NORTHERN ARIZONA UNIVERSITY

BUILDINGS # 4, 5, 6
(MORTON HALL, NORTH HALL, CAMPBELL HALL)
FA UPGRADES

FLAGSTAFF, ARIZONA

NAU PROJECT NO. 09.004.195

STANLEY CONSULTANTS PROJECT NO. 29019.01.00

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DRAWING NO.	TITLE
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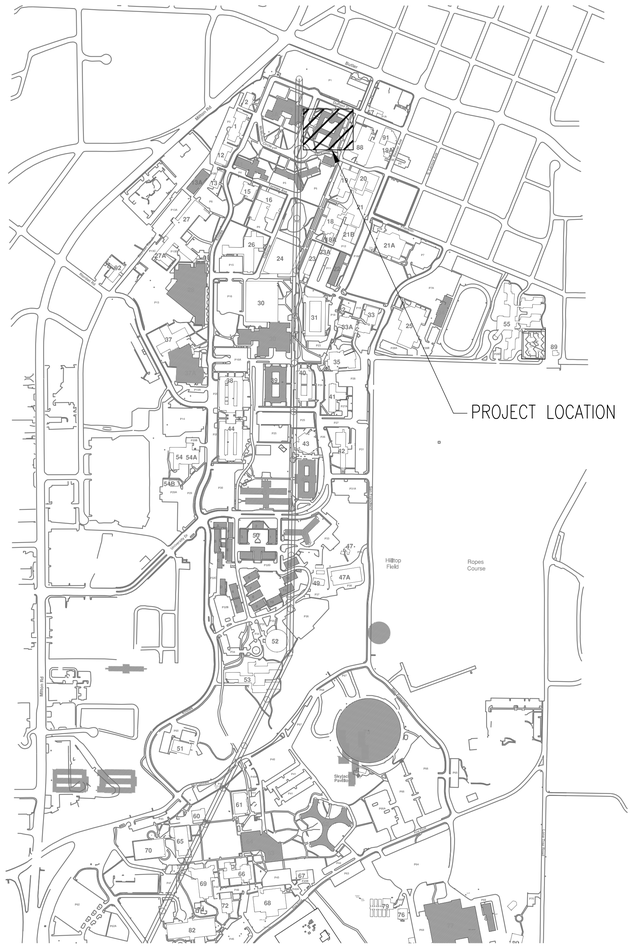
ES52	SPECIAL SYSTEMS – RISER DIAGRAM – CAMPBELL HALL
ES53	SPECIAL SYSTEMS – DETAILS



LOCATION MAP

APPLICABLE CODES AND REFERENCES

2011 NATIONAL ELECTRICAL CODE (NFPA 70)
ARIZONA STATE FIRE CODE
2010 AMERICANS WITH DISABILITIES ACT
2012 INTERNATIONAL BUILDING CODE
2012 INTERNATIONAL MECHANICAL CODE
2012 INTERNATIONAL FIRE CODE
OSHA REGULATIONS
NAU TECHNICAL STANDARDS AND DESIGN GUIDELINES (VOL. FY17, REV. 1, 05/01/2017)
NAU FIRE CODE

PRELIMINARY ISSUE
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05-29-2019

NO.	REVISIONS	DSGN	CHKD	APVD	DATE

Stanley Consultants INC.
1661 East Camelback Road, Suite 400, Phoenix, Arizona 85016
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NORTHERN ARIZONA UNIVERSITY
NAU BLDG's #4, 5, 6, FA UPGRADES
FLAGSTAF, ARIZONA US

GENERAL
COVER SHEET & DRAWING INDEX

DESIGNED	B. KOWALCZYKOWSKA	SCALE: AS SHOWN	
DRAWN	B. KOWALCZYKOWSKA	NO. 29019.01.00	REV.
CHECKED	D. MORITZ	GG00	A
APPROVED	B. CHIDESTER		
APPROVED			
DATE			

FIRE ALARM

EOL = END OF LINE RESISTOR

[*] * =
- FACP = FIRE ALARM CONTROL PANEL
- FAA = FIRE ALARM ANNUNCIATOR
- FTR = FIRE ALARM TRANSPONDER OR TRANSMITTER
- ESR = ELEVATOR STATUS/RECALL
- FAC = FIRE ALARM COMMUNICATOR
- MIC = REMOTE MIC
- EVAC = VOICE EVACUATION PANEL
- AMP = AMPLIFIER RACK
- BATT = BATTERY PACK AND CHARGER

FSCP X — FIRE SYSTEM CONTROL PANEL

WHERE X:
- CO_2 – CARBON DIOXIDE
- DC – DRY CHEMICAL
- FO – FOAM
- WC – WET CHEMICAL
- CA – CLEAN AGENT

RSFACU X — RELEASING SERVICE FIRE ALARM CONTROL UNIT

WHERE X:
- CO_2 – CARBON DIOXIDE
- DC – DRY CHEMICAL
- FO – FOAM
- WC – WET CHEMICAL
- CA – CLEAN AGENT
- WM – WATER MIST
- DL – DELUGE SPRINKLER

ET — EMERGENCY TEXTUAL VISIBLE APPLIANCE

[*] * =
- F = MANUAL PULL STATION
- CO_2 = MANUAL PULL STATION – CARBON DIOXIDE
- DC = MANUAL PULL STATION – DRY CHEMICAL
- FO = MANUAL PULL STATION – FOAM
- WC = MANUAL PULL STATION – WET CHEMICAL
- CA = MANUAL PULL STATION – CLEAN AGENT
- WM = MANUAL PULL STATION – WATER MIST
- DL = MANUAL PULL STATION – DELUGE SPRINKLER

[*] * =
- BLANK = FIRE SERVICE OR EMERGENCY TELEPHONE STATION
- A = FIRE SERVICE OR EMERGENCY TELEPHONE STATION – ACCESSIBLE
- H = FIRE SERVICE OR EMERGENCY TELEPHONE STATION – HANDSET

[*] * =
- BLANK = ABORT SWITCH
- CO_2 = ABORT SWITCH – CARBON DIOXIDE
- DC = ABORT SWITCH – DRY CHEMICAL
- FO = ABORT SWITCH – FOAM
- WC = ABORT SWITCH – WET CHEMICAL
- CA = ABORT SWITCH – CLEAN AGENT
- WM = ABORT SWITCH – WATER MIST
- DL = ABORT SWITCH – DELUGE SPRINKLER
- PRE = ABORT SWITCH – PREACTION SYSTEM
- EPO = ABORT SWITCH – EMERGENCY POWER OFF

X — HEAT DETECTOR – COMBINATION: RATE OF RISE AND FIXED TEMPERATURE

WHERE X:
- R/F – COMBINATION; RATE OF RISE AND FIXED TEMPERATURE
- R/C – RATE COMPENSATION
- F – FIXED TEMPERATURE
- R – RATE OF RISE ONLY
- TSS – TEMPERATURE SUPERVISORY SWITCH

HEAT DETECTOR – LINE TYPE DETECTOR (HEAT– SENSITIVE CABLE)

R — SMOKE/HEAT DETECTOR

X — SMOKE DETECTOR

WHERE X:
- P – PHOTOELECTRIC PRODUCTS OF COMBUSTION DETECTOR
- I – IONIZATION PRODUCTS OF COMBUSTION DETECTOR
- BT – BEAM TRANSMITTER
- BR – BEAM RECEIVER
- ASD – AIR SAMPLING
- 120 – 120V STAND ALONE
- S – PHOTOELECTRIC (SUPERVISORY), LOW FREQUENCY SOUNDER BASE

I / II — SMOKE DETECTOR FOR DUCT

GAS DETECTOR

X — FLAME DETECTOR

WHERE X:
- F – FLAME
- UV – ULTRAVIOLET
- IR – INFRARED
- UV/IR – COMBINATION ULTRAVIOLET INFRARED
- VR – VISIBLE RADIATION

[*] * =
- WF = FLOW DETECTOR/SWITCH
- PS = PRESSURE DETECTOR/SWITCH
- LS = LEVEL DETECTOR/SWITCH
- TS = VALVE TAMPER SWITCH

VS — VALVE WITH VALVE SUPERVISORY SWITCH

X — x =
- R = OUTPUT RELAY
- HT = TEMPERATURE SWITCH – HIGH TEMPERATURE
- LT = TEMPERATURE SWITCH – LOW TEMPERATURE

X — x =
- BLANK = GONG
- V = BELL – VIBRATING
- VS = BELL – VIBRATING/STROBE
- G = BELL – SINGLE STROKE GONG
- GS = BELL – SINGLE STROKE GONG/STROBE

ROTATING BEACON TO INDICATE EMERGENCY RESPONSE POINTS

RTS — REMOTE ALARM INDICATING AND TEST SWITCH

AIM — ADDRESSABLE INPUT MODULE

AOM — ADDRESSABLE OUTPUT MODULE

[*] X * =
- H = HORN
- S = SPEAKER
- V = STROBE
- SS = SPEAKER/STROBE
- HS = HORN/STROBE

WHERE X:
- X – CANDELA RATING

GENERAL NOTES:

1. ALL SYMBOLS AND ABBREVIATIONS SHOWN ON THIS LEGEND MAY NOT APPEAR ON THIS SET OF DRAWINGS.

PRELIMINARY ISSUE
FOR APPROVAL

05-29-2019

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NORTHERN ARIZONA UNIVERSITY
BUILDING # 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

GENERAL LEGEND

DESIGNED	B. KOWALCZYKOWSKA
DRAWN	B. KOWALCZYKOWSKA
CHECKED	D. MORITZ
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
REV. A
GG01

CADD D1-R4

GENERAL NOTES:

* FIRE ALARM SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH AN R2 OCCUPANCY PER NFPA 70, 72, AND 101. NO CO DETECTION IS REQUIRED PER NAU AS NO FOSSIL FUEL SOURCES ARE IN PLACE IN THE FACILITY.

