GENERAL NOTES

1. THESE DRAWINGS DEPICT GENERAL LOCATIONS OF LIFE SAFETY EQUIPMENT & FIELD DEVICES. EXACT ROUTING OF CONDUITS TO BE DETERMINED IN THE FIELD BY THE INSTALLING CONTRACTOR TO SUIT CONDITIONS. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
2. SHOULD ANY CONDITIONS EXIST THAT DIFFER FROM WHAT IS INDICATED ON THESE DRAWINGS WHICH CAUSE MAJOR DEVIATIONS IN THE WORK SHOWN, THE CONTRACTOR SHALL CONTACT SIMPLEXGRINNELL IN A TIMELY MANNER SO AS NOT TO IMPAIR THE CONSTRUCTION SCHEDULE.
3. CONTRACTOR IS RESPONSIBLE FOR MAKING AND OBTAINING APPROVAL FOR ALL NECESSARY ADJUSTMENTS IN CIRCUITING AS REQUIRED TO ACCOMMODATE THE RELOCATION OF EQUIPMENT AND/OR DEVICES WHICH ARE AFFECTED BY ANY AUTHORIZED CHANGE. ALL CHANGES SHALL BE CLEARLY INDICATED ON THE RECORD DRAWINGS.
4. A STAMPED SET OF APPROVED FIRE ALARM DRAWINGS SHALL BE AT THE JOB SITE AND SHALL BE USED FOR INSTALLATION.
5. THE POWER CIRCUIT TO THE FACP AND TO THE FIRE ALARM POWER SUPPLIES SHALL BE ON A DEDICATED 120V, 20A BRANCH CIRCUIT BREAKER, AND SHALL HAVE A RED MARKING, LOCK-ON PROVISION AND SHALL BE IDENTIFIED AS "FIRE ALARM CIRCUIT CONTROL." THE LOCATION OF THE CIRCUIT DISCONNECT MEANS (CIRCUIT BREAKER) SHALL BE PERMANENTLY IDENTIFIED AT THE FIRE ALARM CONTROL UNIT.
6. UPDATE THE AS-BUILT DRAWING SET DAILY WITH JOB PROGRESS. RETURN THE AS-BUILT DRAWING SET TO SIMPLEXGRINNELL NO LATER THAN 7 DAYS AFTER FINAL TEST.
7. THE CONTRACTOR WILL MAINTAIN ALL AREAS OF THE BUILDING IN A NEAT AND WORKMAN LIKE MANNER.
8. DO NOT APPLY POWER EXCEPT IN THE PRESENCE OF A FACTORY TRAINED SIMPLEXGRINNELL TECHNICAL REPRESENTATIVE.
9. ANY SMOKE DETECTOR HEAD INSTALLED BEFORE THE BUILDING IS CLEANED AND ACCEPTED SHALL BE COVERED TO PROTECT FROM DUST. ANY FALSE ALARMS DUE TO DIRT CONTAMINATED HEADS SHALL BE THE RESPONSIBILITY OF THE FIRE ALARM INSTALLER.
10. THE FIRE ALARM INSTALLER WILL MAINTAIN THE FIRE RESISTANCE INTEGRITY OF ALL WALL, CEILING, AND ROOF ASSEMBLIES ANY TIME THAT WORK IS NOT ACTIVELY BEING PERFORMED.
11. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND NEC.
12. ALL WIRING SHALL BE INSTALLED ACCORDING TO NFPA 70 (NEC).
13. FIRE ALARM CIRCUITS SHALL BE IDENTIFIED IN ACCORDANCE WITH APPROPRIATE SECTION OF NEC 760. MARK ALL FIRE ALARM WIRES IN ACCORDANCE WITH NEC 760 SECTIONS FOR POWER LIMITED AND NON-POWER LIMITED WIRE.
14 FIRE ALARM CABLE INSTALLED IN DUCTS, PLENUM, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE FPLP.
15. FIRE ALARM CABLE INSTALLED IN THE VERTICAL RUNS AND PENETRATE MORE THAN ONE FLOOR OR CABLES INSTALLED IN VERTICAL RUNS IN SHAFTS SHALL BE TYPE FPLR.
16. FIRE ALARM CABLE INSTALLED IN UNDERGROUND CONDUIT OR OTHER WET LOCATIONS SHALL BE UL LISTED FOR WET LOCATIONS.
17. FIRE ALARM CIRCUITS EXTENDING BEYOND ONE BUILDING AND RUN OUTDOOR SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 ARTICLES 760, 770, 725 AND 800 WHERE APPLICABLE.
18. ALL WIRING, INCLUDING SHIELDS MUST BE DRY AND FREE OF SHORTS AND GROUNDS.
19. ALL SHIELDED WIRE MUST HAVE SHIELD CONTINUITY AT FULL LENGTH OF THE WIRE.
20. ONLY SYSTEM WIRING CAN BE RUN IN THE SAME CONDUIT.
21. 120VAC IS NOT PERMITTED IN THE SAME CONDUIT WITH LOW VOLTAGE WIRING.
22. MAINTAIN 40 PERCENT CONDUIT FILL RATIO AS PER NEC REQUIREMENTS.
23. EXISTING CONDUITS MAY BE USED BY THE INSTALLATION CONTRACTOR AS DEEMED NECESSARY, HOWEVER, ANY EXISTING CONDUIT WILL BE USED ONLY IF CONDUITS MEET CURRENT STANDARDS AND CODES. SIMPLEXGRINNELL MAKES NO STATEMENTS WRITTEN OR VERBAL AS TO THE CONDITION OF EXISTING CONDUITS.

