

CAMPUS PLANNING, DESIGN & CONSTRUCTION

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ADDENDUM NO. 1 - OUTLINE AND SUMMARY INFORMATION

 Project Name:
 Fieldhouse Fire Alarm Replacement

 Location:
 Montana State University

PPA No.: 23-0928

Date: March 07, 2025

To: All Plan Holders of Record

The Plans and Specification prepared by <u>Morrison Maierle, Inc</u> dated <u>January 29, 2025</u>, shall be clarified and added as follow. The bidder proposes to perform all the following clarifications or changes. It is understood that the Base Bid shall include any modification of Work or Additional Work that may be required by reason of the following change or clarifications.

The Bidders are to acknowledge the receipt of this Addendum by inserting its number and date into their Bid Forms. Failure to acknowledge may subject the Bidder to disqualification and rejection of the bid. This Addendum forms part of the Contract Documents as if bound therein and modifies them as follows:

I. PRIOR APPROVALS

A. None

II. AMENDMENTS TO THE PROJECT MANUAL

A. None.

III. AMENDMENTS TO THE DRAWINGS

- A. Replace existing Sheet FA0.1 with updated attached Sheet FA0.1.
- B. Replace existing Sheet FA0.2 with updated attached Sheet FA0.2.
- C. Add new Sheet FA8.1.
- D. Add new Sheet FA8.2.
- E. Add new Sheet FA8.3.

IV. ATTACHMENTS

- A. Pre-Bid Meeting Attendance List.
- B. Pre-Bid Meeting Questions.
- C. Fieldhouse Events Schedule.

D. Revised Sheets.

END



Sign-in Sheet

Date: 3/4/2025 PPA No.: 23-0928 Project Name: Brick Breeden Fire Alarm

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Meeting Time & Location: 11:00 am at the Lobby of the Brick Breeden

From:

Pre-Bid Meeting Sign-in Sheet:

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NAME	COMPANY	PHONE	E-MAIL	
Ara Meskimen	MSU-PDC	406-994-	Ara.meskimen@montana.edu	
		3230		۰,
Derck Berray	MTWYS	406.869-9406	d bogon Contwysys, com	а.
Stary Stoddard	MTWYS	670.8823	Sstuddard (antwysys).	(Om
Cody Belly	Millennium Electric	406-601-9010	Confu Bomillennium electric.	Com
Eric Goroski	Liberty Electric		pric anosh: Oliberty alectricio	Georg
Spencer Schmidt	TWO BEAT COOSTRUCTION		Spencer@ tuo Bear Constru	Hon. Com
ERIC GOILES	HTS	4065793502	- Egalves offis - Jo. Cou	N
Simpledel	3E Electric	406-410-1012	SimW @ Becontractors.com	
John Segue	3E Electria	406-920-8575	John S@ Becon tractors, com	
RANDY BERNOT	ICT	4065798550	161@In-tch, com	
Gain Crystal	crystal Finishing	406-595-0807	CrFinishing I. e gmail. Coa	7
Brent Kronfuss	Remote service s	406.580-9773	remotescruicesyde@gmail.	Com
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				8
				1

Questions from Brick Breeden Fire Alarm

- Do you have a Budget for the project? MSU will not provide Engineer's Estimate.
- Do you have a Schedule put together for the days that we cannot work due to events? A schedule of events in Brick Breeden will be included as an attachment. Contractor will need additional coordination on these dates.
- Does exposed boxes and conduit have to match existing wall color? Yes, exposed boxes and conduit need to match existing wall color.
- Demo of conduit/boxes in Murals. Who will be responsible for painting/touching up the Murals? Do you have contacts who painted them? The contractor and MSU will work on a plan for touching up the Mural with the artist if needed.
- Will the Contractor have full access to rooms? Access to locker rooms and weight room will need to be schedule with user group. Access to offices require a 72-hour notice of work will need to be given.
- Will there be night work allowed? Yes , night and weekend work will be allowed but will need to coordinate with MSU
- Can an Electrical Contractor be Prime on it? Prime Contractor are not restricted to a certain trade. Contractor will need to able to bond and insure project.
- With the Hours of our scope, fire alarm scope, painting and patching could the contract be extended to a August 2026 completion date? I see manpower and housing being major factors for any contractor that bids this with a August 2025 completion date. Completion Date of the Project will be January 1,2026
- Can we updated timeline expectation in relation to the daily liquidated damages? Completion Date of the Project will be January 1,2026
- What is the schedule of events taking place at the Brick for the duration of the project? A schedule of events in Brick Breeden will be include as an attachment. Contractor will need additional coordination on these dates
- What is the flexibility regarding our employee's labor hours? IE nights, weekend, etc. Yes, night and weekend work will be allowed but will need to coordinate with MSU
- Clarification regarding parking permits/access. Contractor will be allowed 3 construction vehicles in staging area but will need to purchase contractor parking permit for additional vehicles or trailers.
- Will we be responsible for asbestos abatement and finishing work for painting/drywall etc. Contractor will be responsible for asbestos abatement and finishing work for painting /drywall.
- Fire Alarm will act as primary contractor for this project? Prime Contractor are not restricted to a certain trade. Contractor will need to able to bond and insure project.
- Who will cover fee for elevator tech and inspection fee? MSU will cover the fee to place the elevator in test and will cover the cost of the inspection fee from the state of Montana.
- Key Access? Contractor will need to get a CAT Card for access into the building.
- Surface mounted boxes painted or factory red? All conduit and boxes and covers in Mech rooms and above drop ceilings are to be factory red, but if conduit and boxes are exposed to the public, they will match surrounding paint colors, and the box covers will be labeled FIRE ALARM. And all surface mount Speaker/Strobes will have an Edwards factory white back box.TC

- Are lifts allowed on the floor? Yes, MSU Sport Facilities will provide plywood to protect the floor.
- Is MSU contracting the Asbestos Abatement contractor? No. Awarded contractor will carry the abatement.
- Is MSU contracting the Elevator Tech for the Elevator work? MSU will cover the fee to place the elevator in test and will cover the cost of the inspection fee from the state of Montana.
- Looking at the SOW of this project August 15, 2025 deadline is unattainable, would MSU be willing to extend the finish date to Jan. 2026 or even August of 2026. Asbestos abatement could become a time commitment. Completion Date for the Project will be January 1, 2026
- The Hyperspike speakers that are Specified as of right now show 105 in stock, if these fall below the project amount will cause a delay in shipping of 4-6 months. MSU understands the availability of the Hyperspike speakers could affect the
- Would the G4WSB be acceptable for all the visible wall mount devices? Versus the 27193-26? For all surface wall mounted Strobes and Speakers/Strobes, use the G4WSB. Do not use the 27193-26 for anything. For surface ceiling Strobes and Speaker/Strobes use any manufacturer acceptable back box, as there will not be visible to the eye from the ground.







27193-26

• What color for the Hyper Spikes? White for commercial but specs call for red? Red per MSU Fire Marshall

Saturday	1-Mar-25	CONFIRMED - WBB vs Sac State
Sunday	2-Mar-25	
, Monday	3-Mar-25	CONFIRMED - MBB vs Eastern Washington
Tuesday	4-Mar-25	
Wednesday	5-Mar-25	
Thursday	6-Mar-25	
Friday	7-Mar-25	
Saturday	8-Mar-25	
Sunday	9-Mar-25	
Monday	10-Mar-	
monuay	25	
Tuesday	11-Mar- 25	
	12-Mar-	
Wednesday	25	CONFIRMED - State AA Basketball
Thursday	13-Mar- 25	CONFIRMED - State AA Basketball
Friday	14-Mar- 25	CONFIRMED - State AA Basketball
Saturday	15-Mar- 25	CONFIRMED - State AA Basketball
Sunday	16-Mar- 25	
Monday	17-Mar- 25	
Tuesday	18-Mar- 25	
Wednesday	19-Mar- 25	CONFIRMED - SWMBIA (Evening Load In)
Thursday	20-Mar- 25	CONFIRMED - SWMBIA
Friday	21-Mar- 25	CONFIRMED - SWMBIA
Saturday	22-Mar- 25	CONFIRMED - SWMBIA
Sunday	23-Mar- 25	CONFIRMED - SWMBIA

Attachment- Brick Breeden Fieldhouse Schedule March 1 to August 31, 2025

Monday	24-Mar- 25	
Tuesday	25-Mar- 25	
Wednesday	26-Mar- 25	1H - WBB Post-Season Hold
Thursday	27-Mar- 25	1H - WBB Post-Season Hold
Friday	28-Mar- 25	CONFIRMED - Pow Wow
Saturday	29-Mar- 25	CONFIRMED - Pow Wow
Sunday	30-Mar- 25	CONFIRMED - State FFA Convention (Internal set up)
Monday	31-Mar- 25	CONFIRMED - State FFA Convention (Internal set up)
Tuesday	1-Apr-25	CONFIRMED - State FFA Convention (Internal set up)
Wednesday	2-Apr-25	CONFIRMED - State FFA Convention
Thursday	3-Apr-25	CONFIRMED - State FFA Convention
Friday	4-Apr-25	CONFIRMED - State FFA Convention
Saturday	5-Apr-25	CONFIRMED - State FFA Convention
Sunday	6-Apr-25	CONFIRMED - SPRING RODEO
Monday	7-Apr-25	CONFIRMED - SPRING RODEO
Tuesday	8-Apr-25	CONFIRMED - SPRING RODEO
Wednesday	9-Apr-25	CONFIRMED - SPRING RODEO
Thursday	10-Apr- 25	CONFIRMED - SPRING RODEO – Event Day 1
Friday	11-Apr- 25	CONFIRMED - SPRING RODEO – Event Day 2
Saturday	12-Apr- 25	CONFIRMED - SPRING RODEO – Event Day 3
Sunday	13-Apr- 25	CONFIRMED - SPRING RODEO – Event Day 4
Monday	14-Apr- 25	CONFIRMED - SPRING RODEO
Tuesday	15-Apr- 25	CONFIRMED - SPRING RODEO
Wednesday	16-Apr- 25	
Thursday	17-Apr- 25	
Friday	18-Apr- 25	

Saturday	19-Apr- 25	
Sunday	20-Apr- 25	CONFIRMED - Revival Church
Monday	21-Apr- 25	
Tuesday	22-Apr- 25	
Wednesday	23-Apr- 25	
Thursday	24-Apr- 25	
Friday	25-Apr- 25	
Saturday	26-Apr- 25	CONFIRMED - Fusion Fight League
Sunday	27-Apr- 25	
Monday	28-Apr- 25	CONFIRMED - Golden Bobcats
Tuesday	29-Apr- 25	
Wednesday	30-Apr- 25	
Thursday	1-May-25	CONFIRMED - MADE FAIR
Friday	2-May-25	CONFIRMED - MADE FAIR
Saturday	3-May-25	CONFIRMED - MADE FAIR
Sunday	4-May-25	1H - COMMENCEMENT SET
Monday	5-May-25	CONFIRMED - COMMENCEMENT SET
Tuesday	6-May-25	CONFIRMED - COMMENCEMENT SET
Wednesday	7-May-25	CONFIRMED - COMMENCEMENT SET
Thursday	8-May-25	CONFIRMED - COMMENCEMENT SET
Friday	9-May-25	CONFIRMED - COMMENCEMENT
Saturday	10-May- 25	
Sunday	11-May- 25	
Monday	12-May- 25	
Tuesday	13-May- 25	
Wednesday	14-May- 25	

	15-May-	
Thursday	25	
Friday	16-May- 25	
Caturdau	17-May-	
Saturday	25	
Sunday	18-May- 25	
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Monday	25	
Tuesday	20-May-	
	25	
Wednesday	21-May- 25	
	22-May-	
Thursday	25	
Friday	23-May-	
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Saturday	24-May- 25	
	25-May-	
Sunday	25-iviay=	
Monday	26-May-	
wonday	25	
Tuesday	27-May-	
-	25	
Wednesday	28-May- 25	
Thursday	29-May-	
	25	
Friday	30-May- 25	
	31-May-	
Saturday	25	
Sunday	1-Jun-25	
Monday	2-Jun-25	
Tuesday	3-Jun-25	
Wednesday	4-Jun-25	
Thursday	5-Jun-25	1H Bozeman Graduations - Rehearsal
Friday	6-Jun-25	1H Bozeman Graduations
Saturday	7-Jun-25	CONFIRMED - Bozeman Graduations
Sunday	8-Jun-25	
Monday	9-Jun-25	

Tuesday	10-Jun- 25	
Wednesday	11-Jun- 25	
Thursday	12-Jun- 25	
Friday	13-Jun- 25	
Saturday	14-Jun- 25	1H - Athletics Men's BB Camp
Sunday	15-Jun- 25	1H - Athletics (Summer Camps)
Monday	16-Jun- 25	CONFIRMED - WBB Camp
Tuesday	17-Jun- 25	CONFIRMED - WBB Camp
Wednesday	18-Jun- 25	CONFIRMED - WBB Camp
Thursday	19-Jun- 25	CONFIRMED - WBB Camp
Friday	20-Jun- 25	CONFIRMED - WBB Camp
Saturday	21-Jun- 25	CONFIRMED - WBB Camp
Sunday	22-Jun- 25	1H - Athletics (Summer Camps)
Monday	23-Jun- 25	CONFIRMED - MBB Camp
Tuesday	24-Jun- 25	CONFIRMED - MBB Camp
Wednesday	25-Jun- 25	CONFIRMED - MBB Camp
Thursday	26-Jun- 25	1H - Athletics (Summer Camps)
Friday	27-Jun- 25	1H - Athletics (Summer Camps)
Saturday	28-Jun- 25	1H - Athletics (Summer Camps)
Sunday	29-Jun- 25	1H - Athletics (Summer Camps)
Monday	30-Jun- 25	CONFIRMED - MBB Camp
Tuesday	1-Jul-25	CONFIRMED - MBB Camp
Wednesday	2-Jul-25	CONFIRMED - MBB Camp