* ALL FIRE ALARM WIRING TO BE 2 HOUR LISTED, PLENUM RATED, POWER LIMITED, AND APPROVED BY MANUFACTURER FOR USE WITH EQUIPMENT. ALL FIRE ALARM CABLE MUST BE MARKED FOR POWER LIMITED FIRE ALARM USE. WIRING SHALL BE ALLOWED TO BE INSTALLED WITHOUT CONDUIT ABOVE CEILINGS WHERE ACCESSIBLE AND NOT EXPOSED TO HAZARDOUS CONDITIONS WHEN PROPERLY SUPPORTED PER CODE. WHERE ROUTED ABOVE A DROPPED GYPSUM CEILING, PLACE FLEXIBLE METAL CONDUIT BETWEEN DEVICES, OR FOR CIRCUIT ROUTING. REUSE CONDUITS WHERE POSSIBLE WHERE CONCEALED. WHERE PLACED IN EXPOSED SERVICE AREAS SUCH AS MECHANICAL ROOMS AND EXPOSED BOTTOM SIDES OF UPPER FLOOR DECK, PLACE WIRING IN RED EMT METAL CONDUIT PRE-PAINTED RED, (ALLIED TRUE COLOR, OR EQUAL). CONDUIT TYPE SHALL MATCH CLASSIFICATION OF SPACE INSTALLATION REQUIREMENTS. CONTRACTOR TO ROUTE BETWEEN FLOORS AS NECESSARY IN CHASES OR WALLS WHERE POSSIBLE. EXPOSED CONDUITS SHALL BE APPROVED BY NAU PRIOR TO INSTALL. ALL J-BOXES SHALL BE PAINTED RED AND MARKED "FIRE ALARM, POWER LIMITED"

* FIRE ALARM WIRING REQUIREMENTS ARE AS FOLLOWS (VERIFY WITH NOTIFIER AS SYSTEM SHALL BE AN NFS2-640 SYSTEM). ALL FIRE ALARM WIRING SHALL BE PLENUM RATED AND POWER LIMITED, MARKED FOR POWER LIMITED USE, AND LISTED AS APPROVED BY MANUFACTURER FOR USE WITH THEIR EQUIPMENT:

  A. CONTROL AND MONITOR MODULES:
     PROVIDE A 2/C #14 FOR 24VDC AND #16 TW/SH FROM FACP FOR CONTROL MODULE AND #16TW/SH FOR MONITOR MODULE LOCATIONS.
  B. NOTIFICATION/INDICATING CIRCUITS (SPEAKER, STROBES)
     PROVIDE A 2/C #14 FOR 24VDC/SYNC SIGNAL AND #16 TSP FROM FACP FOR SPEAKER CIRCUITS UNLESS OTHERWISE REQUIRED BY MANUFACTURER. FOR 120V DEVICES 2/C #12 IN A 3/4 INCH EMT CONDUIT.
  C. SIGNAL LINE/INITIATING CIRCUIT WIRING (PULL STATIONS, SMOKE, HEAT, DUCT DETECTORS, ETC.)
     PROVIDE A #16 TW/SH FROM FACP. IF DEVICES REQUIRE A 24VDC POWER DEVICE PLACEMENT SHALL LIMIT TO 50 DEVICES PER SLC CIRCUIT. SUPPLY INDEPENDENT OF SIGNAL LINE CIRCUIT (HARD WIRED NON-ADDRESSABLE TYPE) PROVIDE A 2/C #14 FROM FACP TO DEVICES AND AN END OF LINE RESISTOR AS REQUIRED ON CIRCUIT.

* ALL CONTROL AND MONITOR MODULES SHALL BE MOUNTED IN 2 X 4 OR 4 X 4 INCH BACKBOXES AS REQUIRED BY MANUFACTURER. PROVIDE BACKBOX ADJACENT TO DEVICE TO BE MONITORED, CONTROLLED, OR FOR SIGNALING PURPOSES. ALL CONTACT CLOSED DEVICES THAT ARE BEING MONITORED SHALL ALSO HAVE AN END OF LINE RESISTOR ON CIRCUIT TO SUPERVISE WIRING AND BE COORDINATED WITH NOTIFIER FOR PROPER VALUE OF RESISTOR.

* THERE ARE MULTIPLE LOCATIONS WHERE IT SHOWS TO PROVIDE A MONITOR MODULE. AT THESE LOCATIONS PROVIDE A NOTIFIER XP10--M(A) 10 INPUT MODULE TO MONITOR ANY CONTACT CLOSURE OUTPUTS THAT MAY BE IN THE ROOM. PROVIDE IN NOTIFIER BACKBOX BB-XP WITH COVER AND LOCATE ADJACENT TO DEVICES MONITORED. WIRE TO SLC CIRCUIT AND ALL CONNECTED DEVICES SHALL HAVE PROPER ELR AT END OF CONTACT CLOSURE FOR FULL SUPERVISION. SHOW DEVICES ON FINAL AS-BUILTS AND IF ONLY INPUT MODULE INSTALLED AT THIS TIME ALLOW FOR 2 OF 10 POINTS FOR FUTURE ADDRESS CONNECTIONS.

* CONTRACTOR TO SUBMIT A MANUFACTURER PREPARED PLANS, SEQUENCE OF OPERATION MATRIX, AND SCHEMATIC RISER SHOWING THE FACP, DEVICES, AND ALL ASSOCIATED WIRING REQUIREMENTS FOR APPROVAL BEFORE INSTALLATION. RISER SHALL SHOW ADDRESS TAG FOR EACH DEVICE AND ALSO VOLTAGE DROP AND BATTERY COMPUTATIONS FOR ALL CIRCUITS, NOTIFICATION AND SIGNAL LINE PER SPECIFICATION.

* FACP SHALL HAVE A SYNCH MODULE FOR ALL STROBE CIRCUITS.

* FIRE ALARM CONDUITS SHALL NOT ENTER THE BOTTOM OF FIRE ALARM CONTROL PANEL OR AUXILARY ENCLOSURES AS THIS SPACE SHOULD BE RESERVED FOR BATTERIES.

* FACP AND DISTRIBUTED AMPLIFIERS 120VAC POWER REQUIREMENTS ARE FROM PANELBOARDS AS SHOWN ON DRAWINGS. CONTRACTOR WILL HAVE TO CONFIRM SPARE BREAKERS AS PANEL SCHEDULE STATES "SPARE" BUT BREAKERS ARE TURNED ON.

* PANELS ARE ALL SQUARE D "QO" STYLE PANELS. IF STANDARD SINGLE POLES BREAKER SPARES ARE NOT AVAILABLE CONTRACTOR MAY REPLACE WITH TWO IN ONE SPACE BREAKERS. CONTRACTOR SHALL ROUTE 120VAC REQUIREMENTS FROM THESE CIRCUITS TO FACP OR DISTRIBUTED AMPLIFIER LOCATIONS WITH 3 #12 IN A 3/4 INCH EMT CONDUIT. THIS CIRCUIT SHALL BE DEDICATED. LABEL BREAKERS IN BREAKER PANEL SERVING FACP OR AMPLIFIERS AS " FACP " AND PLACE LOCKING CLIP ON ALL BREAKERS. AT FACP OR DISTRIBUTED AMPLIFIERS LABEL WITH BREAKER PANEL NAME AND CIRCUIT NUMBER.COORDINATE WITH NAU.

* ELECTRICAL LAYOUT DRAWINGS ARE DIAGRAMMATIC. REFER TO REFLECTIVE CEILING PLANS FOR GUIDANCE. WHERE HARD SOFFITED CEILING IS SHOWN. CONTRACTOR MAY INSTALL ADDITIONAL ACCESS PANELS TO MATCH EXISTING IF REQUIRED.

* PROVIDE ADDITIONAL SUPPORTS FOR EQUIPMENT WHEREVER THE BUILDING STRUCTURE IS NOT SUITABLE FOR DIRECT MOUNTING.

* THE ARRANGEMENT AND ROUTING OF CIRCUITS WILL BE AT THE CONTRACTORS DISCRESSION IN ACCORDANCE WITH GENERALLY ACCEPTED GOOD PRACTICES, AND NEC REQUIREMENTS.

* SYSTEM RISER DIAGRAM SHALL BE PROVIDED BY INSTALLATION CONTRACTOR AFTER FINAL TESTING WITH ADDRESS OF ALL DEVICES SHOWN NEXT TO EACH DEVICE FOR FUTURE MAINTENANCE AND TESTING PURPOSES. THIS SHALL INCLUDE SLC ROUTING REPORT FOR TROUBLESHOOTING PURPOSES.

* PROVIDE FIRE STOPPING AROUND ALL RACEWAYS PENETRATING WALLS, FLOORS, OR CEILINGS, UTILIZE THOMAS AND BETTS "UL" LISTED FLAME-SAFE FIRESTOP SYSTEM.

* THERE ARE EXISTING PRESSURE, TAMPER, AND FLOW SWITCH LOCATIONS THAT ARE NOT SHOWN ON THE DRAWINGS AS THE ROOMS WERE LOCKED AT TIME OF SITE VISIT. REPLACE ALL EXISTING MONITOR MODULES AND INSTALL NEW 10 INPUT MODULES AND REPLACE BOXES. REUSE RACEWAYS AS POSSIBLE. WHERE 10 POINT MODULES ARE USED AT MODULE EACH ASSOCIATED INPUT POINT ARE TO BE DEFINED AND CLEARLY LABELED AT EACH SWITCH BEING MONITORED.

* CONFIRM LOADING OF S/V DEVICES WITH MANUFACTURERS MAX OUTPUT RATINGS. LOOPS SHOWN ARE SCHEMATIC IN NATURE AND MAY REQUIRE MORE LOOPS FOR DEVICE LOADING REQUIREMENTS. THIS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THE REQUIREMENTS.

* LOCATE SPEAKER/VISUAL DEVICES RECESSED IN SUSPENDED CEILING WHERE THIS TYPE OF CEILING EXIST. ALL OTHER SPEAKER/VISUAL DEVICES SHALL BE SURFACE MOUNTED AT HEIGHTS PER NFPA 72, ADA REQUIREMENTS, AND AS DETAILED ON DRAWINGS.

* ALL WIRING IS TO BE COPPER CONDUCTORS. FIBER OPTIC CABLE WILL BE USED AS THE NETWORK MEDIA BETWEEN PANELS AS SHOWN ON THE RISER DIAGRAM.

* IF SHIELDED WIRE IS USED, THE FOLLOWING MUST BE OBSERVED:

  A. METALLIC CONTINUITY OF THE SHIELD MUST BE MAINTAINED THROUGHOUT THE ENTIRE LENGTH OF THE CABLE.

  B. THE ENTIRE LENGTH OF THE CABLE MUST HAVE A RESISTANCE GREATER THAN 1 MEGOHM TO EARTH GROUND.

* A SYSTEM GROUND MUST BE PROVIDED FOR EARTH DETECTION AND LIGHTNING PROTECTION DEVICES. THIS CONNECTION SHALL BE MADE TO AN APPROVED DEDICATED EARTH CONNECTION PER NFPA 780.

* ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT. ALL WIRE AND CONDUIT MUST BE INSTALLED PER N.E.C. 760.

* EXCESS SLACK SHOULD BE KEPT TO A MINIMUM INSIDE THE FACP ENCLOSURES. THE WIRING SHOULD BE NEATLY DRESSED AND BUNDLED TOGETHER USING THE WIRE TIES PROVIDED WITH THE EQUIPMENT. ANCHOR POWER LIMITED WIRING TO TIE POINTS.

* ALL 23 AWG CATEGORY 6 (DATA CABLE) USED WITH "WIRED NETWORK CARDS" MUST BE TWISTED PAIR. WHEN SHIELDED CABLE IS USED, THE SHIELD MUST BE TERMINATED TO CHASSIS EARTH.

