

SCOPE OF THE PROJECT:  
INSTALLATION OF NEW FIRE ALARM SYSTEM

1. Provide new analog addressable fire alarm control panel (EST-2)

2. INSTALL NEW EDWARD'S BPS-6 POWER EXPANDER PANELS TO POWER NOTIFICATION APPLIANCE CIRCUITS.

3. INSTALL NEW MANUAL PULL STATIONS AT ALL POINTS OF EXITS.

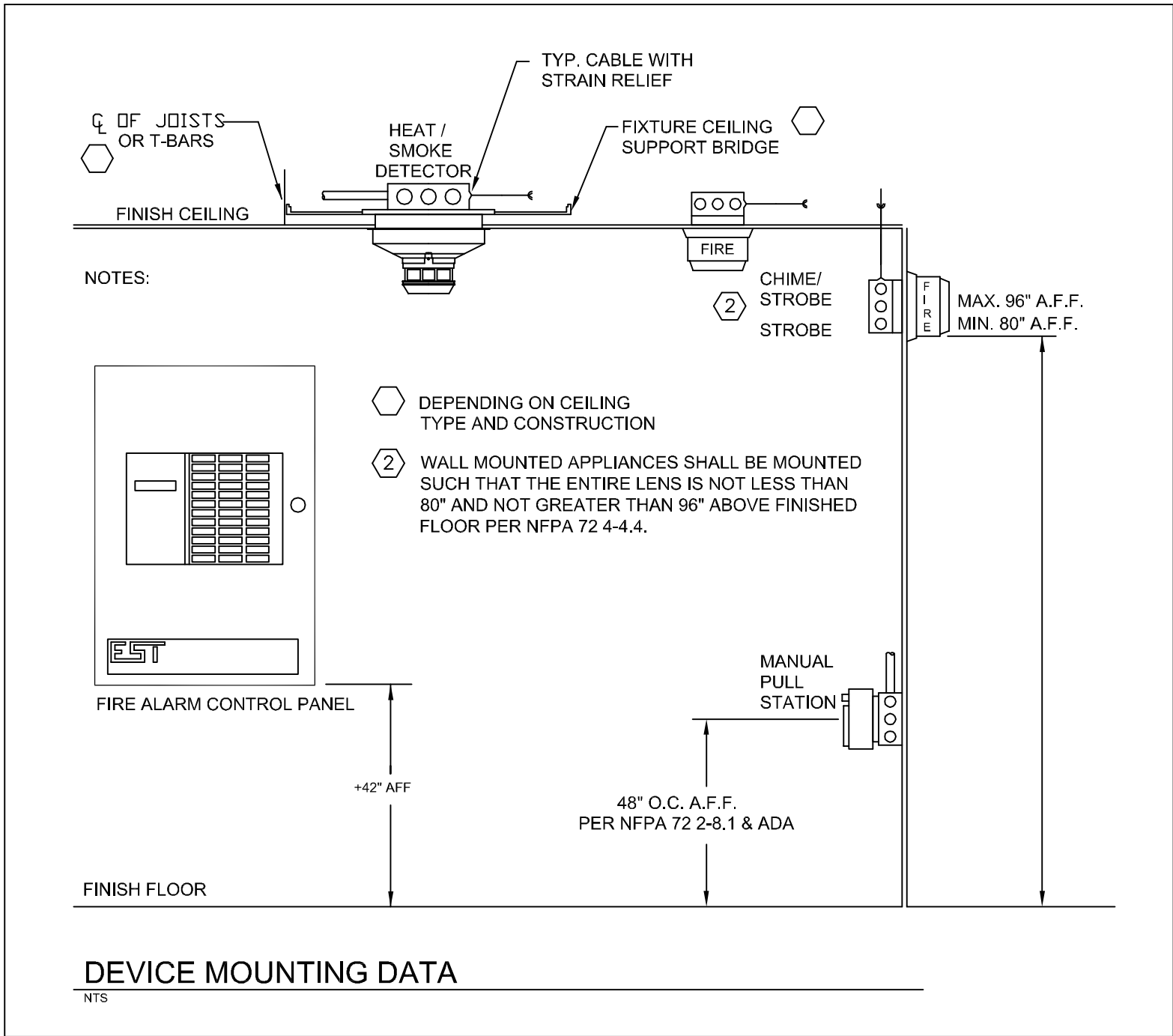
4. INSTALL AUDIBLE (HORN) VISUAL (STROBE) DEVICES AS PER REQUIREMENTS OF NFPA 72.