Thursday	3-Jul-25	1H - Athletics (Summer Camps)
Friday	4-Jul-25	1H - Athletics (Summer Camps)
Saturday	5-Jul-25	1H - Athletics (Summer Camps)
Sunday	6-Jul-25	1H - Athletics (Summer Camps)
Monday	7-Jul-25	1H - Athletics (Summer Camps)
Tuesday	8-Jul-25	CONFIRMED - VB Camp
Wednesday	9-Jul-25	CONFIRMED - VB Camp
Thursday	10-Jul-25	CONFIRMED - VB Camp
Friday	11-Jul-25	CONFIRMED - VB Camp
Saturday	12-Jul-25	CONFIRMED - VB Camp
Sunday	13-Jul-25	CONFIRMED - VB Camp
Monday	14-Jul-25	CONFIRMED - VB Camp
Tuesday	15-Jul-25	CONFIRMED - VB Camp
Wednesday	16-Jul-25	CONFIRMED - VB Camp
Thursday	17-Jul-25	CONFIRMED - VB Camp
Friday	18-Jul-25	CONFIRMED - VB Camp
Saturday	19-Jul-25	1H - Athletics (Summer Camps)
Sunday	20-Jul-25	1H - Athletics (Summer Camps)
Monday	21-Jul-25	
Tuesday	22-Jul-25	
Wednesday	23-Jul-25	
Thursday	24-Jul-25	1H - Athletics (Summer Camps)
Friday	25-Jul-25	1H - Athletics (Summer Camps)
Saturday	26-Jul-25	CONFIRMED - Pepper (Alison Krauss)
Sunday	27-Jul-25	
Monday	28-Jul-25	CONFIRMED - MBB Camp
Tuesday	29-Jul-25	CONFIRMED - MBB Camp
Wednesday	30-Jul-25	CONFIRMED - MBB Camp
Thursday	31-Jul-25	
Friday	1-Aug-25	
Saturday	2-Aug-25	1H - WBB Camp (Tentative)
Sunday	3-Aug-25	
Monday	4-Aug-25	
Tuesday	5-Aug-25	Maintenance Hold - Black Box Motors
Wednesday	6-Aug-25	Maintenance Hold - Black Box Motors
Thursday	7-Aug-25	Maintenance Hold - Black Box Motors
Friday	8-Aug-25	Maintenance Hold - Black Box Motors
Saturday	9-Aug-25	Maintenance Hold - Black Box Motors

Sunday	10-Aug- 25	Maintenance Hold - Black Box Motors
Monday	11-Aug- 25	Maintenance Hold - Black Box Motors
Tuesday	12-Aug- 25	Maintenance Hold - Black Box Motors
Wednesday	13-Aug- 25	Maintenance Hold - Black Box Motors
Thursday	14-Aug- 25	Maintenance Hold - Black Box Motors
Friday	15-Aug- 25	Maintenance Hold - Black Box Motors
Saturday	16-Aug- 25	Maintenance Hold - Black Box Motors
Sunday	17-Aug- 25	Maintenance Hold - Black Box Motors
Monday	18-Aug- 25	CONFIRMED - Freshman Convocation (set up)
Tuesday	19-Aug- 25	CONFIRMED - Freshman Convocation
Wednesday	20-Aug- 25	
Thursday	21-Aug- 25	
Friday	22-Aug- 25	
Saturday	23-Aug- 25	
Sunday	24-Aug- 25	
Monday	25-Aug- 25	
Tuesday	26-Aug- 25	
Wednesday	27-Aug- 25	
Thursday	28-Aug- 25	
Friday	29-Aug- 25	
Saturday	30-Aug- 25	
Sunday	31-Aug- 25	

	FIRE ALARM NOTES	ELECTRICAL NOTES
1.	FIRE ALARM SYSTEM SHALL COMPLY WITH: A. IBC (INTERNATIONAL BUILDING CODE), 2021 B. IFC (INTERNATIONAL FIRE CODE), 2021 C. NFPA 70 (NATIONAL ELECTRIC CODE), 2020	1. THE CONTRACTOR SHALL COMPLY WITH THE CONSTRUCTION PRACTICES AND R OF THE REFERENCED EDITION OF THE NATIONAL ELECTRIC CODE (2020 NFPA 70) NATIONAL ELECTRICAL SAFETY CODE, AND INSTRUCTIONS OF MANUFACTURERS AND MATERIALS SUPPLIED FOR THE PROJECT.
2	 D. NFPA 72 (FIRE ALARM CODE), 2019 E. PROJECT SPECIFICATIONS F. LOCAL AHJ REQUIREMENTS (AMENDMENTS) THESE DRAWINGS REPRESENT ENGINEERED FINALIZED SHOP DRAWINGS READY FOR 	2. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL JUNCTION AND PULL BOXES THE INSTALLATION OF ELECTRICAL DEVICES AND EQUIPMENT, WHETHER OR NO INDICATED ON THE PLANS. SIZING OF THESE BOXES SHALL BE PER THE NATIONA CODE AND/OR MANUFACTURES REQUIREMENTS.
	INSTALLATION. THE CONTRACTOR SHALL PROVIDE RED-LINE FIELD ASBUILTS TO THE FIRE ALARM DESIGNER. THE FIRE ALARM DESIGNER WILL PREPARE AND PROVIDE RECORD DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COMPLETED NFPA 72 INSPECTION & TESTING, RECORD OF COMPLETION FORMS AND AND PROVIDE OPERATION & MAINTENANCE MANUALS TO THE OWNERS	3. ALL PENETRATIONS THROUGH FIRE BARRIERS SHALL BE FIRE STOPPED TO MAIN INTEGRITY OF THE FIRE BARRIER. FIRE STOPPING MATERIAL SHALL BE U.L. LISTE
3.	REPRESENTATIVE. COORDINATE THE EXACT DEVICE LOCATIONS WITH ELECTRICAL AND MECHANICAL SYSTEM EQUIPMENT AND BUILDING ARCHITECTURAL FEATURES. INSTALLING CONTRACTOR SHALL	4. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE GENERAL CONTRACTOR CONTROL REPRESENTATIVE PRIOR TO MAKING ANY PENETRATIONS THROUGH S MEMBERS.
4.	CONSULT/CONFIRM ANY NECESSARY DEVIATION OF DEVICE BOX PLACEMENT OR CONDUIT/CIRCUIT ROUTING WITH THE DESIGNER OF RECORD PRIOR TO IMPLEMENTING CHANGES IN THE FIELD. ALL FIRE ALARM CABLE AND WIRE TO BE IN CONDUIT. FIRE ALARM CONDUIT SHALL BE 3/4" EMT MINIMUM UNLESS OTHERWISE NOTED. CONCEAL CONDUITS IN WALL AND CEILING SPACES WHEREVER FEASIBLE. MECHANICAL AREAS AND CONCEALED CONDUIT SHALL BE FACTORY FINISHED RED. EXPOSED SURFACE CONDUIT IN FINISHED AREAS SHALL BE PAINTED TO MATCH SURROUNDINGS.	5. SHOULD PROJECT CONDITIONS REQUIRE REARRANGEMENT OF WORK, THE CON MARK SUCH CHANGES ON THE AS-BUILT DRAWINGS. IF THESE CHANGES REQUIR METHODS TO THOSE SPECIFIED IN THE CONTRACT DOCUMENTS, THE CONTRACT SUBMIT DRAWINGS SHOWING THE PROPOSED ALTERNATE METHODS TO THE GE CONTRACTOR. THE CONTRACTOR SHALL NOT PROCEED UNTIL APPROVAL IS OBT REARRANGEMENT OF WORK FOR THE PURPOSE OF COORDINATION SHALL NOT F AN ITEM FOR EXTRA COST.
5.	ALL FIRE ALARM JUNCTION BOXES AND COVERS ABOVE CEILINGS AND IN MECHANICAL SPACES ARE TO BE PAINTED RED, BOTH SIDES OF COVER PLATES SHALL BE PAINTED RED. JUNCTION BOXES AND COVERS IN EXPOSED LOCATIONS SHALL BE PAINTED TO MATCH EXISTING SURFACES AND	6. REPAIR ANY DAMAGE TO EXISTING CONSTRUCTION RESULTING FROM THE INSTA ELECTRICAL ITEMS. THE AREAS REPAIRED SHALL MATCH THE ADJACENT SURFAC AND COLOR.
6.	IDENTIFIED AS FIRE ALARM WITH PRINTED LABEL.	 ALL EXPOSED AND CONCEALED CONDUITS SHALL BE EMT (ELECTRICAL METALLIU UNDERGROUND CONDUIT SHALL BE PVC CONDUIT SCHEDULE 40, UNLESS NOTE USE FLEXIBLE METAL CONDUIT AND SEAL-TIGHT WHERE APPLICABLE.
7.	NAC - NOTIFICATION APPLICATION CIRCUIT SHALL BE CLASS B. SLC - SIGNALING LINE CIRCUIT SHALL BE CLASS B. NO MORE THAN 12 T-TAPS OR 10% OF EST T-TAPS @ 125. "T" TAPPING: NO MORE THAN 12 T-TAPS OR 10% OF EST T-TAPS @ 125 ON THE SLC. NOT ALLOWED	8. ALL EQUIPMENT SHALL BE CAPABLE OF FITTING IN THE SPACES LOCATED WHILE MANUFACTURER'S RECOMMENDED ACCESS REQUIREMENTS. REVIEW ALL PLACE EQUIPMENT IS TO BE INSTALLED PRIOR TO ORDERING OF EQUIPMENT AND NOTIF CONTRACTOR OF ANY INADEQUATE CLEARANCES OR CONDITIONS THAT WILL PF PROPER INSTALLATION, MAINTENANCE, AND OPERATIONS OF THE EQUIPMENT.
8.	FOR ANY NAC OR IDC CIRCUIT. ALL NOTIFICATION APPLIANCES SHALL OPERATE IN SYNCHRONIZATION AS REQUIRED BY NFPA 72.	9. PROVIDE ACCESS PANELS TO ALL CONCEALED TRANSFORMERS, DEVICES, JUNC AND EQUIPMENT. COORDINATE THE LOCATION OF ACCESS PANELS TO INSURE T
9.	FIRE ALARM EQUIPMENT CABINETS, BOXES, AND DEVICES SHALL HAVE TAGS PERMANENTLY AFFIXED TO THE FACE . LABEL EACH DEVICE USING SELF-ADHESIVE LASER PRINTED COMMERCIALLY AVAILABLE ID TAGS. ADDRESSABLE DEVICES SHALL BE LABELED WITH ADDRESS.	EQUIPMENT CAN BE MAINTAINED ADEQUATELY. 10. ALL EQUIPMENT AND CABLE SHALL BE PROPERLY RATED FOR THE CONDITIONS I INSTALLED.
	NOTIFICATION APPLIANCES SHALL BE LABELED WITH THEIR ASSOCIATED NAC IDENTIFIER MATCHING THAT ON THESE PLANS. LABEL ALL MONITOR AND RELAY MODULES WITH ASSOCIATED FUNCTION. LABEL REMOTE TEST SWITCHES WITH ASSOCIATED DUCT DETECTOR ADDRESS AND AIR	11. ALL 120VAC CIRCUIT BREAKERS SERVING FIRE ALARM EQUIPMENT SHALL BE REI LOCKABLE. CAMPUS STANDARD IS SPACE AGE ELOCK-FA.
10.	HANDLER DESIGNATION. ALL LABELS SHALL BE #24 FONT. DO <u>NOT</u> SPLICE FIRE ALARM CONDUCTORS EXCEPT WHERE INDICATED ON THESE DRAWINGS. ALL FIRE ALARM WIRING SHALL ONLY BE TERMINATED AT A DEVICE OR APPROVED TERMINAL BLOCK LOCATION ONLY.	12. ANY PENETRATION OF THE BUILDING VAPOR BARRIER SYSTEM SHALL BE APPRO SEALED TO RETAIN THE INTEGRITY OF THE SYSTEM. THIS INCLUDES BUT IS NOT CONDUITS AND BACKS OF ELECTRICAL BOXES.
11.	EST4 LCD SHALL HAVE MSU LOGO.	
	PHASE PLAN	SCOPE OF WORK
1.	INSTALL ALL NEW HEADEND EQUIPMENT AND NOTIFICATION APPLIANCES THROUGHOUT THE BUILDING INCLUDING ALL ASSOCIATED RACEWAY. IN THE EVENT THAT THE INSTALLATION OF A NEW NOTIFICATION APPLIANCE CONFLICTS WITH AN EXISTING APPLIANCE, ATTEMPT TO INSTALL ADJACENT TO ONE ANOTHER, IF NOT, REMOVE THE EXISTING APPLIANCE AND RELOCATE IT TEMPORARILY SO THAT IT MAY STILL FUNCTION UNTIL PHASE 4, BUT THE NEW APPLIANCE MAY BE	THE EXISTING SIMPLEX SYSTEM WILL BE REMOVED AND REPLACED WITH A NEW ESTA THE NEW SYSTEM WILL BE INSTALLED IN ITS ENTIRETY BEFORE DEMO OF EXISTING S SHALL MAINTAIN OPERATION OF EXISTING SYSTEM AND COMPONENTS TO THE FULLE POSSIBLE WHILE INSTALLING THE NEW SYSTEM.
2.	INSTALLED SO IT WILL BE OPERATIONAL IN PHASE 3. INSTALL ALL NEW ADDRESSABLE DEVICES (DETECTION, CONTROLS, MONITORS, ETC.). MOST OF THESE NEW DEVICES WILL REQUIRE UTILIZING THE EXITING DEVICE LOCATION OR CONTROL	 THIS BUILDING IS A GROUP 'A' OCCUPANCY OVER 1000 WITH ACCESSORY GROUP 'B'. T FOLLOW IBC 907.2.1 1. A MANUAL ALARM SYSTEM SHALL BE PROVIDED IN ACCORDANCE WITH IBC 907.2 2. THE BUILDING <u>IS</u>FULLY SPRINKLERED AND WILL TAKE THE EXCEPTION TO ELIMIT
	INTERFACE. WHERE FEASIBLE, INSTALL THE NEW DEVICE ADJACENT TO THE EXISTING DEVICE. OTHERWISE PROVIDE A J-BOX AND SERVICE LOOP FOR COMPLETION IN PHASE 4. I.E. PROVIDE AN SLC SERVICE LOOP TO AN ELEVATOR MECHANICAL ROOM, THEN IN PHASE 4, ALL DEVICES, WIRING, ETC. CAN BE REMOVED ALLOWING FOR THE EXISTING CONDUIT AND BACKBOXES TO BE REUSED WITH THE NEW SYSTEM.	 STATIONS. ONE PULL WILL BE PROVIDED AT FACU, THE MAIN RECEPTION OFFICE SPRINKLER RISER. NEW OCCUPANT NOTIFICATION WILL BE PROVIDED THROUGHOUT VIA VOICE EVA <u>SYSTEM WILL BE TOTAL EVACUATION WITH A SINGLE VOICE CHANNEL</u>. SYSTEM WILL HAVE 8 MANUAL PAGING ZONES, BUT WILL NOT COMPLY WITH IBC
3.	AT THIS POINT THE NEW SYSTEM SHOULD BE RUNNING 100% AS FAR NOTIFICATION IS CONCERNED. SOME INPUTS MAYBE FUNCTIONING WHERE THERE ISN'T A CONFLICT WITH EXISTING DEVICE OPERATION. A FUNCTIONAL TEST WITH THE AHJ MAY BE REQUIRED TO PROVE FULL NOTIFICATION	 ZONES DUE TO EXISTING BUILDING LAYOUT. AUXILIARY SYSTEMS INCLUDE ELEVATOR RECALL, DOOR MAG RELEASE, ROLL-D RELEASE, HVAC DETECTION AND SHUTDOWN, KITCHEN HOOD AND SPRINKLER S MONITORING.
	THROUGH THE NEW SYSTEM. PROVIDE A TEMPORARY ALARM RELAY OUTPUT ON THE EXISTING SYSTEM TO A TEMPORARY ALARM MONITOR FOR THE NEW SYSTEM. DISABLE ALL NOTIFICATION ON THE EXISTING SYSTEM.	 SMOKES AND HEATS FOR CONTROL OF DOOR RELEASE, HVAC AND ELEVATOR R WILL BE SUPERVISORY AND OPERATE AS CONTROL DEVICES ONLY TO MINIMIZE PULLS, SMOKES FOR PROTECTION OF EQUIPMENT AND WATERFLOW WILL BE AL ACTIVATE THE EVACUATION MESSAGE.
4.	BEGIN CHANGING OUT EXISTING DEVICES AND CONTROLS (ELEVATORS, DOORS, SPRINKLER, ETC.) IN SMALL QUANTITIES SO THAT "OUT OF SERVICE" TIME CAN MINIMIZED. PROVIDE A FIRE WATCH FOR ANYTIME THE SPRINKLER SYSTEM IS TEMPORARILY OUT OF SERVICE DURING THE TRANSITION FROM EXISTING TO NEW. I.E ON DAY ONE DO ELEVATOR 1, ON DAY TWO ELEVATOR 2, AND SO ON, AND SUBSEQUENTLY FOR FIRE DOORS WITH DOOR MAGS AND ROLL DOWN DOORS. FINISH TRANSITION WITH SPRINKLER SYSTEM MIGRATION. PROVICE LOCKOUT/TAGOUT WHEN REQUIRED. INFORM FACILITIES WHEN ANY SYSTEM WILL BE OUT OF OPERATION. DEPROGRAM REMOVED	 ALL SMOKE DETECTORS CONFIGURED FOR FIRE ALARM SHALL EMPLOY ALARM N NFPA 72 2019. PROVIDE NEW CELLULAR COMMUNICATOR WITH NEW SYSTEM. OLD COMMUNICA REMAIN FUNCTIONAL UNTIL EXISTING SYSTEM IS REMOVED,
	DEVICES FROM THE EXISTING SYSTEM IF FEASABLE. IT MAYBE ACCEPTABLE TO LEAVE TROUBLES ON THE EXISTING PANEL FOR MISSING DEVICES SO LONG AS IT DOES NOT CAUSE A CONTINUAL DISTURBANCE TO THE OCCUPANTS OF THE BUILDING. PROGRAM (ACCORDING TO THE MATRIX ON THIS SHEET) ALL NEWLY INSTALLED DEVICES INTO THE NEW SYSTEM AS THEY ARE BROUGHT	* IMPORTANT NOTE *
5.	ONLINE.	THE EXISTING CMU WALLS ASSOCIATED WITH THIS PROJECT MAY CONTAIN ASBESTOR THE FORM OF VERMICULITE INSULATION. SEE THE PRE-RENOVATION ASBESTOS INSP IDENTIFYING THE EXISTING CMU WALLS POTENTIALLY CONTAINING VERMICULITE INSU ALARM CONDUIT ROUTING IS SHOWN IN APPROXIMATE LOCATION AND GENERAL ROU
6.	FOREMAN AND FIRE MARSHAL TO ATTEND. DEMO EXISTING SIMPLEX SYSTEM IN ITS ENTIRETY. REPAIR, PATCH PAINT ANY DISTURBED AREAS AS A RESULT OF DEMO. PAINT ANY NEW CONDUITS NOT YET PAINTED ACCORDING TO THE FIRE ALARM NOTES ON THIS SHEET.	PURPOSES. THE CONTRACTOR SHALL FIELD VERY EXACT LOCATION AND QUANTITY OF IN ASSUMED ASBESTOS-CONTAINING CMU WALLS. THE CONTRACTOR SHALL FOLLOW SECTION 028200 FOR REMEDIATION REQUIREMENTS."

