

BURNT MILLS
ELEMENTARY
SCHOOL

MSDE - PUBLIC SCHOOL
CONSTRUCTION PROGRAM
(PSCP) #15.208

MONTGOMERY COUNTY
PUBLIC SCHOOLS
415 PRELUDE DRIVE
SILVER SPRING, MD 20901

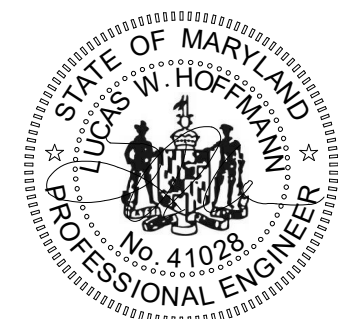
CIVIL ENGINEER
ADTEK ENGINEERS, INC.
150 SOUTH EAST STREET, SUITE 201
FREDERICK, MD 21701
301.360.4345

MEP / FP
2RW CONSULTANTS, INC.
2677 PROSPERITY AVE., SUITE 275
FAIRFAX, VA 22031
703.718.4335

STRUCTURAL
LINTON ENGINEERING
46090 LAKE CENTER PLAZA, SUITE 309
POTOMAC FALLS, VA 20165
571.323.0320

FOOD SERVICE
NYIKOS-GARCIA
7146 STARMOUNT WAY
NEW MARKET, MD 21774
240.883.9530

ACOUSTICS
POLYSONICS
405 BELLE AIR LANE
WARRENTON, VA 20186
540.341.4998



PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR
APPROVED BY ME, AND THAT I AM A QUALY LICENSED PROFESSIONAL
ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
LICENSE NUMBER: 41028 EXPIRATION DATE: 08/10/2025

PROJECT # 20042

DATE: ISSUE:

04/27/2021 DESIGN DEVELOPMENT
07/22/2021 65% CD SUBMISSION
08/19/2021 95% CD IAC SUBMISSION
09/01/2021 BID SET
09/27/2021 PERMIT SUBMISSION
10/11/2021 CONFORMING BID SET
01/18/2023 ASI-19

13

DRAWN: JTP CHECKED: BMW

SCALE: AS INDICATED

SHEET TITLE:

FIRE ALARM RISER
DIAGRAM

© MTFA 2021 ALL RIGHTS RESERVED

SHEET #

E-603

ELEVATOR SEQUENCE OF OPERATION

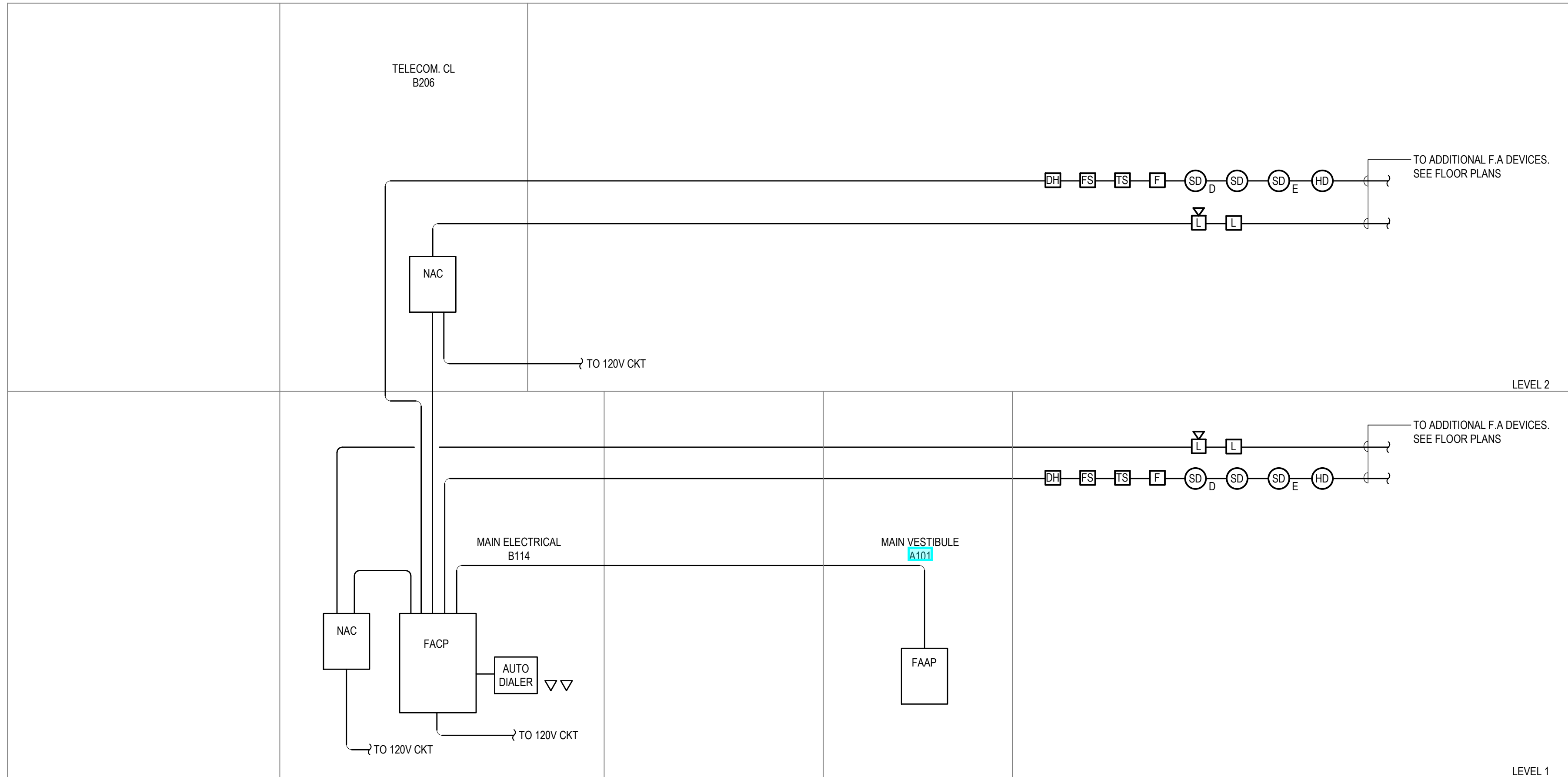
1. PROVIDE AND INSTALL ALL FIRE ALARM DEVICES AND ELEVATOR CIRCUITRY DEVICES INCLUDING BUT NOT LIMITED TO ALL CONTROL INTERLOCKS, CABLING, HARDWARE, MATERIAL, AND LABOR NECESSARY TO ACHIEVE THE FOLLOWING SEQUENCE OF OPERATION.
2. ACTIVATION OF ANY ELEVATOR SHAFT OR LOBBY SMOKE DETECTOR WILL CAUSE RECALL TO PRIMARY RECALL FLOOR. CONDITION = GENERAL ALARM WITH APPROPRIATE DEVICE AND HORIZONTAL/VERTICAL ZONE ANNUNCIATION AT FACP AND ANNUNCIATOR.
3. ACTIVATION OF PRIMARY RECALL FLOOR LOBBY SMOKE DETECTOR WILL CAUSE SECONDARY RECALL. CONDITION = GENERAL ALARM WITH APPROPRIATE DEVICE AND HORIZONTAL/VERTICAL ZONE ANNUNCIATION AT FACP AND ANNUNCIATOR.
4. ACTIVATION OF SHAFT OR MACHINE ROOM HEAT DETECTORS SHALL CAUSE THE SHUNT TRIP BREAKER AT ELEVATOR MOTORS TO DE-ENERGIZE THE ELEVATOR MOTOR CIRCUITS. CONDITION = GENERAL ALARM WITH APPROPRIATE DEVICE AND HORIZONTAL/VERTICAL ZONE ANNUNCIATION AT FACP AND ANNUNCIATOR. HEAT DEVICES = 135 DEG. F.
5. INTERLOCK SHUNT TRIP WITH HEAT DETECTOR TO DE-ENERGIZE MOTOR UPON ACTIVATION OF HEAT DETECTOR AND ONLY WHEN CAB DOORS HAVE OPENED AND ALLOWED SAFE EXIT OF PASSENGERS.
6. ELEVATOR MACHINE ROOM SHALL NOT DISCHARGE WATER UNLESS OPERATING TEMPERATURE (165 DEGREES F) IS PRESENT AT A SHAFT SPRINKLER.
7. FULLY COORDINATE INTERLOCK WIRING TYPE, CONNECTIONS, AND LOGIC WITH THE ELEVATOR VENDOR/CONTRACTOR TO ALLOW RECALL FOR ELEVATOR. ACTIVATION OF SMOKE DETECTORS AS ABOVE DESCRIBED SHALL OVERRIDE ALL NORMAL CONTROL OPERATION OF THE ELEVATOR.
8. COORDINATE WITH THE FIRE MARSHALL OFFICIALS FOR FINAL APPROVAL OF SEQUENCE OF OPERATION. INCLUDE SUCH COORDINATION REQUIREMENTS WITH SHOP DRAWING SUBMITTALS FOR THE FIRE ALARM SYSTEM PORTION OF THIS CONTRACT. OBTAIN WRITTEN REVIEW COMMENTS ON SUBMITTALS FROM THE FIRE MARSHALL'S OFFICE PRIOR TO ROUGH IN OF ANY SYSTEMS UNDER THIS PORTION OF THE WORK.
9. PRIMARY AND SECONDARY RECALL FLOORS SHALL BE COORDINATED WITH DESIGNATIONS FOR SAME AS MADE BY THE ARCHITECT OR THE AUTHORITIES HAVING JURISDICTION. FULLY COORDINATE THE ACTUAL LEVELS WITH THE ARCHITECT PRIOR TO PROVIDING THE WORK.
10. ALL WORK SHALL BE IN ACCORDANCE WITH NFPA 72, ANSI ELEVATOR CODE, AND CURRENT ADOPTED CODES.
11. PROVIDE RELAY(S) AT EACH ELEVATOR SHUNT TRIP POWER SOURCE TO MONITOR SHUNT TRIP POWER AT ELEVATOR.

