TOTAL BACKUP BATTERY RESERVED= 3.45 AH

TOTAL BACKUP BATTERY RESERVED= 3.44 AH

TOTAL BACKUP BATTERY REQUIRED= 2.24 AH

TOTAL BACKUP BATTERY RESERVED= 3.36 AH

TOTAL BACKUP BATTERY RESERVED= 3.45 AH

POWER SUPPLY #2	BA	TTERY C	ALCULA	TIONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5499 DISTRIBUTED POWER MODULE	1	0.07500	0.07500	0.20500	0.205	500
SCR CEILING MOUNT STROBE @ 115cd	9			0.21000	1.890	000
PC2R CEILING MOUNT HORN/STROBE @ 115cd	10			0.21800	2.180	000
TOTALS		TOTAL STANDBY	0.075	TOTAL ALARM	4.27	7 5
C	OMPUT	TATIONS				
TOTAL AMPS USED IN STA	ANDBY=	0.075	X	24 HOURS=	1.80	AH
TOTAL AMPS USED IN A	ALARM=	4.275	Χ	0.083 (5 MIN)=	0.35	АН
				•	2.15	AH
		TOTAL	BACKUP BATTE	ERY PROVIDED=	7.00	АН
TOTAL BACKU	P BATTE	RY PROVIDED A	FTER 20% DERA	TING FACTOR=	5.60	АН
		TOTAL	BACKUP BATTE	RY REQUIRED=	2.15	АН
		TOTAL	BACKUP BATTE	RY RESERVED=	3.45	— AH

POWER SUPPLY #3	BA	TTERY C	ALCULA	ATIONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5499 DISTRIBUTED POWER MODULE	1	0.07500	0.07500	0.20500	0.205	00
SCR CEILING MOUNT STROBE @ 115cd	9			0.21000	1.890	00
SCR CEILING MOUNT STROBE @ 75cd	2			0.15800	0.316	600
PC2R CEILING MOUNT HORN/STROBE @ 115cd	8			0.21800	1.744	00
PC2R CEILING MOUNT HORN/STROBE @ 75cd	1			0.17600	0.176	600
TOTALS		TOTAL STANDBY	0.075	TOTAL ALARM	4.33	31
C	COMPUT	TATIONS				
TOTAL AMPS USED IN STA	ANDBY=	0.075	X	24 HOURS=	1.80	АН
TOTAL AMPS USED IN A	ALARM=	4.331	Χ	0.083 (5 MIN)=	0.36	АН
					2.16	 AH
		TOTAL	BACKUP BATTE	ERY PROVIDED=	7.00	АН
TOTAL BACKU	P BATTE	RY PROVIDED A	FTER 20% DERA	ATING FACTOR=	5.60	АН
		TOTAL	BACKUP BATTE	RY REQUIRED=	2.16	АН

POWER SUPPLY #	4 BA	TTERY C	ALCULA	ATIONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5499 DISTRIBUTED POWER MODULE	1	0.07500	0.07500	0.20500	0.205	00
SCR CEILING MOUNT STROBE @ 115cd	10			0.21000	2.100	00
SCR CEILING MOUNT STROBE @ 75cd	2			0.15800	0.316	00
PC2R CEILING MOUNT HORN/STROBE @ 115cd	10			0.21800	2.180	00
PC2R CEILING MOUNT HORN/STROBE @ 75cd	3			0.17600	0.528	00
TOTALS		TOTAL STANDBY	0.075	TOTAL ALARM	5.32	9
	COMPUT	TATIONS				
TOTAL AMPS USED IN ST	ANDBY=	0.075	X	24 HOURS=	1.80	АН
TOTAL AMPS USED IN	ALARM=	5.329	X	0.083 (5 MIN)=	0.44	АН
					2.24	AH
		TOTAL	BACKUP BATTE	ERY PROVIDED=	7.00	АН
TOTAL BACKI	JP BATTE	RY PROVIDED A	FTER 20% DERA	ATING FACTOR=	5.60	АН

POWER SUPPLY #	5 BA	TTERY C	ALCULA	ATIONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5499 DISTRIBUTED POWER MODULE	1	0.07500	0.07500	0.20500	0.205	00
SCR CEILING MOUNT STROBE @ 115cd	10			0.21000	2.100	00
SCR CEILING MOUNT STROBE @ 75cd	2			0.15800	0.316	00
PC2R CEILING MOUNT HORN/STROBE @ 115cd	10			0.21800	2.180	00
TOTALS		TOTAL STANDBY	0.075	TOTAL ALARM	4.80	11
	COMPU	TATIONS				
TOTAL AMPS USED IN ST	ANDBY=	0.075	X	24 HOURS=	1.80	AH
TOTAL AMPS USED IN	ALARM=	4.801	Χ	0.083 (5 MIN)=	0.40	AH
				•	2.20	 AH

AL AMPS USED IN STANDBY=	0.075	X	24 HOURS=	1.80	АН
OTAL AMPS USED IN ALARM=	4.801	X	0.083 (5 MIN)=	0.40	АН
			_	2.20	 AH
	TOTAL BA	CKUP BA	TTERY PROVIDED=	7.00	AH
TOTAL BACKUP BATTERY PR	OVIDED AFTE	ER 20% DE	RATING FACTOR=	5.60	АН
	TOTAL BA	CKUP BAT	TTERY REQUIRED=	2.20	АН
	TOTAL BAC	CKUP BAT	TERY RESERVED=	3.40	AH

