BOX AND WIRING FROM ALL FIRE ALARM DEVICES TO THE NEW FIRE ALARM CONTROL PANEL.
2. FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL.
3. MINIMUM SIZE OF CONDUIT SHALL BE 3/4".
4. SEE DRAWING FA401 FOR FIRE ALARM RISER DIAGRAM.
5. LIGHT LINES INDICATE BACKGROUND WORK BY OTHER DISCIPLINES, DARK LINES INDICATE NEW WORK, UNO.
6. SEE DRAWING FA001 FOR THE FOLLOWING ELECTRICAL INFORMATION:
   a) GENERAL NOTES
   b) ABBREVIATIONS
   c) SCOPE OF WORK
   d) SEQUENCE OF OPERATION
   e) FIRE ALARM SYMBOLS
   f) ELEVATOR OPERATION REQUIREMENTS
7. REFER TO FIRE PROTECTION (FP) DRAWINGS FOR THE CEILING HEIGHTS.
8. THE DRAWING SHOWS THE APPROXIMATE LOCATION OF THE FIRE ALARM DEVICES. CONTRACTOR SHALL FIELD VERIFY, DETERMINE, AND PROVIDE THE FINAL LOCATION OF FIRE ALARM DEVICES BASED ON THE SUPPLIED EQUIPMENT/SYSTEM AND AS PER NFPA 72.
9. STROBES SHALL BE SYNCHRONIZED AS PER NFPA 72. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR SYNCHRONIZATION. NOTIFICATION CIRCUITS AND APPLIANCES SHALL MEET ADAAG REQUIREMENTS.

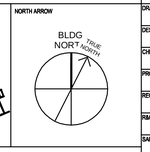
KEY NOTES:

1. PHOTOELECTRIC DUCT SMOKE DETECTOR MOUNTED ON MAKE-UP AIR UNIT.
2. PHOTOELECTRIC DUCT SMOKE DETECTOR MOUNTED ON AIR HANDLER UNIT.
3. WALL MOUNTED MONACO TRANSCEIVER ANTENNA. SEE DETAIL 1/FA501.

KEY PLAN



NORTH ARROW



3/32"=1' 0 6 12 24 32

PROJECT STATUS

BID SET 04/27/09

ISSUE

MARK	DATE	DESCRIPTION

DRAWN	R. LENO	04/27/09
DESIGNED	D. CRAWFORD	04/27/09
CHECKED	E. MIYODA	04/27/09
PROJMGR	J. GRANT	04/27/09
REQUESTOR	R. SCHULER	04/27/09
R&QA		
SAFETY		
SUPERVISOR	S. FRANKEL	04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
ROOF PLAN
FIRE ALARM PLAN
NORTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA215	

