

DATE: May 9, 2024
MAI NO.: 1751a
OPSC APPL. NO.:
DSA APPL. NO.: 02-120394
DSA FILE NO.: 16-H1
PTN: 63891-35

ADDENDUM FOR:

MODERNIZATION AT CORCORAN HIGH SCHOOL – SCIENCE BUILDING

**CORCORAN UNIFIED SCHOOL DISTRICT
CORCORAN, KINGS COUNTY, CALIFORNIA**

James Ryan Morrelli

C-33128

ARCHITECT

MANGINI ASSOCIATES INC.
4320 W. Mineral King Avenue, Visalia, CA 93291
PHONE: (559) 627-0530 FAX: (559) 627-1926

Ryan W. Carlson

M-34846

MECHANICAL ENGINEER

LAWRENCE NYE CARLSON ASSOCIATES
7084 N. Maple Ave., Suite 101, CA 93720
PHONE: (559) 431-0101 FAX: (559) 431-1362

Steven Kirk Eastham

E-18786

ELECTRICAL ENGINEER

ROSE SING EASTHAM and ASSOCIATES
131 S. Dunworth Avenue, Visalia, CA 93292
PHONE: (559) 733-2671 FAX: (559) 733-0372

ADDENDUM
NUMBER

1

DSA

ADDENDUM NO. 1

TO PROSPECTIVE BIDDERS:

This Addendum forms a part of the Contract Documents and modifies the Contract Documents dated August 24, 2022 and approved May 1, 2023.

Bidders shall acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may disqualify the Bidder.

This Addendum consists of 3 printed pages and the following Attachments:

Lawrence Engineering Group Letter, dated May 1, 2024.
Rose Sing Eastham and Associates, Inc. memo dated May 8, 2024.
Drawing Sheet ES1.2, dated delta 05-08-24 Addendum 1
Drawing Sheet E1.10, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.1, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.2, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.3, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.4, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.5, dated delta 05-08-24 Addendum 1
Drawing Sheet E2.6, dated delta 05-08-24 Addendum 1
Drawing Sheet E4.1, dated delta 05-08-24 Addendum 1

CHANGES TO THE PROJECT MANUAL

ITEM NO. 1.1: Refer to Section 08 7100 – Door Hardware:

See Section 3.7 Schedule of Finish Hardware
Revise HW SET 02 Surface Closer to 4111 H-EDA

ITEM NO. 1.2: Refer to Section 09 2900 – Gypsum Board:

Add paragraph 1.2.A.3 in Submittals
3. *Shop drawing indicating proposed control joint layout.*

Add paragraph 2.3.F in Metal Trim
F. *Control Joints:*
1. *Provide with 1/4" wide center channel with removable tape strip and wings perforated for nailing and joint treatment at horizontal edges as manufactured by Clark Dietrich, 093 Vinc Control Joint (ZNCJ).*

Add paragraph 3.5.C in Corner Treatment
F. *Control Joints:*
1. *Walls and ceilings: Install at 30'-0" o.c. maximum spacing in either direction when planes exceed 30'-0" in length.*
2. *Unless locations are specifically indicated on the Drawings, Contractor shall submit a control joint plan for the architect's review.*

ADDENDUM NO. 1

CHANGES TO THE DRAWINGS

ITEM NO. 1.3: Refer to Sheet A1, Building 900 Demolition & New Floor Plans,
Add the following Demolition Floor Plan General Notes to Sheets A1:
“DEMOLITION FLOOR PLAN GENERAL NOTES:
1. VERIFY ALL CONDITIONS PRIOR TO COMMENCEMENT OF WORK
2. PROTECT AREAS NOT IN SCOPE OF WORK
3. SEE PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION
4. ALL FIRE ALARM, DATA AND MISCELLANEOUS ABANDONED EQUIPMENT AND ABANDONED CONDUITS
ARE TO BE REMOVED, INCLUDING THOSE THAT ARE NOT CLEARLY VISIBLE

ITEM NO. 1.4: Refer to Sheet A5, Building 900 Demolition & New Roof Plans,
See Roof Plan Key Notes.
Delete key note 9 and replace with the following:
9 – “REMOVE (E) PLYWOOD SHEATHING AT INSIDE FACE OF MECHANICAL SCREEN, REPLACE WITH NEW
1/2” PLYWOOD SHEATHING. PAINT (N) PLYWOOD SHEATHING FINISH, ‘b’ ”

ITEM NO. 1.5: Refer to Sheet A12, Door Schedule,
See Door Types. Delete wood doors from project and replace them with hollow metal doors.

Delete description of Door Type “B” and replace with the following:
Type “B” – 1 3/4" THK. HOLLOW METAL DOOR.

Delete description of Door Type “C” and replace with the following:
Type “C” – 1 3/4" THK. HOLLOW METAL DOOR, TYPE ‘A’ GLAZING AT NON-RATED DOORS, TYPE ‘C’
GLAZING AT RATED DOORS, COORDINATE DOOR RATING WITH DOOR SCHEDULE.

See Door Schedule. At doors 902, 904, 905, & 906, delete exterior door finish ‘p’ and replace with exterior door finish ‘c’.

See Door Schedule. At doors 902, 904, 905, & 906, delete exterior frame finish ‘p’ and replace with exterior frame finish ‘c’.

ITEM NO. 1.6: Refer to attached letter from Lawrence Engineering Group for changes to Plumbing Drawings.

ITEM NO. 1.7: Delete Sheet ES1.2, replace with sheet ES1.2, Revisions Dated 05-08-24, attached.
Delete Sheet E1.10, replace with sheet E1.10, Revisions Dated 05-08-24, attached.
Delete Sheet E2.1, replace with sheet E2.1, Revisions Dated 05-08-24, attached.
Delete Sheet E2.2, replace with sheet E2.2, Revisions Dated 05-08-24, attached.
Delete Sheet E2.3, replace with sheet E2.3, Revisions Dated 05-08-24, attached.
Delete Sheet E2.4, replace with sheet E2.4, Revisions Dated 05-08-24, attached.
Delete Sheet E2.5, replace with sheet E2.5, Revisions Dated 05-08-24, attached.
Delete Sheet E2.6, replace with sheet E2.6, Revisions Dated 05-08-24, attached.
Delete Sheet E4.1, replace with sheet E4.1, Revisions Dated 05-08-24, attached.

Refer to attached memo from Rose Sing Eastham and Associates, dated May 8, 2024 for changes to Electrical drawings.

END OF ADDENDUM NUMBER 1



May 1, 2024

Mr. Manuel Acosta
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, CA 93291

LEG #22035 (M.A.I. #1751a)

Subject: Modernization at Corcoran High School Science Building
Re: Addendum 1

Dear Mr. Acosta:

Please issue the following items with your next published addendum.

PLUMBING:

1. Refer to sheet P10 BUILDING 900 ENLARGED PLUMBING PLAN:
 - a. Revise all GT-1 deck-mounted gas turrets to be GT-2 wall-mounted gas turrets.
(Typical) Wall-mounted gas turrets GT-2 shall be installed with the center at 40 inches above finished floor.

2. Refer to sheet P11 BUILDING 900 ENLARGED PLUMBING PLAN:
 - a. Revise all GT-1 deck-mounted gas turrets to be GT-2 wall-mounted gas turrets.
(Typical) Wall-mounted gas turrets GT-2 shall be installed with the center at 40 inches above finished floor.