POWER SUPPLY #6	BA	TTERY C	ALCULA	ATIONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5499 DISTRIBUTED POWER MODULE	1	0.07500	0.07500	0.20500	0.205	00
SCR CEILING MOUNT STROBE @ 115cd	2			0.21000	0.420	00
SCR CEILING MOUNT STROBE @ 75cd	1			0.15800	0.158	00
SCRK W.P. CEILING MOUNT STROBE @ 115cd	7			0.21000	1.470	00
PC2R CEILING MOUNT HORN/STROBE @ 115cd	2			0.21800	0.436	00
PC2RK W.P. CEILING MOUNT HORN/STROBE @ 115cd	7			0.21800	1.526	00
TOTALS		TOTAL STANDBY	0.075	TOTAL ALARM	4.21	5
(COMPU	TATIONS				
TOTAL AMPS USED IN ST	ANDBY=	0.075	Χ	24 HOURS=	1.80	АН
TOTAL AMPS USED IN	ALARM=	4.215	Χ	0.083 (5 MIN)=	0.35	АН
					2.15	AH
		TOTAL	BACKUP BATTE	ERY PROVIDED=	7.00	АН
TOTAL BACKU	P BATTE	RY PROVIDED A	FTER 20% DERA	ATING FACTOR=	5.60	АН
		TOTAL	BACKUP BATTE	RY REQUIRED=	2.15	АН

N.A.C. POWER SUPPLY CALCULATIONS

WORST CASE WIRE NOTIFICATION APPLIANCE CIRCUIT #1

WIRE LTG. AWG RESIST. OF VOLT DROP (FEET) SIZE CO. 565 | 14 | 3.26 | 3.930 | 19.26%

APPROXIMATE TOTAL WIRE: 565 ft. 3.930 VDC TOTAL VOLTAGE DROP IN CIRCUIT: TOTAL PERCENTAGE DROP IN CIRCUIT: 19.26% OPERATING VOLTAGE AT LAST DEVICE: 16.470 VDC MINIMUM OPERATING VOLTAGE: 16 VDC

BASED UPON A 20.40 VDC CIRCUIT OPERATING AT 75°C (167°F)

NOTIFICATION APPLIANCE CIRCUIT #1 TOTAL VOLTAGE DROP EQUALS THE SUM OF ALL INDIVIDUAL

VOLTAGE DROPS.

CALCULATIONS ARE BASED ON THE FORMULA FROM 2005 EDITION OF NEC SECTION 215.2 COMMENTARY

<u> 2 x L x R x I</u> 1000 L = ONE-WAY LENGTH OF CIRCUIT (FT)

R = CONDUCTOR RESISTANCE IN OHMS PER 1000 FT (RESISTIVITY IS BASED ON COATED STRANDED WIRE) I - LOAD CURRENT (AMPS)

> RESISTANCE AS PER 2005 EDITION OF NEC

T	TABLE 8						
GUAGE	RESISTIVITY						
12	2.05						
14	3.26						
16	5.29						
18	8.45						

WORST CASE WIRE

SCALE: NO SCALE

		VOL	TAGE D	ROP (CALCUL	ATIONS		
			WIRE	E GAUGE:	14			
NAC CIRCUIT	SOURCE VOLTAGE	TOTAL AMP.	WIRE LENGTH (FEET)	AWG. SIZE	RESIST. OF COND.	VOLT DROP	% DROP	VOLTAGE AT LAST DEVICE
1	20.4	1.066	565	14	3.26	3.930	19.26%	16.470
2	20.4	1.074	539	14	3.26	3.774	18.50%	16.626
3	20.4	1.066	528	14	3.26	3.670	17.99%	16.730
4	20.4	0.856	503	14	3.26	2.806	13.75%	17.594
5	20.4	1.074	485	14	3.26	3.397	16.65%	17.003
6	20.4	0.856	464	14	3.26	2.591	12.70%	17.809
7	20.4	1.066	455	14	3.26	3.165	15.52%	17.235
8	20.4	1.074	436	14	3.26	3.050	14.95%	17.350
9	20.4	0.856	394	14	3.26	2.198	10.77%	18.202
10	20.4	1.138	454	14	3.26	3.371	16.52%	17.029
11	20.4	1.276	364	14	3.26	3.029	14.85%	17.371
12	20.4	0.856	340	14	3.26	1.897	9.30%	18.503
13	20.4	1.400	384	14	3.26	3.504	17.18%	16.896
14	20.4	1.494	339	14	3.26	3.300	16.18%	17.100
15	20.4	1.292	279	14	3.26	2.354	11.54%	18.046
16	20.4	0.938	383	14	3.26	2.341	11.48%	18.059
17	20.4	1.172	411	14	3.26	3.144	15.41%	17.256
18	20.4	0.856	305	14	3.26	1.701	8.34%	18.699
19	20.4	1.284	367	14	3.26	3.076	15.08%	17.324
20	20.4	1.284	312	14	3.26	2.615	12.82%	17.785
21	20.4	0.856	351	14	3.26	1.958	9.60%	18.442
22	20.4	1.074	431	14	3.26	3.019	14.80%	17.381
23	20.4	1.066	422	14	3.26	2.936	14.39%	17.464
24	20.4	1.014	241	14	3.26	1.593	7.81%	18.807
NAC #2	20.4	0.176	55	14	3.26	0.063	0.31%	20.337

VOLTAGE DROP CALCULATIONS

SCALE: NO SCALE

DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
5808 CONTROL UNIT	1	0.17000	0.17000	0.32500	0.325	00
SD500-MIM MINI MONITOR MODULE	6	0.00055	0.00330	0.00055	0.003	30
5883 RELAY MODULE	2	0.03500	0.07000	0.20000	0.400	00
SD500-PS PULL STATION	14	0.00055	0.00770	0.00055	0.007	70
SD500-LIM ISOLATOR MODULE	2	0.00092	0.00184	0.00092	0.0018	84
SD500-ARM CONTROL MODULE	13	0.00055	0.00715	0.00055	0.007	15
SD500-AIM MONITOR MODULE	18	0.00055	0.00990	0.00055	0.009	90
SD505-AHS HEAT DETECTOR	2	0.00055	0.00110	0.00055	0.00110	
SD505-APS SMOKE DETECTOR	1	0.00055	0.00055	0.00055	0.000	55
SD505-DUCT DUCT SMOKE DETECTOR	12	0.00055	0.00660	0.00055	0.006	60
TOTALS		TOTAL STANDBY	0.278	TOTAL ALARM	0.93	9
	COMPUT	ATIONS				
TOTAL AMPS USED IN	STANDBY=	0.278	Χ	24 HOURS=	6.68	ΑН
TOTAL AMPS USED	N ALARM=	0.939	Χ	0.083 (5 MIN)=	0.08	_AH
					6.75	AH
		TOTAL	BACKUP BATTI	ERY PROVIDED=	18.00	АН
TOTAL BAC	KUP BATTE	RY PROVIDED A	FTER 20% DERA	ATING FACTOR=	14.40	АН
		TOTAL	BACKUP BATTI	ERY REQUIRED=	6.75	АН
		TOTAL	BACKUP BATTE	RY RESERVED=	7.65	— AH

