177 – AR-5 REPEATER BATTERY CALC

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
AR-5	1	CWSI WIRELESS REPEATER		0.030000	0.030000	0.180	0.180000
				Total Panel Stby	0.030000	Total Panel Alarm	0.180000
Mult-Candela Strobes (Select Candella Rating)							
GEC3-24WR	3	GENTEX HORN STROBE	30cd	0.000000	0.000000	0.102	0.306000
				Total Periph Stby	0.000	Total Periph Alarm	0.306
				Total Standby Amps	0.030	Total Alarm Amps	0.486

* Additional Current Draw Included Below With Device Addresses Used
1. 2-wire detector alarm current is included in the alarm current of the Initiating Device Circuit.

Battery Calculations		Standby Current		Alarm Current
Control Panel Cord Power		0.030		0.180
Power For External Peripheral Devices		0.00000		0.30600
		0.030	<-- Totals -->	0.486
Additional Battery Capacity Required	0%	0.000		0.000
Standby Time =	24 Hrs	0.720	Standby Ah	
Alarm Time =	5 Mins.	0.041	Alarm Ah	
Standby + Alarm =		0.761		
Minimum Battery Required	BA-12V-4AHS	0.913	20% Safety Margin	

179 – AR-5 REPEATER BATTERY CALC

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
AR-5	1	CWSI WIRELESS REPEATER		0.030000	0.030000	0.180	0.180000
				Total Panel Stby	0.030000	Total Panel Alarm	0.180000
Mult-Candela Strobes (Select Candella Rating)							
GEC3-24WR	5	GENTEX HORN STROBE	15cd	0.000000	0.000000	0.077	0.385000
GEC3-24WR	1	GENTEX HORN STROBE	60cd	0.000000	0.000000	0.161	0.161000
GEC3-24WR	1	GENTEX HORN STROBE	110cd	0.000000	0.000000	0.256	0.256000
				Total Periph Stby	0.000	Total Periph Alarm	0.802
				Total Standby Amps	0.030	Total Alarm Amps	0.982

* Additional Current Draw Included Below With Device Addresses Used
1. 2-wire detector alarm current is included in the alarm current of the Initiating Device Circuit.

Battery Calculations		Standby Current		Alarm Current
Control Panel Cord Power		0.030		0.180
Power For External Peripheral Devices		0.00000		0.80200
		0.030	<-- Totals -->	0.982
Additional Battery Capacity Required	0%	0.000		0.000
Standby Time =	24 Hrs	0.720	Standby Ah	
Alarm Time =	5 Mins.	0.082	Alarm Ah	
Standby + Alarm =		0.802		
Minimum Battery Required	BA-12V-4AHS	0.962	20% Safety Margin	

CWS1 CP-3600 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

NOTIFICATION CIRCUIT DESCRIPTION	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance	GEC3-24WR
										PID	GEC3-24WR
										Setting	30cd
										Device Type	MC A/V
										Supv. Current	0.0000
										Alarm Current	0.1020
										Alarm Current @ 23 Volts	0.1020
177 – BASEMENT CKT	AR-5 V1-1	150	14go	0.0031	0.562	0.568	18.932	21.12%	16vdc	1014 Ft.	3
SPARE	AR-5 V1-2		14go	0.0031	0.000	0.000	19.500	18.75%	16vdc	0 Ft.	

CWS1 CP-3600 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

NOTIFICATION CIRCUIT DESCRIPTION	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance	GEC3-24WR	GEC3-24WR	GEC3-24WR
										PID	GEC3-24WR	GEC3-24WR	GEC3-24WR
										Setting	15cd	60cd	110cd
										Device Type	MC A/V	MC A/V	MC A/V
										Supv. Current	0.0000	0.0000	0.0000
										Alarm Current	0.0770	0.1610	0.2560
										Alarm Current @ 23 Volts	0.0770	0.1610	0.2560
179 – BASEMENT CKT	AR-5 V1-1	300	14go	0.0031	0.494	0.947	18.553	22.70%	16vdc	1152 Ft.	1	1	1
179 – FIRST/SECOND/THIRD FLOOR CKT	AR-5 V1-2	150	14go	0.0031	0.308	0.334	19.166	20.14%	16vdc	1843 Ft.	4		

