Read Permit Conditions prior to calling for inspection. All sleeping units are required to report as Local only and not dispatch.

If hallways or corridors have drop tiles instead of hard lids, smoke detecion is required above ceiling per Total Coverage NFPA 72 2019.

Emergency Radio points required to be monitored by FACP.

FIRE ALARM SYSTEM T.I.

HAMPTON INN & SUITES

1515 S. MERIDIAN, PUYALLUP, WA

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
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CERTIFIED ENGINEERING TECHNICIAN
JAMES CLARK
NICET
EXPIRES 07/01/2025
FIRE ALARM SYSTEMS

2

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

GENERAL NOTES

1. ALL REQUIRED MATERIALS AND WORK SHALL COMPLY WITH ALL ADOPTED APPLICABLE CODES AND STANDARDS AS WELL AS WITH FEDERAL, STATE, LOCAL WIRING CODES AT THE TIME OF THE PERMIT SUBMITTAL, AND CUSTOMER CONTRACT SPECIFICATIONS.
2. ALL SYSTEM-INSTALLED DEVICES SHALL NOT BE CONCEALED OR OBSTRUCTED IN ANY WAY AS TO IMPEDE THE PROPER FUNCTION OF THE DEVICE.
3. INSTALLATION OF DEVICES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. POWER LIMITED AND NON-POWER LIMITED FIELD WIRING MUST BE INSTALLED WITHIN THE FACP ENCLOSURE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND THE ELECTRICAL CODE.
4. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALE ON THE DRAWINGS.
5. INPUT POWER TO ALARM PANELS TO BE 120 VAC, ON A DEDICATED CIRCUIT THAT DOES NOT DE-ENERGIZE UPON SYSTEM ALARM OR EPO (EMERGENCY POWER OUT) ACTIVATION. THE ON-SITE ELECTRICAL CONTRACTOR PROVIDES WIRING AND TERMINATION OF THIS INPUT POWER. NO OTHER LOADS ARE PERMITTED ON THIS CIRCUIT.
6. THE CIRCUIT DISCONNECTING MEANS SHALL HAVE A RED MARKING, SHALL BE ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL, AND SHALL BE IDENTIFIED AS “FIRE ALARM CIRCUIT”.
7. ALL VAC (VOLT, ALTERNATING, CURRENT), WIRING IS TO BE KEPT SEPARATE FROM ALL 24 VDC (VOLT, DIRECT, CURRENT) WIRING.
8. ALL VISUAL, AUDIBLE/VISUAL DEVICES ARE TO BE MOUNTED AT THE HEIGHT SPECIFIED IN THE PROJECT PLANS AND NOT CONCEALED OR OBSTRUCTED.
9. ALL CABLING SHALL MEET THE REQUIREMENTS OF THE PANEL MANUFACTURER.
10. ALL EQUIPMENT ELEVATIONS SHALL BE PER THE PROJECT PLANS AND DETAILS.
11. ANY WIRING THAT IS REQUIRED FOR MONITORING OF THE ALARM PANEL SUCH AS LIFE SAFETY EQUIPMENT OR OFF-SITE MONITORING IS TO BE PROVIDED BY THE ON-SITE FIRE ALARM CONTRACTOR.
12. CHECK FOR WIRE TO WIRE SHORTS AND SHORTS TO GROUND THROUGHOUT THE INSTALLATION. SHORTS AND GROUNDS ARE NOT ACCEPTABLE.
13. ALL ALARM DEVICES AND PANEL WIRING SHALL BE LABELED ACCORDING TO THE PROJECT PLANS WITH AN APPROPRIATE MARKING SYSTEM. THE MARKING SHALL BE LEGIBLE AND NON REMOVABLE.
14. ALL ALARM DEVICES TO BE LABELED AS SHOWN ON THE PROJECT DRAWINGS INCLUDING THE EOL IDENTIFICATION.
15. FIRE ALARM BACKUP BATTERIES SHALL SUPPLY 24 HOURS OF STANDBY AND 5 MINUTES OF ALARM FOR NON-VOICE SYSTEMS.
16. THE FIRE ALARM SYSTEM AUDIBLE SIGNAL SHALL BE THREE-PULSE TEMPORAL PATTERN. VOICE EVACUATION SHALL BE MORSE U PATTERN.
17. UPON COMPLETION OF THE INSTALLATION OF THE FIRE ALARM SYSTEM, A SATISFACTORY TEST OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF THE AUTHORITY HAVING JURISDICTION.
18. PRIOR TO REQUESTING FINAL APPROVAL OF THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL FURNISH A WRITTEN STATEMENT TO THE AUTHORITY HAVING JURISDICTION TO THE EFFECT THAT THE SYSTEM HAS BEEN INSTALLED AND COMPLETELY TESTED.
19. AS-BUILT DRAWINGS ACCURATELY REFLECTING THE SYSTEM INSTALLED IN ITS COMPLETED AND FINAL CONDITION ALONG WITH ANY APPROVALS OR TESTING RESULTS SHALL BE MAINTAINED ON SITE.

2021 Adopted codes

APPLICABLE CODES AND REGULATIONS

2018 INTERNATIONAL BUILDING CODE (IBC) W/ WAC 51-50

2018 INTERNATIONAL EXISTING BUILDING CODE W/ WAC 51-50-480000

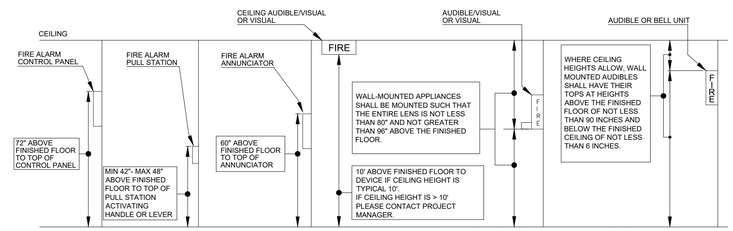
2018 INTERNATIONAL MECHANICAL CODE W/ WAC 51-52

2018 INTERNATIONAL FIRE CODE W/ WAC 51-54A

2016 NATIONAL FIRE ALARM & SIGNALING CODE (NFPA-72)

2019

MOUNTING HEIGHTS



VISUAL APPLIANCE MOUNTING HEIGHT CONSIDERATIONS IN SLEEPING ROOMS
1. MIN DISTANCE IN SLEEPING ROOMS IS 24" FROM CEILING TO TOP OF LENS FOR 110CD STROBES WITHIN 10' OF THE PILLOW
2. 185CD STROBES, USED IN SLEEPING ROOMS, CAN BE WITHIN THE 24" MINIMUM DISTANCE FROM THE CEILING. THE HIGHER INTENSITY IS TO COMPENSATE FOR A POSSIBLE SMOKE LAYER.