5808 BATTERY CALCULATIONS

SCALE: NO SCALE

AL300ULXR BA	$A \cap F$	RY CAL	CULATI	ONS		
DEVICE TYPE	QTY	STANDBY CURRENT	TOTAL STANDBY CURRENT	ALARM CURRENT	TOTAL A	
AL300ULXR POWER SUPPLY	1	0.09000	0.09000	0.09000	0.090	00
C900V2 NETWORK CAPTURE MODULE	1	0.28000	0.28000	0.28000	0.28000	
TOTALS		TOTAL STANDBY	0.370	TOTAL ALARM	0.370	
(COMPUT	ATIONS				
TOTAL AMPS USED IN S	STANDBY=	0.370	x	24 HOURS=	8.880	АН
TOTAL AMPS USED I	N ALARM=	0.370	X	.083 (5 MIN) =	0.031	АН
					8.911	AH
		TOTAL	. BACKUP BATT	ERY PROVIDED=	12.000	ΑH
TOTAL BACK	KUP BATTE	RY PROVIDED A	FTER 20% DER	ATING FACTOR=	9.60	АН
		TOTAL	BACKUP BATT	ERY REQUIRED=	8.911	ΑH
		TOTAL	BACKUP BATTE	RY RESERVED=	0.689	_ AH

AL300ULXR BATTERY CALCULATIONS

SCALE: NO SCALE

SCOPE OF WORK THIS IS AN EXISTING STORE THAT S OPEN FOR BUSINESS. THE EXISTING FIRE ALARM SYSTEM WILL BE REPLACED WITH NEW TO

ENSURE RELIABLE PERFORMANCE.

EACH DEDICATED 20AMP CIRCUIT BREAKER SHALL NOT EXCEED 16AMPS OF DRAW FROM THE FIRE ALARM CONTROL PANEL AND ALL ASSOCIATED EQUIPMENT. IT IS THE INSTALLING CONTRACTOR'S RESPONSIBILITY TO CALCULATE THE AMOUNT OF AC CIRCUITS REQUIRED. 5808 - 2.75A

5499 - 3.0A

AL300ULXR - 1.45A

POINTS TO BE ANNUNCIATED

AC REQUIREMENTS



FIRE ALARM POINTS TO BE ANNUNCIATED

1.) GENERAL REQUIREMENTS:

- 1. THIS SYSTEM SHALL BE INSTALLED PER NFPA 72 (YEAR EDITION AS REQUIRED BY THE AHJ), NFPA 70 (YEAR EDITION AS REQUIRED BY THE AHJ), THE APPLICABLE MECHANICAL CODE (YEAR EDITION AS REQUIRED BY THE AHJ), AND THE APPLICABLE BUILDING CODE (YEAR EDITION AS REQUIRED BY THE AHJ), AND THE MANUFACTURES INSTRUCTIONS AS SHIPPED WITH THE EQUIPMENT.
- 2. IN ADDITION TO THESE NOTES, THE REQUEST FOR PROPOSAL OUTLINES ADDITIONAL REQUIREMENTS.
- 3. ADDITIONAL NOTES SPECIFIC TO THIS INDIVIDUAL SITE, MAYBE INCLUDED ON THE FLOOR PLANS, THE RISER DIAGRAM AND THE LEGEND. 4. INSTALLATION SHALL BE COMPLETED WITHIN SIX (6) WEEKS OF THE ISSUANCE OF THE PERMIT, IF NO PERMIT IS REQUIRED THE INSTALLATION SHALL BE COMPLETED WITHIN
- SEVEN (7) WEEKS UPON THE AWARD OF THE CONTRACT. IF A CONTRACTOR HAS BEEN AWARDED MULTIPLE PROJECTS OTHER ARRANGEMENTS MAY BE MADE WITH TELGIAN
- 5. PRIOR TO BID AND SUBMITTAL IT IS REQUIRED THAT THE ALARM CONTRACTOR MAKE A SITE VISIT AND NOTE ANY CONFLICTS BETWEEN THE DRAWINGS AND THE SITE. AFTER THE SITE VISIT ANY DISCREPANCIES SHALL BE COMMUNICATED BACK TO TELGIAN. ANY DISCREPANCIES NOT BROUGHT TO THE ATTENTION OF TELGIAN SHALL BE THE RESPONSIBILITY OF THE ALARM INSTALLATION CONTRACTOR AND ANY ADDITIONAL MONIES MAY BE DENIED. THE ALARM CONTRACTOR SHALL COORDINATE ALL SITE VISITS WITH STORE MANAGEMENT, AFTER AN INITIAL COORDINATION MEETING HAS BEEN ARRANGED BY TELGI
- OF WORK CAN BE PERFORMED WHEN THE STORE IS OPEN. THE ALARM CONTRACTOR SHALL COORDINATE THE SCHEDULE WITH THE STORE SHIFT MANAGER TO PROVIDE ACCESS TO SPECIFIC WORK AREAS. 7. THE ALARM CONTRACTOR SHALL CONTACT TELGIAN (734-738-1111) WITH ANY COMMENTS OR EXCEPTIONS TO THE DRAWINGS OR NOTES PRIOR TO BID. THE CONTRACTORS