WIRE SCHEDULE

FIRE ALARM WIRE LIST

	CIRCUIT DESCRIPTION	RISER RATED: FPLR	SINGLE CONDUCTOR(THHN,TFFN)	PLENUM RATED: FPLP
K	REMOTE TEST SWITCH/ LED CIRCUIT – (2) 2 CONDUCTOR 16 AWG SOLID	SG ANIX./PAIGE 454731ARE AREA=0.0272 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-1N-03-BX	(4) #16 AWG AREA=0.0072 SQ. INCH (EACH)	SG ANIX./PAIGE 454740ARE AREA=0.0208 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-2N-03
M	MAPNET/IDNET CIRCUIT 1 PAIR 16 AWG TWISTED OVERALL SHIELD	SG ANIX./PAIGE 740218L AREA=0.0269 SQ. INCH ANIXTER PART NUMBER T740218L		ANIXTER PART NUMBER FA-1602C-1-2S-03 AREA=0.0246 SQ. INCH
P	POWER CIRCUIT 2 CONDUCTOR 16 AWG SOLID (SUBSCRIPT "+" IF RESETTABLE)	SG ANIX./PAIGE 454731ARE AREA=0.0272 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-1N-03-BX	(4) #16 AWG AREA=0.0072 SQ. INCH (EACH)	SG ANIX./PAIGE 454740ARE AREA=0.0208 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-2N-03
R	RELAY CIRCUIT 2 CONDUCTOR 14 AWG SOLID	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	SG ANIX./PAIGE 454719ARE AREA=0.0333 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-2N-03
V	VISUAL/SIGNAL CIRCUIT 2 CONDUCTOR 14 AWG SOLID	SG ANIX./PAIGE 454718ARE AREA=0.0380 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-1N-03-BX	(2) #14 AWG AREA=0.0097 SQ. INCH (EACH)	SG ANIX./PAIGE 454719ARE AREA=0.0333 SQ. INCH ANIXTER PART NUMBER FA-1402C-1-2N-03
Z	ZONE CIRCUIT 2 CONDUCTOR 16 AWG SOLID	SG ANIX./PAIGE 454731ARE AREA=0.0272 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-1N-03-BX	(2) #16 AWG AREA=0.0072 SQ. INCH (EACH)	SG ANIX./PAIGE 454740ARE AREA=0.0209 SQ. INCH ANIXTER PART NUMBER FA-1602C-1-2N-03

CONDUIT SIZE	CONDUCTOR AREA	CONDUIT SIZE	CONDUCTOR AREA
1/2"	0.12 SQ INCH *	1-1/4"	0.60 SQ INCH *
3/4"	0.21 SQ INCH *	1-1/2"	0.82 SQ INCH *
1"	0.34 SQ INCH *	2"	1.34 SQ INCH *

* 40% FILL PER N.E.C.

THE CABLES SPECIFIED HERE ARE FOR REFERENCE OF REQUIRED ELECTRICAL CHARACTERISTICS AS WELL AS CODE REQUIREMENTS. ALTERNATE SUPPLIERS MAY BE SUBSTITUTED PROVIDING EQUIVALENT CHARACTERISTICS ARE MAINTAINED. ITEMS SUCH AS CAPACITANCE BETWEEN CONDUCTORS AND WIRE GAUGE CAN BE CRUCIAL TO THE CIRCUIT DESIGN OF THIS SYSTEM INSTALLATION.