* IT IS PERMISSIBLE TO USE MIXED MEDIA IN A NETWORK SYSTEM IF APPROVED BY OWNER. FOR EXAMPLE, SOME SPANS MAY BE "WIRED MEDIA" TO CAMPUS NETWORK BUT OPTICAL FIBER SHALL BE USED BETWEEN 3 MAIN BUILDING FIRE ALARM PANELS.

* ALL WIRING, EXCEPT THE SHIELD IS SUPERVISED.

* WHEN NETWORK WIRING LEAVES A BUILDING, TRANSIENT OVERVOLTAGE PROTECTION ISOLATION MODULES ARE REQUIRED. ONE MUST BE INSTALLED WHERE IT LEAVES THE BUILDING AND ONE WHERE IT ENTERS THE NEXT BUILDING. INSTALL IN NEMA ENCLOSURE RATED FOR AREA AT HEIGHT WHERE MAY BE SERVICED WITHOUT USING A LADDER AND ACCESSIBLE WITHOUT DIRECT EXPOSURE TO OCCUPANTS.

* CONDUCTORS MUST TEST FREE OF ALL GROUNDS BEFORE MAKING ANY CONNECTIONS TO THE FIRE ALARM CONTROL PANEL.

* THE FIRE ALARM EQUIPMENT SHALL BE COMMISSIONED ONLY UNDER THE DIRECT SUPERVISION OF A FACP MANUFACTURERS REPRESENTATIVE.

* CHECK VISUAL DEVICES FOR CORRECT CANDELA RATING BEFORE INSTALLATION.

* INSTALLATION SHALL BE DIRECT SUPERVISED BY NICET LEVEL 2 CERTIFIED INDIVIDUAL IN THE FIELD AT ALL TIMES.

* NO ADDRESSABLE MODULES MOUNTED ABOVE 80 INCHES.

* TAMPER AND FLOW SWITCHES SHALL BE IN NORMALLY OPEN, NON-ALARM POSITION FOR NORMAL OPERATION.

* S/V DEVICES MAY BE FIELD ADJUSTED TO BE SEEN AND HEARD FOR INTELLIGIBILITY IF APPROVED BY AHJ. BUILDING SPEAKERS SHALL BE TAPPED AT 0.25W INITIALLY WITH CANDELLA SETTING AT 15. ADJUST AS NECESSARY IN FINAL COMMISSIONING.

* AUDIBLE DEVICES SHALL BE 15 DB ABOVE AMBIENT NOISE LEVEL OR 5 DB ABOVE MAXIMUM NOISE LEVEL.

* HANDWRITTEN LABELS ARE NOT APPROVED ON DEVICES.

* BATTERIES IN PANELS OR POWER SUPPLIES SHALL BE LABELED WITH MONTH AND YEAR OF MANUFACTURE.

* PRIMARY POWER SHALL NOT BE TURNED ONTO POWER FIRE ALARM SYSTEM WITHOUT BEING SUPERVISED AND FIRST APPROVED BY MANUFACTURER REPRESENTATIVE.

* A COPY OF THE STAMPED APPROVED FIRE ALARM DRAWINGS SHALL BE KEPT AT EACH OF THE 3 PANEL LOCATIONS AT ALL TIME FOR FIRE ALARM INSPECTIONS. INTERCONNECTION NETWORK FIBER ROUTE WILL ALSO BE DEFINED.

* FINAL SYSTEM, TESTING SHALL BE DONE WITH THE AHJ PRESENT AND CONTRACTOR TO PROVIDE 2 MEN WITH WALKIE TALKIES TO TEST ALL FUNCTIONS OF OPERATIONS MATRIX TABLE OR AS APPROVED BY AHJ.

* CAN SMOKE TESTING ONLY AND MAGNETIC TESTING WILL NOT BE ACCEPTED.

* OWNER AND AHJ SHALL EACH RECEIVE A COPY OF FINAL ACCEPTANCE TEST RESULTS.

* PROVIDE AMPLIFIERS AND WITH VOICE CARD WITH MICROPHONE AND MINIMUM OF 3 DIGITALLY PRE-RECORDED MESSAGES. CONFIRM WITH NAU. EXAMPLES ARE AS FOLLOWS:

  A. THIS IS A FIRE ALARM. PLEASE PROCEED DIRECTLY TO YOUR DESIGNATED SAFE AREA OUTSIDE OF THE BUILDING.

  B. YOUR ATTENTION PLEASE. AN ALL CLEAR HAS BEEN ISSUED; PLEASE RETURN TO YOUR UNIT.

  C. THIS IS A TAKE SHELTER ALARM. PLEASE PROCEED DIRECTLY TO THE DESIGNATED AREA INSIDE THE BUILDING, AND CHECK IN WITH YOUR DESIGNATED CONTACT.

* THE LAST MESSAGE ABOVE SHALL BE USED FOR EMERGENCY WEATHER CONDITIONS AND BE ABLE TO BE ACTIVATED BY A REMOTE SIGNAL.

* CONTACT OWNER FOR TIMED INTERVALS OF ACTIVATION OF MESSAGES AND MEANS OF TERMINATION OF EACH MESSAGE.

* ACCESS PANELS HAVE BEEN SHOWN IF CONTRACTOR IS CLEARED TO WORK IN THOSE AREAS TO CONCEAL WIRING. CONCEAL WIRING AS MUCH POSSIBLE.

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

GENERAL
FIRE ALARM NOTES

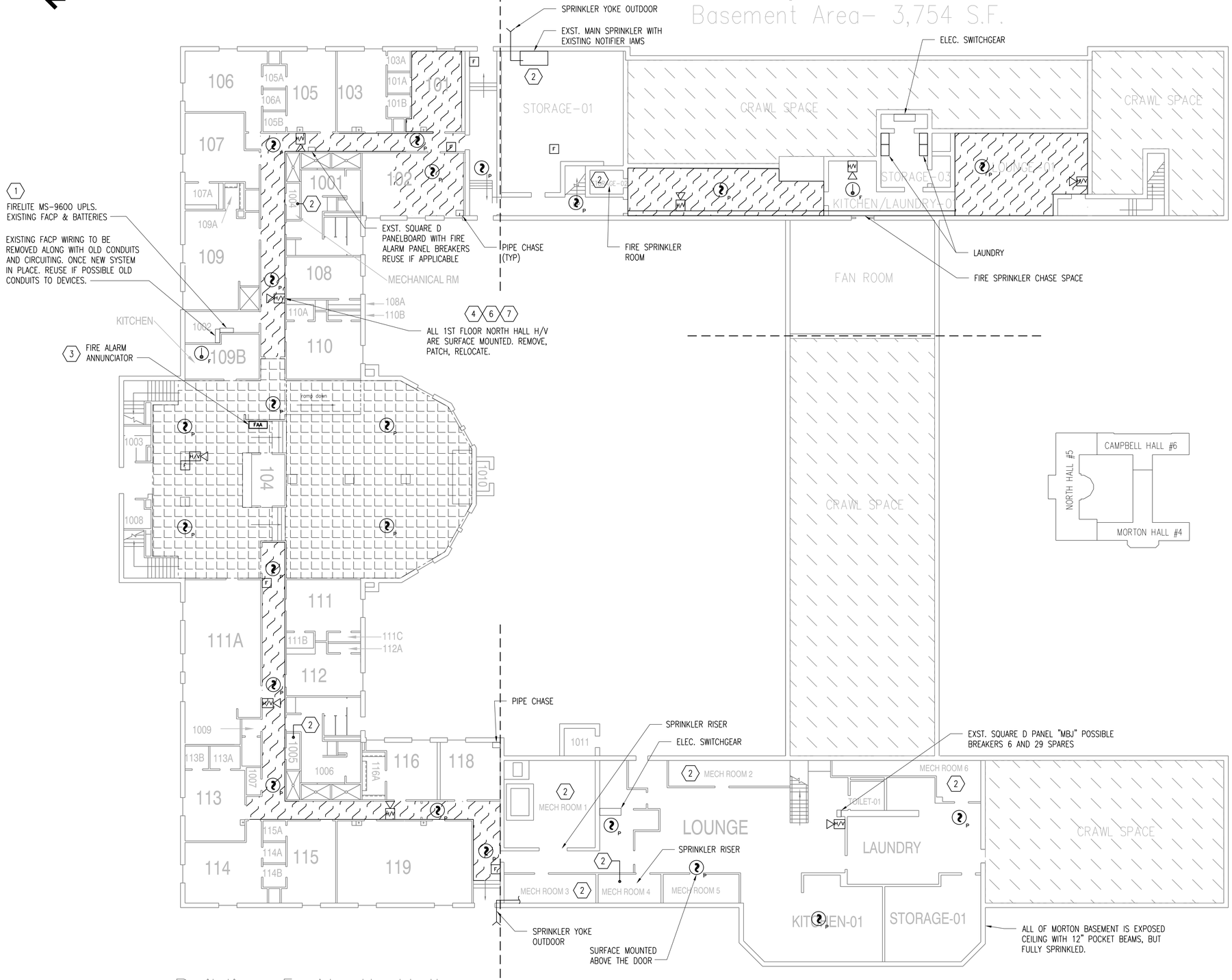
DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
REV. A
GG02

CADD D1-R4

NORTH

Building 6, Campbell Hall
Basement Area– 3,754 S.F.



Building 5, North Hall
First Floor Area– 11,290 S.F.

Building 4, Morton Hall
Basement Area– 4,216 S.F.

DEMOLITION FIRE ALARM – FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING GG02 FOR PARTICULARS.
2. FOR KEYED NOTES (#) – SEE DWG. DE40.