6. WORKING HOURS: THIS STORE IS IN OPERATION AND OPEN TO THE PUBLIC; PORTIONS OF WORK WILL NEED TO BE PERFORMED WHEN THE STORE IS CLOSED AND PORTIONS

- ASSUME RESPONSIBILITY FOR ANY DISCREPANCIES NOT NOTED PRIOR TO BID. MODIFICATIONS TO THE PLANS SHALL NOT BE ALLOWED WITHOUT EXPRESSED WRITTEN
- 8. THE ALARM CONTRACTOR SHALL PROVIDE A MOTORIZED AERIAL WORK PLATFORM AND LADDER FOR USE DURING THE ENTIRE PERIOD OF THE FIRE ALARM INSTALLATION. THE PLATFORM SHALL BE CAPABLE OF ANY WORK ELEVATION INSIDE THE BUILDING.
- 9. THE ALARM CONTRACTOR SHALL INCLUDE IN THEIR BID THE USE OF AN ELECTRICAL CONTRACTOR TO PROVIDE, OR EXTEND ANY LINE VOLTAGE (120V MAX) REQUIRED. ALL LINE VOLTAGE (120V MAX) AND LOW VOLTAGE (UP TO 50VAC/VDC) CIRCUITING SHALL BE IN SEPARATE CONDUITS.
- 10. THE ALARM CONTRACTOR SHALL INCLUDE IN THEIR BID THE USE OF OTHER TRADES TO COMPLETE THIS PROJECT. (SPRINKLER, MECHANICAL, ELECTRICAL, TRENCHING, ETC.)
- 11. IF THE CONTRACTOR DOES NOT HAVE THE CAPABILITY OF TESTING ALL SPRINKLER SYSTEMS (DRY, WATERFLOW, LOW AIR, FIRE PUMP, ETC.) THEY SHALL CONTRACT THE SERVICES OF A SPRINKLER CONTRACTOR FOR ALL TESTING.
- 12. IF THE ALARM CONTRACTOR DOES NOT HAVE THE CAPABILITY/KNOWLEDGE OF TERMINATING TO HVAC SYSTEMS FOR AIR HANDLER SHUT DOWN WHEN APPLICABLE THEY SHALL CONTRACT THE SERVICES OF AN HVAC CONTRACTOR TO PERFORM TERMINATIONS.
- 13. SYSTEM OPERATION, TESTING, TURN OVER, WARRANTY, COMPLIANCE AND AFTER MARKET SERVICE SHALL BE THE RESPONSIBILITY OF THE ALARM CONTRACTOR, IF THE ALARM CONTRACTOR IS NOT CAPABLE OF TESTING EQUIPMENT (DRY SYSTEM, FIRE PUMP ETC.) THE ALARM CONTRACTOR SHALL INCLUDE IN THEIR BID THE SERVICES OF A CONTRACTOR TO WHOM HAS THE CAPABILITIES. THE ALARM CONTRACTOR IS FULLY RESPONSIBLE FOR TESTING ALL EQUIPMENT ASSOCIATED WITH THE FIRE ALARM SYSTEM.
- 14. TELGIAN SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE CONSTRUCTION WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NOR SHALL THEY BE REQUIRED TO SUPERVISE THE CONDUCT OF THE CONSTRUCTION PROCEDURES FOLLOWED BY THE CONTRACTOR, SUBCONTRACTORS, THEIR RESPECTIVE EMPLOYEES OR ANY OTHER PERSON AT THE JOB SITE OTHER THAN TELGIAN EMPLOYEES AND/OR THE ENGINEER OF RECORD.
- 15. THE ALARM CONTRACTOR SHALL COORDINATE ALL LOCATIONS WITH THE LATEST HOME DEPOT FIXTURE PLANS PRIOR TO INSTALLATION. ANY DISCREPANCIES BETWEEN PLANS AND THE ACTUAL SITE SHALL BE COMMUNICATED BACK TO TELGIAN PRIOR TO THE BID. 16. TELGIAN SHALL PROVIDE APPROVED DRAWINGS TO THE ALARM CONTRACTOR FOR INSTALLATION. THE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL
- PERMITS AND INCLUDE IN THEIR PROPOSAL ANY REQUIRED PERMIT FEES, THIS INCLUDES AND IS NOT LIMITED TO ELECTRICAL, MECHANICAL, AND FIRE ALARM INSTALLATION PERMITS. ALL PLAN REVIEW FEES SHALL BE PAID BY TELGIAN UNLESS PERMIT AND PLAN REVIEW FEES ARE COMBINED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INCLUDE IN THEIR RID ALL COMBINED FEES. NOTE: IF THE DRAWINGS ARE REQUIRED TO BE SUBMITTED BY THE INSTALLING CONTRACTOR OR "HAND." CARRIED" INTO THE AHJ, THE CONTRACTOR SHALL SUPPLY ADEQUATE LABOR TO PERFORM SUCH, ALSO NOTE: THE PERMIT SHALL BE APPLIED FOR WITHIN SEVEN (7) DAYS UPON AWARD OF THE CONTRACT, THE CONTRACTOR SHALL THEN FORWARD A COPY OF PERMIT APPLICATION AND A COPY OF THE PAYMENT RECEIPT TO TELGIAN.
- 17. THE CONTRACTOR SHALL HAVE A SUPPORTIVE OFFICE LOCATION STAFFED WITH SERVICE PERSONNEL WITHIN 100 MILES OF THE STORE, UNLESS OTHERWISE REFLECTIVE ON THEIR BID, AND AGREED UPON IN WRITING FROM TELGIAN.
- 18. CENTRAL STATION MONITORING SHALL BE PROVIDED BY THE COMPANY DESIGNATED BY THE HOME DEPOT. THE INSTALLING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF TESTING ALL SIGNALS AND VERIFICATION WITH THE CENTRAL MONITORING STATION.
- . CAUTION: TELGIAN SHALL NOT BE RESPONSIBLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY TELGIAN.
- 2. A SILENT KNIGHT 5808 MICROPROCESSOR-BASED MULTIPLEX FIRE ALARM SYSTEM WITH INTELLIGENT, ADDRESSABLE, INITIATION DEVICES IS REQUIRED. THE RISER DIAGRAM IS BASED AROUND A MULTIPLEX ADDRESSABLE SYSTEM. THE FIRE ALARM SYSTEM SHALL BE MONITORED BY AN APPROVED U.L. LISTED CENTRAL STATION PROVIDING REMOTE STATION SERVICE. INTERFACE WILL BE FULLY LISTED AND APPROVED FOR THIS PURPOSE