5. INSTALL MONITOR MODULES TO MONITOR THE CONDITIONS OF THE SPRINKLER WATER FLOW AND TAMPER SWITCHES.

6. ALL STROBES TO BE SYNCHRONIZED.

TOTAL AREA WORK: 190,200 S.F.

- GENERAL NOTES:**
- 1.) FIRE ALARM SYSTEM SHALL COMPLY WITH NFPA 72 (2001 ED.),TITLE 19, TITLE 24, ADA REQUIREMENTS.
- 3.) Wiring shall not be looped through device terminals. Conductor must be cut and wired "in" & "out" so that adequate supervision of the circuit can be maintained.
- 4.) All fire alarm wiring must be tested after installed. Must test free of opens, shorts and grounds.
- 5.) POINT AND COMMON ANNUNCIATION AND T-TAPPING PROHIBITED. (EXCEPT WITH ADDRESSABLE CLASS B DEVICES).
- 7.) ALL TERMINATION'S IN MAIN PULL BOXES AND TERMINAL CABINETS SHALL BE ON BOX MOUNTED TERMINAL BLOCKS.
- 8.) THE FACP IS NOT TO BE USED AS A TERMINAL CABINET.
- 9.) ALL CONDUIT SIZES INDICATED IN DRAWINGS ARE MINIMUMS. CONTRACTOR TO ADJUST SIZE FOR FIELD CONDITIONS (IE NO. OF BENDS ETC.) BUT SHALL NOT BE SMALLER THAN 3/4".
- 10.) ALL FIRE ALARM WIRING MUST TEST FREE OF OPENS, SHORTS AND GROUNDS.
- 11.) STROBE POWER PANELS SHALL BE CAPABLE OF PROVIDING A MINIMUM OF 6 Amps OF POWER FOR EACH 30,000sf OF FLOOR AREA. THIS IS REQUIRED TO PROVIDE FOR COMPLETE BUILDING OF FLOOR TENANT SPACE.
- 12.) FIRE ALARM DRAWINGS ARE SCHEMATIC IN NATURE ONLY. CONTRACTOR TO ROUTE CONDUIT AS FIELD CONDITIONS INDICATE.
- 13.) CONDUIT AND JUNCTION/BACK BOXES ARE NOT TO BE USED FOR UNRELATED WIRING.
- 14.) PULL STATIONS SHALL BE MOUNTED AT 48" ABOVE FINISHED FLOOR TO CENTER OF BOX.
- 15.) PENETRATIONS TO FIRE-RATED ASSEMBLIES SHALL BE PROTECTED BY A UL APPROVED THROUGH-PENETRATION FIRE-STOP SYSTEM.
- 16.) AUDIO VISUAL DEVICES SHALL BE INSTALLED PER TITLE 24 SECTION 3503 CBC REQUIREMENT.
- 17.) CONTRACTOR TO VERIFY LOCATION OF FLOW AND TAMPER SWITCHES AT JOB SITE.
- 18.) ANY DEVICE EXPOSED TO THE ATMOSPHERE TO BE MOUNTED IN A WEATHERPROOF BOX, COMPONENT SHALL BE LISTED FOR EXTERIOR.
- 19.) FIRE ALARM LOCKED PANEL SHALL BE ACCESSIBLE ONLY TO FIRE DEPT. PERSONNEL & AUTHORIZED MAINTENANCE PERSONNEL.
- 20.) ANY DEVIATION FROM THESE PLANS NECESSARY DUE TO FIELD CONDITIONS SHALL BE APPROVED BY FIRE ALARM ENGINEER.
- 21.) ANY FIELD CONDITION MISREPRESENTED IN THESE DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 22.) ALL DEVICES IN THE ALARM SYSTEM SHALL BE COMPATIBLE AND INSTALLED TO MANUFACTURERS SPECIFICATIONS.