LEGEND:

- SOFFITED CEILING CUT IN ACCESS DOORS AS NEEDED TO MATCH EXISTING.
- SUSPENDED ACT CEILING
- 12"x12" CEILING TILES
- CRAWL SPACE

PRELIMINARY ISSUE
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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

DEMOLITION – BLDGS. #4, 5, 6
BASEMENT–#4, #6 & 1st FLOOR #5
FLOOR PLAN

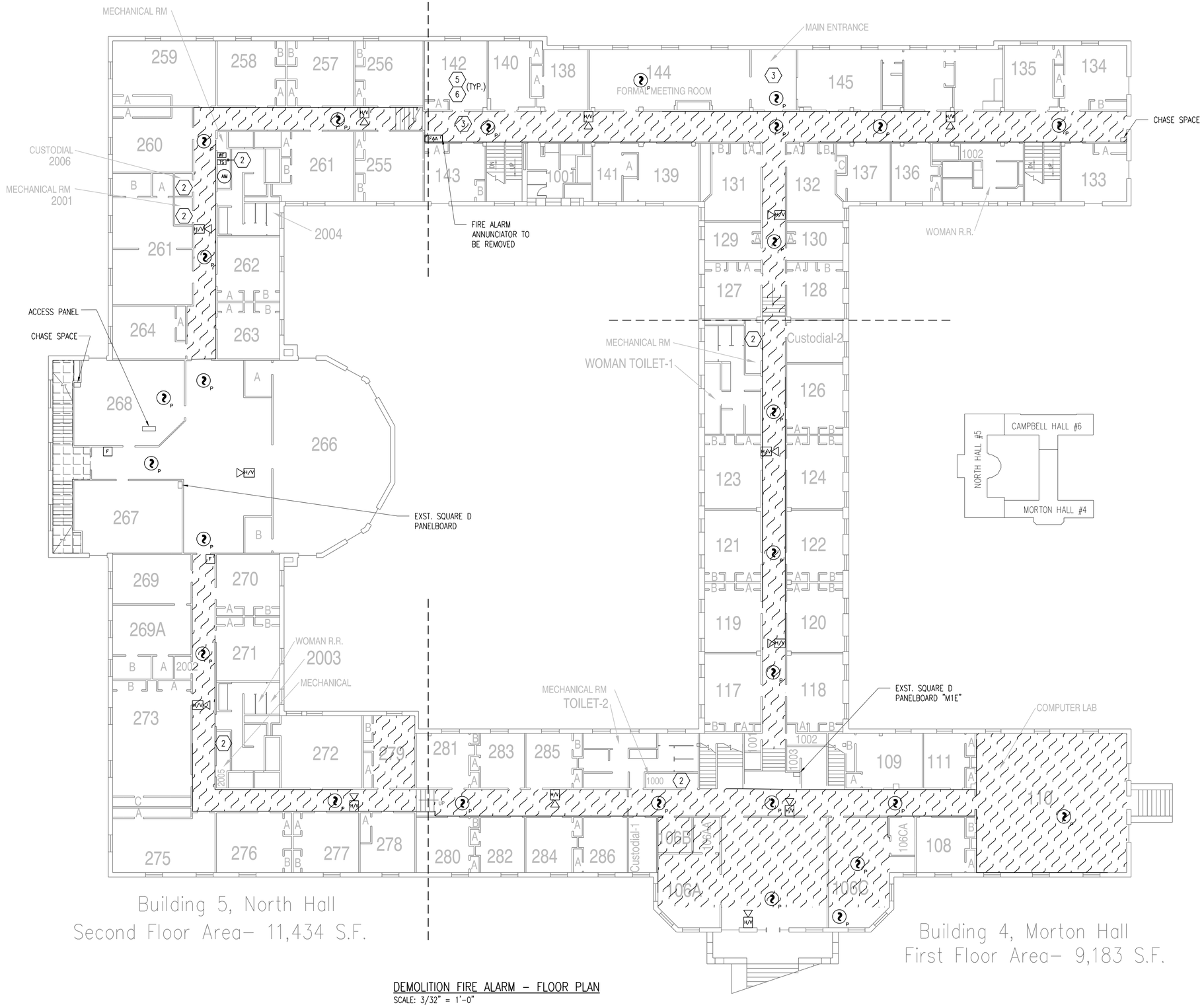
DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'-0"
NO. 29019.01.00
REV. A
DE10

CADD D1-R4

NORTH

Building 6, Campbell Hall
First Floor Area– 6,707 S.F.



DEMOLITION FIRE ALARM – FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING GG02 FOR PARTICULARS.
2. FOR KEYED NOTES (#) – SEE DWG. DE40.

LEGEND:

- SOFFITED CEILING CUT IN ACCESS DOORS AS NEEDED TO MATCH EXISTING.
- SUSPENDED ACT CEILING
- 12"x12" CEILING TILES
- CRAWL SPACE

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

DEMOLITION – BLDGS. #4, 5, 6
1st FLOOR #4, #6 & 2nd FLOOR #5
FLOOR PLAN

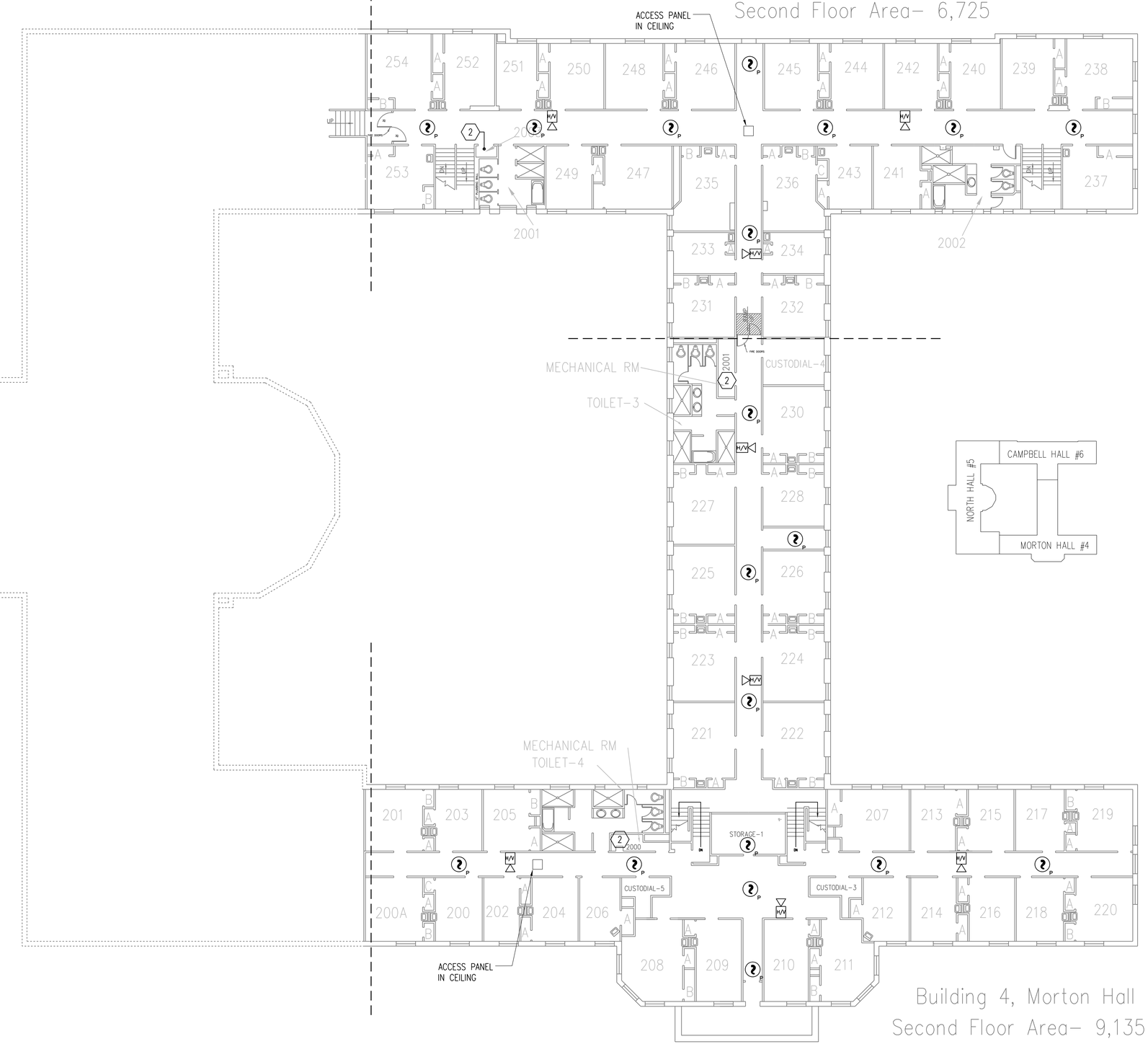
DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'-0"
NO. 29019.01.00
REV. A
DE20

CADD D1-R4

NORTH

Building 6, Campbell Hall
Second Floor Area– 6,725



Building 4, Morton Hall
Second Floor Area– 9,135 S.F.

DEMOLITION FIRE ALARM – FLOOR PLAN

SCALE: 3/32" = 1'–0"

GENERAL NOTES:

1. SEE DRAWING GG02 FOR PARTICULARS.
2. FOR KEYED NOTES (#) – SEE DWG. DE40.

LEGEND:

- SOFFITED CEILING CUT IN ACCESS DOORS AS NEEDED TO MATCH EXISTING.
- SUSPENDED ACT CEILING
- 12"x12" CEILING TILES
- CRAWL SPACE

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BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

DEMOLITION – BLDGS. #4, 5, 6
2nd FLOOR #4 AND #6
FLOOR PLAN

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'–0"
NO. 29019.01.00
REV. A
DE30

CADD D1-R4

FIRE ALARM KEYED DEMOLITION NOTES: (#)

1. REMOVE EXISTING FIRELITE MS9600 FIRE ALARM PANEL AND ASSOCIATED BATTERY CABINET UNDER PANEL. REUSE 120V CIRCUITS FROM PANEL FOR NEW AMPLIFIER AND 24VDC POWER SUPPLIES IF REQUIRED BY MANUFACTURER LAYOUT.

2. EXISTING FLOW, TAMPER SWITCHES FOR FIRE PROTECTION SYSTEM TO BE REUSED. REMOVE EXISTING MONITOR MODULES AS NEW NOTIFIER SYSTEM WILL REQUIRE NOTIFIER 10 INPUT MODULES IN THEIR PLACE. TYPICAL FOR ALL FLOW, TAMPER, AND PRESSURE SWITCHES ON ALL FLOORS. SEE FACP GENERAL AND INSTALL NOTES FOR REQUIREMENTS. LOCATE NEW MONITOR MODULES IN NEW BOX PER INSTALLTION NOTES AND RECONNECT EXISTING SWITCH MONITORING 2/C CABLE. INSTALL ELR ON EACH MONITORED POINT IF NOT CURRENTLY IN PLACE. WHERE KEYED NOTE 2 IS SHOWN ON PLANS IS WHERE SPRINKLER RISER DEVICES MAY EXIST BUT WAS NOT ABLE TO ENTER THE AREA AND VERIFY. CONFIRM AT TIME OF WALK THRU WITH NAU TO BID.

3. REMOVE EXISTING FIRE ALARM ANNUNCIATOR THAT WAS LOCATED IN NORTH HALL MAIN LOBBY AND CAMPBELL HALL FIRST FLOOR AND REFINISH SURFACE, OR REPLACE WITH NEW COVER OR PAINT TO MATCH EXISTING.

4. THE SURFACE MOUNTED HORN/STROBES ON ALL FLOORS ARE TO BE REMOVED ALONG WITH BACKBOXES AND CONDUITS BACK TO SOURCE. IF CONTRACTOR CAN REUSE ANY OF THE EXISTING CONCEALED CONDUITS FOR NEW CIRCUITING TO REDUCE SURFACE MOUNTED RACEWAY THIS IS ALLOWED AS LONG OF FINISHED INSTALLATION IS DONE PER CODE. PATCH AND PAINT WALL TO MATCH EXISTING FOR ANY REMOVED EQUIPMENT.