3. A MINIMUM OF 10% EXCESS CAPACITY IS REQUIRED ON EACH SIGNALING LINE CIRCUIT (SLC). T-TAPPING IS AN ACCEPTABLE METHOD OF WIRING AS INDICATED ON TELGIAN DRAWINGS. A FORM OF CIRCUIT ISOLATION FROM A FAULT CONDITION IS REQUIRED TO PREVENT COMPLETE SLC IMPAIRMENT AND ENSURE SURVIVABILITY. AN ISOLATION

- MODULE FOR EACH T-TAP IS REQUIRED. 4. SIGNALING LINE CIRCUITS SHALL BE CLASS B. INITIATING DEVICE CIRCUITS SHALL BE CLASS B. NOTIFICATION APPLIANCE CIRCUITS SHALL BE CLASS B. 5. POWER CONSUMPTION AND CIRCUIT LOADING PARAMETERS SHALL NOT EXCEED A MAXIMUM OF 80% OF CAPACITY DURING PEAK AMPERAGE DRAW CONDITIONS (I.E. ALARM).
- POWER SUPPLIES SHALL BE LOCATED AND SIZED TO ACHIEVE THIS PURPOSE. WIRE SIZE AND CIRCUIT LENGTH SHALL ALSO BE CONSIDERED. 3.) INSTALLATION REQUIREMENTS:
- INSTALLATION OF THE FIRE ALARM SYSTEM SHALL BE IN STRICT COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CONSULT THE MANUFACTURER'S CONTROL PANEL AND PERIPHERAL EQUIPMENT INSTALLATION MANUALS FOR ALL WIRING DIAGRAMS, SCHEMATICS, PHYSICAL EQUIPMENT SIZES, ETC. BEFORE BEGINNING SYSTEM
- . THE WALL MOUNTED STROBES AND HORN/STROBES SHALL BE PLACED 80 IN (2,030 MM) ABOVE THE HIGHEST FLOOR LEVEL WITHIN THE SPACE, OR 6 IN (152 MM) BELOW THE CELLING WHICH EVER IS LOWER UNITESS OTHERWISE INDICATED. THE 115 CD STROBES AND HORN/STROBES, UL 1971 LISTED FOR CELLING MOUNTING, SHALL BE PLACED AT THE BOTTOM OF THE BAR JOIST CENTERED DIRECTLY OVER THE RESPECTIVE AISLE. IF A BAR JOIST DOES NOT CENTER DIRECTLY OVER THE AISLE, THE ALARM CONTRACTOR SHALL PROVIDE AND INSTALL A UNISTRUT TO MEET THIS REQUIREMENT. NOTE: IF A CEILING NOTIFICATION DEVICE IS DESIGNED FOR PLACEMENT ABOVE OR
- ADJACENT TO THE END OF A LIGHT FIXTURE, IT SHALL BE RELOCATED TO BE IN BETWEEN THE FIXTURE AND THE RACK. 3. OUTDOOR NOTIFICATION DEVICES SHALL BE MOUNTED ON CAST WEATHERPROOF OUTLET BOXES (2 GANG BELL BOX) WITH RUBBER GASKET OR PER MANUFACTURERS
- 4. THE NEW SYSTEM SHALL BE INSTALLED WITH 100% NEW CABLE. ALL THE EXISTING CABLE SHALL BE REMOVED AT THE END OF THE PROJECT. 5. ALL FIRE ALARM SYSTEM CABLING SHALL BE ROUTED THROUGH 3/4" EMT CONDUIT FROM DEVICES AND SHALL BE STUBBED UP TO THE BOTTOM CHORD OF THE BAR JOIST.
- SPACES. 6. THE ALARM CONTRACTOR SHALL PROVIDE ALL TOOLS, LIFTS, MATERIALS AND LABOR TO PIPE AND INSTALL ALL MOUNTING AND EQUIPMENT ENCLOSURES AS SPECIFIED ON
- THE SHOP DRAWINGS. THIS INSTALLATION SHALL REFLECT TELGIAN'S SHOP DRAWINGS AS MUCH AS PRACTICALLY POSSIBLE. IF THE FACP AND NAC POWER SUPPLIES CANNOT BE INSTALLED WHERE INDICATED DUE TO SPACE LIMITATIONS AN ALTERNATE LOCATION SHALL BE COORDINATED WITH TELGIAN, THE ALARM CONTRACTOR SHALL DVIDE CONDUIT ROUTING. THE ALARM CONTRACTOR SHALL PROVIDE THE TELGIAN PROJECT MANAGER WITH AN ACCURATE AS-BUILT POINT TO POINT PLAN INDICATING CONDUIT AND CABLE ROUTING, PIPE FILL, WIRE IDENTIFICATION AND JUNCTION POINTS.
- 7. ALL CONDUIT, BOXES (UNLESS OTHERWISE INDICATED), FITTINGS, COUPLINGS, CONNECTORS, STRAPS, SUPPORTS, PULL STRINGS, BUSHINGS, ETC., SHALL BE PROVIDED AND INSTALLED BY THE ALARM CONTRACTOR. IF EXISTING CONDUITS CAN BE USED THEY SHALL MEET ALL REQUIREMENTS OF THE DESIGN DOCUMENTS.
- 8. THE ALARM CONTRACTOR SHALL PROVIDE AND INSTALL CABLE EXPOSED USING FIRE RATED CABLE PER NEC ARTICLE 760 UNLESS OTHERWISE NOTED BY LOCAL JURISDICTIONAL AUTHORITIES. ATTCHING CABLE TO DROP TILE GRID AND ELECTRICAL CONDUIT HANGERS SHALL NOT BE PERMITTED PER NEC. 9. CONDUIT SHALL BE PROVIDED AND INSTALLED BY THE ALARM CONTRACTOR ALL EXPOSED CABLE BELOW THE BOTTOM BAR JOIST OR OTHER ROOF STRUCTURE PROTRUDING LOWER, OR OTHER LOCATIONS WHERE THE CABLE MAY BECOME EXPOSED AND/OR DAMAGED, MUST BE WITHIN A STEEL CONDUIT. ALL CONDUIT AND BOXES AT THE
- MANUFACTURER'S INSTRUCTIONS AND DETAILS. ALL ALARM JUNCTION BOXES SHALL BE LABELED AS "FIRE ALARM SYSTEM" WITH DECAL OR OTHER APPROVED MARKINGS BY ALARM CONTRACTOR OR PER JURISDICTIONAL REQUIREMENTS. 10. NO HORIZONTAL RUNS ON WALLS WILL BE ALLOWED BELOW THE BAR JOIST. NOTED EXCEPTION: IF THE AREA BETWEEN THE BAR JOIST AND ROOF IS INSULATED AND/OR