REFERENCE https://www.anixter.com/customer/tycofs FOR SG ANIXTER CABLE DATA

SYSTEM DESCRIPTION / SCOPE OF WORK

OCCUPANCY TYPE: M MERCANTILE GROUP

SPRINKLER PROTECTION: BUILDING IS PARTIALLY SPRINKLED

PROVIDE AND INSTALL A NEW AUTOMATIC AND MANUAL FIRE ALARM SYSTEM AS SHOWN ON DRAWINGS.

ALL WIRING TO BE CLASS B. WIRING IS STYLE Y FOR NOTIFICATION APPLIANCE CIRCUITS, STYLE B FOR INITIATING DEVICE CIRCUITS, AND STYLE 4 FOR SIGNALING LINE CIRCUITS.

AUTOMATIC FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UUFX OR UUJS UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY THE OWNER.

FIRE ALARM APPLICABLE CODES & STANDARDS

FIRE PREVENTION CODE (NFPA 1), 2006 EDITION

NATIONAL ELECTRIC CODE (NFPA 70), 2011 EDITION

ELEVATOR CODE ASME A.17.1, 2013

JURISDICTIONS WITHIN THE STATE MAY HAVE AMENDMENTS TO THE STATE ADOPTED CODE. CHECK WITH THE LOCAL JURISDICTION AUTHORITY FOR MORE DETAILS.

ABBREVIATIONS LEGEND

AC = ABOVE CEILING
C = CEILING MOUNTED
E = EXISTING TO REMAIN
RC = EXISTING TO REMOVE AND COVER
RD = EXISTING DEVICE TO BE RELOCATED
RL = RELOCATED DEVICE
RR = REMOVE EXISTING AND REPLACE W/NEW

WP = WEATHERPROOF
XP = EXPLOSION PROOF
H = HIGH HUMIDITY
AFF = ABOVE FINISHED FLOOR
AHJ = AUTHORITY HAVING JURISDICTION
ALM = ALARM
ANN = ANNUNCIATOR
BMS = BUILDING MANAGEMENT SYSTEM
CBC = CALIFORNIA BUILDING CODE
CD = (eg. 15CD) CANDELA
CSFM = CALIFORNIA STATE FIRE MARSHALL
DET = DETECTOR
DGP = DATA GATHERING PANEL
EOL = END OF LINE
EPO = EMERGENCY POWER OFF
FACP = FIRE ALARM CONTROL PANEL
FATC = FIRE ALARM TERMINAL CABINET
FBO = FURNISHED BY OTHERS
FCC = FIRE COMMAND CENTER
FAA = FIRE ALARM ANNUNCIATOR
FTR = FIRE ALARM TRANSPONDER
FSD = FIRE SMOKE DAMPER

HT = HEIGHT
HVAC = HEATING, VENTILATION, & AIR CONDITIONING
IMS = INFORMATION MANAGEMENT SYSTEM
MAX = MAXIMUM
MIN = MINIMUM
N/A = NOT APPLICABLE
NAC = NOTIFICATION APPLIANCE CIRCUIT EXTENDER
NDU = NETWORK DISPLAY UNIT
NEC = NATIONAL ELECTRICAL CODE
NFPA = NATIONAL FIRE PROTECTION ASSOCIATION
NIC = NOT IN CONTRACT
NPU = NETWORK PROCESSING UNIT
NTS = NOT TO SCALE
PAP = PRE-ACTION PANEL
SCC = STATUS COMMAND CENTER
SLC = SIGNALING LINE CIRCUIT
SMK = SMOKE
SUPV = SUPERVISORY
TAC = TRUEALERT ADDRESSABLE CONTROLLER
TRBL = TROUBLE
TS = TAMPER SWITCH
TYP = TYPICAL
UON = UNLESS OTHERWISE NOTED
VCC = VOICE COMMAND CENTER
VT = VALVE TAMPER
WF = WATER FLOW
W = (eg. 1/2W) WATT
W/ = WITH
W/O = WITH OUT