5. CONTRACTOR TO VERIFY IF THERE ARE ANY EXISTING 120V RESIDENTIAL STYLE DETECTORS IN ANY OF THE STUDENT DORM ROOMS. AT TIME OF SITE VISIT THE 2 SAMPLE ROOMS DID NOT HAVE ANY DETECTORS. IF THEY DO EXIST IN ANY ROOMS, REMOVE ALL OF THESE DETECTORS AND CIRCUITS BACK TO THE ASSOCIATED PANELBOARD. IF THE DETECTOR HAS A BACKBOX IN THE WALL AND A CONDUIT TO ABOVE THE CEILING, LEAVE BACKBOX, CUT CONDUIT OFF AT 6 INCHES ABOVE CEILING ONCE ALL WIRING HAS BEEN REMOVED, AND PLACE BLANK STAINLESS COVER PLATE ON BACKBOX. PLACE CONDUIT SEAL INTERIOR TO CONDUIT ABOVE CEILING.

6. CONTRACTOR SHALL REPAIR AND MATCH TYPE OF ALL SURFACES THAT ARE DISTURBED BY REMOVAL, OR INSTALLATION OF SYSTEM. PAINT COLORS SHALL BE VERIFIED WITH NAU AND MATCH TYPE OF PAINT FOR LATEX, GLOSS/SEMI-GLOSS/SATIN, ETC.

7. PLASTER/GYPSUM OPENINGS SHALL HAVE PROPER FILL AND TEXTURE REAPPLIED TO MATCH EXISTING.

8. REMOVE ALL ABANDONED CONDUIT, INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILING FINISHES. CUT CONDUIT FLUSH WITH WALLS AND FLOORS, AND PATCH SURFACES. CONDUITS NOT USED SHALL BE CAPPED WHERE NOT ABLE TO BE REMOVED.

9. CONTRACTOR SHALL VERIFY THAT ABANDONED WIRING AND CONDUIT SERVE ONLY ABANDONED EQUIPMENT PRIOR TO REMOVAL. IF LOADS REMAIN ON A CIRCUIT CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO KEEP REMAINING LOADS INTACT AND DISCONNECT EQUIPMENT REQUIRED TO BE REMOVED AS PART OF THIS CONTRACT. MULTIPLE RENOVATIONS TO EACH BUILDING HAVE TAKEN PLACE OVER TIME SO ACCURACY OF PANEL SCHEDULES WILL NEED TO BE CONFIRMED BY CONTRACTOR.

PRELIMINARY ISSUE
FOR APPROVAL

05-29-2019

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

DEMOLITION NOTES

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
REV. A
DE40

NORTH

ADMINISTRATIVE AREA

CAMPBELL HALL SPRINKLER ENTRANCE AND YOKE

Building 6, Campbell Hall
Basement Area– 3,754 S.F.

STORAGE-01

CRAWL SPACE

4 UP TO MAIN "FACP-CH" ON 1ST FLOOR

CRAWL SPACE

STORAGE-03

LOUNGE-01

KITCHEN/LAUNDRY-01

OWNER PROVIDED CAMPUS NETWORK CONNECTION TO NOTIFIER MNS SYSTEM. CONTRACTOR TO FIELD ROUTE INTER-BUILDING NETWORK CABLES BETWEEN PANELS IN CONDUIT. 3

5 7 POSSIBLE LOCATION OF C-DAA-B AND C-NAC-B. CONTRACTOR TO VERIFY IF BETTER LOCATION AND POSSIBLE RACEWAY ROUTING, SEE DWG ES52

FAN ROOM

MECHANICAL RM

KITCHEN

ramp down

ARTIFICIAL BEAMS TO CONCEAL SPRINKLER PIPING. USE FOR FACP WIRING IF POSSIBLE.

CRAWL SPACE

CAMPBELL HALL #6

NORTH HALL #5

MORTON HALL #4

1 2 12 NEW "FACP-NH". USE BREAKER #19 FOR NEW FACP. SEE DWG ES50

ROUTE OVERHEAD AND CONCEAL IF POSSIBLE

EXISTING PANEL "NLP" IS SQUARE D QO LEAD CENTER. PROVIDE 20A, 1P BREAKERS IN SPACES #39 & #41 TO SERVE ADDITIONAL FACP EQUIPMENT. PROVIDE LOCKING CLIPS ON BREAKER

5 7 POSSIBLE LOCATION OF M-DAA-B AND M-NAC-B. CONTRACTOR TO VERIFY IF BETTER LOCATION AND POSSIBLE RACEWAY ROUTING, SEE DWG ES51

MECH ROOM 2

MECH ROOM 6

TOILET-01

LOUNGE

LAUNDRY

CRAWL SPACE

MECH ROOM 3

MECH ROOM 4

MECH ROOM 5

KITCHEN-01

STORAGE-01

ADMINISTRATIVE OFFICE AREA

MOUNT SMOKE DETECTORS WITHOUT SOUNDER BASES IN OFFICES.

Building 5, North Hall
First Floor Area– 11,290 S.F.

Building 4, Morton Hall
Basement Area– 4,216 S.F.

INSTALLATION FIRE ALARM – FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING GG01 FOR LEGEND.
2. 120V CIRCUITS FOR C-DAA-B, C-NAC-B, M-DAA-B, AND M-NAC-B NEED TO BE DETERMINED BY INSTALLATION CONTRACTOR AND SHOWN ON AS-BUILTS.
3. ROUTING OF SLC, AUDIO SIGNAL, AND SYNC. SIGNAL CABLE AND CONDUITS FROM "FACP" TO "DAA" AND "NAC" SHALL BE COORDINATED IN FIELD. USE CHASES FOR PIPING WHERE POSSIBLE TO CONCEAL.
4. SEE DRAWING DE10 FOR EXISTING CEILING TYPES.
5. FOR INSTALLATION KEYED NOTES (#), SEE DRAWING ES40.

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

INSTALLATION – BLDGS. #4, 5, 6
BASEMENT–#4, #6 & 1st FLOOR #5
FLOOR PLAN

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'-0"
NO. 29019.01.00
REV. A
ES10

CADD D1-R4

NORTH

Building 6, Campbell Hall
First Floor Area– 6,707 S.F.

PROVIDE A DURESS PULL STATION ON SLC LOOP IN RM 258 AS DIRECTED BY NAU.

ADMINISTRATIVE AREA

MECHANICAL RM

EMPTY CHASE IN CORNER TO ROUTE 120V IN.

1 2 4 12 NEW CAMPBELL HALL "FACP-CH"

MAIN ENTRANCE

FORMAL MEETING ROOM

CUSTODIAL 2006

MECHANICAL RM 2001

2004

UP TO PANEL "CZB" ON SECOND FLOOR FOR ELECT.

WOMAN R.R.

RECEPTIONIST

NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLY LOCATION FOR 2ND FLOOR NORTH HALL. 7

MECHANICAL RM

WOMAN TOILET-1

Custodial-2

CAMPBELL HALL #6

NORTH HALL #5

MORTON HALL #4

ROUTE OVERHEAD 4 5

EXST. SQUARE D PANELBOARD WITH SPACE FOR CIRCUITING FOR NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLY FOR 2ND FLOOR NORTH HALL

WOMAN R.R. 2003

MECHANICAL

10 11 (TYP)

MECHANICAL RM TOILET-2

PANELBOARD "M1E" CIRCUIT 28, 33, 40 SHOW SPARE BREAKER. CONTRACTOR TO CONFIRM.

COMPUTER LAB

NEW CONDUIT TO FOLLOW SIDE OF POCKET BEAM AND THEN INTO SUPPORTED CEILING AREA.

ADMINISTRATIVE OFFICE AREA

MOUNT SMOKE DETECTORS WITHOUT SOUNDER BASES IN THIS AREA IN OFFICES

Custodial-1

1 2 4 12 NEW MORTON HALL "FACP-MH"

Building 5, North Hall
Second Floor Area– 11,434 S.F.

Building 4, Morton Hall
First Floor Area– 9,183 S.F.

INSTALLATION FIRE ALARM – FLOOR PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING GG02 FOR PARTICULARS.
2. SEE DRAWING DE20 FOR EXISTING CEILING TYPES.
3. FOR INSTALLATION KEYED NOTES (#), SEE DRAWING ES40.

LEGEND:

- SOFFITED CEILING CUT IN ACCESS DOORS AS NEEDED TO MATCH EXISTING.
- SUSPENDED ACT CEILING
- 12"x12" CEILING TILES
- CRAWL SPACE

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

INSTALLATION – BLDGS. #4, 5, 6
1st FLOOR #4, #6 & 2nd FLOOR #5
FLOOR PLAN

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'-0"
NO. 29019.01.00
REV. A
ES20

CADD D1-R4

NORTH

Building 6, Campbell Hall
Second Floor Area– 6,725

ACCESS PANEL IN CEILING

POSSIBLE NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLY LOCATION FOR 2nd FLOOR CAMPBELL HALL

PANELBOARD "CZB" SQUARE D, CIRCUITS 35, 37, 39, 40–42 ARE SPARES, BUT CONFIRM FOR USE FOR CIRCUITING FOR NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLIES FOR THE 2nd FLOOR OF CAMPBELL HALL

MECHANICAL RM

TOILET–3

CUSTODIAL–4

CAMPBELL HALL #6

NORTH HALL #5

MORTON HALL #4

PANELBOARD "MZH"

MECHANICAL RM
TOILET–4

STORAGE

CUSTODIAL–5

CUSTODIAL–6

PANELBOARD "AZG" SQUARE D, HAS SPARE BREAKER TO USE FOR CIRCUITING FOR NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLIES FOR SECOND FLOOR MORTON HALL

ACCESS PANEL IN CEILING

EXISTING PUNCHDOWNS

NEW DISTRIBUTION AMPLIFIER AND POWER SUPPLY LOCATION FOR 2nd FLOOR MORTON HALL

Building 4, Morton Hall
Second Floor Area– 9,135 S.F.

INSTALLATION FIRE ALARM – FLOOR PLAN
SCALE: 3/32" = 1'–0"

GENERAL NOTES:

1. SEE DRAWING GG02 FOR PARTICULARS.
2. SEE DRAWING DE30 FOR EXISTING CEILING TYPES.
3. FOR INSTALLATION KEYED NOTES (#), SEE DRAWING ES40.