Sincerely,
LAWRENCE ENGINEERING GROUP

A handwritten signature in blue ink that reads 'Paul Xiong'.

Paul Xiong, PE
Mechanical Engineer

Rose, Sing, Eastham and Associates

Electrical Consultants

131 S. Dunworth St. • Visalia, CA 93292-6705

Phone: (559) 733-2671 - E-Mail: seastham@rse-eng.com

May 8, 2024

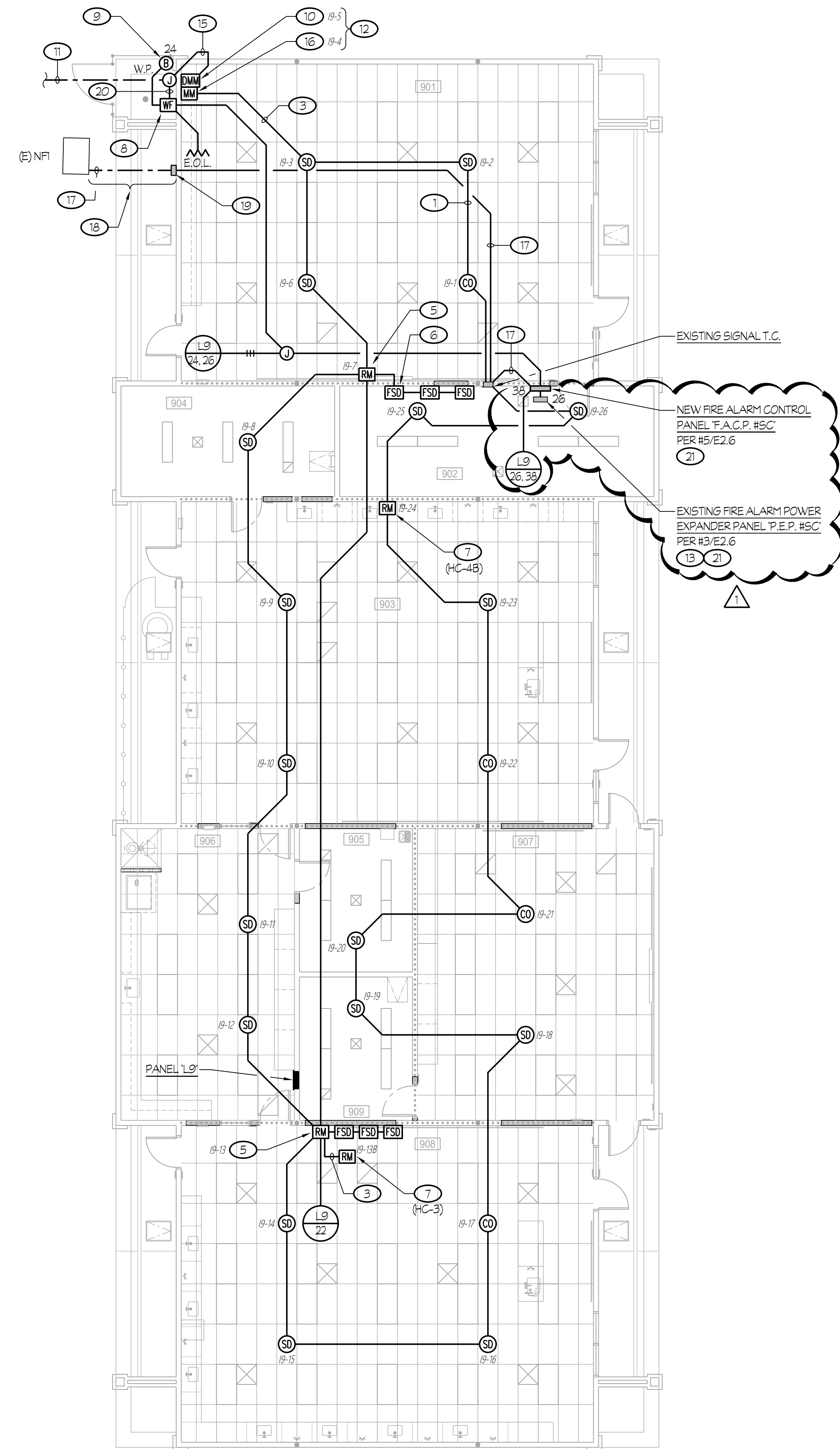
Project: 1751a Corcoran HS Science Building Modernization

RE: Electrical List of Changes for Addendum #1

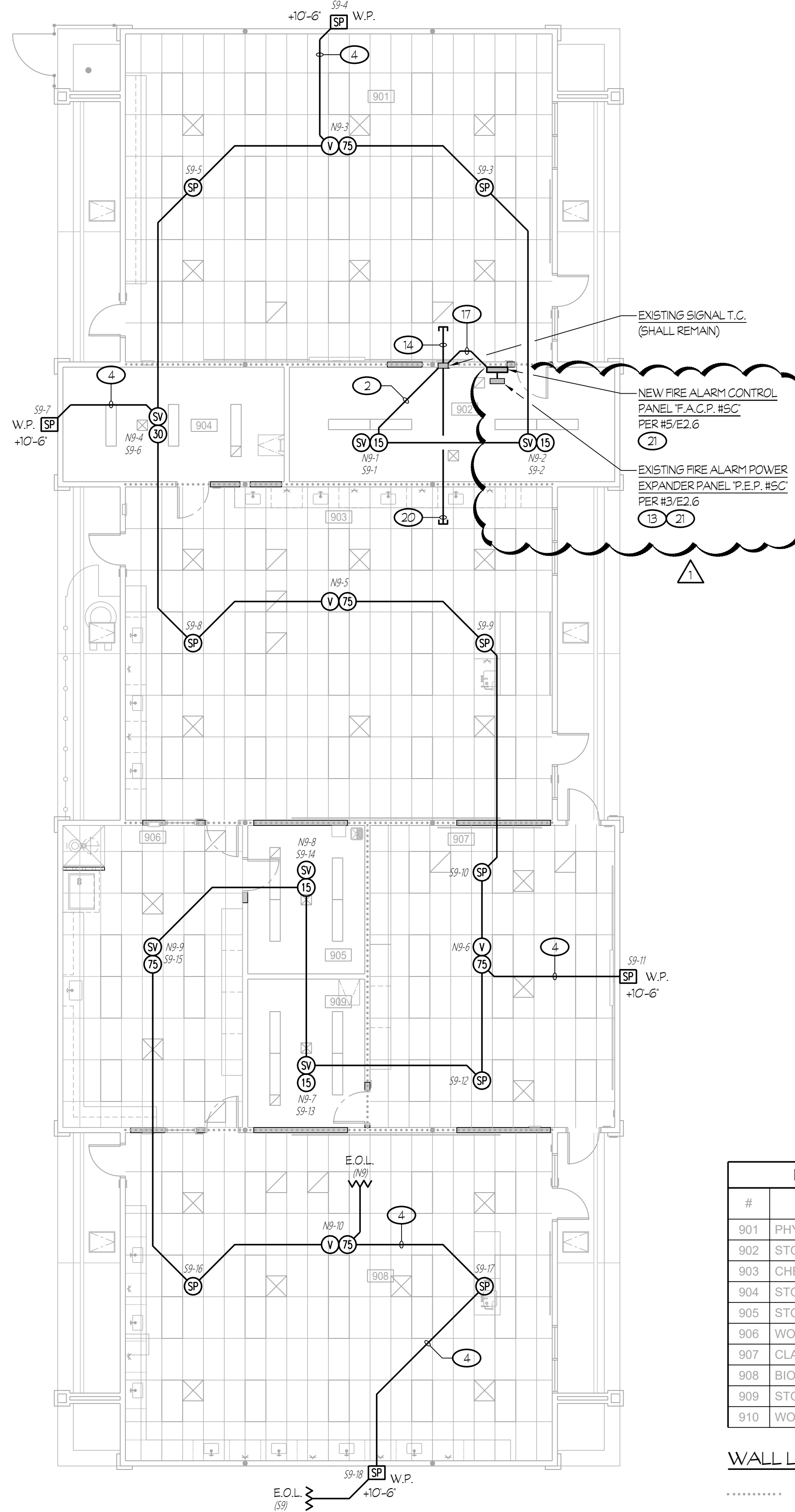
SHEET #	DESCRIPTION OF CHANGE	DELTA
ES1.2	- Removed conduit runs between buildings 700, 800, and 1000	1
	- Removed FATC #F7, FACP #7, FATC #10, pull boxes NF7, -NF9, and pull cans FPC7-10	1
	- Added keynotes number 4 – 6	1
	- Added FACP #SC and PEP #SC	1
E1.10	- Added keynote #21	1
	- Added FACP #SC	1
E2.1	- Removed FACP #NA, FACP #7, UFAC, and PEP#- from the fire alarm equipment legend	1
	- Removed notes G and H	1
	- Added FACP #SC to the fire alarm equipment legend	1
E2.2	- Revised the signaling line circuit, notification appliance circuit, and speaker circuit schedules	1
E2.3	- Removed and/or replaced fire alarm equipment shown at bldgs. 700 and 100	1
	- Added keynote #6 to bldgs. 1000, 1500, and 1600	1
	- Adjusted conduit at bldg 900 from EFR to EF	1
	- Replaced keynotes #5, 6, 21–28, 30, and 33	1
	- Removed keynotes #9-14, 31, 32, and 34. Aforementioned keynotes now shown as “not in use”.	1
E2.4	- Replaced keynotes 7-14 and 16-18	1
	- Removed and Replaced fire alarm equipment shown at buildings 700, 800, 1000	1
	- Removed pull boxes NF7 - NF9, and pull cans FPC7, FPC8, FPC10	1
	- Added fire alarm equipment shown at bldg 1600	1
E2.5	- Revised the PEP #SC battery calcs	1
	- Replaced FACP #7 battery calcs with FACP #SC battery calcs	1
E2.6	- Added FACP #SC mounting detail	1
E4.1	- Revised Panel L9 panel schedule	1

