

# Marathon High School Theatrical Lighting and Sound Improvements

PREPARED FOR

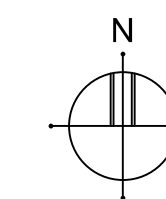
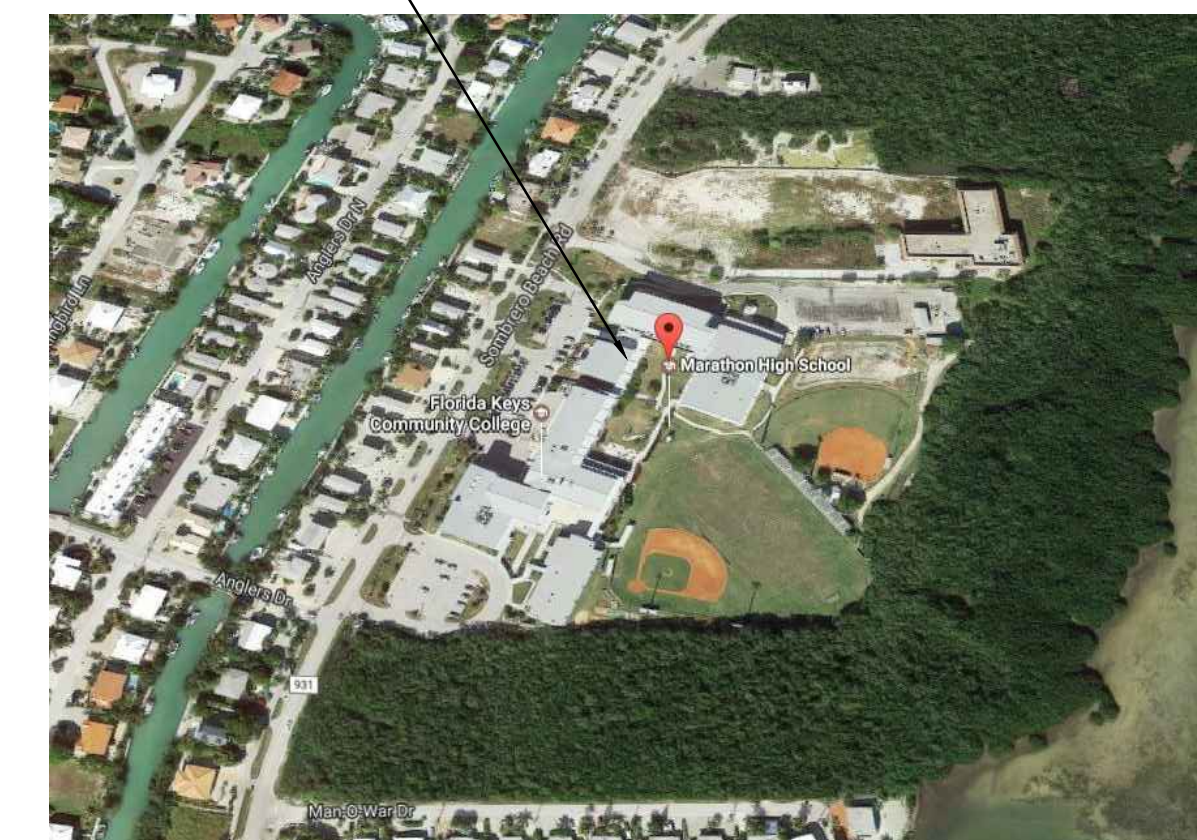


Monroe County School District  
241 Trumbo Road  
Key West, Florida 33040

PREPARED BY

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Marathon High School 350  
Sombrero Beach Road  
Marathon, FL 33050



LOCATION OF SITE

## DRAWING INDEX

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Construction Documents  
February 17, 2017

AGI PROJECT

16020

SHEET

X1

ROBERT C. ANSTON, P.E. 40858

TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS AND  
THE PROJECT MANUAL ARE COMPLETE AND COMPLY  
WITH THE 2014 FLORIDA BUILDING CODE