SCALE INDEX SHEET OF

DWG: P:_TECHNOLOGY\60048683 – Nasa Ames – N232 Fire Alarm\500 CAD\F\Sheet\FA215.dwg User: LenoR
DATE: Apr 27, 2009 – 8:28:42 am Images:
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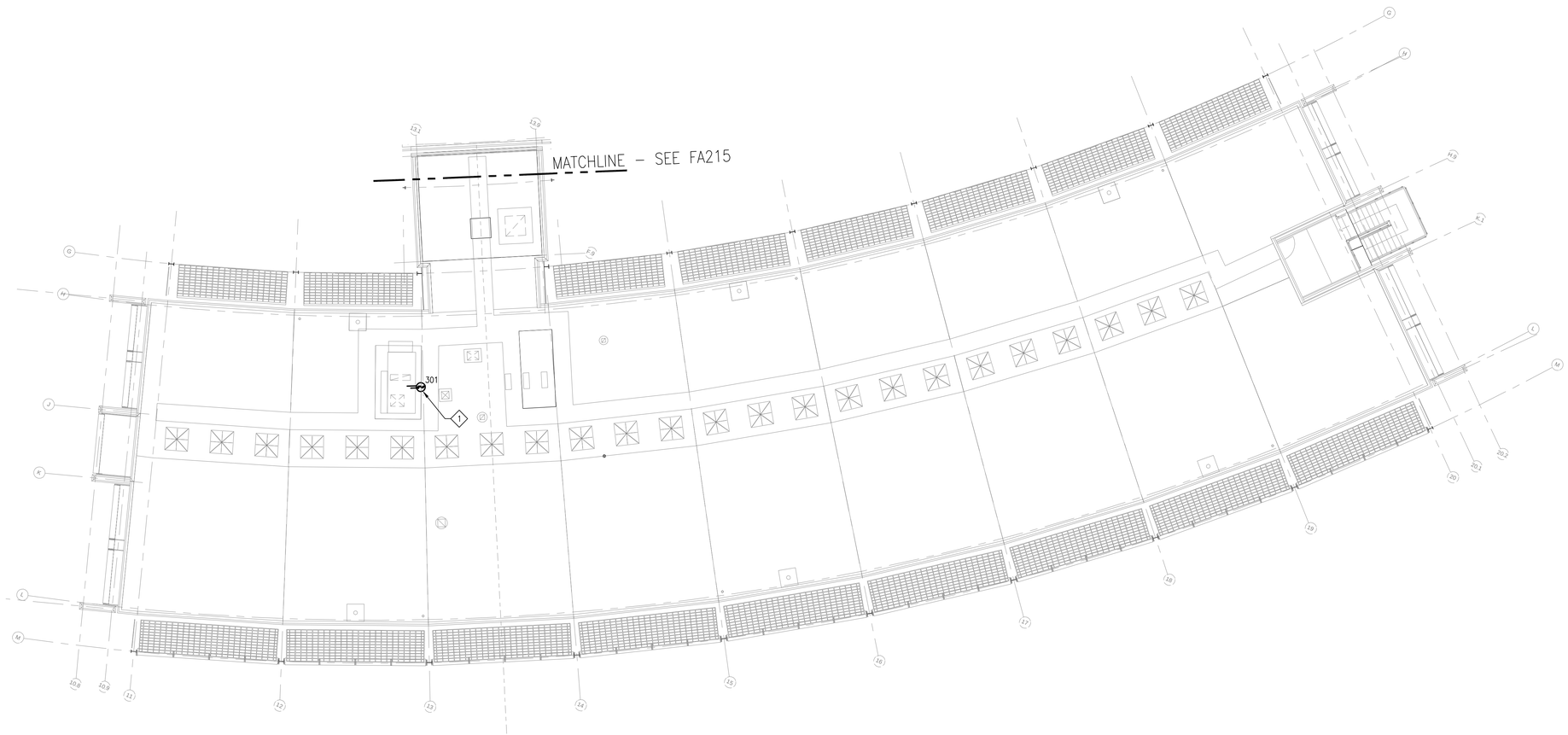


SHEET NOTES:

1. ALL DEVICES SHOWN ARE NEW. PROVIDE CONDUIT , J-BOX AND WIRING FROM ALL FIRE ALARM DEVICES TO THE NEW FIRE ALARM CONTROL PANEL.
2. FIRE ALARM DEVICES SHALL BE COMPATIBLE WITH THE FIRE ALARM CONTROL PANEL.
3. MINIMUM SIZE OF CONDUIT SHALL BE 3/4".
4. SEE DRAWING FA401 FOR FIRE ALARM RISER DIAGRAM.
5. LIGHT LINES INDICATE BACKGROUND WORK BY OTHER DISCIPLINES, DARK LINES INDICATE NEW WORK, UNO.
6. SEE DRAWING FA001 FOR THE FOLLOWING ELECTRICAL INFORMATION:
   a) GENERAL NOTES
   b) ABBREVIATIONS
   c) SCOPE OF WORK
   d) SEQUENCE OF OPERATION
   e) FIRE ALARM SYMBOLS
   f) ELEVATOR OPERATION REQUIREMENTS
7. REFER TO FIRE PROTECTION (FP) DRAWINGS FOR THE CEILING HEIGHTS.
8. THE DRAWING SHOWS THE APPROXIMATE LOCATION OF THE FIRE ALARM DEVICES. CONTRACTOR SHALL FIELD VERIFY, DETERMINE, AND PROVIDE THE FINAL LOCATION OF FIRE ALARM DEVICES BASED ON THE SUPPLIED EQUIPMENT/SYSTEM AND AS PER NFPA 72.
9. STROBES SHALL BE SYNCHRONIZED AS PER NFPA 72. CONTRACTOR SHALL PROVIDE ALL NECESSARY EQUIPMENT FOR SYNCHRONIZATION. NOTIFICATION CIRCUITS AND APPLIANCES SHALL MEET ADAAG REQUIREMENTS.