NOTES (THIS SHEET ONLY):

- 1 TYPICAL OF FIRE ALARM CIRCUITING BETWEEN ADDRESSABLE DEVICES (CONNECTED ONTO THE SIGNALING LINE CIRCUIT (SLC)), U.O.N.; RUN 1/2" - ONE FA' CABLE BETWEEN ADDRESSABLE DEVICES.
- 2 TYPICAL OF FIRE ALARM CIRCUITING BETWEEN NOTIFICATION APPLIANCES, U.O.N.; RUN 3/4" - ONE FSP CABLE, 2 #12 BETWEEN NOTIFICATION APPLIANCES.
- 3 3/4" - TWO FA' CABLES.
- 4 1/2" - TWO FSP CABLES.
- 5 PROVIDE A RELAY MODULE TO CONTROL 120V POWER FOR FIRE/SMOKE DAMPERS. FLUSH MOUNT IN T-BAR CEILING, U.O.N. AND PROVIDE AN ENGRAVED NAMEPLATE: 'FIRE/SMOKE DAMPERS'.
- 6 TYPICAL OF ALL FIRE/SMOKE DAMPERS (SYMBOL FSD); CONNECT FIRE/SMOKE DAMPER IN ATTIC SPACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE A HORSEPOWER RATED TOGGLE SWITCH AS DISCONNECTING MEANS.
- 7 PROVIDE A RELAY MODULE FOR UNIT SHUTDOWN OF RESPECTIVE AC UNIT. FLUSH MOUNT IN T-BAR CEILING (OR GYPCARD CEILING), U.O.N. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE THE INTERCONNECTION CONDUIT/ CONDUCTORS AND ANY ADDITIONAL REQUIREMENTS. PROVIDE AN ENGRAVED NAMEPLATE: 'UNIT SHUTDOWN, HC-1'.
- 8 CONNECT THE WATERFLOW SWITCH AT FIRE SPRINKLER RISER. COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR. RUN 1/2" L.F.M.C. - 2 #14 FROM THE WATERFLOW SWITCH TO THE WEATHER PROOF JUNCTION BOX.
- 9 CONNECT ELECTRIC BELL. ROUTE BRANCH CIRCUITING THRU THE WATERFLOW SWITCH. COORDINATE EXACT LOCATION WITH THE FIRE SPRINKLER CONTRACTOR PRIOR TO ROUGH-IN.
- 10 PROVIDE A DUAL MONITOR MODULE FOR SUPERVISION OF TAMPER SWITCHES AT THE 0.5.8.Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. PROVIDE AN ENGRAVED NAMEPLATE: 'TAMPER SWITCHES AT D.D.C.V.'. RUN 3/4" - TWO FA' CABLES, 2 #14 BETWEEN ADJACENT MONITOR MODULES.
- 11 3/4" - 4 #14 TO TAMPER SWITCHES AT THE 0.5.8.Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. REFER TO SITE ELECTRICAL PLAN, SHEET RES.1, FOR CONTINUATION. ROUTE IN 'COMMON' TRENCH AND SAWCUT WITH FIRE SPRINKLER PIPING.
- 12 FLUSH MOUNT DUAL MONITOR MODULES IN THE T-BAR CEILING.
- 13 NEW LOCATION OF EXISTING FIRE ALARM POWER EXPANDER PANEL 'P.E.P. #5C' SALVAGED DURING DEMOLITION. MOUNT HIGH ON WALL AT CEILING.
- 14 STUB 1" INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING.
- 15 3/4" - 6 #14.
- 16 PROVIDE A MONITOR MODULE FOR SUPERVISION OF WATER FLOW SWITCH AT FIRE SPRINKLER RISER. COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR.
- 17 REFER TO THE PARTIAL FIRE ALARM SYSTEM RISER DIAGRAM - BUILDING 900, DETAIL #1/E2.4, FOR CONDUIT, CABLEING AND CONDUCTOR REQUIREMENTS.
- 18 REMOVE ENTIRE PORTION OF EASTERLY CONCRETE MOW STRIP AT EXISTING PULL BOX NFI AND ENTIRE PORTION OF THE ADJACENT CONCRETE SIDEWALK (BETWEEN CONSTRUCTION OR CONTROL JOINTS) AS REQUIRED TO INSTALL NEW FIRE ALARM CONDUITS. REPLACE WITH NEW CONCRETE MOW STRIP AND SIDEWALK PER DETAIL #7/E5.2.
- 19 PROVIDE A NEW FIRE ALARM PULL CAN 'PCB' PER DETAIL #4/E2.6 AND SURFACE MOUNT HIGH ON WALL AT BOTTOM OF SOFFIT. RUN CONDUITS UP INTO SOFFIT, TURN 90° AND CONTINUE INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING. SEAL AROUND CONDUIT PENETRATIONS.
- 20 1/2" - 2 #14.
- 21 MOUNT THE EXISTING FIRE ALARM POWER EXPANDER PANEL 'P.E.P. #5C' ABOVE THE NEW FIRE ALARM CONTROL PANEL 'F.A.C.P. #5C'.