	ACRONYMS/ABBREVIATIONS:						A	NUNCI	IATION		NC		N				CON	TROL			\bigwedge	OFF-	SITE TRA		
D REQUIREMENTS 70), CURRENT RS OF EQUIPMENT	 AFF ABOVE FINISHED FLOOR AC ALTERNATING CURRENT ACT ACOUSTICAL TILE CEILING AWG AMERICAN WIRE GAGE BFC BELOW FINISHED CEILING 			SYSTEM OUTP	UTS		ADDRESS																		
XES REQUIRED FOR NOT SPECIFICALLY NAL ELECTRICAL	 5. BFC BELOW FINISHED CEILING 6. CD CANDELA 7. CKT CIRCUIT BREAKER 8. C CONDUIT 9. DB DECIBEL 						D TO DEVICE				FACILITY														
AINTAIN THE STED.	10.DEDDEDICATED11.DCDIRECT CURRENT12.EMTELECTRICAL METALLIC TUBING								S		UGHOUT										l l				
OR QUALITY H STRUCTURAL	 EOL END OF LINE RESISTOR EOLR END OF LINE RELAY EX EXISTING 						LUDING B	SNF	JAL MEAN	1EANS	CES THRO														
ONTRACTOR SHALL UIRE ALTERNATE ACTOR SHALL	 XP EXPLOSION PROOF FA FIRE ALARM FPL FIRE ALARM POWER LIMITED HL HARD LID CEILING TYPE (GYP-BOARD) HVAC HEATING VENTILATING AIR CONDITIONING 						DISPLAY INCI	D VISUAL ME	IBLE AND VISI	AND VISUAL N	KER APPLIANO	E AFFLIANCES RM MESSAGE	QDBE	EASE	ENT) *	FLOOR) *									
GENERAL DBTAINED. DT BE CONSIDERED	21. HZHERTZ22. IAWIN ACCORDANCE WITH23. IDCINITIATING DEVICE CIRCUIT						N ON LCD	JDIBLE AN	il via aud	AUDIBLE	BLE SPEA		HORN STF	DOOR RELE/	. (BASEME	.L (FIRST F	T) *				l P				
STALLATION OF FACES IN TEXTURE	24.LVLOW VOLTAGE25.NACNOTIFICATION APPLIANCE CIRCUIT26.NEMANATIONAL ELECTRICAL MANUFACTURER ASSOC.27.NECNATIONAL ELECTRIC CODE28.NICNOT IN CONTRACT						C INFORMATIC	F PANEL VIA AI	TION AT PANE	AT PANEL VIA	E ALARM AUDI		ER EXTERIOR	/ ROLL DOWN	ATOR RECALL	VATOR RECAL	SNAL (FIRE HA		ED FAN	AMPERS **	A SYSTEM				
LLIC TUBING). ALL TED OTHERWISE.	29.NTSNOT TO SCALE30.OTSOPEN TO STRUCTURE CEILING31.RGSRIGID GALVANIZED STEEL CONDUIT32.SLCSIGNALING LINE CIRCUIT33.SPDTSINGLE THROW DOUBLE THROW						EVENT SPECIFI	DTIFICAITON A1	ORY NOTIFICA	NOTIFICATION		RE-RECORDEL	FIRE SPRINKL	G / FIRE DOOR	LE LEVEL ELEV	ED LEVEL ELE	R WARNING SIC	R SHUNT TRIP	OWN ASSOCIATE	FIRE SMOKE D	RENA SOUND/P	ALARM	R ALARM	SUPERVISORY	
ILE MEETING THE ACES WHERE DTIFY THE GENERAL PREVENT THE	 34. SPST SINGLE THROW SINGLE THROW 35. TSP TWISTED SHIELDED PAIR 36. UTP UNSHIELDED TWISTED PAIR 37. UL UNDERWRITERS LABORATORIES 			SYSTEM INPU			DISPLAY AND DES	ALARM NO	SUPERVIS	TROUBLE		INITIATE P	ACTIVATE	DOOR MAG	ALTERNA	DESIGNAT	ELEVATOR	ELEVATOR	SHUT D	ACTUATE	SHUNT AF	GENERAL	SPRINKLE	GENERAL	
r. NCTION BOXES	38. V VOLT 39. WP WEATHERPROOF 40. W/ WITH			MANUAL PULL STATION		1.1	A.1	A.2	A.3	A.4	B.1 E	.2 B.3	B.4	C.1	C.2	C.3	C.4	C.5	C.6	C.7	C.8	D.1	D.2	D.3	
THAT THE				KITCHEN HOOD		1.2	×	×			x :	<									×	×			\Box
S IN WHICH IT IS	SHEET INDEX			SMOKE DETECTOR, SPOT PROTECTION (MEDIA BOOTHS)	1.3	×	×			x :	<								8	×	×			
D AND	SHEET DESCRIPTION FA0.1 FIRE ALARM COVER SHEET		EVICES	SMOKE DETECTOR, EQUIPMENT PROTEC		1.4 1.5	× ×	×	×		×	< ×		×						×	×	×		×	+
PRIATELY	FA0.2 FIRE ALARM DEVICE LEGEND FA0.3 MAIN LEVEL - OVERALL REFERENCE PLAN		ING D	SMOKE DETECTOR (DESIGNATED LEVEL		1.6	×		x				-		×				 		¥	;†		×	+
LIMITED TO	FA0.4CONCOURSE LEVEL - OVERALL REFERENCE PLANFA0.5UPPER LEVEL - OVERALL REFERENCE PLAN		NITIA	SMOKE DETECTOR (NON-DESIGNATED LE		1.7	×		×							×			i — †	8	P	≿ †		×	+
	FA0.6 CATWALK - OVERALL REFERENCE PLAN	JTS		SMOKE DETECTOR (ELEVATOR MACHINE	ROOM) *	1.8	×		×							×	×		i — †	8	K	}		×	+
·	FA1.0BASEMENT - FIRE ALARM PLANFA1.1MAIN LEVEL NORTH - FIRE ALARM PLAN	M INPUTS		HEAT DETECTION (ELEVATOR MACHINE F	,	1.9	×		×									×	 	8	P			×	+
	FA1.2 MAIN LEVEL N.E. & S.E FIRE ALARM PLAN	SYSTEM		DUCT SMOKE DETECTION		1.10	×		x									~	×	×		<u>/</u> +		×	+
VOICE SYSTEM.	FA1.3MAIN LEVEL EAST & WEST - FIRE ALARM PLANFA1.4MAIN LEVEL SOUTH - FIRE ALARM PLAN	ARM S'					<u>^</u>		^										$ \longrightarrow $	¥	¥	<u> </u>			+
SYSTEM. INSTALLER	FA1.5 NORTH CONCOURSE - FIRE ALARM PLAN FA1.6 SOUTH CONCOURSE - FIRE ALARM PLAN	AL		WATERFLOW		2.1	X	×			× :	< ×	×						⊢−−−	<u>۲ × ۲</u>	×	;	×		_
ST EXTENT	FA1.0 SOUTH CONCOURSE - FIRE ALARM PLAN FA1.7 UPPER ARENA - FIRE ALARM PLAN	FIRE	RINK	VALVE TAMPER		2.2	×		×										⊢					×	\perp
THE DESIGN WILL	FA1.8 NORTH CATWALK - FIRE ALARM PLAN		KE SP	FIRE PUMP RUNNING		2.3	×		×										\square					×	
.2.1	FA1.9 SOUTH CATWALK - FIRE ALARM PLAN FA2.0 BASEMENT - DEMO PLAN		Ë	FIRE PUMP LOSS OF AC POWER		2.4	×		×															×	
/INATE MANUAL	FA2.1 MAIN LEVEL NORTH - DEMO PLAN			FIRE PUMP PHASE REVERSAL		2.5	x		×										i – T					×	Τ
CE AND ONE AT THE	FA2.2MAIN LEVEL N.E. & S.E DEMO PLANFA2.3MAIN LEVEL EAST & WEST - DEMO PLAN			LOW BATTERY VOLTAGE		3.1	x			×									i — †						
ACUATION. 907.5.2.2	FA2.4 MAIN LEVEL SOUTH - DEMO PLAN			GROUND FAULT / OPEN / SHORT CIRCUIT		3.2	x			×			_						 			·+			+
C MINIMUM PAGING	FA2.5 NORTH CONCOURSE - DEMO PLAN		SOLE																⊢−−−−						_
DOWN FIRE DOOR	FA2.6 SOUTH CONCOURSE - DEMO PLAN FA2.7 UPPER ARENA - DEMO PLAN		ONTE	AC POWER LOSS		3.3	×			×									<u> </u>]	
SYSTEM	FA2.8 NORTH CATWALK - DEMO PLAN		U U	FIRE DRILL		3.4	x				× :	< ×		×					ı					ļ	
RECALL FUNCTIONS	FA2.9 SOUTH CATWALK - DEMO PLAN	* NO	E: MAINT	AIN EXISTING ELEVATOR RECALL SEQUEN	CES AS CURRENTLY PROVIDED.	FIELD V	ERIFY EXIS	TING PR	ROGRAM	I SEQUEN	ICES AND I	MPLEMENT	INTO NEV	V SYSTEN	I SEQUEN	CE. PRO	VIDE SH	UNT TRIP	, FUNCTIC	ONS WHE	ERE AVAI	LABLE. R		ACCORD	{DIN
E FALSE ALARM.	FA5.1 HEADEND FACU WIRING DETAIL FA5.2 HEADEND AMP WIRING DETAIL	** NOT		AIN EXISTING DAMPER ACTUATION SEQUE		ה בובו ה																			
ARM DEVICES AND	FA5.3 HEADEND NAC WIRING DETAIL			AIN EXISTING DAMFER ACTUATION SEQUE	NGES AS CORRENTET PROVIDED	D. FIELD			FRUGRA					W 3131E		INCE. RE		CCORDIN	<u>ULT.</u>						
/ERIFICATION PER	FA5.4 HEADEND NAC WIRING DETAIL																								
TOR SHALL	FA5.5 HEADEND NAC WIRING DETAIL																								
	FA5.6 HEADEND NAC WIRING DETAIL FA5.7 DEVICE WIRING DETAILS							~^D		ע חוא	VIRE		חו												
	FA6.1 DEVICE ADDRESSES HEADEND RISER												עו	_~~	~~~~	\sim	\sim		\sim	\sim	\sim				
	FA6.2 FIRE ALARM SLC RISER DIAGRAM		LABEL	APPLICATION	MANUFACTURER	_	PAR			RES	ISTANCE M	FT	AWG	<u> </u>				ESCRIPT				!)	TAL LENG	
	FA6.3 FA HEADEND NOTIFICATION RISER		Α	16/2 FPLP (SLC)	WEST PENN	_	D60				4.10		16	20					SABLE UN				<u> </u>	4290'	
	FA6.4 FA APS NOTIFICATION RISER FA6.5 FA APS NOTIFICATION RISER		Н	12/2 FPLP (SPEAKER) *	WEST PENN		609	95B			1.80		12	Å					LOG HYPE			א	<u>}</u>	3776'	'
S MATERIALS IN	FA0.5 FA APS NOTIFICATION RISER FA7.1 FIRE ALARM NAC CALCS		Ν	16/2 FPLP (4-NET-TP)	WEST PENN		D60	991			4.10		16	8	2 CO	ND. SOLI	ID COPPE	ER <mark>FPL</mark> T	WISTED P	AIR (LOV	N CAP)		8	1137'	-
SPECTION REPORT	FA7.2 FIRE ALARM NAC CALCS (CONT.)		Р	14/2 THHN/THWN PAIR (AUX)	GENERIC		Ν	A			3.07		14	§	2	COND. F	PAIR STR	RANDED C	COPPER T	[HHN/TH)	WN		Į –	1514'	
SULATION. THE FIRE	· · · · ·			16/2 FPLP (SPEAKER)	WEST PENN			90B			4.10		16	8	2 CON		COPPER					, ——	2	7005'	,
DUTING FOR BIDDING	FA7.3 FIRE ALARM NAC CALCS (CONT.)		S	10/2 FPLP (SPEAKER)			609	000			1.10			u u	2 0011				ALOG EDI	WARDS S	PEAKER	` •	0		•
OUTING FOR BIDDING Y OF PENETRATIONS	FAT.4 FIRE ALARM BATTERY CALCS		L	16/2 FPLP (25V AUDIO RISER)	WEST PENN		609				4.10		16						ANALOG			`	<u>p</u>	1637'	
NSULATION. THE FIRE OUTING FOR BIDDING Y OF PENETRATIONS OW SPECIFICATION	· · · · ·		L V	, , , , , , , , , , , , , , , , , , ,	WEST PENN GENERIC		609 N	90B A			4.10 3.07		16 14	<u>}</u>	2 C 2	OND. SO	LID COP	PER FPL	ANALOG	AUDIO RI	RISER				"