SPRINKLER RISERS SHALL BE 1/2" WEATHERPROOF MINIMUM. THE ALARM CONTRACTOR SHALL PROVIDE AND INSTALL ALL JUNCTION BOXES AND COVERPLATES PER

- NETTED HORIZONTAL RUNS WILL BE PERMITTED IN 3/4' MINIMUM CONDUIT. 11. LOOSE WIRE SHALL BE INSTALLED AND SECURED TO THE BAR JOIST AS INDICATED ON THE DESIGN DOCUMENTS AND SHALL RUN EITHER PARALLEL OR AT 90° TO THE
- 12. THE FIRE ALARM SYSTEM CONTROL PANEL SHALL BE MOUNTED AT 60" TO THE TOP OF THE KEYPAD, ABOVE FINISHED FLOOR. 13. THE FIRE ALARM ANNUNCIATOR SHALL BE MOUNTED AT 48" TO THE CENTER OF THE ANNUNCIATOR DISPLAY, ABOVE FINISHED FLOOR.
- 14. DUCT SMOKE DETECTORS AND SAMPLING TUBES SHALL BE FURNISHED BY TELGIAN. THE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRING AND TERMINATIONS FROM FIRE SYSTEM CONTROL RELAY DRY NORMALLY CLOSED CONTACTS TO RESPECTIVE HVAC UNIT FAN MOTOR STARTER CONTROL CIRCUIT TERMINATIONS, SHUTDOWN OF THE RESPECTIVE UNIT MAY NOT BE ACCOMPLISHED BY INTERFACE TO THERMOSTATIC CONTROL CIRCUIT. THE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATIONS TO HVAC EQUIPMENT. THE DUCT DETECTOR HOUSING AND SAMPLING TUBE SHALL BE INSTALLED BY THE ALARM CONTRACTOR. THE AIR DUCT DETECTOR HALL CONSIST OF AN APPROVED PHOTOELECTRIC DETECTOR CAPABLE OF EXCESSIVE DIRT WARNINGS, MOUNTED IN AN AIR DUCT SAMPLING ASSEMBLY AND SAMPLING TUBE HAT EXTENDS ACROSS THE DUCT OF THE VENTILATION SYSTEM. INSTALLING CONTRACTOR SHALL VERIFY RTU NUMBERS WITH TELGIAN IF NECESSARY. ALL DUCT DETECTORS AND CONTROL RELAYS SHALL BE MOUNTED BELOW THE ROOF LINE. IF DUCT DETECTORS AND CONTROL RELAYS ARE MOUNTED ABOVE DROP CEILING. THE GRID DIRECTLY BELOW THE DUCT DETECTOR SHALL HAVE A VINYL LABEL INSTALLED REFLECTING - "DUCT DETECTOR/RELAY - RTU-#". IF APPLICABLE REMOTE TEST SWITCHES SHALL BE MOUNTED ON THE CEILING DIRECTLY BELOW THE UNIT IN THE OFFICE AREA OR THE NEAREST COLUMN ON THE SALES FLOOR.
- 15. PRIOR TO INSTALLATION THE ALARM CONTRACTORS SHALL REVIEW THE DRAWINGS AND NOTES FOR THE DESIGNED SYSTEMS. THE NOTES INCLUDE SPECIFIC INFORMATION NECESSARY TO INSTALL A FULLY OPERATIONAL FIRE ALARM SYSTEM.
- 16. THE FOLLOWING FIRE ALARM EQUIPMENT, IF APPLICABLE, SHALL BE FURNISHED AND PROVIDED BY TELGIAN UNLESS OTHERWISE NOTED: FIRE ALARM CONTROL PANEL
- ANNUNCIATORS MANUAL PULL STATIONS
- AREA SMOKE DETECTORS DUCT SMOKE DETECTORS G. CONTROL RELAYS (HVAC SHUTDOWN, DOOR RELEASE, ETC.)
- H. NOTIFICATION APPLIANCES (HORNS, STROBES, BELLS, ETC.) MONITOR MODULES FOR INITIATING DEVICES (WATERFLOW SWITCHES, GATE VALVES, SPRINKLER TAMPER SWITCHES, PIV'S, FIRE PUMP, DRY SYSTEMS, ETC.)
- 16. TELGIAN SHALL SHIP ALL EQUIPMENT. THE ALARM CONTRACTOR SHALL ACTIVATE A TELEPHONE LINE TO THE FACP AND TELGIAN SHALL DOWNLOAD THE PROGRAM INTO THE PANEL. THE ALARM CONTRACTOR SHALL INCLUDE IN HIS BID, ADEQUATE TIME TO PROVIDE ADDITIONAL MODIFICATIONS IF NECESSARY. 17. THE ALARM CONTRACTOR SHALL PROVIDE A PROFESSIONALLY OPERATED FIRE WATCH APPROVED BY THE AHJ AT ANY TIME THE EXISTING FIRE ALARM SYSTEM IS NOT OPERATIONAL. AT NO TIME WILL THE STORE BE WITHOUT A FIRE ALARM SYSTEM TESTED AND APPROVED BY TELGIAN AND THE AUTHORITY HAVING JURISDICTION. THE FIRE
- WATCH SHALL BE PROVIDED UNTIL SUCH SYSTEMS ARE FOUND ACCEPTABLE AND APPROVED BY TELGIAN AND THE AUTHORITY HAVING JURISDICTION. THE ALARM CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED BY THE FIRE WATCH AND COORDINATION WITH THE AHJ. 18. IF APPLICABLE, A WEATHERPROOF NOTIFICATION APPLIANCE SHALL BE INSTALLED 10' A.F.G. ABOVE THE FIRE DEPARTMENT CONNECTION.