**NOTES:**  
ELECTRICAL POWER SERVICE SHALL BE ON A DEDICATED BRANCH CIRCUIT(S). THE CIRCUIT(S) AND CONNECTIONS SHALL BE MECHANICALLY PROTECTED (CIRCUIT BREAKERS SHALL BE LOCKED IN THE ON POSITION WITH AN APPROVED MECHANICAL CLIP). CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING. SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONAL, AND SHALL BE IDENTIFIED AS "FIRE ALARM". THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT. [NFPA 72, 1-5.2.5.2]

- NOTES:**
1. INITIATING DEVICE CIRCUITS TO BE WIRED CLASS "B" STYLE 4
2. NOTIFICATION DEVICE CIRCUITS TO BE WIRED CLASS "B" STYLE 4.

**MODEL 5104 UL INSTALLATION REQUIREMENTS:**  
THE MODEL 5104 HAS BEEN UL LISTED AS A CONTROL/COMMUNICATOR FOR USE IN A CENTRAL STATION FIRE ALARM SYSTEM UNDER NFPA 72. COPIES OF NFPA 72 MAY BE OBTAINED BY WRITING. TO: NATIONAL FIRE PROTECTION ASSOCIATION. IN ANY INSTALLATION WHICH IS TO BE SUBMITTED FOR CERTIFICATION YOU MUST USE UL LISTED EQUIPMENT. PROPERLY INSTALLED BY PROFESSIONALS IN COMPLIANCE WITH THE ABOVE STANDARDS AND THE NATIONAL ELECTRICAL CODE (NFPA-72). THE INSTALLATION MUST ALSO MEET REQUIREMENTS OF LOCAL AUTHORITIES. THE 5104 MUST REPORT TO A CERTIFIED CENTRAL STATION AND THE CENTRAL STATION COMPANY OR THE INSTALLATION COMPANY MUST PROVIDE ROUTINE TESTING AND MAINTENANCE OF THE SYSTEM TO INSURE CONTINUED OPERATION IN COMPLIANCE WITH THE REQUIREMENTS.

**GENERAL NOTES:**

- 1.) SYSTEM SHALL BE A LOW VOLTAGE POWER LIMITED CENTRAL STATION SIGNALING SYSTEM, SILENT KNIGHT MODEL #5104 INSTALLED IN FLOOR OF ONE STORY BUILDING. THE SIGNALS SHALL BE RECEIVED AT CENTRAL STATION.
- 2.) THE SYSTEM SHALL BE EQUIPPED WITH A VISUAL AT THE KEYPAD FOR THE PURPOSE OF LOCAL ANNUNCIATION.
- 3.) THE SYSTEM SHALL COMMUNICATE WITH THE CENTRAL STATION VIA A DUAL LINE COMMUNICATOR. (NFPA 71)
- i. ALL INSTALLATIONS SHALL HAVE TWO (2) DIFFERENT LOOP START TELEPHONE LINES.
- ii. CENTRAL STATION MONITORING FACILITY HAS TWO (2) DIFFERENT TELEPHONE LINES (TWO DIFFERENT NUMBERS) AVAILABLE FOR TRANSMISSION FROM THE FIELD.
- iii. THE INCOMING LINES ARE IN ROTARY, SO THAT IF LINE #1 IS BUSY IT WILL AUTOMATICALLY BE ANSWERED ON LINE #2.
- iv. THE DIGITAL COMMUNICATOR WILL CONSTANTLY MONITOR EACH AUTOMATICALLY TRANSMIT A "TROUBLE" SIGNAL TO CENTRAL STATION INDICATING WHICH TELEPHONE LINE FAILED VIA THE OTHER PHONE LINE AND SOUND A VOCAL TROUBLE" WARNING ON SITE.
- v. THE DIGITAL COMMUNICATOR USED THE PRIMARY PHONE LINE TO CALL THE PRIMARY PHONE NUMBER AT CENTRAL STATION. IF THE DIGITAL COMMUNICATOR IS UNABLE TO REACH THE PRIMARY NUMBER AFTER 8 ATTEMPTS, IT WILL AUTOMATICALLY DIAL THE SECONDARY PHONE NUMBER.
- vi. IF THE PRIMARY LINE FAILS, THE DIGITAL COMMUNICATOR WILL USE THE SECONDARY TO DIAL THE PRIMARY NUMBER AT CENTRAL STATION. IF IT IS UNABLE TO REACH THE RECEIVER AFTER 8 ATTEMPTS, IT WILL THEN DIAL THE SECONDARY PHONE NUMBER.
- vii. THE DIGITAL COMMUNICATOR SHALL BE CONNECTED TO THE TELEPHONE LINES USING RJ38X