BUILDING 900
FIRE ALARM PLAN - INITIATION
1/8" = 1'-0"



BUILDING 900
FIRE ALARM PLAN - NOTIFICATION
1/8" = 1'-0"

- 6 TYPICAL OF ALL FIRE/SMOKE DAMPERS (SYMBOL FSD); CONNECT FIRE/SMOKE DAMPER IN ATTIC SPACE. COORDINATE EXACT LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. PROVIDE A HORSEPOWER RATED TOGGLE SWITCH AS DISCONNECTING MEANS.
- 7 PROVIDE A RELAY MODULE FOR UNIT SHUTDOWN OF RESPECTIVE AC UNIT. FLUSH MOUNT IN T-BAR CEILING (OR GYPCARD CEILING), U.O.N. COORDINATE WITH MECHANICAL CONTRACTOR TO PROVIDE THE INTERCONNECTION CONDUIT/ CONDUCTORS AND ANY ADDITIONAL REQUIREMENTS. PROVIDE AN ENGRAVED NAMEPLATE: 'UNIT SHUTDOWN, HC-1'.
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- 9 CONNECT ELECTRIC BELL. ROUTE BRANCH CIRCUITING THRU THE WATERFLOW SWITCH. COORDINATE EXACT LOCATION WITH THE FIRE SPRINKLER CONTRACTOR PRIOR TO ROUGH-IN.
- 10 PROVIDE A DUAL MONITOR MODULE FOR SUPERVISION OF TAMPER SWITCHES AT THE 0.5.8.Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. PROVIDE AN ENGRAVED NAMEPLATE: 'TAMPER SWITCHES AT D.D.C.V.'. RUN 3/4" - TWO FA' CABLES, 2 #14 BETWEEN ADJACENT MONITOR MODULES.
- 11 3/4" - 4 #14 TO TAMPER SWITCHES AT THE 0.5.8.Y. VALVES LOCATED ON THE DOUBLE CHECK DETECTOR/BACKFLOW PREVENTER ASSEMBLY. REFER TO SITE ELECTRICAL PLAN, SHEET RES.1, FOR CONTINUATION. ROUTE IN 'COMMON' TRENCH AND SAWCUT WITH FIRE SPRINKLER PIPING.
- 12 FLUSH MOUNT DUAL MONITOR MODULES IN THE T-BAR CEILING.
- 13 NEW LOCATION OF EXISTING FIRE ALARM POWER EXPANDER PANEL 'P.E.P. #5C' SALVAGED DURING DEMOLITION. MOUNT HIGH ON WALL AT CEILING.
- 14 STUB 1" INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING.
- 15 3/4" - 6 #14.
- 16 PROVIDE A MONITOR MODULE FOR SUPERVISION OF WATER FLOW SWITCH AT FIRE SPRINKLER RISER. COORDINATE EXACT LOCATION WITH FIRE SPRINKLER CONTRACTOR.
- 17 REFER TO THE PARTIAL FIRE ALARM SYSTEM RISER DIAGRAM - BUILDING 900, DETAIL #1/E2.4, FOR CONDUIT, CABLEING AND CONDUCTOR REQUIREMENTS.
- 18 REMOVE ENTIRE PORTION OF EASTERLY CONCRETE MOW STRIP AT EXISTING PULL BOX NFI AND ENTIRE PORTION OF THE ADJACENT CONCRETE SIDEWALK (BETWEEN CONSTRUCTION OR CONTROL JOINTS) AS REQUIRED TO INSTALL NEW FIRE ALARM CONDUITS. REPLACE WITH NEW CONCRETE MOW STRIP AND SIDEWALK PER DETAIL #7/E5.2.
- 19 PROVIDE A NEW FIRE ALARM PULL CAN 'PCB' PER DETAIL #4/E2.6 AND SURFACE MOUNT HIGH ON WALL AT BOTTOM OF SOFFIT. RUN CONDUITS UP INTO SOFFIT, TURN 90° AND CONTINUE INTO ACCESSIBLE ATTIC SPACE ABOVE T-BAR CEILING. SEAL AROUND CONDUIT PENETRATIONS.
- 20 1/2" - 2 #14.
- 21 MOUNT THE EXISTING FIRE ALARM POWER EXPANDER PANEL 'P.E.P. #5C' ABOVE THE NEW FIRE ALARM CONTROL PANEL 'F.A.C.P. #5C'.

AUTOMATIC FIRE SPRINKLER SYSTEM

THIS BUILDING HAS AN AUTOMATIC FIRE SPRINKLER SYSTEM. HEAT DETECTORS HAVE BEEN OMITTED, IN CONCEALED ATTIC SPACES ABOVE CEILINGS AND SOFFITS, DUE TO THE AUTOMATIC FIRE SPRINKLER SYSTEM IS FULLY EQUIPPED IN THESE AREAS. C.F.C. 907.2.3.6.2.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM
PLAN SUBMITTAL

THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

THE FIRE ALARM SYSTEM SHALL BE A TOTAL (COMPLETE) AUTOMATIC HEAT AND SMOKE DETECTION SYSTEM, PER C.F.C. SECTION 907.2.3.6, AND SHALL COVER EVERY ROOM AND/OR AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).

#	ROOM NAME
901	PHYSICS
902	STORAGE
903	CHEMISTRY
904	STORAGE
905	STORAGE
906	WORKROOM
907	CLASSROOM
908	BIOLOGY
909	STORAGE
910	WORKROOM

WALL LEGEND

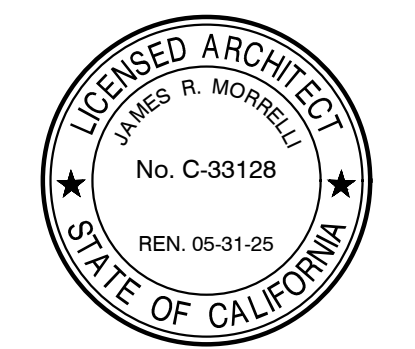
..... 1-HOUR RATED WALL, CONTINUOUS VERTICALLY FROM FLOOR TO BOTTOM OF ROOF FRAMING.