NOTE: THE INSTALLATION BACK BOX DOES NOT ALWAYS CORRESPOND TO THE BOTTOM OR THE TOP OF THE ACTUAL DEVICE. SEE SPECIFIC DEVICE INSTALLATION SHEETS FOR THE CORRESPONDING BACK BOX INSTALLATION HEIGHTS.

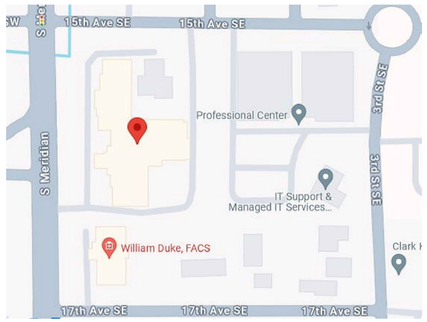
BILL OF MATERIAL

SYMBOL	NEW	EXISTING	MANUFACTURER	PART NO	DESCRIPTION
FACU		1	EDWARDS	3X-SFS1RI	FACP /W CPU, 1 LOOP, 4 NACS, 10A POWER SUPPLY, RED
			EDWARDS	3-SFS1	EST3X ELECTRONICS CHASSIS
			EDWARDS	4X-LCD	EST3X USER INTEFACE CARD
			EDWARDS	PS10-4B	POWER SUPPLY
			EDWARDS	3X-NET	NETWORK OPTION CARD, RS485, CL A OR B, MAX 64 NODES
			EDWARDS	3-SDC1	SIGNATURE DEVICE CARD - UPGRADES A 3-SSDC2 TO A 3-SDDC2.
			EDWARDS	SFS	SFS LED CONTROL/DISPLAY MODULE
			EDWARDS	SFS1-CPU	EST3X MAINBOARD
NAC	2		EDWARDS	BPS10A	REMOTE BOOSTER POWER SUPPLY, 10A, 120VAC, RED
			EDWARDS	SIGA-CC1	SIGNAL MODULE /W 1 RISER IN, 1 OUTPUT CKT, CL 'B'
A/N	3		EDWARDS	SIGA-CC1	SIGNAL MODULE /W 1 RISER IN, 1 OUTPUT CKT, CL 'B'
LF	30		EDWARDS	SIGA-PCD W/SIGA-ABAG-LF BASE	PHOTOELECTRIC SMOKE AND CARBON MONOXIDE LIFE SAFETY DETECTOR.
A/N	3		EDWARDS	SIGA-TCDR	TEMPORAL GENERATOR FOR SOUNDER BASES
S	16		EDWARDS	SIGA-PD W/SIGA-SB4 BASE	PHOTOELECTRIC SMOKE DETECTOR
AM	3		EDWARDS	SIGA-RM1	RISER MONITOR MODULE, MONITORS ONE RISER
LF	3		EDWARDS	G4LFWF-HVM	LOW FREQUENCY(520HZ), WHITE, 15,30,75,110 CD, FIRE
LF	27		EDWARDS	G4LFWF-H	LOW FREQUENCY(520HZ) HORN, WHITE, FIRE
	3		EDWARDS	G1F-VM	WALL STROBE, SWITCH SELECT 15, 30, 75, 110 CD, WHITE, /W FIRE

2

SHEET INDEX

LOCATION MAP



WIRE LEGEND

TAG	CIRCUIT TYPE	WIRE TYPE	CLASS
A	SIGNAL LINE CIRCUIT (SLC)	2 #16 TWISTED / UNSHIELDED - FPL	CLASS B
N	NOTIFICATION APPLIANCE CIRCUIT (NAC)	2 #14 TWISTED / UNSHIELDED - FPL	CLASS B

SCOPE OF WORK

SCOPE:

INSTALLING COMPANY WILL PROVIDE:

ADDITION OF NEW DETECTION AND NOTIFICATION TO AN EXISTING SYSTEM IN THE GUEST ROOMS NEW WING OF THE EXISTING BUILDING.

ALL ADDRESSABLE DEVICES WILL BE CONNECTED TO FIRE ALARM CONTROL PANEL INTELLIGENT LOOP.
ALL DEVICES ARE TO BE COMPATIBLE WITH THE HEAD-END EQUIPMENT AND OTHER DEVICES. ALL DEVICES WILL HAVE A TEXUAL DISPLAY ON THE FIRE ALARM CONTROL PANEL DESCRIBING TYPE OF DEVICE AND LOCATION.