**BILL OF MATERIAL / SYMBOL LIST**

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL #	C.S.F.M.	ROUGH-IN BOX	QTY.
[FACP]	FIRE ALARM CONTROL PANEL	GS BLDG. SYSTEM	EST-2	7170-1591:195	2-WBDS	1
[DACT]	DIGITAL COMMUNICATOR TO UL LISTED CENTRAL STATION	SILENT KNIGHT	5104	7165-0559:114	PROVIDED	1
[ANN]	GRAPHIC ANNUNCIATOR	GS BLDG. SYSTEM	ENV0Y	7120-1591:196	PROVIDED	1
[RPS]	REMOTE POWER SUPPLY	G.S. BLDG. SYSTEM	BPS-6	7300-1591:229	PROVIDED	6
[CC-1]	SIGNAL MODULE	GS BLDG. SYSTEMS	SIGA-CC1	7300-1591:121	4"S BOX	6
[CT-2]	DUAL INPUT MODULE	GS BLDG. SYSTEMS	SIGA-CT2	7300-1591:121	4"S SINGLE GANG RING	6
[CR]	CONTROL MODULE	GS BLDG. SYSTEMS	SIGA-CR	7300-1591:121	4"S SINGLE GANG RING	4
[FWP] [CT-1]	WEATHERPROOF PULL STATION SINGLE INPUT MODULE	GAMEWELL GS BLDG. SYSTEMS	M46-28 SIGA-CT1	7150-1288:108 7300-1591:121	28762 W/50397 4"S SINGLE GANG RING	2 2
[F]	PULL STATION	G.S. BLDG. SYSTEM	SIGA-270	7150-1591:129	4"S W/SINGLE GANG RING	13
[SD]	SMOKE DETECTOR	G.S. BLDG. SYSTEM	SIGA-PS	7272-1591:126	4"S WITH 3-O-RING	67
	SMOKE DETECTOR BASE		SIGA-SB	7300-1591:120		67
[HD]	HEAT DETECTOR	G.S. BLDG. SYSTEM	SIGA-HRS	7270-1591:125	4"S WITH 3-O-RING	1
	HEAT DETECTOR BASE		SIGA-SB	7300-1591:120		1
[DD]	DUCT SMOKE DETECTOR	G.S. BLDG. SYSTEM	SIGA-SD	3240-1591:108	PROVIDED	4
[H-W]	HORN/STROBE (WALL)	G.S. BLDG. SYSTEM	G1-HDVM	7125-1591:202	4"S W/SINGLE GANG	32
[H-C]	HORN/STROBE (CEILING)	G.S. BLDG. SYSTEM	GC-HDVM	7135-0569:122	4"S	11
[V]	STROBE (WALL)	G.S. BLDG. SYSTEM	G1-VM	7125-1591:218	SINGLE GANG	52
[S]	STROBE (CEILING)	G.S. BLDG. SYSTEM	GC-VM	7135-0569:123	4"S	7
[H-WP]	HORN/STROBE (WALL) WEATHERPROOF BACK BOX	G.S. BLDG. SYSTEM	757-8A-T	7125-1591:202	757-WB	2
[M]	MINI HORN	WHEELOK	MIZ-24S-W	7135-0785:150	SINGLE GANG	86
[DH]	DOOR HOLDER	RSG	DH-24120	3550-1039:100		28
[FS]	FLOW SWITCH	BY OTHERS, CONNECTION ONLY				
[TS]	TAMPER SWITCH	BY OTHERS, CONNECTION ONLY				
[↑]	SMOKE FIRE DAMPER	BY OTHERS, CONNECTION ONLY				