HOP DRAWING FOR PERMIT/CONSTRUCTION	(BRICK BREEDEN) FIELDHOUSE		FIRE ALARM REPLACEMENT		MONIANA SIAIE UNIVERSIIY	BOZEMAN
100% SHO	FII	Re	ALARIN	Desig	N, LL	, .c
	DRAW		BY: B ED BY:	SM BSM		
	REV. 01 02	L A		IPTION ew	2/	DATE 26/25
	02	A	uuenua	#1	5/	7/25
	A N F S	pex ICE ire A tate	n Moss, S Fire Alar T 110772	rm Design 2 stems, Lev ana DLI	el IV	
	PP	A	#2	3-0	92	28
	AE‡	# :	202	4-02	2-0	4D
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MONTANA STATE UNIVERSITY

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SYMBOL	QUANTITY	MANUFACTURER	PART NO	DESCRIPTION	SIZE	MOUNTING	TRIM	BOX
	1	EDWARDS	EST4 VOICE PANEL	FACP VOICE PANEL	50"H X 27.34"W X 3.86"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	4-CAB24DR	3-CAB21B
	1	EDWARDS	4-CPU	MAIN CPU		LEFT 3 LRM SPACES ON 3-CHAS7		
	1	EDWARDS	4-LCDLE	DISPLAY, MAIN LCD MODULE		ON 4-CPU @ INNER DOOR		
	1	EDWARDS	4-MIC	PAGING MICROPHONE		2 LRM SPACES ON 3-CHAS7		
	1	EDWARDS	4-AUDTELS	AUDIO IO AND TELEPHONE RISER MODULE		LRM SPACE ON 3-CHAS7		
	1	EDWARDS	4-LCDAUDTEL	SEPARATE LCD FOR MIC/FT		ON 4-AUDTELS @ INNER DOOR		
	1	EDWARDS	4-PPS/M	PRIMARY POWER SUPPLY 120V		3-CHAS7		
FACU	1	EDWARDS	3-MODCOM	MODEM COMMUNICATOR AND DIALER		LRM SPACE ON 3-CHAS7		
	1	EDWARDS	3-SSDC2	SIGNATURE SINGLE DRIVER CONTROLLER		LRM SPACE ON 3-CHAS7		
	1	EDWARDS	3-ZA20A	20 WATT ZONED AMPLIFIER, CLASS B, 70VRMS		LRM SPACE ON 3-CHAS7		
	1	EDWARDS	3-CAB21B	BACK BOX /W 21 LRM SPACE W/O DOOR		N/A		
	1	EDWARDS	4-CAB24DRL	DOOR ASSEMBLY, RED		3-CAB21B		
	1	EDWARDS	4-24L24S	24 INDICATOR 24 CONTROL DISPLAY MODULE		INNER DOOR		
	3	EDWARDS	3-CHAS7	CHASSIS ASS'Y FOR 7 LRMS		3-CAB21B		
	2	EDWARDS	4-NET-TP	TWISTED PAIR SFP NETWORK CONTROLLER		ON 4-CPU		
	1	EDWARDS	BC-1	BATTERY BOX FOR 40AH BATTERIES		BELOW OR ADJACENT TO FACU		
	3	EDWARDS	4-6ANN (PAGING)	METALLIC BRONZE ANNUNCIATOR W/4-ANNCPU, MIC	13.2"H X 18.68"W X 2.67"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	4-CAB24DR	3-CAB21B
	3	EDWARDS	4-ANNCPU	ANNUNCIATOR CENTRAL PROCESSOR UNIT		IN 4-6ANNMT		
	3	EDWARDS	4-ANNAUDTEL	AUDIO TELEPHONE INTERFACE MODULE		IN 4-6ANNMT		
	3	EDWARDS	4-LCDLE	DISPLAY, MAIN LCD MODULE		ON 4-ANNCPU		
FAA	3	EDWARDS	4-24L24S	24 INDICATOR 24 CONTROL DISPLAY MODULE		IN 4-6ANNMT		
	3	EDWARDS	4-6ANNMT	WALLBOX, SURFACE/FLUSH MOUNTING		N/A		
	3	EDWARDS	4-6ANN SERIES	DOOR ASSEMBLY FOR 4-6ANNMT, BRONZE		ON 4-6ANNMT		
	3	EDWARDS	4-MIC	PAGING MICROPHONE		IN 4-6ANNMT		
	6	EDWARDS	4-NET-TP	TWISTED PAIR SFP NETWORK CONTROLLER		ON 4-ANNCPU		
CELL	1	DMP	DUALCOMNF-LA (24V)	UNIVERSAL FIRE ALARM COMMUNICATOR LTE-AT&T	4.5"W X 2.75"H X 1.75"D		N/A	INCLUDED
NAC AA30	5	EDWARDS	APS6A	AUXILIARY/BOOSTER POWER SUPPLY, 6A, 120VAC, RED	26"H X 15"W X 5.3"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	N/A	INCLUDED
AA30	5	EDWARDS	SIGA-AA30	30 WATT INTELLIGENT AUDIO AMPLIFIER		MOUNT IN SIDE AT THE TOP OF APS		
AA30x2	1	EDWARDS	APS10A	AUXILIARY/BOOSTER POWER SUPPLY, 10A, 120VAC, RED	26"H X 15"W X 5.3"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	N/A	INCLUDED
ALOUAZ	2	EDWARDS	SIGA-AA30	30 WATT INTELLIGENT AUDIO AMPLIFIER		MOUNT IN SIDE AT THE TOP OF APS		
NAC	1	EDWARDS	BPS10A	REMOTE BOOSTER POWER SUPPLY, 10A, 120VAC, RED	17"H X 13"W X 3.375"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	N/A	INCLUDED
	2	EDWARDS	AMPLIFIER(S) FOR HYPERSPIKE SPEAKERS	3-RCC REMOTE CLOSET CABINET WITH (4) 3-ZA95 AMPLIFIERS AND 4-PPS POWER SUPPLIES.	48.375"H X 25"W X 6"D	72" AFF TO THE TOP OF THE CABINET. NO CONDUIT PENETRATION IN BOTTOM.	N/A	3-RCC21
	2	EDWARDS	3-RCC21R	RED REMOTE CHASSIS CABINET /W COVER		N/A		
	2	EDWARDS	4-CPU	MAIN CPU		LEFT 3 LRM SPACES ON 3-CHAS7		
AMP	8	EDWARDS	3-ZA95	95 WATT ZONED AMPLIFIER, CLASS B/A, 25 OR 70VRMS		LRM SPACE ON 3-CHAS7		
	8	EDWARDS	4-PPS/M	PRIMARY POWER SUPPLY 120V		3-CHAS7		
	6	EDWARDS	3-CHAS7	CHASSIS ASS'Y FOR 7 LRMS		3-RCC21		
	4	EDWARDS	4-NET-TP	TWISTED PAIR SFP NETWORK CONTROLLER		ON 4-CPU		
	3	EDWARDS	MFC-A (ELEV RECALL)	MULTI-FUNCTION CABINET W/ UIO6R AND (4) MCR, (1) MCT2	8"H X 14"W X 3.5"D	SURFACE MOUNT. 48" AFF TO TOP OF BOX. SEE FIRE ALARM PLANS	SIGA-UIO6R	INCLUDED
MFC	3	EDWARDS	SIGA-UIO6R	6 POSITION, RISER SELECTION UIO MB		MOUNTS IN MFC-A		
	12	EDWARDS	SIGA-MCR	CONTROL RELAY MODULE - UIO MOUNT		ON SIGA-UIO6R		
	3	EDWARDS	SIGA-MCT2	DUAL INPUT MODULE - UIO MOUNT		ON SIGA-UIO6R		
	1	EDWARDS	MFC-A (FIRE PUMP)	MULTI-FUNCTION CABINET W/ UIO2R AND (2)MCT2'S	8"H X 14"W X 3.5"D	SURFACE MOUNT. 48" AFF TO TOP OF BOX. SEE FIRE ALARM PLANS	SIGA-UIO2R	INCLUDED
MFC FP	1	EDWARDS	SIGA-UIO2R	6 POSITION, RISER SELECTION UIO MB		MOUNTS IN MFC-A		
	2	EDWARDS	SIGA-MCT2	DUAL INPUT MODULE - UIO MOUNT		ON SIGA-UIO2R		