WIRING CLASS:
SLC - CLASS B
NAC - CLASS B

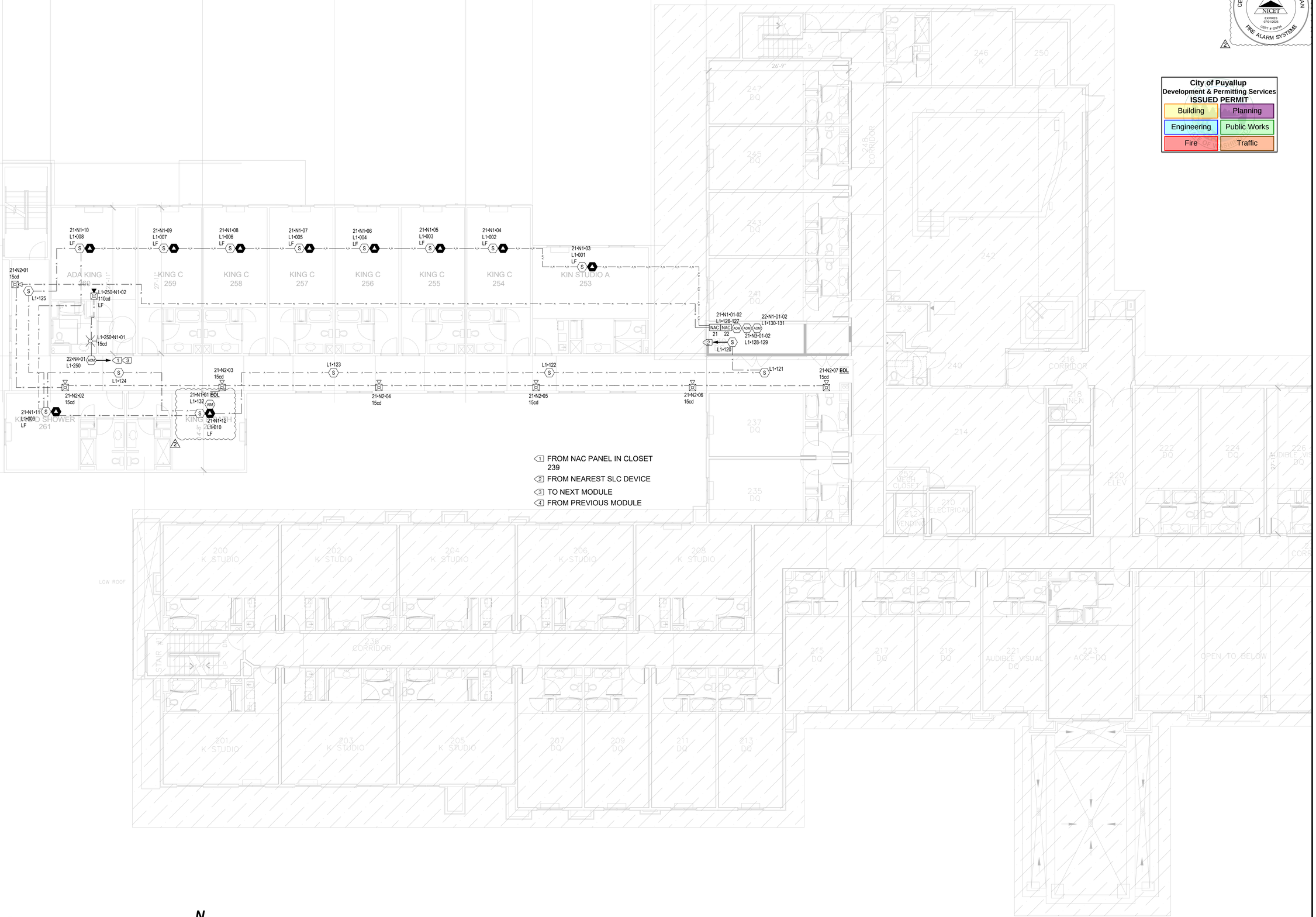
EXISTING SEQUENCE OF OPERATION

SYSTEM INPUTS	SYSTEM OUTPUTS: ACTUATE ALARM SIGNAL INDICATOR (RED LED)	FACP ACTION: ACTUATE TROUBLE SIGNAL INDICATOR (AMBER LED)	FACP ACTION: ACTUATE SUPERVISORY SIGNAL INDICATOR (AMBER LED)	FACP ACTION: INDICATE INPUT SIGNAL ON LCD DISPLAY	NOTIFICATION: ACTIVATE AUDIBLE & VISUAL EVACUATION FOR BUILDING	NOTIFICATION: TRANSMIT ALARM SIGNAL TO REMOTE ANNUNCIATOR	NOTIFICATION: TRANSMIT TROUBLE SIGNAL TO REMOTE ANNUNCIATOR	NOTIFICATION: TRANSMIT SUPERVISORY SIGNAL TO REMOTE ANNUNCIATOR	NOTIFICATION: TRANSMIT ALARM SIGNAL TO MONITORING COMPANY	NOTIFICATION: TRANSMIT TROUBLE SIGNAL TO MONITORING COMPANY	NOTIFICATION: TRANSMIT SUPERVISORY SIGNAL TO MONITORING COMPANY	NOTIFICATION: RECORD ALL SYSTEM EVENTS IN CPU MEMORY	EQUIPMENT CONTROLLED: DOOR HOLD OPENS RELEASE	EQUIPMENT CONTROLLED: ACTIVATE SOUNDER BASES IN ALL GUEST ROOMS	EQUIPMENT CONTROLLED:	EQUIPMENT CONTROLLED: ELEVATOR RECALL TO DESIGNATED PRIMARY RECALL FLOOR	EQUIPMENT CONTROLLED: ELEVATOR RECALL TO DESIGNATED ALTERNATE RECALL FLOOR	EQUIPMENT CONTROLLED: ACTIVATE ELEVATOR SHUNT-TRIP	EQUIPMENT CONTROLLED: CLOSE DAMPERS THROUGHOUT BUILDING
MANUAL PULL STATION	●			●	●	●			●			●	●	●						
AREA SMOKE DETECTOR	●			●	●	●			●			●	●	●						●
WATERFLOW SWITCH	●			●	●	●			●			●	●	●						
VALVE TAMPER SWITCH			●	●				●			●	●	●							
POST INDICATING VALVE			●	●				●			●	●								
GUEST ROOM SMOKE DETECTOR			●	●				●			●	●								
ADA/HEARING IMPAIRED SMOKE			●	●				●			●	●								
ELEVATOR INTERFACE INPUTS:																				
LOBBY SMOKE DETECTOR @ 2ND & 3RD FLRS	●			●	●	●			●			●	●	●		●				●
LOBBY SMOKE DETECTOR @ 1ST FLR	●			●	●	●			●			●	●	●			●			●
MACHINE ROOM SMOKE DETECTOR	●			●	●	●			●			●	●	●		●				●
ELEVATOR SHAFT SMOKE DETECTOR	●			●	●	●			●			●	●	●		●				
MACHINE ROOM HEAT DETECTOR	●			●	●	●			●			●	●	●				●		
ELEVATOR SHAFT HEAT DETECTOR	●			●	●	●			●			●	●	●				●		
INITIATING CIRCUIT CONDITIONS:																				
OPEN WIRE		●		●			●			●		●								
GROUNDED WIRE		●		●			●			●		●								
SHORTED WIRES	●			●	●	●			●			●								
NOTIFICATION CIRCUIT CONDITIONS:																				
OPEN WIRE		●		●			●			●		●								
GROUNDED WIRE		●		●			●			●		●								
SHORTED WIRES		●		●			●			●		●								
SIGNALING LINE CIRCUIT CONDITIONS:																				
OPEN WIRE		●		●			●			●		●								
GROUNDED WIRE		●		●			●			●		●								
WIRE TO WIRE SHORT & OPEN		●		●			●			●		●								
WIRE TO WIRE SHORT & GROUND		●		●			●			●		●								
OPEN & GROUND		●		●			●			●		●								
LOSS OF CARRIER		●		●			●			●		●								
FACP POWER LOSS		●		●	●			●			●	●								
FACP LOW BATTERY		●		●	●			●			●									
FACP REMOTE STATION DACT FAILURE		●									●									

FIRE ALARM SYSTEM T.I.
GENERAL INFORMATION
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024
SCALE: AS NOTED
SHEET #: FA0.00



1 FROM NAC PANEL IN CLOSET 239

2 FROM NEAREST SLC DEVICE

3 TO NEXT MODULE

4 FROM PREVIOUS MODULE

CERTIFIED ENGINEERING TECHNICIAN
JAMES CLARK
NICET
EXPIRES 07/01/2025
FIRE ALARM SYSTEMS

City of Puyallup
Development & Permitting Services
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Building	Planning
Engineering	Public Works
Fire	Traffic