BUILDING SITE KEY



Rose Sing Eastham and Associates
Electrical Consultants
131 S. Dunworth - (559) 733-2671
Visalia, California 93292-6705



DATE: AUGUST 24, 2022

**MODERNIZATION AT
CORCORAN HIGH SCHOOL
SCIENCE BUILDING**
1100 LETTS AVE., CORCORAN, CA. 93212
CORCORAN UNIFIED SCHOOL DISTRICT
1520 PATTERSON AVE., CORCORAN, KINGS COUNTY, CA. 93212



REVISIONS	DATE	DESCRIPTION
1	05-09-24	ADDENDUM #1

ARCHITECTURE
INGENUITY
MANGINI
McLain BARENG MORRELL SCOTT
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MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93271
(559) 627-0530 Office
(559) 627-1520 Fax

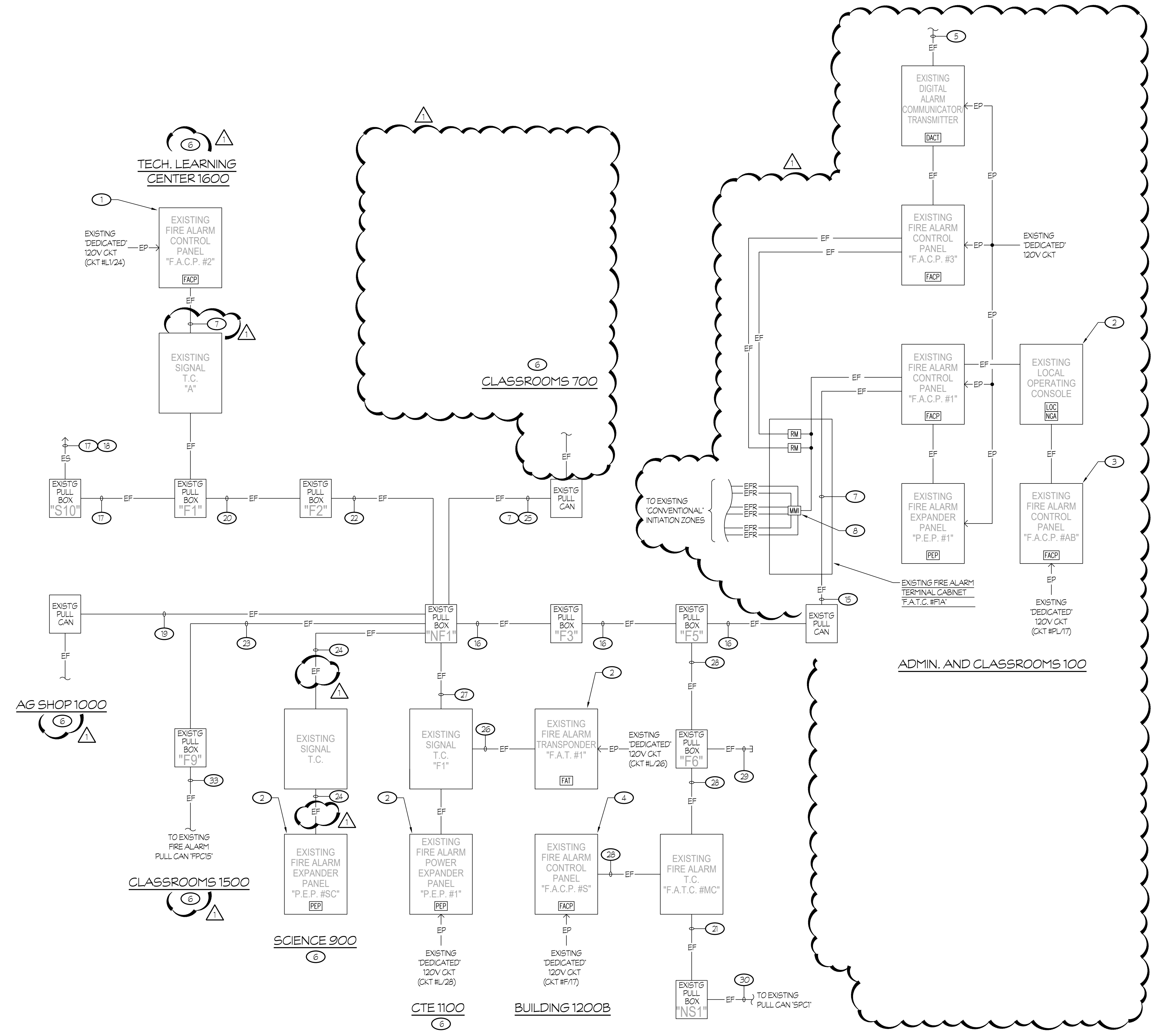
TITLE
BUILDING 900
FIRE ALARM PLANS

E1.10

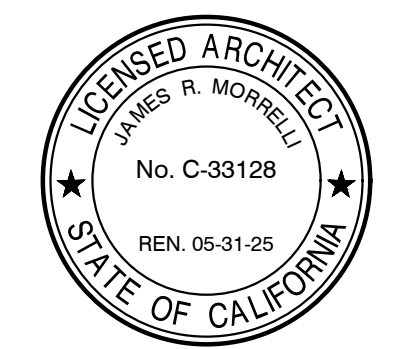
PROJECT 1751a

NOTES (THIS SHEET ONLY):

- 1 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-108893, FILE NO. 16-2, AND WAS APPROVED ON AUGUST 16, 2007. PROJECT WAS CLOSED ON AUGUST 31, 2010.
- 2 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-117217 AND WAS APPROVED ON JUNE 11, 2019.
- 3 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-116520, FILE NO. 16-H1 AND WAS APPROVED ON JUNE 25, 2018.
- 4 EXISTING FIRE ALARM EQUIPMENT WAS SUBMITTED IN D.S.A. APPLICATION NO. 02-119740, FILE NO. 16-H1 AND WAS APPROVED ON JUNE 24, 2022.
- 5 EXISTING DEDICATED TELEPHONE LINES. THE PRIMARY NUMBER IS (559) 992-2736. THE SECONDARY NUMBER IS (559) 992-5062.
- 6 THE SIGNALING LINE CIRCUIT (SLC #2 FROM F.A.C.P. #2 IN TECH. LEARNING CENTER) SHALL REMAIN IN USE FOR THE EXISTING ADDRESSABLE DEVICES IN CLASSROOMS BLDG. 100, CLASSROOMS BLDG. 800, AG SHOP BLDG. 1000, CTE BLDG. 1100 AND CLASSROOMS BLDG. 1500. THE EXISTING ADDRESSABLE DEVICES IN SCIENCE BLDG. 900 ARE GOING TO BE REMOVED AND DE-ACTIVATED. THE ELECTRICAL CONTRACTOR SHALL RE-CONFIGURE SIGNALING LINE CIRCUIT #2, CLASS A AS REQUIRED AND REMOVE/REPLACE THE EXISTING TWO 'SFA' CABLES ACCORDINGLY.
- 7 EF DENOTES EXISTING FIRE ALARM FEEDER OR CIRCUIT SHALL REMAIN UNLESS OTHERWISE NOTED.
- 8 EXISTING MULTI-MOD SIX ZONE INTERFACE MODULE.
- 9 NOT IN USE.
- 10 NOT IN USE.
- 11 NOT IN USE.
- 12 NOT IN USE.
- 13 NOT IN USE.
- 14 NOT IN USE.
- 15 EXISTING 1 1/2" - FOUR 'NFA' CABLES (EXISTING NETWORK).
- 16 EXISTING 1 1/2" CONDUIT - TWO 'NFA' CABLES (NETWORK), PLUS AN EXISTING 1 1/2" CONDUIT - 50 PR. TELEPHONE CABLE.
- 17 EXISTING 2" CONDUIT - 50 PR. TELEPHONE CABLE.
- 18 TO EXISTING TELEPHONE BACKBOARD IN TELEPHONE/DATA ROOM OF TECH. LEARNING CENTER, BLDG. 1600.
- 19 EXISTING 1" - TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2) AND 2 #12 (NAC CKT AT BLDG. 1000 FROM P.E.P. #5C).
- 20 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK), TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2) AND 2 #12 (NAC CKT AT BLDG. 800 FROM P.E.P. #2).
- 21 EXISTING TWO 1 1/2" CONDUITS (SPARE), EACH EQUIPPED WITH A NYLON PULL STRING.
- 22 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK), TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2).
- 23 EXISTING 3/4" - TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2).
- 24 EXISTING 1" - TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2) AND 4 #12 (NAC CIRCUITS TO BUILDINGS 700 AND 1000 FROM P.E.P. #5C).
- 25 EXISTING 1" - TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2), PLUS 1" (SPARE).
- 26 EXISTING 3/4" - TWO 'NFA' CABLES (NETWORK), PLUS 1" (SPARE).
- 27 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK) AND TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2), PLUS 1 1/2" (SPARE).
- 28 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK); PLUS 1 1/2" (SPARE).
- 29 EXISTING TWO 1 1/2" (SPARES) STUBBED UP ONTO THE NORTH ELEVATION OF EXISTING CLASSROOMS BLDG. 300.
- 30 EXISTING FIRE ALARM AND SIGNALS' CONDUITS, THREE 1 1/2" AND THREE 1".
- 31 NOT IN USE.
- 32 NOT IN USE.
- 33 EXISTING 1" - TWO 'SFA' CABLES (SLC #2 FROM F.A.C.P. #2).
- 34 NOT IN USE.