TESTING & OPERATION NTES

1. COMPLY WITH ALL REQUIREMENTS OF DIVISION 28 SPECIFICATIONS AND NFPA 72.
2. FOR EACH INSTALLATION AND SYSTEM TO BE TESTED IN ACCORDANCE WITH NFPA 72, CHAPTER 10 PRIOR TO SCHEDULING FIRE MARSHAL. ENSURE NO WORKER TOUCHES OR INTERFERES WITH ANY PART OF THE FIRE ALARM SYSTEM, DEVICE, OR WIRING DURING ANY TEST OF "RING-OUT", OR DURING ANY TESTING IN PRESENCE OF FIRE MARSHAL.
3. SEE DIVISIONS 26 AND 28 SPECIFICATIONS REGARDING COORDINATION OF FIRE ALARM SUBMITTALS WITH OTHER TRADES.
4. ALL PUBLICLY ACCESSIBLE/OCCUPIABLE AREAS SHALL BE VOID OF EXPOSED CABLES, OPEN BOXES, INCOMPLETE FIRE ALARM WORK, OR OTHERWISE INCOMPLETE INSTALLATIONS. FIRE ALARM SYSTEM(S) IN PUBLIC OCCUPIABLE AREAS SHALL BE FULLY FINISHED, TEST, AND OPERATIONALLY MAINTAINED.
5. SEE DIVISION 28 31 00 SPECIFICATIONS SECTION FOR EXTRA MATERIALS.

FA GENERAL NOTES

1. PROVIDE ADDITIONAL FIRE ALARM DEVICES (UP TO 20%) AS DIRECTED BY THE FIRE MARSHALL AT NO ADDITIONAL COSTS TO THE OWNER.



1 FIRE ALARM RISER
- E-603 SCALE: NONE

| FIRE ALARM SYSTEM INPUT/OUTPUT MATRIX | OUTPUT ACTIVATED | | | | | | | | | | | |
|---------------------------------------|--------------------------|-------------------------------|----------------------------|------------------------------------|---|--------------------------------------|---|--|---|-----------------------|---|--------------------------------------|
| | ALARM INDICATION AT FACP | SUPERVISOR INDICATION AT FACP | TROUBLE INDICATION AT FACP | ALARM INDICATION AT REMOTE DISPLAY | SUPERVISOR INDICATION AT REMOTE DISPLAY | TROUBLE INDICATION AT REMOTE DISPLAY | ALARM SIGNAL TO UL LISTED CENTRAL STATION | SUPERVISOR SIGNAL TO UL LISTED CENTRAL STATION | TROUBLE SIGNAL TO UL LISTED CENTRAL STATION | ACTIVATE ANY SIGNALS | RECALL ELEVATOR TO PRIMARY FLOOR (MAIN FLOOR) | ACTIVATE ELEVATOR TO ALTERNATE FLOOR |
| DEVICE ACTIVATED | | | | | | | | | | | | |
| MANUAL STATION | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | |
| SMOKE DETECTOR - GENERAL | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |
| HEAT DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |
| DUCT SMOKE DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |
| SPRINKLER FLOW SWITCH | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |
| VALVE TAMPER SWITCH | | <input type="radio"/> | | <input type="radio"/> | | | <input type="radio"/> | | | | | |
| ELEV SHAFT SMOKE DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV SHAFT HEAT DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV EQUIP RM SMOKE DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV EQUIP RM HEAT DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV PIT HEAT DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| MAIN LEVEL ELEV LOBBY SMOKE | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV LOBBY SMOKE DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ELEV SHUNT TRIP POWER MONITOR | | <input type="radio"/> | | <input type="radio"/> | | | <input type="radio"/> | | | | | |
| MACHINE RM / HOISTWAY FLOW SWITCH | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | | <input type="radio"/> | <input type="radio"/> |
| HOISTWAY SPRINKLER | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | | <input type="radio"/> | <input type="radio"/> |
| KITCHEN HOOD SUPPRESSION | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |
| LOSS OF POWER TO FACP | | | <input type="radio"/> | | | | <input type="radio"/> | | | | | |
| LOW VOLTAGE - BATTERY | | | <input type="radio"/> | | | | <input type="radio"/> | | | | | |
| SMOKE CURTAIN SMOKE DETECTOR | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | | <input type="radio"/> | | <input type="radio"/> |