THEATRICAL STAGE LIGHTING DEVICE LEGEND (NEW DEVICES UNLESS OTHERWISE NOTED)			
<b>[AR]</b> 1	-STAGE LIGHTING AUXILIARY RACK -EXISTING EQUIPMENT SHOWN FOR CLARITY	<b>[PD]</b> 1	-STAGE LIGHTING DIMMER RACK -EXISTING EQUIPMENT SHOWN FOR CLARITY
<b>[HD]</b>	-STAGE LIGHTING HOUSE LIGHT DIMMERS. -EXISTING EQUIPMENT SHOWN FOR CLARITY	<b>[PB]</b> #	-STAGE LIGHTING PLUGGING BOX. -SURFACE MOUNT AS SHOWN ON PLAN. -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR. -# DENOTES SPECIFIC NAME.
<b>[LR]</b> 1 <sup>S</sup>	-STAGE LIGHTING REMOTE -1 GANG SURFACE MOUNT BOX. -SURFACE MOUNT AS SHOWN ON PLAN -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR.	<b>[ND]</b> 1	-STAGE LIGHTING NON-DIM POWER PANEL. -MOTORIZED CIRCUIT BREAKER DMX PANEL BOARD. -DIMENSIONS D7" X W29" X H50". -WALL MOUNT BOTTOM OF ENCLOSURE A 38". -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR.
<b>[LR]</b> 2 <sup>S</sup>	-STAGE LIGHTING REMOTE -2 GANG SURFACE MOUNT BOX. -MOUNT ADJACENT TO GUBBS. -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR.	<b>[MUL]</b>	-STAGE LIGHTING MULTI CABLE. -MULTI CIRCUIT CABLES THAT EXTEND NON-DIM CIRCUITS FROM JUNCTION BOXES TO PLUGGING BOXES (PB) 6 THRU 10. -SIZE CABLE TO ACCOMMODATE NUMBER OF CIRCUITS. -LACE CABLE TO EXISTING MULTI CABLES -FURNISH IN LENGTHS TO ALLOW THE PB TO MOVE WITHIN THE MANUAL/MOTORIZED RIGGING SYSTEM. -PROVIDE STRAIN RELIEF AT BOTH ENDS. -PROVIDED BY ELECTRICAL CONTRACTOR. -COORDINATE WITH STAGE LIGHTING CONTRACTORS.
<b>[LPR]</b>	-STAGE LIGHTING -LIGHTING POWER RECEPTACLE -PROVIDED BY ELECTRICAL CONTRACTOR. -1 GANG SURFACE MOUNTED BOX WITH NEMA 5-20 RECEPTACLE	<b>[SW]</b> #	-STAGE LIGHTING. -ON/OFF POWER SWITCH. -PROVIDED BY ELECTRICAL CONTRACTOR. -ONE GANG SURFACE MOUNT BOX. -MOUNT ADJACENT TO ARC-T#
<b>[ARC-T]</b> #	-STAGE LIGHTING HOUSE LIGHT CONTROL -ARC SYSTEM WIRELESS TRANSMITTER. -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR. -SURFACE MOUNT -DIMENSIONS 9"H X 6"W X 2"D -# DENOTES SPECIFIC DEVICE	<b>[JB]</b>	-STAGE LIGHTING - JUNCTION BOX. -SURFACE MOUNT BOX. -SURFACE MOUNT ON GRID AS SHOWN ON PLAN -SIZE VARIES BASED ON MANUFACTURER, MAXIMUM DIMENSION 12" X 10" X 4" -FURNISHED BY STAGE LIGHTING CONTRACTOR. -INSTALLED BY ELECTRICAL CONTRACTOR.