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

SECOND FLOOR FIRE ALARM ADDITION

HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024

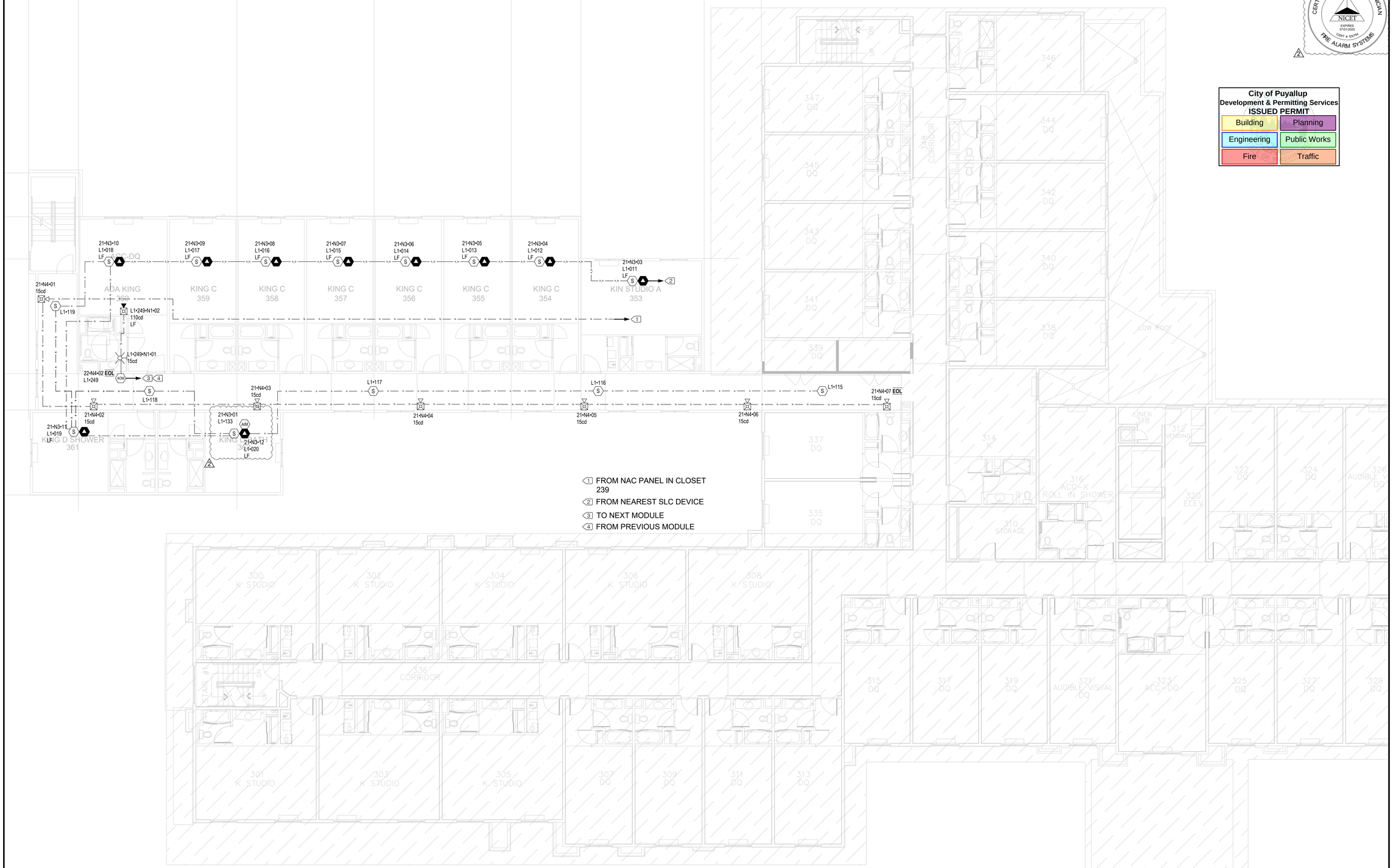
SCALE: AS NOTED

SHEET #: FA1.00

1 SECOND FLOOR FIRE ALARM
Scale: 1/8" = 1'

N

0 4' 8' 16'
Scale: 1/8" = 1'-0"



1 FROM NAC PANEL IN CLOSET 239

2 FROM NEAREST SLC DEVICE

3 TO NEXT MODULE

4 FROM PREVIOUS MODULE

1 THIRD FLOOR FIRE ALARM
Scale: 1/8" = 1'

N

0 4' 8' 16'
Scale: 1/8" = 1'-0"

CERTIFIED ENGINEERING TECHNICIAN
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CERT # 357744
FIRE ALARM SYSTEMS

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BRET A. FORSBERG
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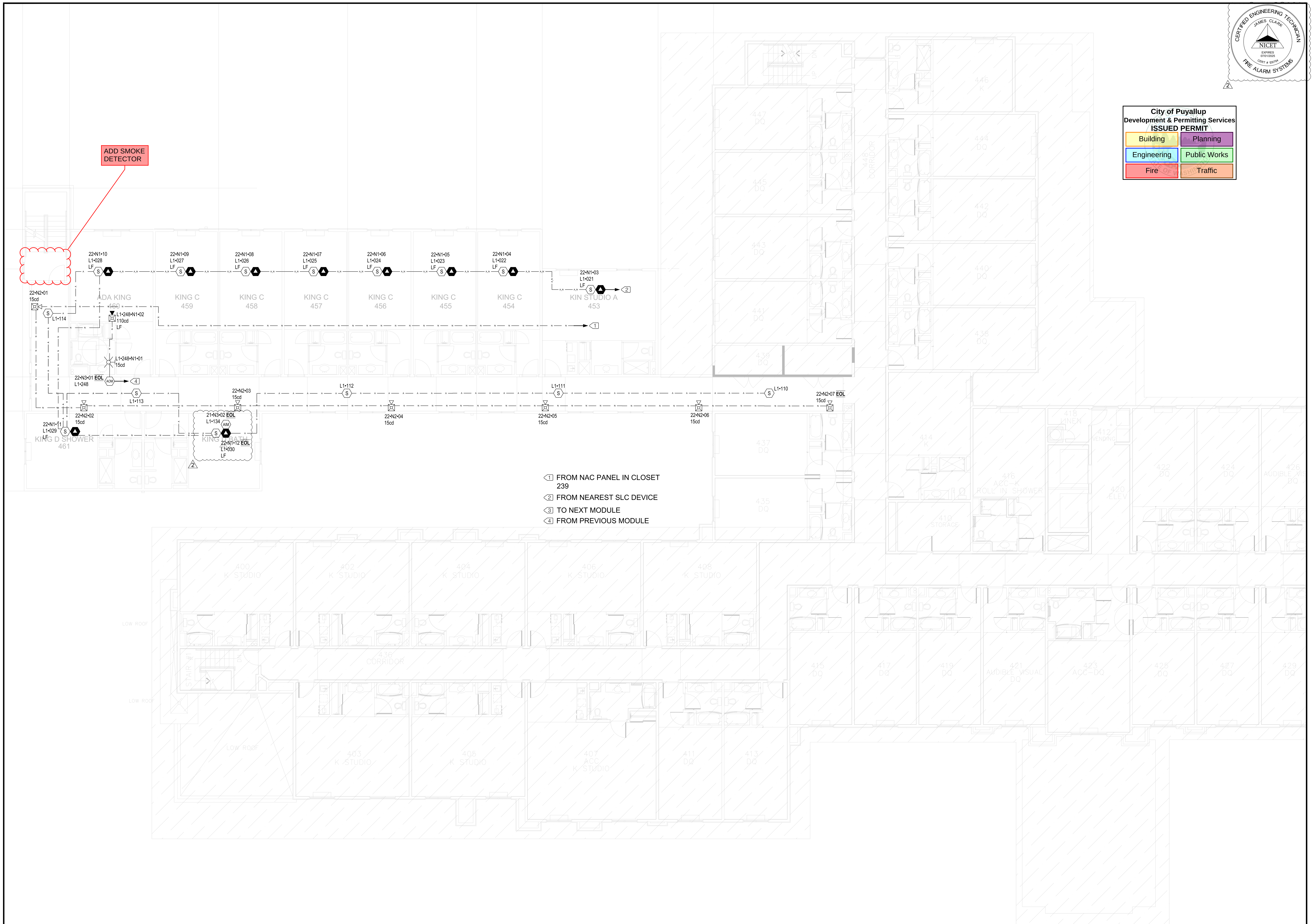
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