**WIRE LEGEND**

V,H	2#14 AWG.	VISIBLE CIRCUIT (STROBE) AUDIBLE CIRCUITS (HORN)
D	2#18 AWG.	ADDRESSABLE DATA CIRCUIT
A	2#18 AWG. 2#14 AWG.	ANNUNCIATOR
DH	2#14 AWG.	DOOR HOLDER

**SEQUENCE OF OPERATION**

	MANUAL PULL STATION	ELEVATE. LOBBY SMOKE DETECTOR	AREA SMOKE DETECTOR	DUCT SMOKE DETECTOR	AREA SMOKE DETECTOR	SPRINKLER WATER FLOW SWITCH	SPRINKLER VALVE TAMPER SWITCH	BUILDING POWER FAILURE
ANNUNCIATE AT FIRE CONTROL PANEL (alarm & trouble)	YES	YES	YES	SUPERVISORY	YES	YES	YES	YES
24-HOUR ATTENDED REMOTE LOCATION (alarm & trouble & Supervisory)	YES	YES	YES	SUPERVISORY	YES	YES	YES	YES
ACTIVATE AUDIO/AUDIBLE/VISUAL SIGNAL ON FLOOR OF ALARM	YES	YES	YES	NO	YES	YES	NO	NO
RECALL ELEVATORS TO PRIMARY & SECONDARY FLOORS	NO	YES	NO	NO	NO	NO	NO	NO
SHUT DOWN AIR HANDLERS	NO	NO	YES	YES	YES	YES	NO	NO
RELEASE ALL DOOR HOLDERS	YES	YES	YES	YES	YES	YES	NO	YES
CENTRAL MONITORING SYSTEM	YES	YES	YES	YES	YES	YES	SUPERVISORY	YES

DUCT DETECTORS SHALL SEND SUPERVISORY SIGNAL .

**BUILDING INFORMATION:**  
PROPOSED 91 UNIT APARTMENT  
BUILDING TYPE V-1HR. CONST.  
R-1 OCCUPANCY  
OVER TYPE I PARKING GARAGE  
S-3 OCCUPANCY  
FULLY SPRINKLERED

GENERAL MONITORING SERVICES, INC.  
1127 LOMA AVENUE  
LONG BEACH, CA. 90804  
1-800-576-0650  
STATE LICENCE ACO 5198

**ALARM ENGINEERS**  
**11145 TAMPA AVE. SUITE #24B**  
**NORTH RIDGE, CA. 91326**  
TEL. (818) 831-5390 FAX. (818) 831-5391 LIC. # C10 867596

Project:  
**91 UNITS APARTMENT BUILDING**  
20223-20237 W. SATICOY STREET  
WINNETKA, CALIFORNIA 91306

Revisions		
No.	Date	Description
	5/5/06	FIRST RELEASE
△		

Sheet Title:

**FIRE ALARM SYSTEM**  
**NOTES, SYMBOLS**  
**& DETAILS**

Sheet Number:

**FA-01**