- 19. IF APPLICABLE, THE ALARM CONTRACTOR SHALL VERIFY THAT THE EXISTING TOOL RENTAL CENTER MAINTENANCE ROOM DOOR HOLDER IS WORKING PROPERLY. SHOULD THE DEVICE NOT WORK PROPERLY, THE ALARM CONTRACTOR SHALL REPAIR, OR REPLACE THIS DEVICE. THIS SHOULD BE VERIFIED PRIOR TO SUBMITTING BID. 20. IF THE ALARM CONTRACTOR REQUIRES ASSISTANCE TROUBLE SHOOTING THE SYSTEM THE ALARM CONTRACTOR SHALL CONTACT THE MANUFACTURER OF THE PRODUCT OR
- 21. ALL FIRE ALARM EQUIPMENT AND CABLE INCLUDING BUT NOT LIMITED TO FIRE ALARM CONTROL PANEL, POWER SUPPLIES, SMOKE/HEAT DETECTORS, DUCT SMOKE DETECTORS, HORNS/STROBES, BELLS, RELAYS, PULL STATIONS, ETC., NOT UTILIZED ON THE NEW FIRE ALARM SYSTEM SHALL BE REMOVED BY THE INSTALLING CONTRACTOR. 22. A BLANK COVER PLATE SHALL REPLACE EACH ABANDONED DEVICE, OR WILL BE REPAIRED (DRYWALL). IF A SPECIALTY BACK BOX WAS UTILIZED BY THE EXISTING FIRE ALARM DEVICE, THE SPECIALTY BACK BOX SHALL BE REMOVED, AND A SINGLE GANG BOX SHALL BE INSTALLED WITH A COVER PLATE. IF DUCT SMOKE DETECTORS ARE REMOVED THE ALARM CONTRACTOR SHALL SEAL ALL PENETRATIONS IN DUCT WORK PER THE AHJ CODE REQUIRMENTS.
- 23. ANY DAMAGE TO THE STORE SHALL BE REPAIRED BY THE ALARM CONTRACTOR. 24. AT THE END OF EACH WORK DAY, DURING THE INSTALLATION, THE INSTALLING CONTRACTOR SHALL CLEAN UP ALL DEBRIS, FINGERPRINTS, DUST FROM DRILLING, ETC. ANY WORK NOT COMPLETED SHALL BE LEFT IN A MANNER THAT WILL NOT AFFECT ANY OTHER OPERATION. 25. ALL SLC DEVICES SHALL HAVE A VINYL ADHESIVE TAG INSTALLED ON THE DEVICE, THE MODULE COVER-PLATE. AND THE DETECTOR BASE REFLECTING THE ASSIGNED POINT
- NUMBER. FOR CONVENTIONAL (I.E. VALVE TAMPER SWITCH, WEATHERPROOF MANUAL PULL STATION, ETC) DEVICES, THEY SHALL ALSO HAVE TAGS INSTALLED AS TO WHAT ADDRESSABLE MODULE THEY ARE CONNECTED TO. 26. EACH ENCLOSURE SHALL HAVE AN EXTERIOR VINYL LABEL INSTALLED IDENTIFYING THE ENCLOSURE NUMBER, THE INTERIOR DOOR SHALL HAVE VINYL LABELS INSTALLED
- REFLECTING THE DISTRIBUTION PANEL AND CIRCUIT BREAKER NUMBER POWERING THE ENCLOSURE, THE BATTERIES SHALL HAVE VINYL LABELS AFFIXED REFLECTING THE INSTALLATION DATE. ALL WIRES TERMINATED WITHIN THE ENCLOSURE SHALL HAVE TAGS AFFIXED REFLECTING THE CIRCUIT NUMBER. 27. IT IS THE INSTALLING CONTRACTORS RESPONSIBILITY TO CALCULATE THE AMOUNT OF AC CIRCUITS REQUIRED BASED ON THE CURRENT DRAWS PROVIDED ON THE FIRE ALARM DRAWINGS. THE DEDICATED 20AMP CIRCUIT BREAKER SHALL NOT EXCEED 16AMPS OF DRAW FROM ALL FIRE ALARM CONTROL PANEL AND ASSOCIATED EQUIPMENT.
- 4.) TESTING REQUIREMENTS: 1. PRIOR TO SCHEDULING THE TELGIAN ACCEPTANCE TEST, COMMUNICATION WITH THE FIRE ALARM SYSTEM VIA PHONE LINE NEEDS TO BE CONFIRMED REMOTELY BY TELGIAN. 2. THE ALARM CONTRACTOR SHALL PERFORM A FIRE ALARM SYSTEM ACCEPTANCE TEST IN THE PRESENCE OF TELGIAN. THIS TEST IS IN ADDITION TO THE TESTS REQUIRED BY HE LOCAL AUTHORITY HAVING JURISDICTION FOR THE CERTIFICATE OF OCCUPANCY. THE TESTS SHALL BE IN ACCORDANCE WITH NFPA 72, NFPA 25, AND ANY SPECIAL TESTING REQUIREMENTS AS REQUIRED BY THE AHJ. TESTING SHALL BE PERFORMED AFTER THE COMPLETE INSTALLATION OF ALL SYSTEMS. CONTRACTOR SHALL BUDGET FOR ONE DAY OF TESTING (WITH TELGIAN) AND HAVE TWO (2) PERSONNEL ON SITE. FAMILIAR AND INVOLVED WITH THE INSTALLATION, HOWEVER THE CONTRACTOR SHALL BE RESPONSIBLE TO BE PRESENT UNTIL SUCH TIME THAT ALL SYSTEMS ARE FOUND ACCEPTABLE. THE CONTRACTOR SHALL FURNISH ALL PERSONNEL, LIFTS, HAND TOOLS, RADIOS AND ANY OTHER EQUIPMENT NEEDED FOR TESTING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ADDITIONAL COSTS INCURRED BY THE FAILURE TO PERFORM
- TO TRAVEL, LODGING, PER DIEM, TRANSPORTATION AND LABOR). 3. THE CONTRACTOR SHALL ALSO PERFORM ANY REQUIRED TESTING WITH THE AHJ.
- 5.) COMPLETION AND ACCEPTANCE REQUIREMENTS: THE ALARM CONTRACTOR SHALL PROVIDE SERVICES NECESSARY TO OBTAIN FINAL APPROVAL DEEMED NECESSARY UNTIL FINAL APPROVAL IS OBTAINED BY STATE AND LOCAL