					DEVICE LEG	GEND			
SYMBOL	QUANTITY	IS EXISTING	MANUFACTURER	PART NO	DESCRIPTION	SIZE	MOUNTING	TRIM	BOX
$\langle M \rangle_{M}$	8		EDWARDS	SIGA-IM2	ISOLATOR MODULE	2.5"H X 4"W X 1"D	ADJACENT TO THE FACU	SIGA-MP1	4" SQUARE BACK BOX - 2-1/8" DEEP
F	3		EDWARDS	SIGA-278	DOUBLE ACTION FIRE ALARM STATION	6"H X 3.5"W X 1"D	48" TO THE TOP OF THE HANDLE; PULL STATION WITHIN 5' OF THE EXIT	N/A	SINGLE GANG CUT-IN, 276B-RSB SURFACE MOUNT BOX RED
AIM	9		EDWARDS	SIGA-CT1	SINGLE INPUT MODULE	2.5"H X 2"W X 1"D	MOUNT WITHIN 3' OF THE DEVICE BEING MONITORED	SIGA-MP2	4" SQUARE BACK BOX - 2-1/8" DEEP, 1-GANG RING
	11		EDWARDS	SIGA-CT2	DUAL INPUT MODULE	2.5"H X 2"W X 1"D	MOUNT WITHIN 3' OF THE DEVICE BEING MONITORED	SIGA-MP2	4" SQUARE BACK BOX - 2-1/8" DEEP, 1-GANG RING
AOM	7		EDWARDS	SIGA-CR	CONTROL RELAY MODULE	2.5"H X 2"W X 1"D	MOUNT WITHIN 3' OF THE DEVICE BEING CONTROLLED	SIGA-MP2	4" SQUARE BACK BOX - 2-1/8" DEEP, 1-GANG RING
(AOM) CRH	11		EDWARDS	SIGA-CRH	CONTROL RELAY MODULE (HIGH CURRENT)	4"L x 4"W x 1"D	MOUNT WITHIN 3' OF THE DEVICE BEING CONTROLLED	N/A	4" SQUARE BACK BOX - 2-1/8" DEEP
(AOM) CC1S	7		EDWARDS	SIGA-CC1S	SIGNATURE SINGLE INPUT SIGNAL SYNCHRONIZATION MODULE	2.5"H X 4"W X 1"D	MOUNT IN APS CABINET	SIGA-MP1	N/A
S	46		EDWARDS	SIGA-OSD W/SIGA-SB4 BASE	INTELLIGENT OPTICAL SMOKE DETECTOR W/ STANDARD BASE	6"Ø X 2.5"D	36" OR GREATER AWAY FROM VENTS OR FLUORESCENT LIGHTS.	SIGA-SB4	4" SQUARE BACK BOX, 1-1/2" DEEP
⟨s⟩ _{IB}	3		EDWARDS	SIGA-OSD W/SIGA-IB4 BASE	INTELLIGENT OPTICAL SMOKE DETECTOR W/ ISOLATOR BASE	6"Ø X 2.5"D	36" OR GREATER AWAY FROM VENTS OR FLUORESCENT LIGHTS.	SIGA-IB4	4" SQUARE BACK BOX, 1-1/2" DEEP
(H)	3		EDWARDS	SIGA-HRD W/SIGA-SB4 BASE	INTELLIGENT FIXED TEMPERATURE /RATE-OF-RISE HEAT DETECTOR	6"Ø X 2.5"D	WITHIN 24" OF SPRINKLER HEAD.	SIGA-SB4	4" SQUARE BACK BOX, 1-1/2" DEEP
(SXH)	6		EDWARDS	SIGA-OSHD W/SIGA-SB4 BASE	MULTISENSOR SMOKE AND HEAT DETECTOR	6"Ø X 2.5"D	WITHIN 24" OF SPRINKLER HEAD.	SIGA-SB4	4" SQUARE BACK BOX, 1-1/2" DEEP
(S)	13		EDWARDS	SIGA-DDOS	OPTICA INTELLIGENT DUCT SMOKE DETECTOR	8.7L x 5.45"W x 1.9"D	SEE FIRE ALARM PLANS	N/A	4" SQUARE BACK BOX, 1-1/2" DEEP MOUNTED NEXT TO SIGA-SD
<u>\</u>	13		EDWARDS	SD-T##	AIR SAMPLE TUBE, FIELD VERIFY		FIELD VERIFY REQUIRED TUBE LENGTH		
×	13		EDWARDS	SD-TRK	REMOTE TEST/RESET STATION, KEYED	N/A	COORDINATE FINAL LOCATION WITH MSU	N/A	1-GANG, 2-1/2 DEEP BACK BOX
	71	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	EDWARDS	GCSVWA	SPEAKER/STROBE, CEILING, WHITE, ALERT	6.8"Ø X 1.82"D	FIRE TECH FORMAN CEILING	GCTW, GRSW-10	4" SQUARE BACKBOX - 2-1/8" DEEP
								·	
Ś	44		EDWARDS	GCSWA	SPEAKER, CEILING, WHITE, ALERT	6.8"Ø X 1.82"D	CEILING	GCTW, GRSW-10	4" SQUARE BACKBOX - 2-1/8" DEEP
×	102		EDWARDS	G4SVWA	SPEAKER/STROBE, WALL, WHITE, ALERT	5.78"H X 4.95"W X 1.62"D	80" TO THE BOTTOM OF THE BACK BOX	GRSW-10	4" SQUARE BACKBOX - 2-1/8" DEEP (FLUSH) OR <mark>G4WSB (SURFACE)</mark>
S	9		EDWARDS	G4SWA	SPEAKER, WALL, WHITE, ALERT	5.78"H X 4.95"W X 1.62"D	80" TO THE BOTTOM OF THE BACK BOX	GRSW-10	4" SQUARE BACKBOX - 2-1/8" DEEP (FLUSH) OR <mark>G4WSB (SURFACE)</mark>
S _{HS}	14		EDWARDS	90215A-801-05-L	TCPA-10 AUDIO SPEAKER, 5 SELECTABLE POWER TAPS, 25V, 70V AND 100 VRMS. RED	10.1"H X 10.1"W X 11.3"D	MOUNT TO CATWALK STRUCTURE SIDE RAILS USING WALL/POLE MOUNT BRACKET	72377B-801	4" SQUARE BACK BOX - 2-1/8" DEEP WITH RED BLANK COVER
S _{HS}	8		EDWARDS	90215A-801-05-L	TCPA-10 AUDIO SPEAKER, 5 SELECTABLE POWER TAPS, 25V, 70V AND 100 VRMS. RED	10.1"H X 10.1"W X 11.3"D	WALL MOUNT 8FT AFF TO BOTTOM OF SPEAKER USING WALL MOUNT BRACKET	72377B-801	4" SQUARE BACK BOX - 2-1/8" DEEP WITH RED BLANK COVER
¥	33		EDWARDS	G4VWN W/ G4VWA-CVR	WALL STROBE, WHITE, ALERT COVER	5.78"H X 4.95"W X 1.62"D	80" TO THE BOTTOM OF THE BACK BOX	G4TW, GP-10 & G4VWA-CVR	4" SQUARE BACKBOX - 2-1/8" DEEP (FLUSH) OR G4WSB (SURFACE)
×	4		EDWARDS	GCVWN W/ GCVWA-CVR	STROBE, CEILING, WHITE, ALERT COVER	6.8"Ø X 1.82"D	CEILING	GCTW, GP-10 & GCVWA-CVR	4" SQUARE BACKBOX - 2-1/8" DEEP
× _{HC}	16		EDWARDS	GCVHWA	STROBE, CEILING, WHITE, ALERT, HI CANDELA	6.8"Ø X 1.82"D	CEILING	GCTW, GP-10 & GCVWA-CVR	4" SQUARE BACKBOX - 2-1/8" DEEP
	1		EDWARDS	WG4RF-HVMC	OUTDOOR RATED HORN-STROBE, RED WITH FIRE MARKING, CLEAR LENS	5.6"W X 8.5"H X 1.4"D	MOUNT ABOVE OR ADJACENT TO FDC. 8'-10' ABOVE GRADE	N/A	742347U (RED)
JB	 28		GENERIC	N/A	JUNCTION BOX WALL	N/A	N/A	N/A	4" SQUARE BACK BOX - 2-1/8" DEEP WITH RED BLANK COVER
B	22		GENERIC	N/A	JUNCTION BOX CEILING	N/A	N/A	N/A	4" SQUARE BACK BOX - 2-1/8" DEEP WITH RED BLANK COVER
FFD	6		GENERIC	N/A	ROLL DOWN FIRE DOOR (MCCABE LINK)	N/A	EXISTING HARDWARE	N/A	N/A
DOC	1		SPACE AGE ELECTRONICS	SSU00685	FIRE ALARM DOCUMENT CABINET W/8GB USB DRIVE (ACE-11), RED WITH CUSTOM LOGO	N/A	EXISTING HARDWARE	N/A	N/A
FPC	1		GENERIC	N/A	FIRE PUMP CONTROLLER	N/A	EXISTING CONTROLS	N/A	N/A
Š	7		GENERIC	N/A	WATERFLOW SWITCH	N/A	EXISTING SWITCH	N/A	N/A
XO	14		GENERIC	N/A	VALVE TAMPER SUPERVISORY SWITCH	N/A	EXISTING SWITCH	N/A	N/A
BF	2		GENERIC	N/A	BACKFLOW VALVE	N/A	EXISTING SWITCH	N/A	N/A
	1		1	Ì	1		1		1



PANEL	LOAD	SU

PANEL COMPONENT SUMMARY

CIRCUIT SUMMARY

				CIRCUIT DETAIL	_S AND
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
3-SSDC2				L1	
3-ZA20A				Audio-25V	
3-2A20A				N1	
4-CPU				ANN	
4-PPS/M				AUX1	

PANEL LOAD SUM

PANEL COMPONENT SUMMARY

CIRCUIT SUMMARY

				CIRCUIT DETAILS	S AND (
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
3-ZA95				S2	
3-ZA95				S4	
3-ZA95				S1	
3-ZA95				S3	

PANEL LOAD SUM

PANEL COMPONENT SUMMARY

CIRCUIT SUMMARY

CIRCUIT DETAILS AND CA

SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
3-ZA95				S1	
3-ZA95				S3	
3-ZA95				S4	
3-ZA95				S2	

			STANDBY CUP	RENT (AMPS	S) ALARM CURRENT (AMPS))				
	QTY PART NO	DESCRIPTION	CURRENT DRAW (A)		CURRENT DRAW (A) TOTAL					
	1 3-CAB14B	Back Box /w 14 LRM Space w/o Door	1 x 0	= 0	1 x 0 = 0					
	1 3-CHAS7 1 3-MODCOM	Chassis Ass'y for 7 LRMs Modem Communicator and Dialer	1 x 0 1 x 0.06	= 0 = 0.06	1 x 0 = 0 1 x 0.095 = 0.095					
	1 3-SSDC2 1 3-ZA20A	Signature Single Driver Controller (LRM) 20 Watt Zoned Amplifier, Class A, 25 or 70Vrms	1 x 0.144 1 x 0.062	= 0.144 = 0.062	1 x 0.204 = 0.204 1 x 1.12 = 1.12	_				
	1 4-24L24S 1 4-AUDTELS	24 Indicator 24 Control Display Module Audio IO and Telephone Riser Source Module	1 x 0.009 1 x 0.085	= 0.009 = 0.085	1 x 0.009 = 0.009 1 x 0.101 = 0.101	_				
	1 4-CPU	Main CPU	1 x 0.211	= 0.211	1 x 0.211 = 0.211	_				
	14-LCDANN14-LCDAUDTEL	Color LCD display Separate LCD for Mic/FT	1 x 0.04 1 x 0.04	= 0.04	1 x 0.093 = 0.093 1 x 0.093 = 0.093		PANEL FCP (E	ST4 VOICE) SUI	MMARY REPORT	
	1 4-LCDLE	DISPLAY, MAIN LCD MODULE	1 x 0.04	= 0.04	1 x 0.093 = 0.093	_				
	1 4-MIC 1 4-NET-TP	Paging Microphone Twisted Pair SFP network controller	1 x 0.008 1 x 0.032	= 0.008	1 x 0.038 = 0.038 1 x 0.032 = 0.032	_				
	1 4-PPS/M	Primary Power Supply 120V CIRCUIT	1 x 0	= 0	1 x 0 = 0	_				
		ANN	1 x 0	= 0	$1 \times 0 = 0$	_				
		Audio-25V AUX1	1 x 0 1 x 0.03	= 0 = 0.03	1 x 0 = 0 1 x 0.082 = 0.082					
		L1 N1	1 x 0.01 1 x 0	= 0.01	1 x 0.014 = 0.014 1 x 0.238 = 0.238	_				
			TOTAL STANDBY CURRENT	0.77	TOTAL ALARM CURRENT 2.422					
) CALCULATIONS			STANDBY	CURRENT	ALARM CURRENT		TO-POINT VOLTAGE DROP	SPEAKER POV	WER/DB LOSS CALCULATIONS	
						STARTING				
AWG	TOTAL DEVICE QTY	CIRCUIT LENGTH RESISTANCE (Ω/ft)		TANDBY (A)	TOTAL ALARM (A)	CALCULATION VOLTAGE	N END OF LINE VOLTAGE VOLTAGE DRO	P WATTS CALCULATION VOLTAGE	END OF LINE VOLTAGE POWER LOSS PERCENT TOT	
16 16	194 7	4321' 0.004 1627' 0.004	0.	.01 0	0.014			0w 25v	25v 0.00 %	OdB
14	7	238' 0.003	(ງ 0	0.238	20.4v	20.05v 0.35v			
16 14		1141' 0.004 1' 0.003	0.	0 .03	0.082	20.4v	20.4v 0v			
		SECONDARY POWER SOURCE I	REQUIREMENTS))						
				EQUIRED STAN	IDBY TIME = 24 HOURS					
		SECONDARY STANDBY LOAD	0.77	REQUIRED ALARN	RM TIME = 15 MINUTES = 18.48 AH				S IN BC-1 CABIN	EI
		SECONDARY ALARM LOAD	2.422	x 0.25	= 0.61 AH	_	MO	UNTED BELOW	FACU	
	ST/	NDBY AND ALARM LOAD SUBTOTAL DERATING FACTOR			19.09 AH x 1.25	_				
	SECOND	RY LOAD REQUIREMENTS (AMP HOURS)			23.86 AH					
UMMARY			STANDBY CUF	RRENT (AMPS	PS) ALARM CURRENT (AMPS)				
u VI	QTY PART NO	DESCRIPTION	CURRENT DRAW (A)	``	CURRENT DRAW (A) TOTAL					
	3 3-CHAS7	Chassis Ass'y for 7 LRMs	(A) 3 x 0	= 0	(A) 3 x 0 = 0	_				
	1 3-RCC21R	Red Remote Chassis Cabinet /w Cover	1 x 0	= 0	1 x 0 = 0	_				
	4 3-ZA95 4 4-PPS/M	95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V	4 x 0.085 4 x 0	= 0.34	$\begin{array}{c c} 4 \times 5.54 &= 22.16 \\ \hline 4 \times 0 &= 0 \end{array}$		EL HSA:1 (3-R(CC21R W/3-7A95	5) SUMMARY REP	PORT
		CIRCUIT S1	1 x 0	= 0	1 x 0 = 0				,	
		S2	1 x 0	= 0	1 x 0 = 0	_				
		\$3 \$4	1 x 0 1 x 0	= 0 = 0	1 x 0 = 0 1 x 0 = 0	_				
			TOTAL STANDBY CURRENT	0.34	TOTAL ALARM CURRENT 22.16					
CALCULATIONS			STANDBY	CURRENT	ALARM CURRENT		TO-POINT VOLTAGE DROP LCULATION SUMMARY	SPEAKER POV	WER/DB LOSS CALCULATIONS	
AWG	TOTAL DEVICE QTY	CIRCUIT LENGTH RESISTANCE	TOTAL ST	ANDBY (A)	TOTAL ALARM (A)	STARTING CALCULATION		P TOTAL USED STARTING CALCULATION	END OF LINE POWER LOSS	TAL DB LOSS
12	5	ωτορη μετορη ωτορη μετορη 463' 0.002				VOLTAGE	VOLTAGE VOLTAGE DRO	WATTS VOLTAGE	VOLTAGE PERCENT	-0.211dB
12	4	508' 0.002	(0	0			48w 70.7v	69.46v 1.75 %	-0.154dB
12	4 5	379' 0.002 510' 0.002	(<u>)</u>	0			48w 70.7v 72w 70.7v		-0.115dB -0.233dB
	·	SECONDARY POWER SOURCE I	REQUIREMENTS	>				·· ·	· · · ·	
					NDBY TIME = 24 HOURS					
		SECONDARY STANDBY LOAD SECONDARY ALARM LOAD	0.34	x 24 x 0.25	= 8.16 AH = 5.54 AH	_		19\/ 9/AU DATTE		
	STA	NDBY AND ALARM LOAD SUBTOTAL	22.10	x U.25	13.7 AH	_			ERIES @ 24VDC	
	SECOND	DERATING FACTOR RY LOAD REQUIREMENTS (AMP HOURS)			x 1.25 17.13 AH					
	I		-			.				
			0		2S) ALARM CURRENT (AMPS))				
JMMARY			STANDBY CUR	TOTAL (**	(A) TOTAL					
JMMARY	QTY PART NO	DESCRIPTION	CURRENT DRAW (A)	TOTAL (A)						
JMMARY	3 3-CHAS7		CURRENT DRAW	TOTAL (A) = 0 = 0	3 x 0 = 0	_				
JMMARY	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085	= 0 = 0 = 0.34	$\begin{array}{c c} & & & \\ \hline & & 3 \times 0 & = 0 \\ \hline & & 1 \times 0 & = 0 \\ \hline & & 4 \times 5.54 & = 22.16 \end{array}$					
JMMARY	3 3-CHAS7 1 3-RCC21R	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover	CURRENT DRAW (A) 3 x 0 1 x 0	= 0 = 0	3 x 0 = 0 1 x 0 = 0	PANE	'EL HSA:2 (3-R0	CC21R W/3-ZA95	5) SUMMARY REP	PORT
JMMARY	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085	= 0 = 0 = 0.34	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	PANE	EL HSA:2 (3-R(CC21R W/3-ZA95	5) SUMMARY REP	PORT
JMMARY	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0	= 0 $= 0$ $= 0.34$ $= 0$ $= 0$ $= 0$ $= 0$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	PANE	EL HSA:2 (3-R(CC21R W/3-ZA95	5) SUMMARY REP	PORT
JMMARY	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY	= 0 = 0 = 0.34 = 0 = 0 = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	PAN	EL HSA:2 (3-R(CC21R W/3-ZA95	5) SUMMARY REP	PORT
	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT	= 0 $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		IEL HSA:2 (3-RC			PORT
	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY	= 0 $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	POINT-TO CALC	TO-POINT VOLTAGE DROP LCULATION SUMMARY	SPEAKER POV	VER/DB LOSS CALCULATIONS	PORT
	3 3-CHAS7 1 3-RCC21R 4 3-ZA95	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY	= 0 $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$ $= 0$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	 POINT-TO	TO-POINT VOLTAGE DROP LCULATION SUMMARY		WER/DB LOSS CALCULATIONS	PORT
CALCULATIONS AWG 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT C	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY	= 0 = 0 = 0.34 = 0 = 0 = 0 = 0 = 0 = 0 0.34	3×0 = 0 1×0 = 0 4×5.54 = 22.16 4×0 = 0 1×0 = 0 ALARM CURRENT 22.16	POINT-TO CALC STARTING CALCULATION	TO-POINT VOLTAGE DROP LCULATION SUMMARY	P TOTAL USED WATTS VOLTAGE	VER/DB LOSS CALCULATIONS END OF LINE POWER LOSS VOLTAGE PERCENT 70.5v 0.28 %	TAL DB LOSS -0.048dB
CALCULATIONS AWG 12 12 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH A82' 0.002 337' 0.002	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY	= 0 = 0 = 0.34 = 0 = 0 = 0 = 0 = 0 = 0 0.34	3×0 = 0 1×0 = 0 4×5.54 = 22.16 4×0 = 0 1×0 = 0 ALARM CURRENT 22.16	POINT-TO CALC STARTING CALCULATION	TO-POINT VOLTAGE DROP LCULATION SUMMARY	PTOTAL USED WATTSSTARTING CALCULATION VOLTAGE16w70.7v48w70.7v48w70.7v	VER/DB LOSS CALCULATIONS END OF LINE POWER LOSS VOLTAGE PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 %	TAL DB LOSS -0.048dB -0.102dB -0.142dB
CALCULATIONS AWG 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH Quitt QUIT S4 QUIT S3 S4	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY TOTAL ST	= 0 = 0 = 0.34 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 0.34 CURRENT CURRENT	3×0 = 0 1×0 = 0 4×5.54 = 22.16 4×0 = 0 1×0 = 0 ALARM CURRENT 22.16	POINT-TO CALC STARTING CALCULATION	TO-POINT VOLTAGE DROP LCULATION SUMMARY	P TOTAL USED WATTS SPEAKER POV WATTS STARTING CALCULATION VOLTAGE 16w 70.7v 48w 70.7v	VER/DB LOSS CALCULATIONS END OF LINE POWER LOSS VOLTAGE PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 %	TAL DB LOSS -0.048dB -0.102dB
CALCULATIONS AWG 12 12 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH A82' 0.002 337' 0.002	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY TOTAL ST	= 0 = 0 = 0.34 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0	3×0 = 0 1×0 = 0 4×5.54 = 22.16 4×0 = 0 1×0 = 0 ALARM CURRENT 22.16	POINT-TO CALC STARTING CALCULATION	TO-POINT VOLTAGE DROP LCULATION SUMMARY	PTOTAL USED WATTSSTARTING CALCULATION VOLTAGE16w70.7v48w70.7v48w70.7v	VER/DB LOSS CALCULATIONS END OF LINE POWER LOSS VOLTAGE PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 %	TAL DB LOSS -0.048dB -0.102dB -0.142dB
CALCULATIONS AWG 12 12 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT RESISTANCE (Ω/ft) 482' 0.002 A628' 0.002 CIRCUIT SECONDARY POWER SOURCE F	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY TOTAL ST STANDBY	IOTAL (A) = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 0 0.34 CURRENT ANDBY (A) 0	3 x 0 = 0 1 x 0 = 0 4 x 5.54 = 22.16 4 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 0 1 x 0 = 0 O 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<	POINT-TC CALC STARTING CALCULATION VOLTAGE	TO-POINT VOLTAGE DROP LCULATION SUMMARY N END OF LINE VOLTAGE VOLTAGE DRO	PTOTAL USED WATTSSTARTING CALCULATION VOLTAGE16w70.7v48w70.7v48w70.7v18w70.7v	VER/DB LOSS CALCULATIONS END OF LINE VOLTAGE POWER LOSS PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 % 70.37v 0.47 %	TAL DB LOSS -0.048dB -0.102dB -0.142dB
CALCULATIONS AWG 12 12 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT S1 CIRCUIT LENGTH CIRCUIT S1 CIRCUIT LENGTH CIRCUIT S1 CIRCUIT LENGTH CIRCUIT S2 S3 S4 CIRCUIT LENGTH CIRCUIT S1 CIRCUIT S1 CIRCUIT S1 CIRCUIT S2 S3 S4 CIRCUIT CIRCUIT S1 CIRCUIT S1 CIRCUIT S1 CIRCUIT S1 CIRCUIT S1 CIRCUIT S1 S2 S3 S4 CIRCUIT CIRCUIT S1 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S2 S3 S4 CIRCUIT S3 S4 CIRCUIT S4	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY TOTAL ST CURRENT STANDBY	IOTAL (A) = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 0 0.34 CURRENT TANDBY (A) 0	3×0 = 0 1×0 = 0 4×5.54 = 22.16 4×0 = 0 1×0 = 0	POINT-TC CALC STARTING CALCULATION VOLTAGE	TO-POINT VOLTAGE DROP LCULATION SUMMARY N END OF LINE VOLTAGE VOLTAGE DRO	PTOTAL USED WATTSSTARTING CALCULATION VOLTAGE16w70.7v48w70.7v48w70.7v18w70.7v	VER/DB LOSS CALCULATIONS END OF LINE POWER LOSS VOLTAGE PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 %	TAL DB LOSS -0.048dB -0.102dB -0.142dB
12 12 12	3 3-CHAS7 1 3-RC21R 4 3-ZA95 4 4-PPS/M	DESCRIPTION DESCRIPTION Chassis Ass'y for 7 LRMs Red Remote Chassis Cabinet /w Cover 95 Watt Zoned Amplifier, Class B/A, 25 or 70Vrms Primary Power Supply 120V CIRCUIT S1 S2 S3 S4 CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT RESISTANCE (Ω/ft) A82' 0.002 A68' 0.002 CIRCUIT SECONDARY POWER SOURCE F SECONDARY POWER SOURCE F CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH CIRCUIT C	CURRENT DRAW (A) 3 x 0 1 x 0 4 x 0.085 4 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 1 x 0 TOTAL STANDBY CURRENT STANDBY TOTAL STANDBY CURRENT CURRENT STANDBY CURRENT STANDBY CURRENT STANDBY	IOTAL (A) = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 = 0 0 0.34 CURRENT TANDBY (A) 0	3 x 0 = 0 1 x 0 = 0 4 x 5.54 = 22.16 4 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 1 x 0 = 0 0 CURRENT 22.16 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	POINT-TC CALC STARTING CALCULATION VOLTAGE	TO-POINT VOLTAGE DROP LCULATION SUMMARY N END OF LINE VOLTAGE VOLTAGE DRO	PTOTAL USED WATTSSTARTING CALCULATION VOLTAGE16w70.7v48w70.7v48w70.7v18w70.7v	VER/DB LOSS CALCULATIONS END OF LINE VOLTAGE POWER LOSS PERCENT TOT 70.5v 0.28 % 69.88v 1.16 % 69.56v 1.61 % 70.37v 0.47 %	TAL DB LOSS -0.048dB -0.102dB -0.142dB