THIRD FLOOR FIRE ALARM ADDITION
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024
SCALE: AS NOTED
SHEET #: FA1.01



1 FOURTH FLOOR FIRE ALARM
Scale: 1/8" = 1'

Scale: 1/8" = 1'-0"

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

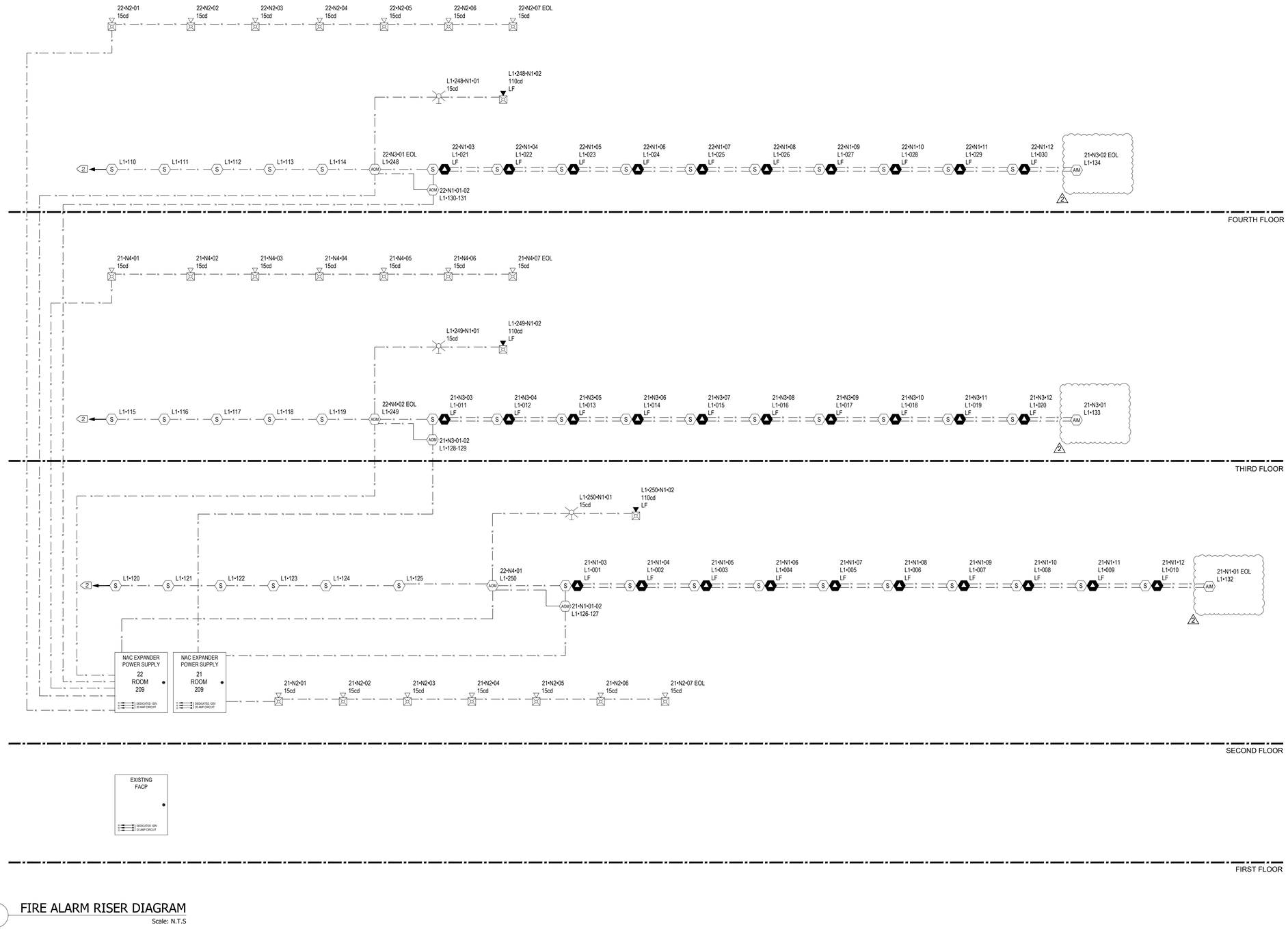
FOURTH FLOOR FIRE ALARM ADDITION
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024

SCALE: AS NOTED

SHEET #: FA1.02



1 FIRE ALARM RISER DIAGRAM

Scale: N.T.S

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

CERTIFIED ENGINEERING TECHNICIAN
JAMES CLARK
NICET
EXPIRES 07/01/2025
FIRE ALARM SYSTEMS

2

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

FIRE ALARM ADDITION RISER
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024