DEVICE ADDRESSING LEGEND

ADDRESSABLE CARD (IDNET OR MAPNET) — DEVICE ADDRESS

M2–1

ADDRESSABLE DEVICES NUMBERING

CIRCUIT DESIGNATOR V=VISUAL OR A/V, H=AUDIBLE ONLY) — DEVICE DESIGNATOR

V2–1

VISUAL, AUDIBLE OR A/V DEVICE

SYMBOL KEY

FIRE ALARM SYMBOLS LEGEND

SYMBOL	DESCRIPTION	MODEL#	COMMONLY USED BACKBOX, REFER TO DATA SHEET FOR OTHER OPTIONS
FACP	FIRE ALARM CONTROL PANEL W / 12AH BATTERY SET	SIMPLEX 4010-9401 SIMPLEX 2081-9274	SUPPLIED BY SIMPLEXGRINNELL
FAA	FIRE ALARM ANNUNCIATOR PANEL	SIMPLEX 4606-9102	SIMPLEX 2975-9206
Z	SMOKE SENSOR / BASE	SIMPLEX 4098-9714 SIMPLEX 4098-9792 BASE	4" OCTAGONAL BOX 1 1/2" DEEP
F	MANUAL PULL STATION	SIMPLEX 4099-9003	SIMPLEX 2975-9178
Z	DUCT SMOKE SENSOR	SIMPLEX 4098-9756	MOUNT TO DUCTWORK
K	REMOTE TEST STATION W/ LED AND KEY SWITCH	SIMPLEX 2098-9806	SINGLE GANG BOX 2 1/2" DEEP
R	ENCAPSULATED RELAY	AIR PRODUCTS PAM-SD	SINGLE GANG BOX 2 1/8" DEEP W/COVER
# C	CEILING MOUNT MULTI-CANDELA HORN/STROBE RED # =CANDELA RATING	SIMPLEX 4906-9128	4" SQUARE BOX 1 1/2" DEEP
#	WALL MOUNT MULTI-CANDELA STROBE ONLY RED # =CANDELA RATING	SIMPLEX 4906-9101	4" SQUARE BOX 1 1/2" DEEP W/4905-9937 ADAPTER SKIRT WHEN SURFACE MOUNTED
WP75 WP	WEATHERPROOF WALL MOUNT MULTI-CANDELA STROBE ONLY RED WP75 =CANDELA RATING	SIMPLEX 4906-9105	SIMPLEX 49WPBB-AWOWR
AM	INDIVIDUAL ADDRESSABLE MODULE	SIMPLEX 4090-9001	SINGLE GANG BOX 2 1/2" DEEP WITH COVER
VS	TAMPER SWITCH	SUPPLIED BY OTHERS	INSTALLED BY MECHANICAL CONTRACTOR
WF	WATERFLOW SWITCH	SUPPLIED BY OTHERS	INSTALLED BY MECHANICAL CONTRACTOR
KHSS	KITCHEN HOOD	SUPPLIED BY OTHERS	SUPPLIED BY OTHERS
PS	PROTECTOWIRE PANEL	SUPPLIED BY OTHERS	SUPPLIED BY OTHERS

SEQUENCE OF OPERATION

SYSTEM OUTPUTS — CONTROL UNIT ANNUNCIATION / NOTIFICATION / FIRE SAFETY CONTROL

SYSTEM INPUTS	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	REMARKS
1 SMOKE SENSOR/DETECTOR	•	•					•	•	•		•	•																					•	•			1
2 MANUAL PULL STATION	•	•					•	•	•		•	•																									2
3 DUCT SENSOR/DETECTOR			•	•			•				•		•																				•	•			3
4 WATERFLOW SWITCH	•	•					•	•	•		•	•																									4
5 TAMPER SWITCH			•	•			•				•		•																								5
6 FIRE ALARM AC POWER FAILURE					•	•					•			•																							6
7 FIRE ALARM SYSTEM LOW BATTERY					•	•					•			•																							7
8 OPEN CIRCUIT OR GROUND FAULT					•	•					•			•																							8
9 CLASS B NOTIFICATION CIRCUIT (NAC) – SHORT					•	•					•			•																							9
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SYSTEM OUTPUTS (A–AJ): 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 TROUBLE SIGNAL; ACTUATE APPROPRIATE LOCATION INDICATOR; ACTUATE AUDIBLE EVACUATION SIGNALS; ACTUATE ALL AUDIBLE EVACUATION SIGNALS; ACTUATE ALL VISIBLE EVACUATION SIGNALS; DISPLAY CHANGE OF STATUS; TRANSMIT ALARM SIGNAL TO SUPERVISING STATION; TRANSMIT SUPV. SIGNAL TO SUPERVISING STATION; TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION; FAN SHUT DOWN; DAMPER SHUT DOWN

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Revisions shown with Δ symbol

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ISSUE DATE:	9/17/14
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SYSTEM: FIRE ALARM SYSTEM

SHEET: GENERAL INFORMATION

FA-002

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