LEGEND:

- SOFFITED CEILING CUT IN ACCESS DOORS AS NEEDED TO MATCH EXISTING.
- SUSPENDED ACT CEILING
- 12"x12" CEILING TILES
- CRAWL SPACE

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

INSTALLATION – BLDGS. #4, 5, 6
2nd FLOOR #4 AND #6
FLOOR PLAN

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: 3/32" = 1'–0"
NO. 29019.01.00
REV. A
ES30

CADD D1–R4

FIRE ALARM KEYED INSTALLATION NOTES: (#)

1. THERE WILL BE 3 NEW COMBINED FIRE ALARM AND DIGITAL VOICE COMMAND PANELS IN THE FOLLOWING LOCATIONS;
   a. NORTH HALL INSIDE LOBBY, RM.110CW, "FACP-NH"
   b. MORTON HALL INSIDE LOBBY RM.103CW, "FACP-MH"
   c. CAMPBELL HALL INSIDE LOBBY, RM.105CW, "FACP-CH"

   ALLOW EXISTING SYSTEM TO REMAIN IN PLACE UNTIL SWITCHOVER IS COMPLETED OF ALL NEW FIRE ALARM PANELS AND ASSOCIATED DISTRIBUTED AMPLIFIERS AND POWER SUPPLIES.

2. THE 3 NEW FIRE ALARM PANELS WILL BE PLACED TO OPERATE ON A COMMON BUILDING NETWORK WITH FIBER MODEMS IN EACH PANEL. IF FIBER OPTIC CONNECTION IS LOST EACH BUILDING MUST BE ABLE TO OPERATE FULLY INDEPENDENTLY.

3. OWNER TO PROVIDE NEW ETHERNET CONNECTIONS DEDICATED FOR THE IP DACT IN THE NEW PANEL "FACP-NH". PROVIDE 2 CATEGORY 6 UTP CABLES FROM ROOM 1002 WHERE NAU WILL PROVIDE CAMPUS CONNECTION. CONTRACTOR TO USE EXISTING CONDUIT WHERE POSSIBLE TO CONCEAL ROUTING OF CATEGORY 6 UTP CABLES FROM ROOM 1002 TO NEW "FACP-NH" LOCATION. SEE FIRE ALARM RISER DIAGRAM FOR INTER-BUILDING CABLE REQUIREMENTS BETWEEN PANELS.

4. WHERE CONTRACTOR MAY NEED TO PLACE A RECESSED PULLBOX TO DEVELOP ROUTE THRU WALL VERTICALLY BETWEEN FLOORS, PULLBOX SHALL BE SIZED BY CONTRACTOR BUT OF MINIMUM DEPTH TO KEEP MINIMAL EXTENSION OF BOX INTO SPACE. DETAILS SHOW A 12 X 12 X 4 INCH BOX BUT CONTRACTOR MAY MODIFY AS REQUIRED. BOX COVER TO MATCH WALL AND TRIM AND PAINT AS REQUIRED TO MATCH WALL FINISHES.

5. CONDUITS FROM NEW FACP LOCATIONS INTO ANY REQUIRED FLOOR DISTRIBUTION PULLBOXES SHALL CONTAIN SLC CIRCUITS, 24VDC POWER, STROBE, AND AUDIO CABLES AS REQUIRED. SEE RISER DIAGRAM BUT VERIFY WITH MANUFACTURER.

6. ALL EXPOSED AND SURFACE MOUNTED CONDUITS TO BE RED EMT. ALL OF SECOND FLOOR IN MORTON AND CAMPBELL HALL SHALL BE SURFACE MOUNTED RACEWAY PER DIRECTION OF NAU.

7. PROVIDE NEW DISTRIBUTED AMPLIFIER AND 24VDC POWER SUPPLY WITH SUPPORTING BATTERIES IN ROOMS AS SHOWN ON RISER DIAGRAM. VERIFY WITH NAU FOR PLACEMENT. THESE WILL SERVICE LOW FREQUENCY SOUNDER BASE, STROBES, AND SPEAKERS. SPECIFIC ENCLOSURE TYPES SHALL BE COORDINATED WITH NAU TO MATCH THOSE IN OTHER FACILITIES.

8. USE 30 FOOT SPACING FOR SMOKE DETECTORS IN THE CORRIDORS WITH FIRST DETECTOR WITHIN 5 FEET OF END OF CORRIDOR.

9. USE 30 FOOT SPACING FOR CEILING MOUNTED SPEAKER/STROBE UNITS IN CORRIDOR WITH FIRST SPEAKER/STROBE LOCATED WITHIN 15 FEET OF END OF CORRDIOR. OFFSET SPEAKERS AND DETECTORS AS SHOWN ON DRAWINGS. TAP SPEAKERS AT 0.25W ORGINALLY FOR TESTING OF INTELLIGIBILITY. CONFIRM WITH MANUFACTURER FOR REQUIRED SPACING FOR COVERAGE BASED ON ACTUAL FINISHES IN SPACES. INSTALL SPEAKERS IN A TEST AREA OF FACILITY FIRST TO VERIFY INTELLIGIBILITY FOR CORRIDORS PRIOR TO COMPLETE SPEAKER INSTALLATION TO VERIFY SPACING SHOWN WORKS FOR ACTUAL SPEAKERS PROVIDED.

10. ALL RESIDENT ROOMS SHALL BE PROVIDED WITH A LOW FREQUENCY SOUNDER BASE AND SMOKE DETECTOR CONNECTED TO NEW BUILDING FIRE ALARM CONTROL PANEL. THE SMOKE DETECTOR SHALL BE PROGRAMMED AS A SUPERVISORY INPUT TO THE FACP. NAU TO COORDINATE POSSIBLE PROGRAMMING OPTION WITH MANUFACTURER REPRESENTATIVE TO HAVE ANY ADJACENT RESIDENT ROOM TO A ROOM IN SUPERVISORY ALARM STAUS THAT ALSO GOES INTO A SUPERVISORY ALARM STATUS TO THEN CHANGE STATUS TO ALARM FOR BUILDING EVACUATION. THIS IS A NAU DECISION BUT CAN BE DONE THRU PROGRAMMING IF DESIRED.

11. RESIDENT ROOM DEVICES SHALL INCLUDE THE LOW FREQUENCY SOUNDER BASE/SMOKE DETECTOR AND BUILDING ALARM SPEAKER/STROBE. THESE SHALL BE MOUNTED PER DETAILS. COORDINATE PENETRATION LOCATION INTO RESIDENT ROOM WITH NAU. DETAIL SHOWS 80 INCHES AFF TO BOTTOM OF BOTH DEVICES. PROXIMITY OF CEILING IN CORRIDOR WILL DETERMINE IF CONDUIT ENTERING RESIDENT ROOM WILL NEED TO ENTER HIGHER THEN DEVICE HEIGHT SHOWN OR IF CONDUIT CAN ENTER DIRECTLY INTO BACKBOX. VERIFY AT TIME OF INSTALLTION WITH NAU.

12. DESIGN ALLOWS FOR NEW INSTALLATION OF NEW SYSTEM AND MAINTAINING EXISTING SYSTEM AS MUCH AS POSSIBLE TO MINIMIZE COVERAGE TIME FOR ANY REQUIRED FIRE WATCH. PROVIDE A PHASING PLAN TO NAU PRIOR TO INSTALLATION OF NEW SYSTEM TO VERIFY ANY TIME FRAME WHERE FIRE WATCH MAY HAVE TO BE IN PLACE PRIOR TO INSTALLATION OF NEW SYSTEM.

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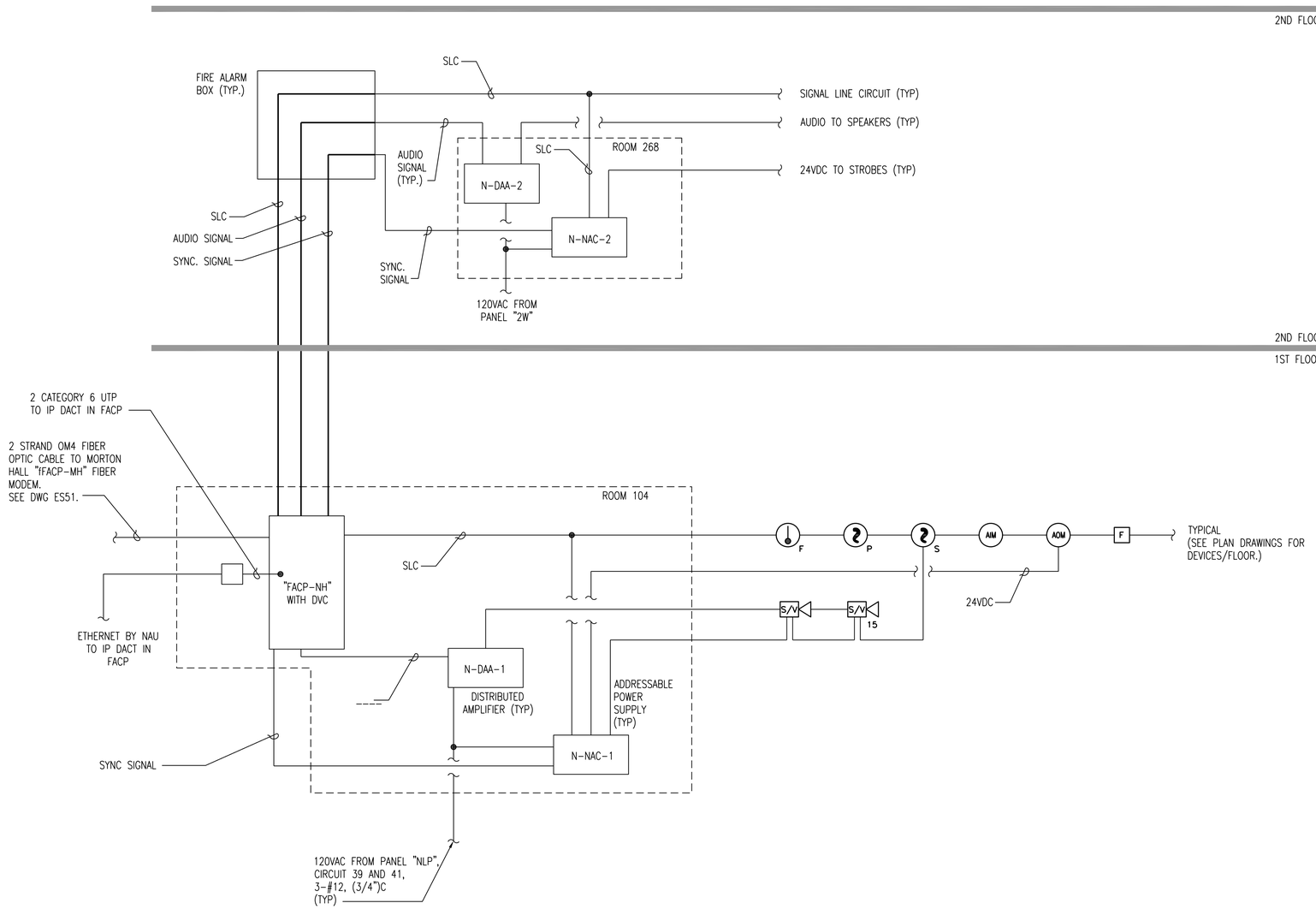
NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