KEY NOTES:

1. PHOTOELECTRIC DUCT SMOKE DETECTOR MOUNTED ON MAKE-UP AIR UNIT.

KEY PLAN

NORTH ARROW

BLDG NORTH
TRUE NORTH

3/32"=1' 0 6 12 24 32

PROJECT STATUS

BID SET 04/27/09

ISSUE		
MARK	DATE	DESCRIPTION

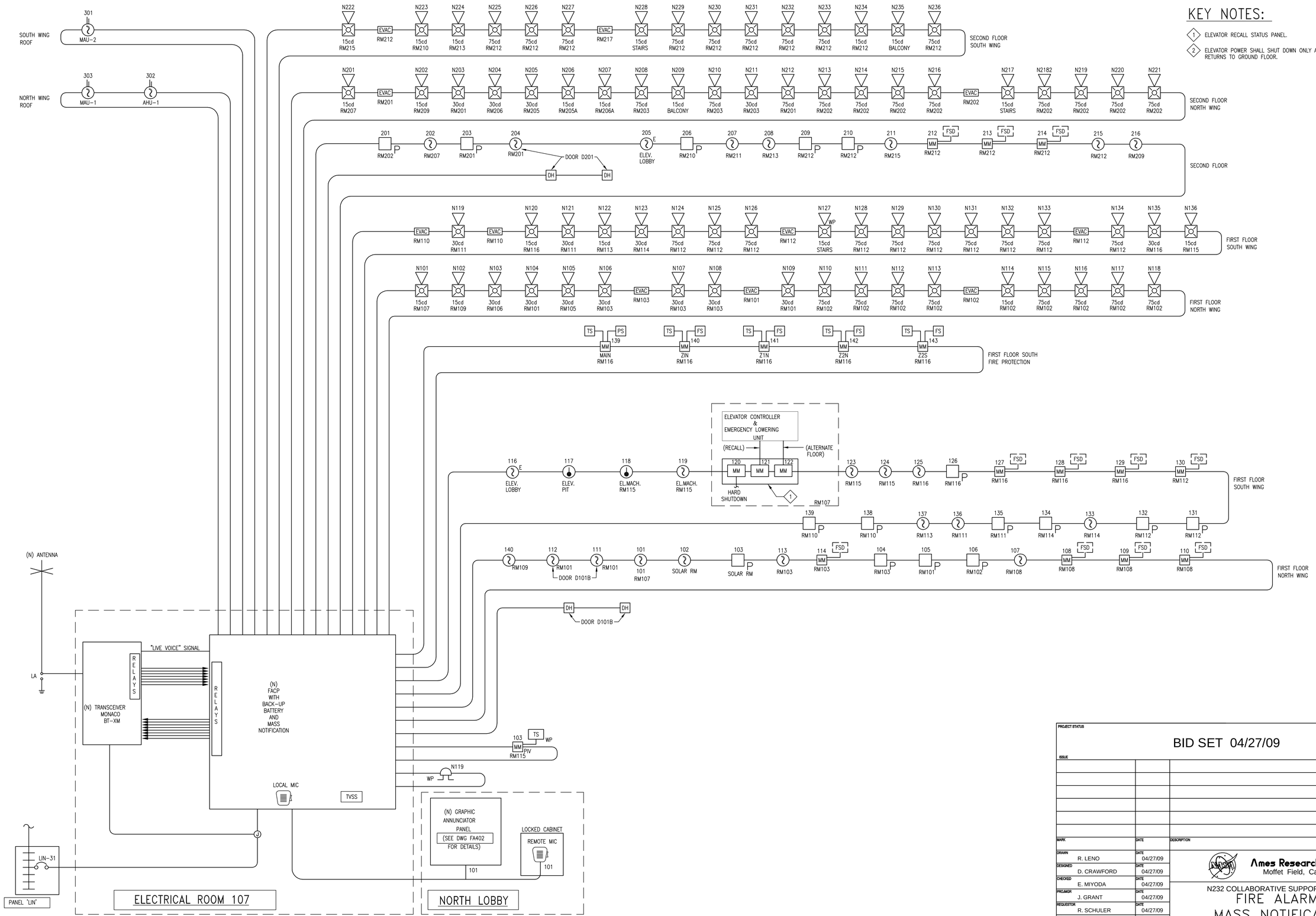
DRAWN	R. LENO	DATE 04/27/09
DESIGNED	D. CRAWFORD	DATE 04/27/09
CHECKED	E. MIYODA	DATE 04/27/09
PROJMGR	J. GRANT	DATE 04/27/09
REQUESTOR	R. SCHULER	DATE 04/27/09
R&QA		DATE
SAFETY		DATE
SUPERVISOR	S. FRANKEL	DATE 04/27/09

Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY
ROOF PLAN
FIRE ALARM PLAN
SOUTH WING

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA216	
SCALE	INDEX	SHEET OF	

DWG: P:_TECHNOLOGY\60048883 - Nasa Ames - N232 Fire Alarm\500 CAD\F\Sheet\FA216.dwg User: LenoR
DATE: Apr 27, 2009 - 8:28:39 am Images:
Xrefs: xFRF01 xarp01 ARDR-SHORT



KEY NOTES:

1. ELEVATOR RECALL STATUS PANEL.
2. ELEVATOR POWER SHALL SHUT DOWN ONLY AFTER ELEVATOR RETURNS TO GROUND FLOOR.

PROJECT STATUS

BID SET 04/27/09

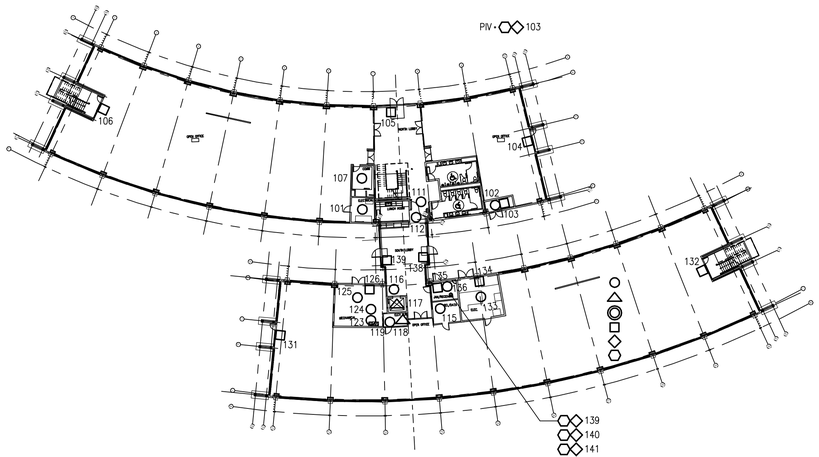
ISSUE

MARK	DATE	DESCRIPTION

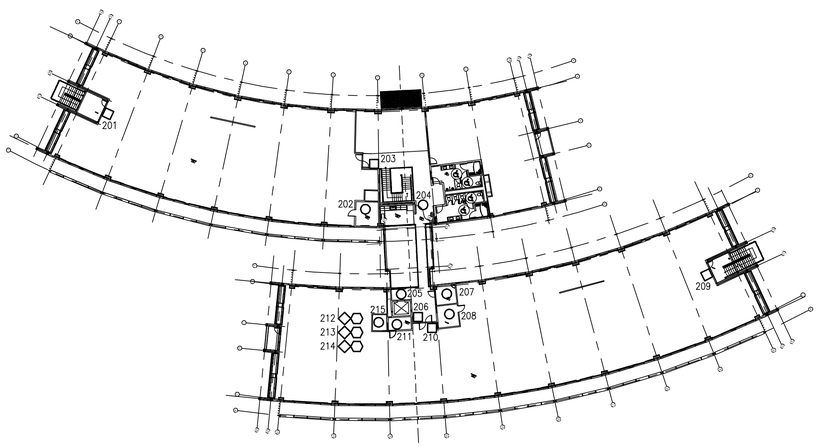
DRAWN R. LENO	DATE 04/27/09	Ames Research Center, Moffet Field, California
DESIGNED D. CRAWFORD	DATE 04/27/09	
CHECKED E. MIYODA	DATE 04/27/09	N232 COLLABORATIVE SUPPORT FACILITY
PROJMGR J. GRANT	DATE 04/27/09	FIRE ALARM/ MASS NOTIFICATION RISER DIAGRAM
REQUESTOR R. SCHULER	DATE 04/27/09	
R&QA	DATE	
SAFETY	DATE	
SUPERVISOR S. FRANKEL	DATE 04/27/09	

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA401	
SCALE	INDEX	SHEET OF	

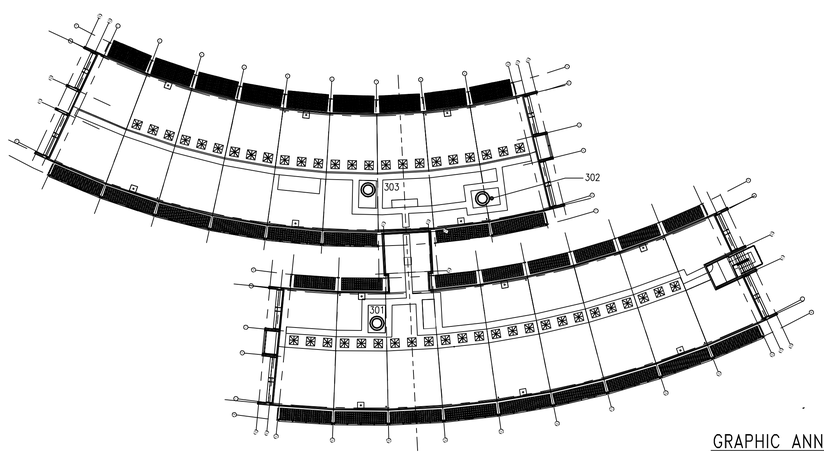
DWG: P:_TECHNOLOGY\60048683 - Nasa Ames - N232 Fire Alarm\500 CAD\F\Sheet\FA401.dwg User: LenoR
DATE: Apr 27, 2009 - 8:28:10 am Images:
Xrefs: "ABBR-SHORT"



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ROOF PLAN

GRAPHIC ANNUNCIATOR PANEL

SYMBOL LEGEND

- SMOKE DETECTOR
- HEAT DETECTOR
- DUCT SMOKE DETECTOR
- MANUAL PULL STATION
- TAMPER SWITCH
- FLOW SWITCH

MIN 22", MAX 28"

MIN 22", MAX 28"

SHEET NOTES:

1. SEE DRAWING FA001 FOR THE FOLLOWING ELECTRICAL INFORMATION:
   a) GENERAL NOTES
   b) ABBREVIATIONS
   c) SCOPE OF WORK
   d) SEQUENCE OF OPERATION
   e) FIRE ALARM SYMBOLS
   f) ELEVATOR OPERATION REQUIREMENTS
2. PROVIDE SCALED FIRE ALARM SYSTEM GRAPHIC ANNUNCIATOR PANEL W/ PLASTIC COVER AND FRAME AS SHOWN ON THIS DRAWING. CONTRACTOR SHALL SUBMIT A TEMPLATE WITH CLEAR AND LEGIBLE MARKINGS FOR REVIEW AND APPROVAL BY THE CONTRACTING OFFICER PRIOR TO FINAL ORDER AND FABRICATION. THE GRAPHIC ANNUNCIATOR PANEL SHALL HAVE WHITE BACKGROUND WITH BLACK LETTERING.
3. UNDER ALARM CONDITIONS THE LIGHTS ON THE GRAPHIC ANNUNCIATOR PANEL SHALL BE LOCKED IN THE "ON" POSITION UNTIL MANUALLY RESET AT THE GRAPHIC ANNUNCIATOR PANEL WITH THE USE OF THE KEY OPERATED ANNUNCIATOR RESET SWITCH.
4. LAMP TEST BUTTON SHALL BE PROVIDED ON THE INSIDE OF THE GRAPHIC ANNUNCIATOR PANEL.

PROJECT STATUS

BID SET 04/27/09

ISSUE

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DRAWN	R. LENO	04/27/09
DESIGNED	D. CRAWFORD	04/27/09
CHECKED	E. MIYODA	04/27/09
PROJMGR	J. GRANT	04/27/09
REQUESTOR	R. SCHULER	04/27/09
R&QA		
SAFETY		
SUPERVISOR	S. FRANKEL	04/27/09

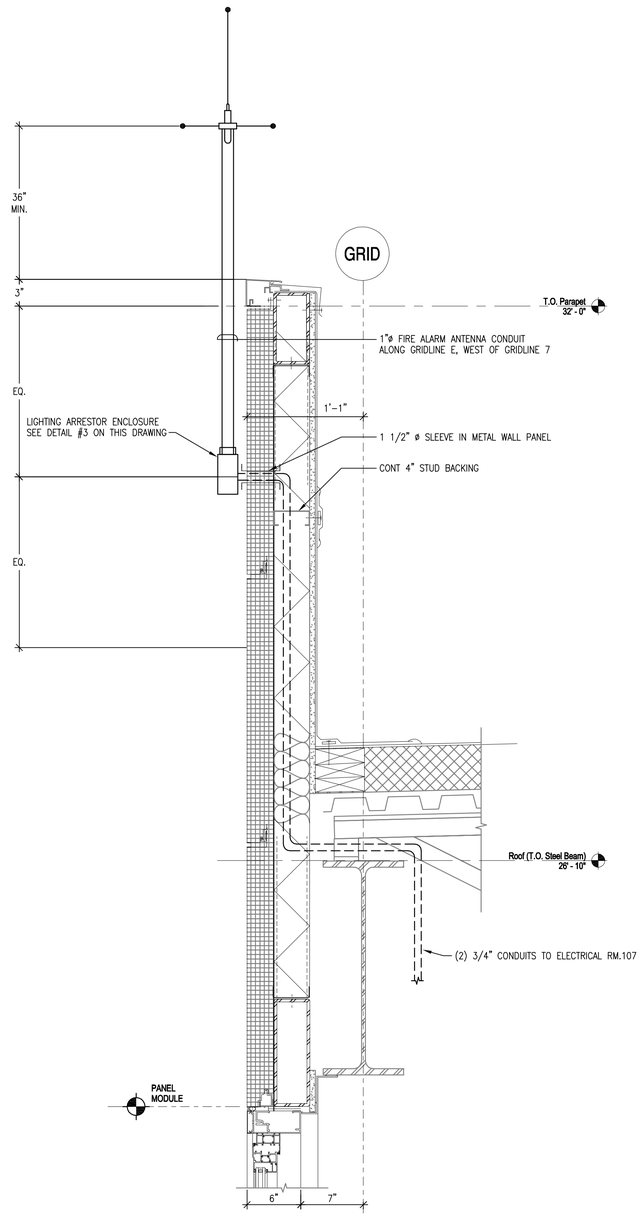
Ames Research Center
Moffet Field, California