SCALE: AS NOTED

SHEET #: FA2.00

21 N1 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.07**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.63**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**5.45 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**1.50053**
Total Circuit Length (Ft):	215	Spare Current (A):	**1.49947**
Total Circuit Resistance (Ω):	1.318758	Spare Current (A) Percent:	**49.98 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
21-N1-01-02	SIGA-TCDR	Temporal Generator for Sounder Bases	0.00053	**1.50053**	5	**0.028731**	**0.04**	**19.66**	**0.04**	**0.22 %**
21-N1-03	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.5**	40	**0.247807**	**0.37**	**19.29**	**0.41**	**2.11 %**
21-N1-04	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.35**	21	**0.126393**	**0.17**	**19.11**	**0.59**	**2.97 %**
21-N1-05	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.2**	12	**0.073818**	**0.09**	**19.03**	**0.67**	**3.42 %**
21-N1-06	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.05**	13	**0.077135**	**0.08**	**18.94**	**0.76**	**3.83 %**
21-N1-07	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.9**	12	**0.076306**	**0.07**	**18.88**	**0.82**	**4.18 %**
21-N1-08	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.75**	13	**0.081282**	**0.06**	**18.82**	**0.88**	**4.49 %**
21-N1-09	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.6**	13	**0.077966**	**0.05**	**18.77**	**0.93**	**4.73 %**
21-N1-10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.45**	16	**0.0987**	**0.04**	**18.72**	**0.98**	**4.95 %**
21-N1-11	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.3**	38	**0.231391**	**0.07**	**18.65**	**1.05**	**5.31 %**
21-N1-12	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.15**	30	**0.182775**	**0.03**	**18.63**	**1.07**	**5.45 %**
21-N1-01 EOL	SIGA-RM1	Riser Monitor Module, monitors one riser	0	**0**	3	**0.016454**	**0**	**18.63**	**1.07**	**5.45 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

21 N2 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**0.81**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.89**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**4.12 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.567**
Total Circuit Length (Ft):	320	Spare Current (A):	**2.433**
Total Circuit Resistance (Ω):	1.961932	Spare Current (A) Percent:	**81.10 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
21-N2-01	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.567**	143	**0.880005**	**0.5**	**19.2**	**0.5**	**2.53 %**
21-N2-02	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.486**	31	**0.187637**	**0.09**	**19.11**	**0.59**	**3.00 %**
21-N2-03	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.405**	30	**0.184244**	**0.07**	**19.04**	**0.66**	**3.37 %**
21-N2-04	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.324**	30	**0.184312**	**0.06**	**18.98**	**0.72**	**3.68 %**
21-N2-05	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.243**	30	**0.184515**	**0.04**	**18.93**	**0.77**	**3.91 %**
21-N2-06	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.162**	30	**0.183888**	**0.03**	**18.9**	**0.8**	**4.06 %**
21-N2-07 EOL	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.081**	26	**0.157331**	**0.01**	**18.89**	**0.81**	**4.12 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

21 N3 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.41**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.29**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**7.16 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**1.50053**
Total Circuit Length (Ft):	665	Spare Current (A):	**1.49947**
Total Circuit Resistance (Ω):	4.085226	Spare Current (A) Percent:	**49.98 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
21-N3-01-02	SIGA-TCDR	Temporal Generator for Sounder Bases	0.00053	**1.50053**	7	**0.040605**	**0.06**	**19.64**	**0.06**	**0.31 %**
21-N3-03	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.5**	75	**0.46605**	**0.69**	**18.95**	**0.75**	**3.82 %**
21-N3-04	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.35**	21	**0.126393**	**0.17**	**18.78**	**0.92**	**4.68 %**
21-N3-05	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.2**	12	**0.073818**	**0.09**	**18.69**	**1.01**	**5.13 %**
21-N3-06	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.05**	13	**0.077135**	**0.08**	**18.61**	**1.09**	**5.54 %**
21-N3-07	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.9**	12	**0.076306**	**0.07**	**18.54**	**1.16**	**5.89 %**
21-N3-08	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.75**	13	**0.081282**	**0.06**	**18.48**	**1.22**	**6.20 %**
21-N3-09	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.6**	13	**0.077966**	**0.05**	**18.43**	**1.27**	**6.44 %**
21-N3-10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.45**	16	**0.0987**	**0.04**	**18.39**	**1.31**	**6.66 %**
21-N3-11	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.3**	38	**0.231391**	**0.07**	**18.32**	**1.38**	**7.02 %**
21-N3-12	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.15**	30	**0.182775**	**0.03**	**18.29**	**1.41**	**7.16 %**
21-N3-01	SIGA-RM1	Riser Monitor Module, monitors one riser.	0	**0**	3	**0.016454**	**0**	**18.29**	**1.41**	**7.16 %**
21-N3-02 EOL	SIGA-RM1	Riser Monitor Module, monitors one riser.	0	**0**	414	**2.541901**	**0**	**18.29**	**1.41**	**7.16 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

21 N4 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.32**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.38**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**6.68 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.567**
Total Circuit Length (Ft):	465	Spare Current (A):	**2.433**
Total Circuit Resistance (Ω):	2.852683	Spare Current (A) Percent:	**81.10 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
21-N4-01	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.567**	288	**1.770756**	**1**	**18.7**	**1**	**5.10 %**
21-N4-02	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.486**	31	**0.187637**	**0.09**	**18.6**	**1.1**	**5.56 %**
21-N4-03	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.405**	30	**0.184244**	**0.07**	**18.53**	**1.17**	**5.94 %**
21-N4-04	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.324**	30	**0.184312**	**0.06**	**18.47**	**1.23**	**6.24 %**
21-N4-05	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.243**	30	**0.184515**	**0.04**	**18.43**	**1.27**	**6.47 %**
21-N4-06	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.162**	30	**0.183888**	**0.03**	**18.4**	**1.3**	**6.62 %**
21-N4-07 EOL	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.081**	26	**0.157331**	**0.01**	**18.38**	**1.32**	**6.68 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

22 N1 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.64**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.06**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**8.31 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**1.50053**
Total Circuit Length (Ft):	273	Spare Current (A):	**1.49947**
Total Circuit Resistance (Ω):	1.67878	Spare Current (A) Percent:	**49.98 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
22-N1-01-02	SIGA-TCDR	Temporal Generator for Sounder Bases	0.00053	**1.50053**	6	**0.039014**	**0.06**	**19.64**	**0.06**	**0.30 %**
22-N1-03	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.5**	100	**0.614**	**0.92**	**18.72**	**0.98**	**4.97 %**
22-N1-04	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.35**	21	**0.126393**	**0.17**	**18.55**	**1.15**	**5.84 %**
22-N1-05	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.2**	12	**0.073818**	**0.09**	**18.46**	**1.24**	**6.29 %**
22-N1-06	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**1.05**	13	**0.077135**	**0.08**	**18.38**	**1.32**	**6.70 %**
22-N1-07	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.9**	12	**0.076306**	**0.07**	**18.31**	**1.39**	**7.05 %**
22-N1-08	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.75**	13	**0.081282**	**0.06**	**18.25**	**1.45**	**7.36 %**
22-N1-09	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.6**	13	**0.077966**	**0.05**	**18.2**	**1.5**	**7.59 %**
22-N1-10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.45**	16	**0.0987**	**0.04**	**18.16**	**1.54**	**7.82 %**
22-N1-11	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.3**	38	**0.231391**	**0.07**	**18.09**	**1.61**	**8.17 %**
22-N1-12 EOL	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0.15	**0.15**	30	**0.182775**	**0.03**	**18.06**	**1.64**	**8.31 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