				PANEL L	OAD SUMM
			PANEL COMPONENT	SUMMARY	
			CIRCUIT SUM	MARY	
				CIRCUIT DETAIL	S AND CAL
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
		CAPACITY		N1	
BPS10A Mainboard				N2 N3	
				N4	
				PANEL L	OAD SUMM
			PANEL COMPONENT	SUMMARY	
			CIRCUIT SUM		
				VIANT	
					S AND CAL
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
APS10A Mainboard				N2 N3	
SIGA-AA30	30w	10w	20w	N4 S1	
	I				
				PANEL L	OAD SUMM
			PANEL COMPONENT	SUMMARY	
			CIRCUIT SUM	MARY	
				CIRCUIT DETAIL	S AND CAL
SOURCE	MAX CAPACITY	TOTAL USED	AVAILABLE CAPACITY	CIRCUIT	
		CAPACITY		N2	
APS10A Mainboard				N3 N4	
SIGA-AA30	30w	11w	19w	S1	

										I				
MMARY	07)(DADTNO				STANDBY CUR	. ,	ALARM CURF	. ,	-				
	QTY	PART NO				(A)	TOTAL (A)	(A)	TOTAL	-				
	1	BPS10A Mainboard	CIRCUIT	oard for BPS10A as	sembly	1 x 0.07	= 0.07	1 x 0.27	= 0.27	-				
			N1 N2			1 x 0 1 x 0	= 0 = 0	1 x 0.364 1 x 0.35	= 0.364 = 0.35	-	FANE	L BPS:1	(DF310	A) 30
			N3			1 x 0	= 0	1 x 0.53	= 0.53	-				
			N4			1 x 0 TOTAL STANDBY	= 0	1 x 0.318 TOTAL ALARM	= 0.318	-				
						CURRENT		CURRENT		POINT-TC)-POINT VOLT/	AGE DROP		
CALCULATIONS					CIRCUIT	STANDBY	CURRENI	ALARM C	URRENI		ULATION SUM			SPEAKER I
AWG		TOTAL DEVICE QTY	,	CIRCUIT LENGTH		TOTAL STA	NDBY (A)	TOTAL AI	LARM (A)	CALCULATION VOLTAGE	END OF LINE VOLTAGE	VOLTAGE DROP	TOTAL USED WATTS	CALCULATI
14		13 12		866' 663'	0.003	0		0.3	-	19.7v 19.7v	18.68v 19.03v	1.02v 0.67v		
14		10 6		869' 1019'	0.003	0		0.5		19.7v 19.7v	18.12v 18.61v	1.58v 1.09v		
17		Ū	SEC					0.0		10.14	10.017	1.007		
								BY TIME = 24 HOUR TIME = 15 MINUTES		-				
						0.07	x 24	= 1.6	8 AH	-			0)/7011	
		ST	andby and ala	ALARM LOAD	AL	1.832	x 0.25	2.14	AH	-	PRUV	IDE (2) 1		DAII
		SECON		G FACTOR JIREMENTS (AMP F	HOURS)			x 1. 2.67						
										1				
MMARY	07)	DADTNO				STANDBY CUR		ALARM CURF		-				
	QTY	PART NO		DESCRIPTION		(A)	TOTAL (A)	(A)	TOTAL			_ /		
	1	APS10A Mainboard SIGA-AA30		oard for APS10A ass tt Intelligent Audio A	-	1 x 0.07 1 x 0.002	= 0.07	1 x 0.27 1 x 1.55	= 0.27 = 1.55			2 (APS6		
			CIRCUIT N2			1 x 0	= 0	1 x 0.56	= 0.56	-		POWEF		
			N3			1 x 0	= 0	1 x 0.574	= 0.574	-	ΤΟΤΑ	L USED	CAPAC	ITY =
			N4 S1			1 x 0.344 1 x 0	= 0.344 = 0	1 x 0.427 1 x 0	= 0.427 = 0	-				
						TOTAL STANDBY CURRENT	0.416	TOTAL ALARM CURRENT	3.381					
CALCULATIONS						STANDBY	CURRENT	ALARM C	URRENT		D-POINT VOLTA			SPEAKER I
AWG		TOTAL DEVICE QTY	,	CIRCUIT LENGTH	(Ω/ft)	TOTAL STA	. ,	TOTAL AI	. ,	STARTING CALCULATION VOLTAGE	END OF LINE VOLTAGE	VOLTAGE DROP	TOTAL USED WATTS	STARTING CALCULATI VOLTAGE
14 14		20 20		497' 711'	0.003	0		0.5		19.7v 19.7v	18.8v 18.28v	0.9v 1.42v		
14		1 37		261' 1232'	0.003	0.3		0.4		19.7v	19.02v	0.68v	10w	70.7v
			SEC	ONDARY POW	ER SOURCE R	EQUIREMENTS					I			
								BY TIME = 24 HOUR TIME = 15 MINUTES		-				
				STANDBY LOAD		0.416	x 24 x 0.25	= 9.9	8 AH	-)/ 1QAL	
		ST	ANDBY AND ALA	RM LOAD SUBTOT	AL	0.001	X 0.23	10.83	3 AH	-	FNUVI	DE (2) 12	2V IOAI	IDAI
		SECON		G FACTOR JIREMENTS (AMP F	HOURS)			x 1. 13.54						
										1				
MMARY	QTY	PART NO		DESCRIPTION		STANDBY CUR CURRENT DRAW	TOTAL (A)	CURRENT DRAW	TOTAL	-				
	1	APS10A Mainboard	Mainh	oard for APS10A as	sombly	(A) 1 x 0.07	= 0.07	(A) 1 x 0.27	= 0.27					` ∧ ∧ ∧ ́
	1	SIGA-AA30	30 Wa	tt Intelligent Audio A		1 x 0.002	= 0.002	1 x 1.55	= 0.27			3 (APS6		
			CIRCUIT N2			1 x 0	= 0	1 x 0.224	= 0.224	-		POWEF		
			N3 N4			1 x 0 1 x 0.344	= 0 = 0.344	1 x 0.749 1 x 0.427	= 0.749 = 0.427		IOTA	L USED	CAPAC	
			S1			1 x 0 TOTAL STANDBY	= 0	1 x 0 TOTAL ALARM	= 0	-				
						CURRENT	0.416	CURRENT	3.22)-POINT VOLT/			
CALCULATIONS				1		STANDBY	CURRENT	ALARM C	URRENT	CALC				SPEAKER I
AWG		TOTAL DEVICE QTY	,	CIRCUIT LENGTH	(Ω/ft)	TOTAL STA		TOTAL AI	,	STARTING CALCULATION VOLTAGE	END OF LINE VOLTAGE	VOLTAGE DROP	TOTAL USED WATTS	STARTING CALCULATI VOLTAGE
14 14		8 23		246' 751'	0.003	0		0.2		19.7v 19.7v	19.51v 17.88v	0.19v 1.82v		
14 16		1 38		253' 998'	0.003	0.3		0.4		19.7v	19.04v	0.66v	11w	70.7v
			SEC			EQUIREMENTS		·		·	·	·		·
								BY TIME = 24 HOUR TIME = 15 MINUTES						
				STANDBY LOAD		0.416	x 24 x 0.25	= 9.9		-		DE (2) 12)\/ 1Q/L	IRAT
		ST	andby and ala	RM LOAD SUBTOT	AL	V.LL		10.79	9 AH	-				ואטו
		SECON		G FACTOR JIREMENTS (AMP F	HOURS)			x 1. 13.49						
					•	1				İ.				