THE TESTS ON THE SCHEDULED DATE, WITHIN THE BUDGETED TIME (ONE 8 HOUR DAY), AND/OR RETESTS DUE TO SYSTEM FAILURE (COSTS INCLUDE, BUT ARE NOT LIMITED

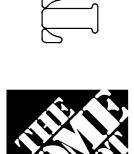
- 2. THE ALARM CONTRACTOR SHALL PROVIDE A FULLY OPERATIONAL AND TESTED FIRE ALARM SYSTEM AND TRAINING ON THE OPERATION AND PROPER USE OF THE INSTALLED SYSTEM (A MINIMUM OF 2 CLASSES SHALL BE PROVIDED), INCLUDING A 24 HOUR PHONE NUMBER FOR QUESTIONS AND SERVICE REQUEST TO THE HOME DEPOT REPRESENTATIVE, UPON COMPLETION. 3. THE ALARM CONTRACTOR SHALL VERIFY THE ACCURACY WITH THE HOME DEPOT MANAGEMENT, CONTACT LISTS FOR NOTIFICATION PURPOSES IN CASE OF SYSTEM ACTIVATION.
- THE NOTIFICATION LIST SHALL INCLUDE CONTACT PHONE NUMBERS, AND THE INDIVIDUAL'S TITLE. THE INFORMATION SHALL BE TRANSMITTED TO THE CENTRAL STATION UPON
- 4. FINAL ACCEPTANCE WILL REQUIRE THE CONTRACTOR TO DELIVER TO THE TELGIAN PROJECT MANAGER THE FOLLOWING:
- A. THREE (3) SETS OF RECORD DRAWINGS (AS BUILT DRAWINGS).
- B. THREE (3) COPIES NFPA 72 CERTIFICATE OF COMPLETION.
- C. THE ALARM CONTRACTOR, UPON COMPLETION, SHALL PROVIDE TO THE TELGIAN PROJECT MANAGER AT A MINIMUM: LETTER OF COMPLETION INDICATING THE SYSTEM HAS BEEN FULLY TESTED LOCALLY AND REMOTELY, SIGNALS HAVE BEEN VERIFIED TO THE CENTRAL STATION AND OPERATION OF THE SYSTEM HAS BEEN FULLY DEMONSTRATED TO HOME DEPOT PERSONNEL (INCLUDE NAMES OF THOSE WHO WERE DEMONSTRATED TO), USERS AND INSTALLATION MANUALS AND CUT SHEETS ON ALL ALARM DEVICES INSTALLED ON THE PREMISE. THE ALARM CONTRACTOR SHALL RECEIVE WRITTEN SIGN OFF FROM THE TELGIAN PROJECT MANAGER INDICATING ALL THE ABOVE HAVE BEEN DELIVERED.
- D. ADDITIONAL CLOSE-OUT DOCUMENTATION SHALL BE PROVIDED AS REFLECTED ON THE CLOSE OUT DOCUMENTATION CHECK LIST ATTACHED TO THE REQUEST FOR
- E. ONE (1) OF THE ABOVE OUTLINED DOCUMENTATION SHALL BE PROVIDED IN THE AS-BUILT CABINET. THE CONTRACTOR SHALL ASSEMBLE CLEARLY LABELED KEY RINGS CONTAINING ONE (1) OF EACH SYSTEM/ENCLOSURE KEY 3 SETS SHALL BE TURNED OVER TO THE STORE MANAGEMENT, AND ONE (1) SET SHALL BE PLACED IN EACH FIRE DEPARTMENT KNOX/ENTRY BOX IF APPLICABLE, STORE MANAGEMENT SHALL ACKNOWLEDGE THE RECEIPT OF THEIR KEY RINGS ON THE TRAINING SIGN IN SHEET ATTACHED TO THE REQUEST FOR PROPOSAL. AHJ/FIRE DEPARTMENT ACKNOWLEDGMENT THAT THE KEYRINGS ASSEMBLED FOR THEIR USE HAVE BEEN PLACED IN THE KNOX ENTRY BOX WITH THE ACKNOWLEDGMENT SHEET ATTACHED TO THE REQUEST FOR PROPOSAL.

FIRE ALARM NOTES/SPECIFICATION SCALE: NO SCALE



CONSULTANT Ray Dotts **DESIGNER:** Bill Cummings **QUALITY CONTROL** Brian Scudder

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STORE#2401 THE HOME DEPOT 245 Riverside St.

DATE

Portland, ME

DESIGN COMPLETE:

05/16/11

HOME DEPOT

REPLACEMENT PROGRAM