1 FIRE ALARM SYSTEM MAIN RISER DIAGRAM - EXISTING
NTS



DATE: AUGUST 24, 2022

MODERNIZATION AT CORCORAN HIGH SCHOOL SCIENCE BUILDING
1100 LETTS AVE., CORCORAN, CA. 93212
CORCORAN UNIFIED SCHOOL DISTRICT
1520 PATTERSON AVE., CORCORAN, KINGS COUNTY, CA. 93212



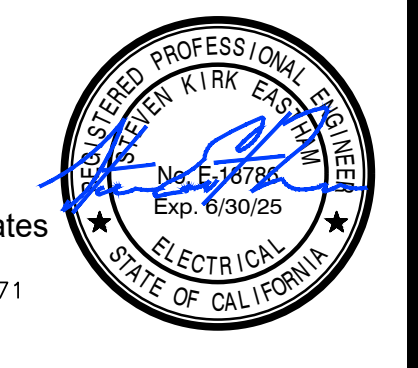
REVISIONS	DATE	DESCRIPTION
	02-09-24	ADDENDUM #1

MANGINI ARCHITECTURE
INGENUITY
McLAIN BARENG MORRELLI SCOTT
www.mangini.us
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93271
(559) 627-1260 fax

TITLE
FIRE ALARM SYSTEM
MAIN RISER DIAGRAM

E2.3
PROJECT 1751a

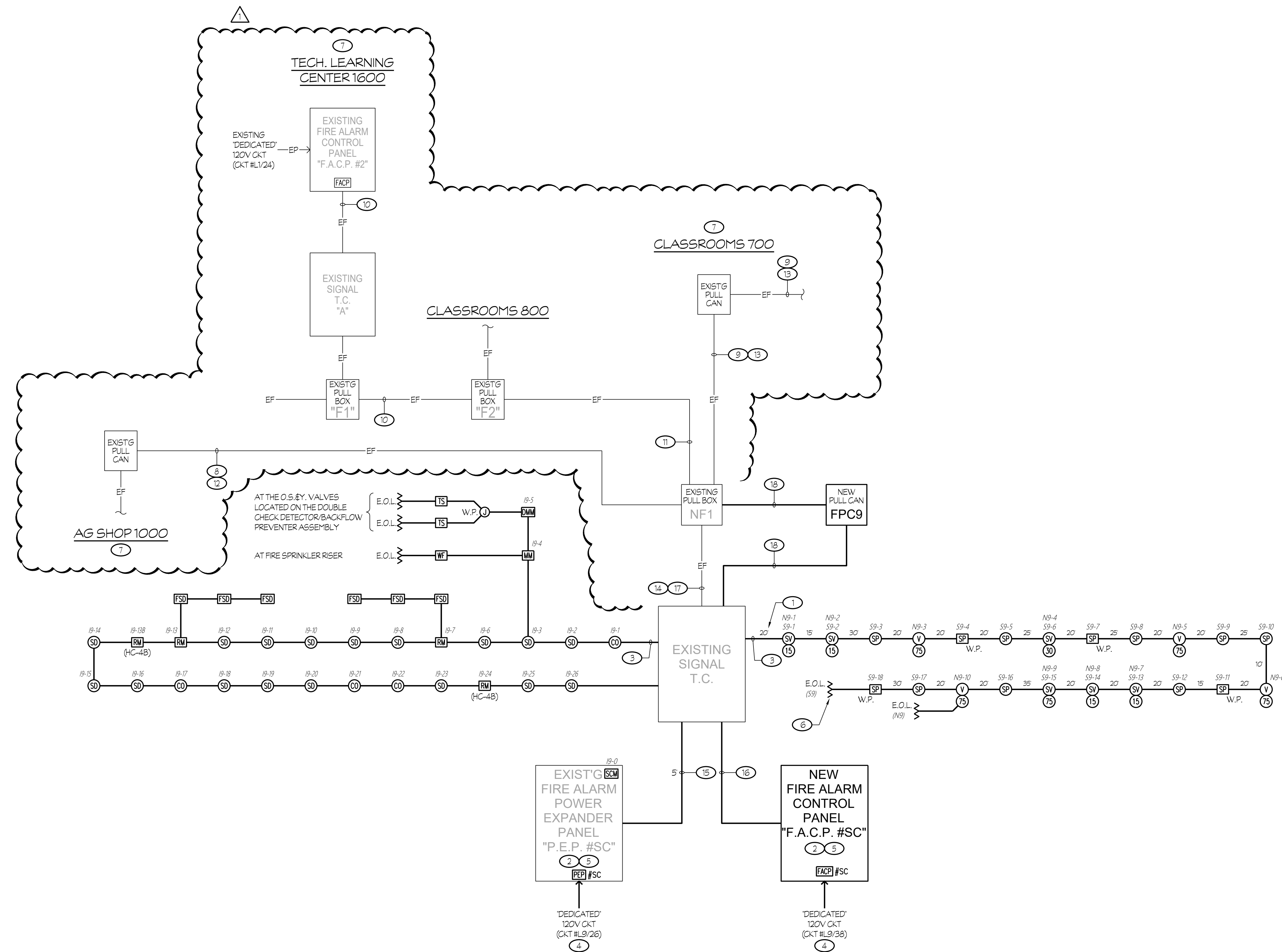
Rose Sing Eastham and Associates
Electrical Consultants
131 S. Dunworth - (559) 733-2671
Visalia, California 93292-6705



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NOTES (THIS SHEET ONLY):