) SUMI	MARY F	REPORT	-	
PEAKER POW STARTING CALCULATION VOLTAGE	/ER/DB LOSS (END OF LINE VOLTAGE	CALCULATIONS POWER LOSS PERCENT	TOTAL DB LOSS	
BATTE	RIES @	24VDC		
/ MAX		1ARY RI NT = 64 6.35 %)		
PEAKER POW STARTING CALCULATION VOLTAGE	IER/DB LOSS C	POWER LOSS PERCENT	TOTAL DB LOSS	
70.7v	69.92v	1.11 %	-0.177dB	
BATTE	RIES @) 24VDC)	
Y MAX	•	1ARY RI NT = 64 8.67 %)		
PEAKER POW	END OF LINE	CALCULATIONS	S	-
VOLTAGE 70.7v	VOLTAGE 70.05v	0.92 %	-0.158dB	-
BATTE	RIES @) 24VDC)	



PANEL	LOAD	SUN

PANEL COMPONENT SUMMARY	

CIRCUIT SUMMARY

				CIRCUIT DETAILS	AND CA
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
				N2	
APS10A Mainboard				N3	
				N4	
SIGA-AA30	30w	4.75w	25.25w	S2	
SIGA-AA30	30w	10.5w	19.5w	S1	

PANEL LOAD SUM

PANEL COMPONENT SUMMARY

			CIRCUIT SUMM	<i>I</i> ARY					
CIRCUIT DETAILS AND									
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT					
				N2					
S10A Mainboard				N3					
				N4					
SIGA-AA30	30w	8.25w	21.75w	S1					

PANEL LOAD SUM

CIRCUIT SUMMARY

				CIRCUIT DETAILS	AND CA
SOURCE	MAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
				N2	
APS10A Mainboard				N3	
SIGA-AA30	30w	14.75w	15.25w	S1	

PANEL LOAD SUM

			PANEL COMPONENT SUM	MARY	
			CIRCUIT SUMMARY		
				CIRCUIT DETAIL	.S AND C.
SOURCE M.	IAX CAPACITY	TOTAL USED CAPACITY	AVAILABLE CAPACITY	CIRCUIT	
APS10A Mainboard				N2	
SIGA-AA30	30w	6.75w	23.25w	S1	