INSTALLATION NOTES

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
REV. A
ES40

CADD D1-R4



SPECIAL SYSTEMS – RISER DIAGRAM – NORTH HALL

SCALE: NONE

GENERAL NOTES:

1. ALL EQUIPMENT TO HAVE BATTERY BACKUP AND CABINETS AS REQUIRED PER SPECIFICATIONS.
2. ALL STROBES TO BE SYNCHRONIZED WITH SYNC MODULES. MAY HAVE SYNC SIGNAL FROM FACP OR BY SLC TO SYNC MODULE AT ADDRESSABLE POWER SUPPLY.
3. THE MAIN FACP IS TO ALSO HAVE AN INTEGRAL DIGITAL VOICE CONTROLLER, FULL ANNUNCIATION, AND BATTERY CABINET AS REQUIRED BELOW MAIN FACP. VENDOR MAY PROVIDE AMPLIFIER INTEGRAL TO MAIN FACP OR HAVE A DISTRIBUTED AMPLIFIER DAA-1 AS SHOWN. IT IS PREFERRED TO KEEP MAIN FACP WITH DVC AS COMPACT AS POSSIBLE.
4. FOR MAIN FACP, DISTRIBUTED AMPLIFIERS, AND ADDRESSIBLE POWER SUPPLIES, THE SOURCE 120V WILL BE FROM PANEL SHOWN ON RISER. PROVIDE 3 #12 IN A 0.75 INCH CONDUIT AS REQUIRED FOR CIRCUIT AND LOCKING BREAKER CLIPS AND PROPER MARKING ON PANEL SCHEDULE PER CODE.
5. FIBER OPTIC NETWORK CABLE BETWEEN PANELS TO BE ROUTED IN CONDUIT ABOVE SUSPENDED CEILING ON 1ST FLOOR OF CAMPBELL AND MORTON HALL AND DROP INTO SUSPENDED CEILING OF 1ST FLOOR OF NORTH HALL. SHALL BE ROUTED IN RED EMT WITH PULLBOXES AS REQUIRED.

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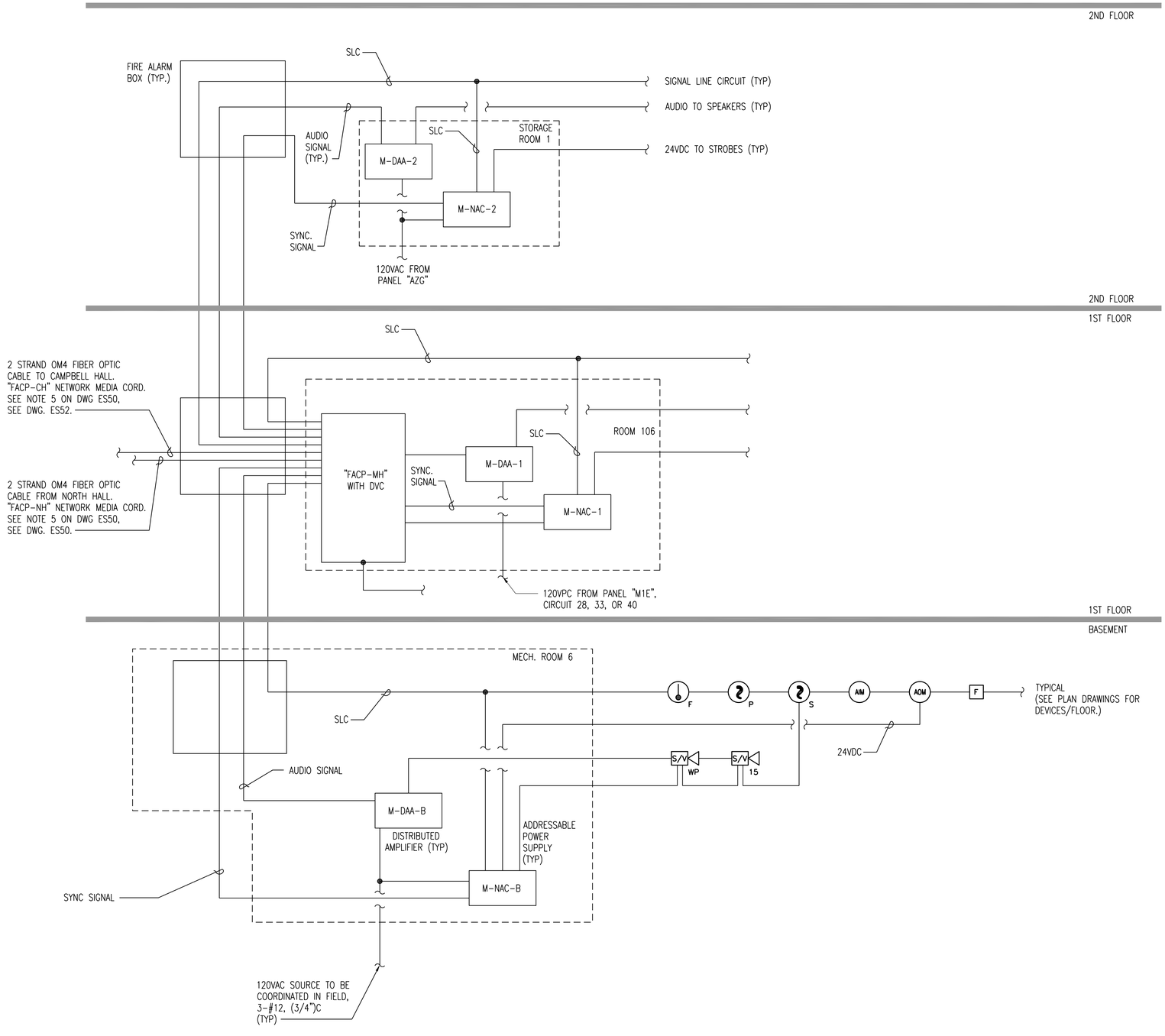
FLAGSTAFF, ARIZONA

SPECIAL SYSTEMS
RISER DIAGRAM
NORTH HALL

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
ES50
REV. A

CADD D1-R4



SPECIAL SYSTEMS – RISER DIAGRAM – MORTON HALL

SCALE: NONE

GENERAL NOTES:

1. ALL EQUIPMENT TO HAVE BATTERY BACKUP AND CABINETS AS REQUIRED PER SPECIFICATIONS.
2. ALL STROBES TO BE SYNCHRONIZED WITH SYNC MODULES. MAY HAVE SYNC SIGNAL FROM FACP OR BY SLC TO SYNC MODULE AT ADDRESSABLE POWER SUPPLY.
3. THE MAIN FACP IS TO ALSO HAVE AN INTEGRAL DIGITAL VOICE CONTROLLER, FULL ANNUNCIATION, AND BATTERY CABINET AS REQUIRED BELOW MAIN FACP. VENDOR MAY PROVIDE AMPLIFIER INTEGRAL TO MAIN FACP OR HAVE A DISTRIBUTED AMPLIFIER DAA-1 AS SHOWN. IT IS PREFERRED TO KEEP MAIN FACP WITH DVC AS COMPACT AS POSSIBLE.
4. FOR MAIN FACP, DISTRIBUTED AMPLIFIERS, AND ADDRESSIBLE POWER SUPPLIES, THE SOURCE 120V WILL BE FROM PANEL SHOWN ON RISER. PROVIDE 3 #12 IN A 0.75 INCH CONDUIT AS REQUIRED FOR CIRCUIT AND LOCKING BREAKER CLIPS AND PROPER MARKING ON PANEL SCHEDULE PER CODE.

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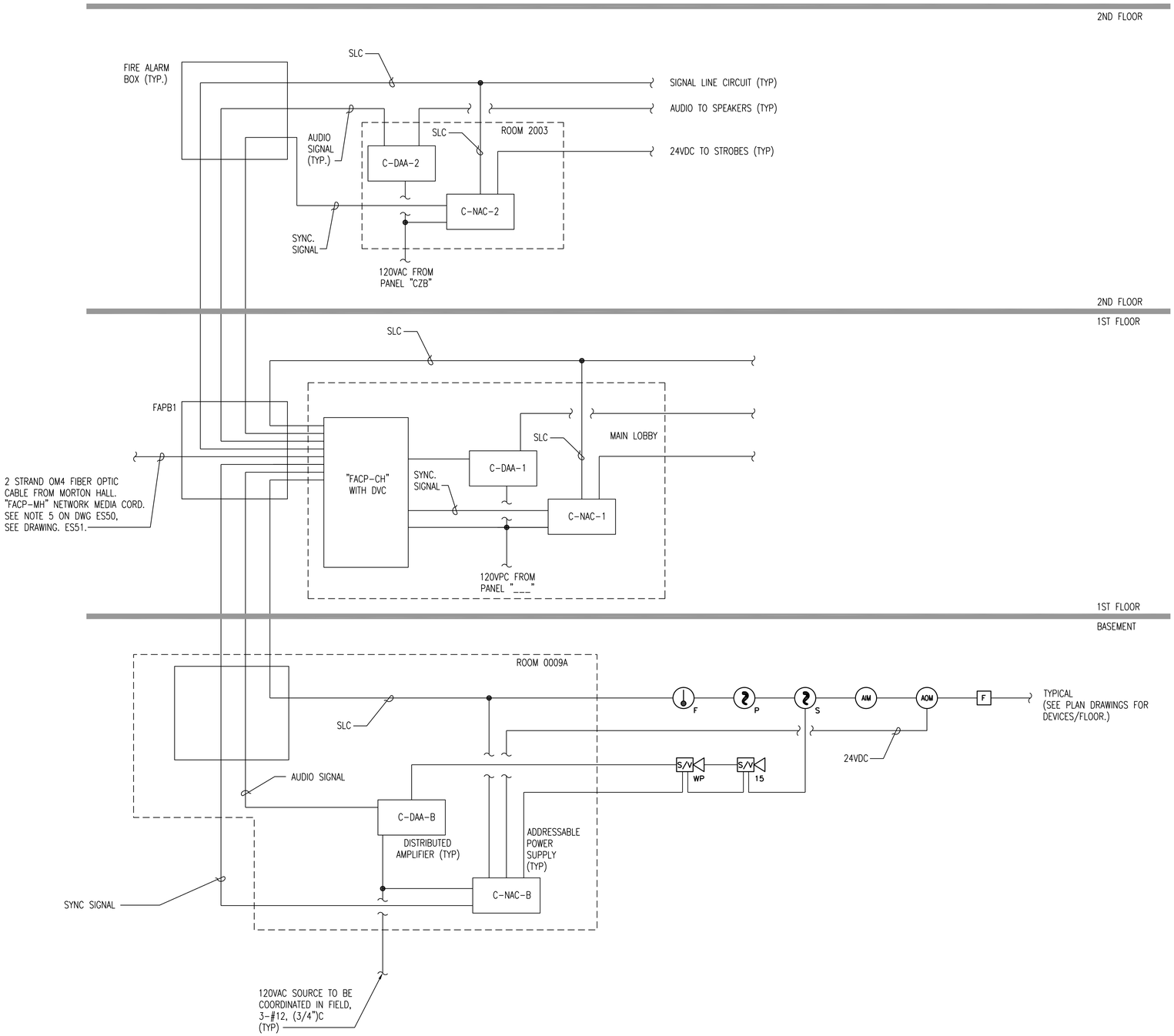
FLAGSTAFF, ARIZONA