22 N2 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**2.75**
Min. Operational Voltage:	16	End Of Line Voltage:	**16.95**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**13.96 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.567**
Total Circuit Length (Ft):	876	Spare Current (A):	**2.433**
Total Circuit Resistance (Ω):	5.381118	Spare Current (A) Percent:	**81.10 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
22-N2-01	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.567**	700	**4.299191**	**2.44**	**17.26**	**2.44**	**12.37 %**
22-N2-02	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.486**	31	**0.187637**	**0.09**	**17.17**	**2.53**	**12.84 %**
22-N2-03	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.405**	30	**0.184244**	**0.07**	**17.1**	**2.6**	**13.22 %**
22-N2-04	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.324**	30	**0.184312**	**0.06**	**17.04**	**2.66**	**13.52 %**
22-N2-05	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.243**	30	**0.184515**	**0.04**	**16.99**	**2.71**	**13.75 %**
22-N2-06	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.162**	30	**0.183888**	**0.03**	**16.96**	**2.74**	**13.90 %**
22-N2-07 EOL	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0.081	**0.081**	26	**0.157331**	**0.01**	**16.95**	**2.75**	**13.96 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

22 N3 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.47**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.23**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**7.48 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.337**
Total Circuit Length (Ft):	712	Spare Current (A):	**2.663**
Total Circuit Resistance (Ω):	4.372872	Spare Current (A) Percent:	**88.77 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
22-N3-01 EOL	SIGA-CC1	Signal Module rw 1 Riser in, 1 Output Ckt, Cl 'B'	0.337	**0.337**	712	**4.372872**	**1.47**	**18.23**	**1.47**	**7.48 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

22 N4 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.7	Max. Voltage Drop:	**1.38**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.32**
Max. Circuit Current (A):	3	Voltage Drop Percent:	**7.02 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.674**
Total Circuit Length (Ft):	541	Spare Current (A):	**2.326**
Total Circuit Resistance (Ω):	3.321777	Spare Current (A) Percent:	**77.53 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
22-N4-01	SIGA-CC1	Signal Module rw 1 Riser in, 1 Output Ckt, Cl 'B'	0.337	**0.674**	127	**0.780311**	**0.53**	**19.17**	**0.53**	**2.67 %**
22-N4-02 EOL	SIGA-CC1	Signal Module rw 1 Riser in, 1 Output Ckt, Cl 'B'	0.337	**0.337**	414	**2.541466**	**0.86**	**18.32**	**1.38**	**7.02 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

L1-248 N1 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.23	Max. Voltage Drop:	**0.02**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.2**
Max. Circuit Current (A):	2	Voltage Drop Percent:	**0.13 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.337**
Total Circuit Length (Ft):	13	Spare Current (A):	**1.663**
Total Circuit Resistance (Ω):	0.081364	Spare Current (A) Percent:	**83.15 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
L1-248-N1-01	G1F-VM	Wall Strobe, Switch Select 15, 30, 75, 110 cd, white, rw FIRE 15cd	0.059	**0.337**	5	**0.02918**	**0.01**	**18.22**	**0.01**	**0.05 %**
L1-248-N1-02	G4LFWF-HVM	Low Frequency(520hz), White, 15,30,75,110 cd, FIRE 110cd	0.278	**0.278**	8	**0.052184**	**0.01**	**18.2**	**0.02**	**0.13 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

L1-249 N1 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	18.32	Max. Voltage Drop:	**0.02**
Min. Operational Voltage:	16	End Of Line Voltage:	**18.29**
Max. Circuit Current (A):	2	Voltage Drop Percent:	**0.13 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.337**
Total Circuit Length (Ft):	13	Spare Current (A):	**1.663**
Total Circuit Resistance (Ω):	0.081875	Spare Current (A) Percent:	**83.15 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
L1-249-N1-01	G1F-VM	Wall Strobe, Switch Select 15, 30, 75, 110 cd, white, rw FIRE 15cd	0.059	**0.337**	5	**0.029691**	**0.01**	**18.31**	**0.01**	**0.05 %**
L1-249-N1-02	G4LFWF-HVM	Low Frequency(520hz), White, 15,30,75,110 cd, FIRE 110cd	0.278	**0.278**	8	**0.052184**	**0.01**	**18.29**	**0.02**	**0.13 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

L1-250 N1 POINT-TO-POINT REPORT

CIRCUIT SETTINGS		TOTALS	
Starting Calculation Voltage:	19.17	Max. Voltage Drop:	**0.02**
Min. Operational Voltage:	16	End Of Line Voltage:	**19.15**
Max. Circuit Current (A):	2	Voltage Drop Percent:	**0.13 %**
Wire Resistance (Ω/kFt):	3.07	Total Circuit Current (A):	**0.337**
Total Circuit Length (Ft):	13	Spare Current (A):	**1.663**
Total Circuit Resistance (Ω):	0.081425	Spare Current (A) Percent:	**83.15 %**

Circuit Wiring Properties: 'V' 14/2 FPLP/R (NAC) 14 AWG, 2 Cond. Solid Copper FPLP/R Analog Unshielded

Device Label	Part No.	Description	Device Current (A)	Remaining Current (A)	Dist. From Previous (Ft)	Resistance From Previous (Ω)	Voltage Drop From Previous	Voltage At Device	Total Voltage Drop	Voltage Drop Percent
L1-250-N1-01	G1F-VM	Wall Strobe, Switch Select 15, 30, 75, 110 cd, white, rw FIRE 15cd	0.059	**0.337**	5	**0.029241**	**0.01**	**19.16**	**0.01**	**0.05 %**
L1-250-N1-02	G4LFWF-HVM	Low Frequency(520hz), White, 15,30,75,110 cd, FIRE 110cd	0.278	**0.278**	8	**0.052184**	**0.01**	**19.15**	**0.02**	**0.13 %**

Calculation Methods:
Resistance From Previous (Ω) = Wire Resistance (Ω/Ft) x 2 x Dist. From Previous (Ft)
Voltage Drop From Previous = Resistance From Previous (Ω) x Remaining Current (A)

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

CERTIFIED ENGINEERING TECHNICIAN
JAMES CLARK
NICET
EXPIRES 07/01/2025
CERT # 238704
FIRE ALARM SYSTEMS

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

FIRE ALARM ADDITION CALCULATIONS
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024
SCALE: AS NOTED
SHEET #: FA3.00