A												
) SUMMARY			STANDBY CURRENT (AMPS	S) ALARM CURRENT (AMPS)								
	QTY PART NO	CURRENT DRAW (A) TOTAL (A)										
		Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1 x 0.07 = 0.07 2 x 0.002 = 0.004	1 x 0.27 = 0.27 2 x 1.55 = 3.1	PANEL APS:4 (APS10A W/SIGA-AA30) SUMMARY REPOR						REPOR	
	CIRCUIT N2	T	1 x 0 = 0	1 x 0.637 = 0.637	- - I	PANEL	POWER S	SUPPL	Y MAX (CURRE	NT = 10	A
	N3 N4		1 x 0 = 0 1 x 0.42 = 0.42	1 x 0.448 = 0.448 1 x 0 = 0	_	ΤΟΤΑ	L USED C	APACI	TY=4.4	455A (4	4.55 %)	
	S1 S2		1 x 0 = 0 1 x 0 = 0	1 x 0 = 0 1 x 0 = 0	-							
			TOTAL STANDBY CURRENT 0.494	TOTAL ALARM CURRENT 4.455								
ND CALCULATIONS			STANDBY CURRENT	ALARM CURRENT		-POINT VOLT		S	SPEAKER POV	VER/DB LOSS (CALCULATION	S
AWG	TOTAL DEVICE QTY	CIRCUIT LENGTH CIRCUIT CIRCUIT LENGTH RESISTANCI (Ω/ft)	E TOTAL STANDBY (A)	TOTAL ALARM (A)	STARTING CALCULATION VOLTAGE	END OF LINE VOLTAGE	VOLTAGE DROP	TOTAL USED WATTS	STARTING CALCULATION VOLTAGE	END OF LINE VOLTAGE	POWER LOSS PERCENT	TOTAL DB LOS
14	19	775' 0.003	0	0.637	19.7v	17.85v	1.85v		VOLTAGE			
14	14 31	1335' 0.003 917' 0.003	0	0.448	19.7v 19.7v	16.51v 19.7v	3.19v 0v					
16 16	18 33	630' 0.004 944' 0.004	0 0	0				4.75w 10.5w	70.7v 70.7v	70.46v 70.06v	0.34 %	-0.043dB -0.142dB
		SECONDARY POWER SOURCE		DBY TIME = 24 HOURS								
	SECOND	DARY STANDBY LOAD		M TIME = 15 MINUTES = 11.86 AH	_							
SECONDARY STANDST LOAD SECONDARY ALARM LOAD STANDBY AND ALARM LOAD SUBTOTAL			4.455 x 0.25	= 1.11 AH 12.97 AH	PROVIDE (2) 12V 18AH BATTERIES @ 24) 24VD(C			
		RATING FACTOR REQUIREMENTS (AMP HOURS)		x 1.25 16.21 AH	-							
) SUMMARY	QTY PART NO	DESCRIPTION	CURRENT DRAW TOTAL (A)	S) ALARM CURRENT (AMPS)	_							
		Mainboard for APS10A assembly	(A) 1 x 0.07 = 0.07	(A) TOTAL 1 x 0.27 = 0.27			5 (APS6A	\\\/QIC	Δ-γνου		NVDV D	רסטב
		30 Watt Intelligent Audio Amplifier	1 x 0.002 = 0.002	1 x 1.55 = 1.55			POWER S					
	N2 N3		$1 \times 0 = 0$ 1 x 0 = 0	$\begin{array}{c c} 1 \times 0.343 &= 0.343 \\ \hline 1 \times 0.49 &= 0.49 \end{array}$	-		AL USED (·
	N4 S1		$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	-	. 🗸 17			<u>.</u>			
			TOTAL STANDBY CURRENT 0.416	TOTAL ALARM CURRENT 3.08	-							
ND CALCULATIONS			STANDBY CURRENT	ALARM CURRENT		-POINT VOLT		S	SPEAKER POV	VER/DB LOSS (CALCULATION	S
AWG	TOTAL DEVICE QTY	CIRCUIT CIRCUIT LENGTH RESISTANCI	E TOTAL STANDBY (A)	TOTAL ALARM (A)	STARTING CALCULATION	END OF LINE VOLTAGE		TOTAL USED WATTS	STARTING CALCULATION	END OF LINE	POWER LOSS PERCENT	TOTAL DB LOS
14	12	(Ω/ft) 479' 0.003	0	0.343	VOLTAGE 19.7v	19.14v	0.56v	WATTS	VOLTAGE	VOLTAGE	PERGENI	
14 14	17 1	577' 0.003 124' 0.003	0 0.344	0.49	19.7v 19.7v	18.62v 19.37v	1.08v 0.33v					
16	27	1021' 0.004 SECONDARY POWER SOURCE		0				8.25w	70.7v	70.19v	0.72 %	-0.121dB
			REQUIRED STAN	DBY TIME = 24 HOURS	_							
			REQUIRED ALAR 0.416 x 24 3.08 x 0.25	M TIME = 15 MINUTES = 9.98 AH = 0.77 AH	_			/ 10/1				$\hat{}$
	STANDBY AND	IDARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR	3.08 X 0.25	= 0.77 AH 10.75 AH x 1.25	_	PRUVI	DE (2) 12\		BAIIE	RIES @	ý 24VD(
		REQUIREMENTS (AMP HOURS)		13.44 AH	•							
SUMMARY			STANDBY CURRENT (AMPS	S) ALARM CURRENT (AMPS)								
	QTY PART NO	DESCRIPTION	CURRENT DRAW (A) TOTAL (A)	CURRENT DRAW (A) TOTAL	_							
		Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1 x 0.07 = 0.07 1 x 0.002 = 0.002	1 x 0.27 = 0.27 1 x 1.55 = 1.55	_		6 (APS6A			,		
	CIRCUIT	,			_		POWER				:NI = 6/	-
	N2 N3		$1 \times 0 = 0$ $1 \times 0 = 0$	1 x 0.672 = 0.672 1 x 0.413 = 0.413	_			ΔΡΔ(Π	Y = 2			
					_		L USED C			905A (4	8.42 %)	
	S1		1 x 0 = 0 TOTAL STANDBY 0.072	1 x 0 = 0 TOTAL ALARM 2.905 CURRENT 2.905	-		L USED C			905A (4	8.42 %)	
ND CALCULATIONS)-Point Volt.	AGE DROP			905A (4)		
ND CALCULATIONS		CIRCUIT CIRCUIT LENGTH RESISTANCI	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT	TOTAL ALARM CURRENT 2.905		D-POINT VOLT	AGE DROP /MARY	S TOTAL USED		VER/DB LOSS (CALCULATION	S
	S1		1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT	TOTAL ALARM CURRENT 2.905 ALARM CURRENT	CALC STARTING	D-POINT VOLT	AGE DROP /MARY	S	SPEAKER POV	VER/DB LOSS (CALCULATION	S
AWG	S1	CIRCUIT LENGTH RESISTANCE (Ω/ft)	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT E TOTAL STANDBY (A)	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A)	CALC STARTING CALCULATION VOLTAGE	D-POINT VOLT ULATION SUN END OF LINE VOLTAGE	AGE DROP IMARY VOLTAGE DROP	S TOTAL USED	SPEAKER POV STARTING CALCULATION	VER/DB LOSS (CALCULATION	S
AWG 14 14	S1 TOTAL DEVICE QTY 20 12 46	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT TOTAL STANDBY (A) 0 0 0 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0	CALC STARTING CALCULATION VOLTAGE 19.7v	D-POINT VOLT ULATION SUN END OF LINE VOLTAGE 18.34v	AGE DROP //MARY VOLTAGE DROP 1.36v	S TOTAL USED WATTS	SPEAKER POV STARTING CALCULATION VOLTAGE	VER/DB LOSS (END OF LINE VOLTAGE	CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS
AWG 14 14	S1 TOTAL DEVICE QTY 20 12 46	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0 0 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0	CALC STARTING CALCULATION VOLTAGE 19.7v	D-POINT VOLT ULATION SUN END OF LINE VOLTAGE 18.34v	AGE DROP //MARY VOLTAGE DROP 1.36v	S TOTAL USED WATTS	SPEAKER POV STARTING CALCULATION VOLTAGE	VER/DB LOSS (END OF LINE VOLTAGE	CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS
AWG 14 14	S1 S1 TOTAL DEVICE QTY 20 12 46 SECOND/ SECOND/ SECOND/	CIRCUIT LENGTH RESISTANCE (Q/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0	CALC STARTING CALCULATION VOLTAGE 19.7v	D-POINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34v 18.96v	AGE DROP //MARY VOLTAGE DROP 1.36v	S TOTAL USED WATTS 14.75w	SPEAKER POV STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46v	CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS -0.326dB
AWG 14 14	S1 S	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT TOTAL STANDBY (A) 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0 0	CALC STARTING CALCULATION VOLTAGE 19.7v	D-POINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34v 18.96v	AGE DROP //MARY VOLTAGE DROP 1.36v 0.74v	S TOTAL USED WATTS 14.75w	SPEAKER POV STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46v	CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS -0.326dB
AWG 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCE (Q/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE SECONDARY POWER SOURCE	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT E TOTAL STANDBY (A) 0 0 0 0 REQUIREMENTS REQUIRED STAND 0.072 x 24 2.905 x 0.25	TOTAL ALARM CURRENT2.905ALARM CURRENTTOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES $= 1.73$ AH $= 0.73$ AH 2.45 AH x 1.25 3.07 AH	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	D-POINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34v 18.96v	AGE DROP //MARY VOLTAGE DROP 1.36v 0.74v	S TOTAL USED WATTS 14.75w	SPEAKER POV STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46v	CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS -0.326dB
AWG 14 14 16	S1 TOTAL DEVICE QTY 20 20 12 46 SECOND SECOND SECOND SECOND DER SECONDARY LOAD	CIRCUIT LENGTH RESISTANCE (Q/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS)	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT 0 TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	D-POINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34v 18.96v	AGE DROP //MARY VOLTAGE DROP 1.36v 0.74v	S TOTAL USED WATTS 14.75w	SPEAKER POV STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46v	CALCULATION POWER LOSS PERCENT	S TOTAL DB LO -0.326dB
AWG 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY STANDBY LOAD DARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT 0 TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT ALARM (A) TOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURS 0 M TIME = 15 MINUTES = 1.73 AH 2.45 AH x 1.25 3.07 AH 3.07 AH CURRENT DRAW (A) TOTAL	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	P-POINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34v 18.96v	AGE DROP //MARY VOLTAGE DROP 1.36v 0.74v	TOTAL USED WATTS 14.75w	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46v	CALCULATION POWER LOSS PERCENT 1.76 %	S TOTAL DB LO -0.326dB
AWG 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT 0 TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV	AGE DROP IMARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12 IDE (2) 12 7 (APS6A POWER S	TOTAL USED WATTS 14.75w V 7AH W/SIG	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE BATTE	VER/DB LOSS (END OF LINE VOLTAGE 69.46v RIES @	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC	S TOTAL DB LO -0.326dB
AWG 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1×0 $= 0$ TOTAL STANDBY CURRENTSTANDBY CURRENT000000REQUIREMENTSREQUIRED STANDREQUIRED STAND0.072x 242.905x 0.25CURRENT DRAWCURRENT DRAWTOTAL (A)1 x 0.07= 0.071 x 0= 0.002	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0 0 DBY TIME = 24 HOURS 0 M TIME = 15 MINUTES = 1.73 AH = 0.73 AH = 2.45 AH x 1.25 3.07 AH S) ALARM CURRENT (AMPS) CURRENT DRAW (A) TOTAL 1 x 0.27 = 0.27 1 x 1.55 = 1.55	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12'	TOTAL USED WATTS 14.75w V 7AH W/SIG	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE BATTE	VER/DB LOSS (END OF LINE VOLTAGE 69.46v RIES @	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC	S TOTAL DB LO -0.326dB
AWG 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1×0 $= 0$ TOTAL STANDBY CURRENT 0.072 STANDBY CURRENTTOTAL STANDBY (A) 0 0 0 0 REQUIREMENTSREQUIRED STANDREQUIRED ALARD 0.072 0.072 $x 24$ 2.905 $x 0.25$ STANDBY CURRENT (AMPS)CURRENT DRAW (A)CURRENT DRAW (A)TOTAL (A) 1×0.07 $= 0.07$ 1×0.02 $= 0.002$ 1×0 $= 0$ 1×0 $= 0$ TOTAL STANDBY 0.072	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0 0 DBY TIME = 24 HOURS M TIME = 15 MINUTES = 1.73 AH = 0.73 AH 2.45 AH x 1.25 3.07 AH SI ALARM CURRENT (AMPS) CURRENT DRAW (A) TOTAL 1 x 0.27 = 0.27 1 x 0.546 = 0.546 1 x 0 = 0 TOTAL ALARM 2 366	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV	AGE DROP IMARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12 IDE (2) 12 7 (APS6A POWER S	TOTAL USED WATTS 14.75w V 7AH W/SIG	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE BATTE	VER/DB LOSS (END OF LINE VOLTAGE 69.46v RIES @	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC	S TOTAL DB LO -0.326dB
AWG 14 14 14 16	S1 S	CIRCUIT LENGTH RESISTANCE (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT 0 TOTAL STANDBY (A) 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0.072 x 24 0.072 x 24 2.905 x 0.25 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0 0.072 x 24 2.905 x 0.25 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 x 0.07 = 0.002 <td>TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0.413 0 DBY TIME = 24 HOURS 0.413 M TIME = 15 MINUTES $= 1.73$ AH $= 0.73$ AH 2.45 AH 2.45 AH x 1.25 3.07 AH 3.07 AH CURRENT DRAW (A) TOTAL 1×0.27 $= 0.27$ 1×0.546 $= 0.546$ 1×0.546 $= 0.546$</td> <td>CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v</td> <td>PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA</td> <td>AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12 7 (APS6A POWER S L USED C</td> <td>TOTAL USED WATTS 14.75W V 7AH W/SIG SUPPL APACI</td> <td>SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE BATTE A-AA30 Y MAX TY = 2.5</td> <td>VER/DB LOSS (END OF LINE VOLTAGE 69.46v RIES @</td> <td>ALCULATION POWER LOSS PERCENT 1.76 % 24VDC 1.76 %</td> <td>S TOTAL DB LO -0.326dB</td>	TOTAL ALARM CURRENT 2.905 ALARM CURRENT TOTAL ALARM (A) 0.672 0.413 0.413 0 DBY TIME = 24 HOURS 0.413 M TIME = 15 MINUTES $= 1.73$ AH $= 0.73$ AH 2.45 AH 2.45 AH x 1.25 3.07 AH 3.07 AH CURRENT DRAW (A) TOTAL 1×0.27 $= 0.27$ 1×0.546 $= 0.546$ 1×0.546 $= 0.546$	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12 7 (APS6A POWER S L USED C	TOTAL USED WATTS 14.75W V 7AH W/SIG SUPPL APACI	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE BATTE A-AA30 Y MAX TY = 2.5	VER/DB LOSS (END OF LINE VOLTAGE 69.46v RIES @	ALCULATION POWER LOSS PERCENT 1.76 % 24VDC 1.76 %	S TOTAL DB LO -0.326dB
AWG 14 14 16 SUMMARY	S1 TOTAL DEVICE QTY 20 20 12 46 SECOND SECOND SECOND SECOND SECONDARY LOAD CIRCUIT 1 APS10A Mainboard M 1 SIGA-AA30 33 CIRCUIT N2 S1	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION DESCRIPTION 30 Watt Intelligent Audio Amplifier IT	1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENTTOTAL STANDBY (A)00000000REQUIREMENTSREQUIRED STAND0.072x 242.905x 0.25001 x 0.07= 0.071 x 0.07= 0.071 x 0.02= 0.0021 x 0= 01 x 0= 0 <t< td=""><td>TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A)$0.672$0.413$0$DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENT</td><td>CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v</br></td><td>PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA</td><td>AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' TOE (2) 12' AGE DROP MARY</td><td>TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI APACI</td><td>SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE A-AA30 Y MAX TY = 2.5 SPEAKER POW STARTING</td><td>VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (34 VER/DB LOSS (END OF LINE</td><td>CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS</td><td>S TOTAL DB LOS -0.326dB</td></t<>	TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENT	CALC STARTING CALCULATION 	PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' TOE (2) 12' AGE DROP MARY	TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI APACI	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE A-AA30 Y MAX TY = 2.5 SPEAKER POW STARTING	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (34 VER/DB LOSS (END OF LINE	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS	S TOTAL DB LOS -0.326dB
AWG 14 14 14 16 SUMMARY	S1 S	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION DESCRIPTION 10 Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT	1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENTTOTAL STANDBY (A)00000000REQUIREMENTSREQUIRED STAND0.072x 242.905x 0.25001 x 0.07= 0.071 x 0.07= 0.071 x 0.02= 0.0021 x 0= 01 x 0= 0 <t< td=""><td>TOTAL ALARM CURRENT2.905ALARM CURRENTTOTAL ALARM (A)TOTAL ALARM (A)$0.672$0.413$0$DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366</td><td>CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v</br></td><td>PPOINT VOLTA ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA</td><td>AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S L USED C</td><td>TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI</td><td>SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE BATTE A-AA30 Y MAX TY = 2.5 SPEAKER POW</td><td>VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @ 0) SUMM CURRE 366A (3) VER/DB LOSS (</td><td>CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION</td><td>S TOTAL DB LOS -0.326dB</td></t<>	TOTAL ALARM CURRENT2.905ALARM CURRENTTOTAL ALARM (A)TOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366	CALC STARTING CALCULATION 	PPOINT VOLTA ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S L USED C	TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE BATTE A-AA30 Y MAX TY = 2.5 SPEAKER POW	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @ 0) SUMM CURRE 366A (3) VER/DB LOSS (CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION	S TOTAL DB LOS -0.326dB
14 14 16 0 SUMMARY	S1 TOTAL DEVICE QTY 20 12 46 SECOND SECOND SECONDARY LOAD SECONDARY LOAD QTY PART NO 1 SIGA-AA30 2 S1	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY STANDBY LOAD DARY ALARM LOAD DARY ALARM LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL REQUIREMENTS (AMP HOURS) DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH CIRCUIT LENGTH 668' 0.003 668'	1 x 0 = 0 TOTAL STANDBY CURRENT 0.072 STANDBY CURRENT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0.072 x 24 2.905 x 0.25 0.072 x 24 2.905 x 0.25 0 0 0.072 x 24 2.905 x 0.25 0.072 x 24 2.905 x 0.25 0.072 x 24 1.x 0.07 = 0.07 1.x 0.07 = 0.07 1.x 0.002 = 0.002 1.x 0 = 0 1.x 0	TOTAL ALARM CURRENT2.905ALARM CURRENTTOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES $= 1.73$ AH $= 0.73$ AH 2.45 AH $x 1.25$ 3.07 AHCURRENT DRAW (A) 1×0.27 1×0.27 1×0.546 $= 0.546$ 1×0.546 2.366 ALARM CURRENT (A)ALARM CURRENT (A)	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12 7 (APS6A POWER S L USED C	TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI APACI	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE A-AA30 Y MAX TY = 2.5 SPEAKER POW STARTING CALCULATION	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (34 VER/DB LOSS (END OF LINE	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS	S TOTAL DB LOS -0.326dB
AWG 14 14 16 SUMMARY SUMMARY SUMMARY ND CALCULATIONS AWG 14	S1 TOTAL DEVICE QTY 20 12 46 SECOND SECOND SECONDARY LOAD SECONDARY LOAD QTY PART NO 1 SIGA-AA30 2 S1	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY STANDBY LOAD DARY ALARM LOAD D ALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION DESCRIPTION 30 Watt Intelligent Audio Amplifier IT CIRCUIT LENGTH CIRCUIT RESISTANCI (Ω/ft) 6668' 0.003	1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENT0TOTAL STANDBY (A)0000000000000000000000.072x 242.905x 0.250.072x 242.905x 0.250.072x 241.0071.0071.0070.0721.0020.0021.0020.0021.0020.0721.0020.0721.0020.0720.0721.0090.0720.0730.0720.0740.0720.0750.0720.0740.0720.0750.0720.0740.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.072 <trr>0.0750.0720.075</trr>	TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENTTOTAL ALARM CURRENTTOTAL ALARM CURRENTTOTAL ALARM CURRENTALARM CURRENT	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S L USED C AGE DROP MARY VOLTAGE DROP	TOTAL USED WATTS 14.75w V 7AH W/SIG SUPPL APACI APACI	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7V BATTE A-AA30 Y MAX TY = 2.3 SPEAKER POW STARTING CALCULATION VOLTAGE	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (3 366A (3 VER/DB LOSS (END OF LINE VOLTAGE	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS PERCENT	S TOTAL DB LOS -0.326dB
AWG 14 14 16 16 SUMMARY SUMMARY ND CALCULATIONS AWG 14	S1 S	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY ALARM LOAD DALARM LOAD SUBTOTAL RATING FACTOR REQUIREMENTS (AMP HOURS) DESCRIPTION DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT CIRCUIT LENGTH CIRCUIT RESISTANCI (Ω/ft) 6668' 0.003 668' 0.004 SECONDARY POWER SOURCE	1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENTTOTAL STANDBY (A)TOTAL STANDBY (A)000000REQUIREMENTS0.072x 242.905x 0.250.072x 242.905x 0.25101111111110.0710.0710.0710.0710.070.070.07210100.0720.072101010100.072XANDBY CURRENT0.07211<0	TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A) 0.672 0.413 0 DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENTALARM CURRENT1 x 0.546= 0.5461 x 01 x 0.546= 0.5461 x 01 x 0.546= 0.5461 x 0TOTAL ALARM CURRENTALARM CURRENTTOTAL ALARM (A)0.54600	CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v	PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA PANEL TOTA	AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S LUSED C AGE DROP MARY VOLTAGE DROP 1.04v	TOTAL USED WATTS 14.75W W/SIG SUPPL APACI APACI APACI 6.75W	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE A-AA30 Y MAX TY = 2.3 SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (30 VER/DB LOSS (END OF LINE VOLTAGE 70.43V	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS PERCENT 0.38 %	S TOTAL DB LOS -0.326dB
AWG 14 14 14 16 SUMMARY	S1 S1 TOTAL DEVICE QTY 20 12 46 SECOND/ SECOND SECOND/ SECONDARY LOAD SECONDARY LOAD OTAL DEVICE QTY 1 APS10A Mainboard M 1 SIGA-AA30 3 1 SIGA 3 SIGA </td <td>CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY STANDBY LOAD DARY ALARM LOAD SUBTOTAL REQUIREMENTS (AMP HOURS) PREQUIREMENTS (AMP HOURS) DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT CIRCUIT LENGTH RESISTANCE Q(Ω/ft) 668' 0.003 668' 0.004 SECONDARY POWER SOURCE</td> <td>1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENTTOTAL STANDBY (A)000000000000000000000000000.072x 242.905x 0.250.072x 242.905x 0.250.072x 241.0072.0021.0071.0071.0070.0721.0020.0021.0020.0021.0020.0721.0030.0721.0040.0720.0721.0050.0720.0720.0720.0721.0040.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0730.0720.0740.0720.0750.0720.0740.0720.0750.0720.0740.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.075<td< td=""><td>TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A)$0.672$0.413$0$DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENTTOTAL ALARM CURRENT</td><td>CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v</br></td><td>PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA PANEL TOTA</td><td>AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S L USED C AGE DROP MARY VOLTAGE DROP</td><td>TOTAL USED WATTS 14.75W W/SIG SUPPL APACI APACI APACI 6.75W</td><td>SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE A-AA30 Y MAX TY = 2.3 SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v</td><td>VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (30 VER/DB LOSS (END OF LINE VOLTAGE 70.43V</td><td>CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS PERCENT 0.38 %</td><td>S TOTAL DB LOS -0.326dB</td></td<></td>	CIRCUIT LENGTH RESISTANCI (Ω/ft) 599' 0.003 579' 0.003 1521' 0.004 SECONDARY POWER SOURCE DARY STANDBY LOAD DARY STANDBY LOAD DARY ALARM LOAD SUBTOTAL REQUIREMENTS (AMP HOURS) PREQUIREMENTS (AMP HOURS) DESCRIPTION Mainboard for APS10A assembly 30 Watt Intelligent Audio Amplifier IT CIRCUIT LENGTH RESISTANCE Q(Ω/ft) 668' 0.003 668' 0.004 SECONDARY POWER SOURCE	1 x 0= 0TOTAL STANDBY CURRENT0.072STANDBY CURRENTTOTAL STANDBY (A)000000000000000000000000000.072x 242.905x 0.250.072x 242.905x 0.250.072x 241.0072.0021.0071.0071.0070.0721.0020.0021.0020.0021.0020.0721.0030.0721.0040.0720.0721.0050.0720.0720.0720.0721.0040.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0720.0730.0720.0740.0720.0750.0720.0740.0720.0750.0720.0740.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.0750.0720.075 <td< td=""><td>TOTAL ALARM CURRENT2.905ALARM CURRENTALARM (A)TOTAL ALARM (A)$0.672$0.413$0$DBY TIME = 24 HOURSM TIME = 15 MINUTES= 1.73 AH= 0.73 AH2.45 AHx 1.253.07 AHS)ALARM CURRENT (AMPS)CURRENT DRAW (A)TOTAL1 x 0.27= 0.271 x 1.55= 1.551 x 0.546= 0.5461 x 0= 0TOTAL ALARM CURRENT2.366ALARM CURRENTTOTAL ALARM CURRENT</td><td>CALC STARTING CALCULATION VOLTAGE 19.7v 19.7v</br></td><td>PPOINT VOLT, ULATION SUM END OF LINE VOLTAGE 18.34V 18.96V PROV EL APS: PANEL TOTA PANEL TOTA</td><td>AGE DROP MARY VOLTAGE DROP 1.36v 0.74v IDE (2) 12' 7 (APS6A POWER S L USED C AGE DROP MARY VOLTAGE DROP</td><td>TOTAL USED WATTS 14.75W W/SIG SUPPL APACI 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APACI APACI 6.75W	SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v BATTE A-AA30 Y MAX TY = 2.3 SPEAKER POW STARTING CALCULATION VOLTAGE 70.7v	VER/DB LOSS (END OF LINE VOLTAGE 69.46V RIES @) SUMN CURRE 366A (30 VER/DB LOSS (END OF LINE VOLTAGE 70.43V	CALCULATION POWER LOSS PERCENT 1.76 % 24VDC ARY R ARY R NT = 6/ 9.43 %) CALCULATION POWER LOSS PERCENT 0.38 %	S TOTAL DB LOS -0.326dB