SPECIAL SYSTEMS
RISER DIAGRAM
MORTON HALL

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
ES51
REV. A

CADD D1-R4



SPECIAL SYSTEMS – RISER DIAGRAM – CAMPBELL HALL

SCALE: NONE

GENERAL NOTES:

1. ALL EQUIPMENT TO HAVE BATTERY BACKUP AND CABINETS AS REQUIRED PER SPECIFICATIONS.
2. ALL STROBES TO BE SYNCHRONIZED WITH SYNC MODULES. MAY HAVE SYNC SIGNAL FROM FACP OR BY SLC TO SYNC MODULE AT ADDRESSABLE POWER SUPPLY.
3. THE MAIN FACP IS TO ALSO HAVE AN INTEGRAL DIGITAL VOICE CONTROLLER, FULL ANNUNCIATION, AND BATTERY CABINET AS REQUIRED BELOW MAIN FACP. VENDOR MAY PROVIDE AMPLIFIER INTEGRAL TO MAIN FACP OR HAVE A DISTRIBUTED AMPLIFIER DAA-1 AS SHOWN. IT IS PREFERRED TO KEEP MAIN FACP WITH DVC AS COMPACT AS POSSIBLE.
4. FOR MAIN FACP, DISTRIBUTED AMPLIFIERS, AND ADDRESSIBLE POWER SUPPLIES, THE SOURCE 120V WILL BE FROM PANEL SHOWN ON RISER. PROVIDE 3 #12 IN A 0.75 INCH CONDUIT AS REQUIRED FOR CIRCUIT AND LOCKING BREAKER CLIPS AND PROPER MARKING ON PANEL SCHEDULE PER CODE.

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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

SPECIAL SYSTEMS
RISER DIAGRAM
CAMPBELL HALL

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE
NO. 29019.01.00
REV. A
ES52

CADD D1-R4

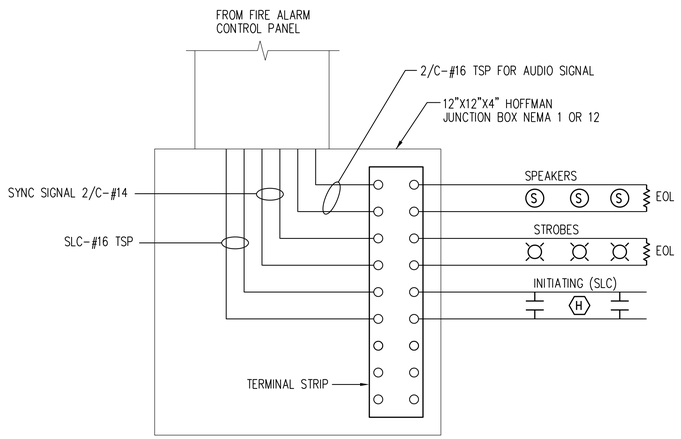
	SYSTEM INPUTS	SYSTEM OUTPUTS: CONTROL UNIT ANNUNCIATION								NOTIFICATION					REQUIRED FIRE SAFETY CONTROL						
		ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTUATE AUDIBLE ALARM SIGNAL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTUATE AUDIBLE SUPERVISORY SIGNAL	ACTUATE COMMON TROUBLE SIGNAL INDICATOR	ACTUATE AUDIBLE COMMON TROUBLE SIGNAL	ACTUATE ALARM INDICATOR	ACTUATE EVACUATION SIGNALS	DISPLAY/PRINT CHANGE OF STATUS	TRANSMIT FIRE ALARM SIGNAL TO SUPERVISING STATION	TRANSMIT SUPERVISORY SIGNAL TO SUPERVISING STATION	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	RELEASE MAGNETICALLY HELD SMOKE DOORS	ELEVATOR RECALL FUNCTIONS	CLOSE SMOKE/FIRE DAMPERS IN RATED WALLS	SHUTDOWN HVAC UNITS	GAS SHUTOFF IN KITCHENS	
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
1	ADDRESSABLE PULL STATION	o	o					o	o	o	o			o	o	o	o		1
2	ADDRESSABLE SMOKE SENSOR	o	o					o	o	o	o			o	o	o	o		2
3	ADDRESSABLE HEAT SENSOR	o	o					o	o	o	o			o	o	o	o		3
4	ADDRESSABLE DUCT DETECTOR – SUPPLY			o	o					o		o							4
5	ADDRESSABLE DUCT DETECTOR – RETURN			o	o					o		o							5
6	MONITORED HARDWIRED FIRE ALARM DEVICES	o	o					o	o	o	o			o	o	o	o		6
7	SPRINKLER WATERFLOW SWITCH	o	o					o	o	o	o			o	o	o	o		7
8	SPRINKLER PRESSURE SWITCH	o	o					o	o	o	o			o	o	o	o		8
9	SPRINKLER TAMPER SWITCH			o	o					o		o							9
10	ADDRESSABLE SMOKE SENSOR RESIDENT ROOM			o	o			o		o		o							10
11	FIRE ALARM AC POWER FAILURE			o	o							o							11
12	FIRE ALARM SYSTEM LOW BATTERY					o	o						o						12
13	OPEN CIRCUIT					o	o						o						13
14	GROUND FAULT					o	o						o						14
15	NOTIFICATION APPLIANCE SHORT CIRCUIT					o	o						o						15

* OPERATION OF THE DISCONNECT SWITCH, TO ALLOW SYSTEM TESTING, SHALL ACTUATE A TROUBLE SIGNAL AT THE FIRE ALARM CONTROL PANEL.

** MORE THAN ONE RESIDENT ROOM DETECTOR ALARM STATUS IN AN ADJACENT SPACE SHALL ACTIVATE ALARM SIGNAL IN ADDITION TO SUPERVISORY SIGNAL.

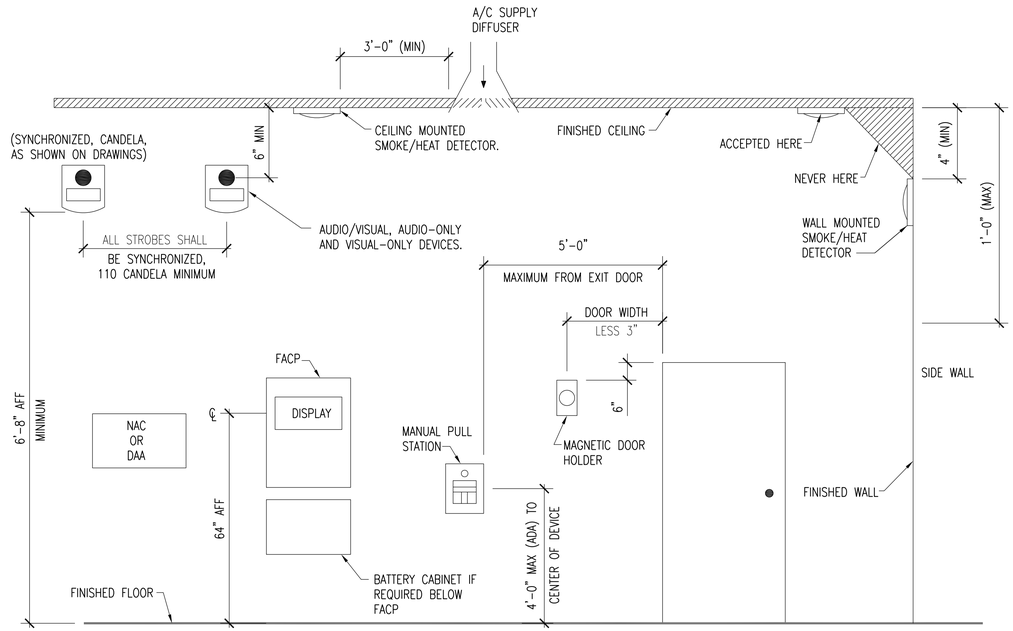
A ES53 FIRE ALARM SYSTEM SEQUENCE OF OPERATIONS

SCALE: NONE



B ES53 JUNCTION BOX FOR FIRE DETECTION

SCALE: NONE

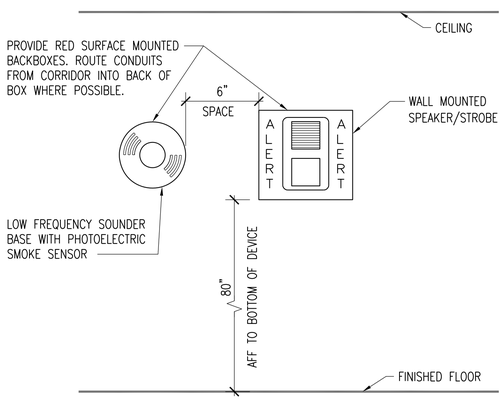


NOTES:

1. ALL CEILING MOUNTED SMOKE OR HEAT DETECTORS SHALL BE MOUNTED AS CLOSE TO CENTER OF ROOM AS POSSIBLE WITH REGARDS TO THE SUPPLY DIFFUSER REQUIREMENTS SHOWN.
2. ALL SMOKE DETECTORS SHALL BE MOUNTED AS TO NOT EXCEED 22 FEET FROM ANY WALL OR CORNER OF A SPACE WITH A MAXIMUM OF A 10' CEILING.
3. SPEAKER/STROBES WHEN WALL MOUNTED SHALL BE AS SHOWN ABOVE, BUT WHICHEVER IS LOWEST.

C ES53 FIRE ALARM SYSTEM TYPICAL DEVICE LOCATIONS

SCALE: NONE



D ES53 TYPICAL RESIDENT ROOM INSTALLATION

SCALE: NONE

PRELIMINARY ISSUE FOR APPROVAL

05-29-2019

NO.	REVISIONS	DSGN	CHKD	APVD	DATE
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NORTHERN ARIZONA UNIVERSITY
BUILDINGS 4, 5, 6 – FLS RENOVATION
FLAGSTAFF, ARIZONA

SPECIAL SYSTEMS FIRE ALARM DETAILS

DESIGNED	D. MORITZ
DRAWN	B. KOWALCZYKOWSKA
CHECKED	B. KOWALCZYKOWSKA
APPROVED	B. CHIDESTER
APPROVED	
DATE	

SCALE: NONE

NO. 29019.01.00

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