- 1 LENGTHS INDICATED WERE USED FOR CALCULATIONS/DESIGN PURPOSES ONLY AND BASED UPON THE DIAGRAMMATIC LAYOUT SHOWN ON THE DRAWINGS. LENGTHS SHALL NOT BE USED FOR BIDDING.
- 2 PROVIDE A COPY OF THE BATTERY CALCULATION FOR THE RESPECTIVE POWER EXPANDER PANEL (OR THE FIRE ALARM CONTROL PANEL F.A.C.P.). THE BATTERY CALCULATION SHALL CONTAIN INFORMATION (AS NOTED ON THESE PLANS) AND BE PLASTIC LAMINATED. MOUNT ONTO INSIDE FACE OF PANEL.
- 3 REFER TO RESPECTIVE FIRE ALARM PLAN FOR CONDUIT AND CABLEING/ CONDUCTOR REQUIREMENTS, TYPICAL.
- 4 CIRCUIT BREAKER SHALL BE EQUIPPED WITH A LOCK-ON ACCESSORY, SPACEAGE HELOCK-FA OR EQUAL. PROVIDE AN ENGRAVED NAMEPLATE, "FIRE ALARM CIRCUIT", WHITE LETTERS ON A RED BACKGROUND.
- 5 PROVIDE "END OF LINE" RESISTORS AT ANY UNUSED OUTPUTS.
- 6 DENOTES END OF LINE RESISTOR ON NOTIFICATION APPLIANCE CIRCUIT. RESISTORS SUPPLIED WITH CONTROL/EXPANDER PANELS AS REQUIRED. LOCATE RESISTORS AT END OF LINE APPLIANCES (CLASS 'B' WIRING), TYPICAL.
- 7 THE SIGNALING LINE CIRCUIT (SLC #2 FROM F.A.C.P. #2 IN TECH. LEARNING CENTER) SHALL REMAIN IN USE FOR THE EXISTING ADDRESSABLE DEVICES IN CLASSROOMS BUILDING 700 AND AG SHOP BLDG. 1000. THE EXISTING ADDRESSABLE DEVICES IN SCIENCE BLDG. 900 ARE GOING TO BE REMOVED AND DEACTIVATED. THE ELECTRICAL CONTRACTOR SHALL RE-CONFIGURE SIGNALING LINE CIRCUIT SLC #2, CLASS 'A' AS REQUIRED AND REMOVE, REPLACE THE EXISTING TWO 'SFA' CABLES ACCORDINGLY.
- 8 EXISTING 1/2" - TWO 'SFA' CABLES (SLC #2, FROM F.A.C.P. #2) AND 2 #12 (NAC CIRCUIT AT BLDG. 700 FROM P.E.P. #5C), PLUS 1/2" SPARE.
- 9 EXISTING 1/2" - TWO 'SFA' CABLES (SLC #2, FROM F.A.C.P. #2) AND 2 #12 (NAC CIRCUIT AT BLDG. 700 FROM P.E.P. #5C), PLUS 1/2" SPARE.
- 10 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK), TWO 'SFA' CABLES (SLC #2 FROM FACP #2), AND 2 #12 (NAC CKT AT BLDG. 800 FROM PEP #2).
- 11 EXISTING 1 1/2" - TWO 'NFA' CABLES (NETWORK), TWO 'SFA' CABLES (SLC #2 FROM FACP #2).
- 12 DISCONNECT AND REMOVE EXISTING 2 #12 (NAC CKT TO BLDG. 1000), PULL IN NEW 2 #12 AND RECONNECT EXISTING NAC CKT TO RELOCATED PEP #5C.
- 13 DISCONNECT AND REMOVE EXISTING 2 #12 (NAC CKT TO BLDG. 700), PULL IN NEW 2 #12 AND RECONNECT EXISTING NAC CKT TO RELOCATED PEP #5C.
- 14 EXISTING 3/4" - TWO 'SFA' CABLES (SLC #2, FROM EXISTING F.A.C.P. #2), DISCONNECT AND REMOVE THE EXISTING TWO 'SFA' CABLES.
- 15 1/2" - TWO 'FA' CABLES (SLC #1, CLASS 'A'), PLUS 2 #12 (NAC CKT #107).
- 16 1 1/4" - TWO 'NFA' CABLES (NEW NETWORK FROM EXISTING FIRE ALARM TRANSDUCER #1 IN CTE BLDG. 1100), TWO 'FA' CABLES (SLC #1), 1 1/4" - ONE 'FSP' CABLE (SPKR CKT #59), PLUS 1 1/4" (SPARE) EQUIPPED WITH A NYLON PULL STRING.
- 17 DISCONNECT AND REMOVE EXISTING 4 #12 (NAC CKTS FROM BLDGS. 700 AND 1000).
- 18 1 1/2" - 4 #12 (NAC CKTS TO BLDGS. 700 AND 1000); 1 1/4" - TWO 'NFA' CABLES (NEW NETWORK FROM EXISTING FIRE ALARM TRANSDUCER #1 IN CTE BLDG. 1100); PLUS 1 1/2" (SPARE) EQUIPPED WITH A NYLON PULL STRING.

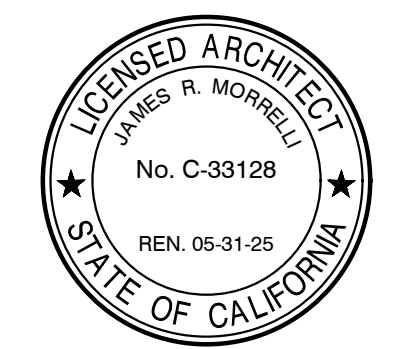


1 PARTIAL FIRE ALARM SYSTEM RISER DIAGRAM - BUILDING 900
NTS

AUTOMATIC FIRE SPRINKLER SYSTEM
THIS BUILDING HAS AN AUTOMATIC FIRE SPRINKLER SYSTEM. HEAT DETECTORS HAVE BEEN OMITTED. IN CONCEALED ATTIC SPACES ABOVE CEILINGS AND SOFFITS. DUE TO THE AUTOMATIC FIRE SPRINKLER SYSTEM IS FULLY EQUIPPED IN THESE AREAS. C.F.C. 907.2.3.6.2.

COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL
THE FIRE ALARM SYSTEM SHOWN ON THESE PLANS HAS BEEN SUBMITTED AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT. ANY SUBSTITUTION OF THE FIRE ALARM SYSTEM SHALL BE RESUBMITTED TO THE ARCHITECT FOR REVIEW AND APPROVAL. THE CONTRACTOR SHALL PAY ANY ADDITIONAL FEES THAT ARE INCURRED DUE TO THIS SUBSTITUTION.

THE FIRE ALARM SYSTEM SHALL BE A TOTAL (COMPLETE) AUTOMATIC HEAT AND SMOKE DETECTION SYSTEM. PER C.F.C. SECTION 907.2.3.6 AND SHALL COVER EVERY ROOM AND/OR AREA. UPON THE ACTIVATION OF ANY INITIATION DEVICE THE FIRE ALARM SYSTEM SHALL ALERT ALL OCCUPANTS AND TRANSMIT THE ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION (C.F.C. SECTION 907.2.3.5).