N232 COLLABORATIVE SUPPORT FACILITY

GRAPHIC ANNUNCIATOR PANEL

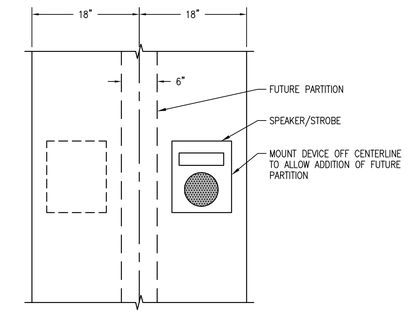
SIZE	CAGE CODE		REV
D	25307	A232-0800- FA402	
SCALE	INDEX	SHEET OF	

DWG: P:_TECHNOLOGY\60048683 - Nasa Ames - N232 Fire Alarm\500 CAD\F\Sheet\FA402.dwg User: LenoR
DATE: Apr 27, 2009 - 8:27:44 am Images:
Xrefs: "xafp01" "xafp02" "xarp01" "XBDR-SHORT



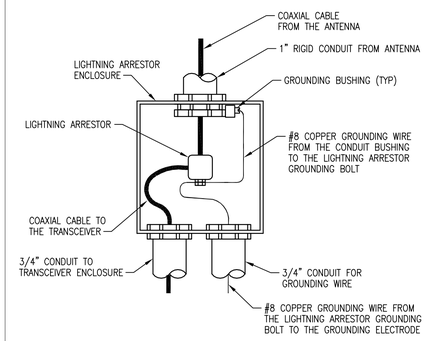
5 SECTION @ PARAPET

FA501 REF. FA501 SCALE: NOT TO SCALE



4 MOUNTING DETAIL AT COLUMN

FA501 REF. FA211, FA212, FA213, FA214 SCALE: NOT TO SCALE



3 LIGHTNING ARRESTOR ENCLOSURE

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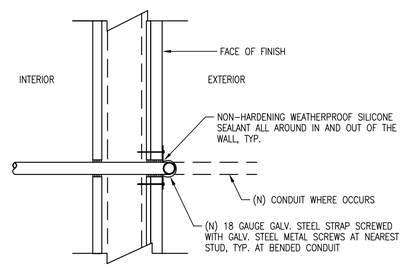
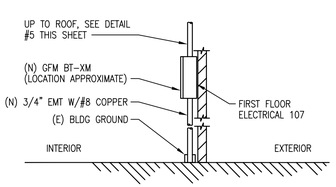


2 WALL PENETRATION DETAIL

FA501 REF. SCALE: NOT TO SCALE



1 TRANSMITTER DETAIL

FA501 REF. FA216 SCALE: NOT TO SCALE

PROJECT STATUS

BID SET 04/27/09

ISSUE

MARK	DATE	DESCRIPTION

DRAWN R. LENO	DATE 04/27/09	Ames Research Center, Moffet Field, California
DESIGNED D. CRAWFORD	DATE 04/27/09	N232 COLLABORATIVE SUPPORT FACILITY
CHECKED E. MIYODA	DATE 04/27/09	FIRE ALARM DETAILS
PROJMGR J. GRANT	DATE 04/27/09	
REQUESTOR R. SCHULER	DATE 04/27/09	
R&QA	DATE	
SAFETY	DATE	
SUPERVISOR S. FRANKEL	DATE 04/27/09	

SIZE	CAGE CODE		REV
D	25307	A232-0800- FA501	
SCALE	INDEX	SHEET OF	

DWG: P:_TECHNOLOGY\60046683 - Nasa Ames - N232 Fire Alarm\500 CAD\F\Sheet\FA501.dwg User: LenoR
DATE: Apr 27, 2009 - 8:29:59 am Images:
Xrefs: RBDR-SHORT