177 – CP-3600 BATTERY CALC

Module	Qty	Description		Standby Current	Total Standby	Alarm Current	Total Alarm
Panel Equipment							
CP-3600	1	CWSI WIRELESS CONTROL FACP		0.100000	0.100000	0.250	0.250000
				Total Panel Stby	0.100000	Total Panel Alarm	0.250000
Mult-Candela Strobes (Select Candella Rating)							
GEC3-24WR	3	GENTEX HORN STROBE	15cd	0.000000	0.000000	0.077	0.231000
				Total Periph Stby	0.000	Total Periph Alarm	0.231
				Total Standby Amps	0.100	Total Alarm Amps	0.481

* Additional Current Draw Included Below With Device Addresses Used
1. 2-wire detector alarm current is included in the alarm current of the Initiating Device Circuit.

Battery Calculations		Standby Current		Alarm Current
Control Panel Cord Power		0.100		0.250
Power For External Peripheral Devices		0.00000		0.23100
		0.100	<-- Totals -->	0.481
Additional Battery Capacity Required	0%	0.000		0.000
Standby Time =	24 Hrs	2.400	Standby Ah	
Alarm Time =	5 Mins.	0.040	Alarm Ah	
Standby + Alarm =		2.440		
Minimum Battery Required	BA-12V-7AHS	2.928	20% Safety Margin	

CWS1 CP-3600 NAC VOLTAGE DROPS

WIRE RESISTANCE BASED ON TABLE 8 FROM NATIONAL ELECTRICAL CODE (UNCOATED SOLID COPPER WIRE) @ 75 Celsius

NOTIFICATION CIRCUIT DESCRIPTION	Plan Ckt.	Dist. (D) Feet	Wire Gauge	Wire Res. / Ft. (R)	Total Alarm (A)	V. Drop (A*2D*R)	Volt @ End	% Volt Drop	Min Device Voltage	Max Distance	GEC3-24WR
										PID	GEC3-24WR
										Setting	15cd
										Device Type	MC A/V
										Supv. Current	0.0000
										Alarm Current	0.0770
										Alarm Current @ 23 Volts	0.0770
177 – FIRST FLOOR/BASEMENT CKT	CP3600 V1-1	200	14go	0.0031	0.231	0.321	19.179	20.09%	16vdc	2462 Ft.	3
SPARE	CP3600 V1-2		14go	0.0031	0.000	0.000	19.500	18.75%	16vdc	0 Ft.	

tyco SimplexGrinnell
Safer. Smarter. Tyco.™
DISTRICT - 147
30 THOMAS DRIVE
WESTBROOK, ME 04092
SERVICE: 207-842-6440
PHONE: 207-842-6440
FAX: 207-842-6439

177-179 STATE ST

177-179 STATE STREET
177 STATE STREET
PORTLAND, ME 04101

Revisions shown with ▲ symbol

ISSUE LOG:				
MARK	DATE	CAD	CHK	DESCRIPTION

DRAWN BY:	DZONA
CHECKED BY:	SKALAFARSKI
ISSUE DATE:	1/13/17
JOB #:	
PROJECT #:	147:147426849

SIMPLEXGRINNELL © 2017

SYSTEM:
FIRE ALARM SYSTEM

SHEET:
CALCULATIONS AND SCHEDULES

FA-601

IMPORTANT NOTICE TO USERS: By accepting or using this drawing and/or the information contained herein, the user agrees to the following terms and conditions: The electronic information in this drawing may be included in, transferred or used for completion of this project by any third party. SimplexGrinnell assumes all liability for the use or reuse of altered files by the owner or any third party and such use will be at the sole risk of the user. Use shall be the sole and exclusive remedy for any claims against SimplexGrinnell for losses from any and all alterations for loss, damage or injury arising directly or indirectly therefrom. Any use, reuse, copying, modification or alteration of the information contained herein shall be at the sole risk of the user. This information may not be sold or transferred to any third party, used on other projects or additions to this project for which it was prepared, or used for completion of this project by any third party. SimplexGrinnell assumes all liability for the use or reuse of altered

FILE PATH: P:\2017\147\CWSI-177-179 State St\CAD\FA-601.dwg
LAST SAVED BY: DZONA
LAST PRINTED: 1/19/2017 1:49:26 PM
24" x 36" - Arch D Size