DATE: AUGUST 24, 2022

MODERNIZATION AT CORCORAN HIGH SCHOOL SCIENCE BUILDING
1100 LETTIS AVE., CORCORAN, CA. 93212
CORCORAN UNIFIED SCHOOL DISTRICT
1520 PATTERSON AVE., CORCORAN, KINGS COUNTY, CA. 93212



REVISIONS	DATE	DESCRIPTION
1	02-08-24	ADDENDUM #1

MANGINI ARCHITECTURE
INGENUITY
McLAIN BARENG MORRELL SCOTT
www.mangini.us
MANGINI ASSOCIATES INC.
4320 West Mineral King Avenue
Visalia, California 93271
(559) 627-0530 Office
(559) 627-1526 Fax

TITLE
PARTIAL FIRE ALARM SYSTEM
RISER DIAGRAM

E2.4
PROJECT 1751a

Rose Sing Eastham and Associates
Electrical Consultants
131 S. Dunworth - (559) 733-2671
Visalia, California 93292-6705



Z:\Drawing\1603\1603_00003\Corcoran\High_School\Modif of Science Bldg. 900 - 11751a\12-1.dwg DATE: 05/08/24 BY: Pmoore DATE PLOTTED: 05/08/24 JOB # 21-16201-05

VOLTAGE DROP CALCULATIONS (OHMS LAW)

VOLTAGE DROP = 2 $\left(\frac{\text{DC RESISTANCE AT 75°C FROM TABLE 8, C.E.C.}}{1000} \right) \left(\frac{\text{LENGTH OF CIRCUIT}}{1000} \right) \left(\frac{\text{CURRENT}}{1} \right)$

PERCENT VOLTAGE DROP = $\frac{\text{VOLTAGE DROP}}{\text{NOMINAL VOLTAGE}} \times 100$

1. NOTIFICATION APPLIANCE CIRCUIT "A":

- (V) : 4 x 0.111A = 0.444A
- (S) : 4 x 0.041A = 0.164A
- (B) : 1 x 0.063A = 0.063A
- (S) : 1 x 0.111A = $\frac{0.111A}{0.782A}$

VOLTAGE DROP = 2(1.98) $\left(\frac{365}{1000} \right)$ (0.782) = 11 V.D.

PERCENT VOLTAGE DROP = $\frac{11}{24} \times 100 = 4.6\%$

EXISTING FIRE ALARM CONTROL PANEL "F.A.C.P. #7" BATTERY CALCULATION

DESCRIPTION	QUANTITY	STANDBY CURRENT		ALARM CURRENT	
		EACH	SUB-TOTAL	EACH	SUB-TOTAL
(A) INTELLIGENT LOOP INTERFACE - MAIN BOARD	1	0.081	0.081	0.150	0.150
120V POWER SUPPLY	1	0.050	0.050	0.050	0.050
LCD TOUCHSCREEN ANNUN. DISPLAY	1	0.030	0.030	0.065	0.065
INTELLIGENT NETWORK INTERFACE	1	0.150	0.150	0.150	0.150
S0W DIGITAL AUDIO AMPLIFIER	2	0.049	0.098	2.206	4.412
(A)					
SMOKE DETECTOR	17				
SMOKE/CO DETECTOR	4				
MONITOR MODULE	1				
DUAL MONITOR MODULE	1				
RELAY MODULE	3				
TOTALS			0.379		4.827

TOTAL ALARM CURRENT OF 4.827 x 0.250 (5 MINUTES) = 1.207 A.H.
 TOTAL STANDBY CURRENT OF 0.379 x 24 HOURS = 9.096 A.H.
 TOTAL AMP HOURS REQUIRED = 10.303 A.H.
 x 1.25 SAFETY FACTOR = 12.879 A.H.

THEREFORE THE EXISTING 18.0 AMP HOUR BATTERIES ARE ADEQUATE.

SPEAKER dB LOSS CALCULATION

SPEAKER CIRCUIT	SPEAKER VOLTAGE	WIRE SIZE	RESISTANCE PER FOOT	FEET REQUIRED ON CIRCUIT	WIRE RESISTANCE	TOTAL WATTAGE OF SPEAKERS ON CIRCUIT	SPEAKER CURRENT (AMPS)	RESISTANCE OF SPEAKER LOAD	WIRE SIZE	ACTUAL VOLTAGE AT SPEAKER LOAD	ACTUAL WATTS AT SPEAKER LOAD	dB LOSS
S9	70	18	0.1278	470	6.01	22	0.31	222.73	18	68.162	20.860	-0.23

NOTE:
 CALCULATION IS BASED ON EACH OF THE 'INTERIOR' SPEAKERS TAPPED AT 1 WATT AND EACH OF THE 'EXTERIOR' SPEAKERS TAPPED AT 2 WATTS.

EXISTING FIRE ALARM POWER EXPANDER PANEL "P.E.P. #5C" BATTERY CALCULATION

DESCRIPTION	QUANTITY	SUPV. CURRENT		ALARM CURRENT	
		EACH	SUB-TOTAL	EACH	SUB-TOTAL
EXPANDER PANEL	1	0.075	0.075	0.206	0.206
SUPERVISED CONTROL MODULE	1	0.0003	0.0003	0.0003	0.0003
75cd STROBE (CEILING)	4	---	---	0.111	0.444
(B) SPEAKER/15cd STROBE (CEILING)	4	---	---	0.041	0.164
(B) SPEAKER/30cd STROBE (CEILING)	1	---	---	0.063	0.063
(B) SPEAKER/75cd STROBE (CEILING)	1	---	---	0.111	0.111
TOTALS			0.075		0.988

TOTAL ALARM CURRENT OF 0.988 x 0.250 (5 MINUTES) = 0.247 A.H.
 TOTAL SUPERVISORY CURRENT OF 0.075 x 24 HOURS = 1.800 A.H.
 TOTAL AMP HOURS REQUIRED = 2.047 A.H.
 x 1.25 SAFETY FACTOR = 2.559 A.H.

THEREFORE THE EXISTING PROVIDE 7.0 AMP HOUR BATTERIES ARE ADEQUATE.

TYPICAL BATTERY CALCULATION NOTES:
 (A) THE CURRENT VALUES LISTED INCLUDES THE MAXIMUM NUMBER OF ADDRESSABLE DEVICES ON BOTH OF THE SIGNALING LINE CIRCUITS "S(C)" (59 ADDRESSABLE DETECTORS AND 159 ADDRESSABLE MODULES PER SIGNALING LINE CIRCUIT "S(C)").
 (B) THE CURRENT VALUES LISTED ARE FOR THE STROBES ONLY. THE SPEAKER CURRENT IS INCLUDED IN THE VALUES LISTED UNDER THE DIGITAL AUDIO AMPLIFIER.

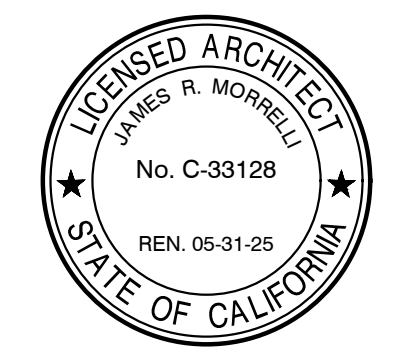
AUTOMATIC FIRE SPRINKLER SYSTEM

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COMPLETE AUTOMATIC FIRE ALARM SYSTEM PLAN SUBMITTAL

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DATE: AUGUST 24, 2022

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CORCORAN UNIFIED SCHOOL DISTRICT
 1520 PATTERSON AVE., CORCORAN, KINGS COUNTY, CA. 93212

REVISIONS

NO.	DATE	DESCRIPTION
1	05-08-24	ADDENDUM #1
2		
3		
4		

ARCHITECTURE
 INGENUITY

MANGINI

McLAIN BARENG MORRELL SCOTT
 MANGINI ASSOCIATES INC.
 4320 West Mineral King Avenue
 Visalia, California 93271
 www.mangini.us
 (559) 627-0530 Office
 (559) 627-1526 Fax

TITLE
 FIRE ALARM SYSTEM
 BATTERY, VOLTAGE
 DROPS AND SPEAKER
 dB LOSS CALCS

E2.5

PROJECT **1751a**



Rose Sing Eastham and Associates
 Electrical Consultants
 131 S. Dunworth - (559) 733-2671
 Visalia, California 93292-6705