1 FIRE ALARM CALCULATIONS
Scale: N.T.S

PANEL 21 (BPS10A) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		**QTY**	**PART NO.**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL**
		1	BPS10A Mainboard	Mainboard for BPS10A assembly	0.07	**0.07**	0.27	**0.27**
CIRCUIT	**SYMBOL**	**QTY**	**PART NO**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL (A)**
21-N1	ⓘ LF	10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0	**0**	0.15	**1.5**
	AM	1	SIGA-RM1	Riser Monitor Module, monitors one riser	0	**0**	0	**0**
	AM	1	SIGA-TCDR	Temporal Generator for Sounder Bases	0.000053	**0.000053**	0.00053	**0.00053**
21-N2	20	7	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0	**0**	0.081	**0.567**
21-N3	ⓘ LF	10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0	**0**	0.15	**1.5**
	AM	2	SIGA-RM1	Riser Monitor Module, monitors one riser	0	**0**	0	**0**
	AM	1	SIGA-TCDR	Temporal Generator for Sounder Bases	0.000053	**0.000053**	0.00053	**0.00053**
21-N4	20	7	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0	**0**	0.081	**0.567**
					TOTAL STANDBY (A)	**0.070106**	TOTAL ALARM (A)	**4.40506**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				**0.070106**	24		**1.68**	
SECONDARY ALARM LOAD (A)				**4.40506**	0.08		**0.37**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**2.05**			
DERATING FACTOR					1.2			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**2.46**			
PROVIDE (2) 12V 7AH BATTERIES								
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								

PANEL 22 (BPS10A) BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		**QTY**	**PART NO.**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL**
		1	BPS10A Mainboard	Mainboard for BPS10A assembly	0.07	**0.07**	0.27	**0.27**
CIRCUIT	**SYMBOL**	**QTY**	**PART NO**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL (A)**
22-N1	ⓘ LF	10	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0	**0**	0.15	**1.5**
	AM	1	SIGA-TCDR	Temporal Generator for Sounder Bases	0.000053	**0.000053**	0.00053	**0.00053**
22-N2	20	7	G1F-HDVM	Temporal Horn, 84.4 or 79.4 dBA, 15, 30, 75, 110 cd Strobe, white, "FIRE" 15cd	0	**0**	0.081	**0.567**
22-N3	AM	1	SIGA-CC1	Signal Module /w 1 Riser in, 1 Output Ckt, Cl 'B'	0	**0**	0.337	**0.337**
22-N4	AM	2	SIGA-CC1	Signal Module /w 1 Riser in, 1 Output Ckt, Cl 'B'	0	**0**	0.337	**0.674**
					TOTAL STANDBY (A)	**0.070053**	TOTAL ALARM (A)	**3.34853**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				**0.070053**	24		**1.68**	
SECONDARY ALARM LOAD (A)				**3.34853**	0.08		**0.28**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**1.96**			
DERATING FACTOR					1.2			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**2.35**			
PROVIDE (2) 12V 7AH BATTERIES								
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								

BATTERY CALCULATION
(SECONDARY POWER SOURCE REQUIREMENTS)

					STANDBY CURRENT (AMPS)		SECONDARY ALARM CURRENT (AMPS)	
PANEL COMPONENTS		**QTY**	**PART NO.**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL**
		1	3-SDC1	Signature Device Card - upgrades a 3-SSDC2 to a 3-SDDC2	0.144	**0.144**	0.204	**0.204**
		1	3X-NET	Network option card, RS485, Cl A or B, max 64 nodes	0.098	**0.098**	0.098	**0.098**
		1	4X-LCD	EST3X User Inteface Card	0.066	**0.066**	0.066	**0.066**
		1	SFS	SFS LED control/display module	0.002	**0.002**	0.002	**0.002**
		1	SFS1-CPU	EST3X Mainboard	0.115	**0.115**	0.115	**0.115**
CIRCUIT	**SYMBOL**	**QTY**	**PART NO**	**DESCRIPTION**	**CURRENT DRAW (A)**	**TOTAL (A)**	**CURRENT DRAW (A)**	**TOTAL (A)**
L1	AM	3	SIGA-CC1	Signal Module /w 1 Riser in, 1 Output Ckt, Cl 'B'	0.000223	**0.000669**	0.0001	**0.0003**
	ⓘ LF	30	SIGA-PCD w/SIGA-AB4G-LF BASE	Photoelectric smoke and carbon monoxide life safety detector.	0	**0**	0	**0**
	S	16	SIGA-PD w/SIGA-SB4 BASE	Photoelectric smoke detector	0	**0**	0	**0**
	AM	3	SIGA-RM1	Riser Monitor Module, monitors one riser	0.0002	**0.0006**	0.0002	**0.0006**
	AM	3	SIGA-TCDR	Temporal Generator for Sounder Bases	0	**0**	0.00053	**0.00159**
					TOTAL STANDBY (A)	**0.426269**	TOTAL ALARM (A)	**0.48749**
					REQUIRED STANDBY TIME = 24 HOURS			
					REQUIRED ALARM TIME = 5 MINUTES			
SECONDARY STANDBY LOAD (A)				**0.426269**	24		**10.23**	
SECONDARY ALARM LOAD (A)				**0.48749**	0.08		**0.04**	
STANDBY AND ALARM SUBTOTAL (AMP HOURS)					**10.27**			
DERATING FACTOR					1.2			
SECONDARY LOAD REQUIREMENTS (AMP HOURS)					**12.33**			
PROVIDE (2) 12V 18AH BATTERIES								
*BATTERY BOX SIZE CAPACITY NOT SPECIFIED. REFER TO MANUFACTURER DOCUMENTATION.								

2

1 FIRE ALARM CALCULATIONS
Scale: N.T.S

City of Puyallup
Development & Permitting Services
ISSUED PERMIT
Building | Planning
Engineering | Public Works
Fire | Traffic

CERTIFIED ENGINEERING TECHNICIAN
JAMES CLARK
NICET
EXPIRES 07/01/2025
CERT # 537744
FIRE ALARM SYSTEMS

2

BRET A. FORSBERG
SOUTH PRAIRIE, WA 98385
UBI LICENSE # FORSEL776LK
LICENSE EXPIRES: 03/11/2024

FIRE ALARM SYSTEM T.I.

FIRE ALARM ADDITION CALCULATIONS
HAMPTON INN & SUITES
1515 S. MERIDIAN
PUYALLUP, WA

REV. #	DATE	REVISION DESCRIPTION
1	2/1/2024	PLAN CHECK SET
2	9/4/2024	REVIEW CHANGES

DRAWN BY: JAMES CLARK
DATE: 9/4/2024
SCALE: AS NOTED
SHEET #: FA3.01