THEATRICAL AV SYSTEM DEVICE LEGEND (NEW DEVICES UNLESS OTHERWISE NOTED)			
<b>[AJ]</b> 1 <sup>S</sup>	ANTENNA JACK EXTRON ELECTRONICS EMB 101 ONE GANG SURFACE MOUNT BOX COORDINATE LOCATIONS WITH SOUND CONTRACTOR	<b>[LJB]</b> 2	INTERCOM/ LINE LEVEL JUNCTION BOX #2 12" X 12" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE SOUND RACK 2 COORDINATE LOCATION WITH SOUND CONTRACTOR
<b>[AVPB]</b>	AV PULL BOX 6" X 8" X 4" SCREW COVER BOX SURFACE MOUNT PROVIDE AS SHOWN ON RISER LOCATE WHERE CONVENIENT	<b>[IPB]</b>	INTERCOM/ PULL BOX 6" X 8" X 4" SCREW COVER BOX SURFACE MOUNT PROVIDE AS SHOWN ON RISER LOCATE WHERE CONVENIENT
<b>[AJB]</b> 1	ANTENNA JUNCTION BOX #1 8" X 8" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE SOUND RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[NTJB]</b> 1	NETWORK JUNCTION BOX #1 8" X 8" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE SOUND RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR
<b>[AV]</b> 2 <sup>S</sup>	A/V COMPUTER JACK EXTRON ELECTRONICS EMB 102 TWO GANG SURFACE MOUNT COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[NTJB]</b> 2	NETWORK JUNCTION BOX #2 12" X 12" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE SOUND RACK 2 COORDINATE LOCATION WITH SOUND CONTRACTOR
<b>[AVJB]</b> 1	A/V JUNCTION BOX #1 8" X 8" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE VIDEO RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[NPB]</b>	NETWORK PULL BOX 12" X 12" X 4" SCREW COVER BOX PROVIDE AS SHOWN ON RISER LOCATE WHERE CONVENIENT
<b>[C]</b> F04	CAMERA JACK, FRONT OF HOUSE CAMERA EXTRON ELECTRONICS EMB 102 TWO GANG SURFACE MOUNT MOUNT ON STAGE CENTER LINE, ABOVE BOOTH OPENING	<b>[NT]</b> 1	AUDIO NETWORK JACK EXTRON ELECTRONICS EMB 101 ONE GANG SURFACE MOUNT BOX MOUNT ABOVE CONSOLE COUNTER
<b>[CMBR]</b>	COMBINATION PANEL BOX BACKBOX SUPPLIED BY SOUND CONTRACTOR BACKBOX INSTALLED BY ELECTRICAL CONTRACTOR COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[PO]</b> S	PROJECTOR OUTLET EXTRON ELECTRONICS EMB 102 TWO GANG SURFACE MOUNT COORDINATE LOCATION WITH SOUND CONTRACTOR
<b>[DL]</b> 1 <sup>S</sup>	DELAY SPEAKER JACK 4" SQUARE EXTRA DEEP BOX SINGLE GANG SURFACE MOUNT COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[RS]</b> 1	SOUND RACK 1 EXISTING SOUND RACK
<b>[LJB]</b> 1	INTERCOM/ LINE LEVEL JUNCTION BOX #1 8" X 8" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE SOUND RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR	<b>[RS]</b> 2	SOUND RACK 2 SUPPLIED BY SOUND CONTRACTOR INSTALLED BY SOUND CONTRACTOR
		<b>[KFRB]</b>	EXISTING PLAYBACK RACK REQUIRES SOME REWIRING FOR NEW EQUIPMENT LOCATED ABOVE ON COUNTER TOP COORDINATED BY SOUND CONTRACTOR
		<b>[VJB]</b> 1	VIDEO JUNCTION BOX #1 12" X 12" X 4" SCREW COVER BOX SURFACE MOUNT LOCATED ABOVE VIDEO RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR
		<b>[KFRB]</b>	EXISTING PLAYBACK RACK REQUIRES SOME REWIRING FOR NEW EQUIPMENT LOCATED ABOVE ON COUNTER TOP COORDINATED BY SOUND CONTRACTOR
		<b>[VJB]</b>	VIDEO PULL BOX 12" X 12" X 4" SCREW COVER BOX SURFACE MOUNT PROVIDE AS SHOWN ON RISER LOCATED ABOVE VIDEO RACK 1 COORDINATE LOCATION WITH SOUND CONTRACTOR
		<b>[KVD]</b>	EXISTING VIDEO RACK REQUIRES SOME REWIRING FOR NEW EQUIPMENT LOCATED ABOVE ON COUNTER TOP COORDINATED BY SOUND CONTRACTOR

ELECTRICAL LEGEND		
SYMBOL	DESCRIPTION	MOUNTING
	BRANCH CIRCUIT CONDUIT AND WIRE CONCEALED ABOVE CEILING OR BEHIND FINISHED WALL	N/A
	BRANCH CIRCUIT CONDUIT AND WIRE CONCEALED BELOW FINISHED FLOOR OR UNDERGROUND.	N/A
	RACEWAY EXPOSED ON WALL OR CEILING	N/A
	HOMERUN TO PANELBOARD - LETTER INDICATES PANEL, NUMBER INDICATES CIRCUIT, MINIMUM 3/4" CONDUIT. NOTE: ANY HOMERUN WITHOUT FURTHER DESIGNATION INDICATES TWO #12 AWG AND #12 AWG EQUIPMENT GROUND. PC OUTLET REQUIRES SEPARATE NEUTRAL, MIN. #10 AWG, DEDICATED CIRCUIT REQUIRES SEPARATE NEUTRAL	N/A
	RACEWAY RISER, UP OR DOWN AS NOTED	N/A
	CONDUIT CAPPED	N/A
	LED LUMINAIRE, LETTER INDICATES TYPE	CEILING - SEE FIXTURE SCHEDULE
	EXISTING FLUORESCENT STRIP LIGHT	CHAIN HUNG
	EXISTING SPOTLIGHT	SURFACE MOUNTED
	EXISTING COMBINATION EXIT SIGN / EMERGENCY LIGHT	SURFACE/CEILING MOUNTED
	SINGLE POLE SWITCH, LETTER INDICATES FIXTURE GROUPING BY SWITCH	M.H. 48" AFF TO TOP
	THREE WAY SWITCH	M.H. 48" AFF TO TOP
	DIMMER SWITCH	M.H. 48" AFF TO TOP
	DUPLEX RECEPTACLE - 120VAC	M.H. 16" AFF TO BOTTOM
	DUPLEX RECEPTACLE - 120VAC	MOUNTED 42" AFF TO BOTTOM OR AS NOTED

#### ABBREVIATIONS:

AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
E	EXISTING
ETR	EXISTING TO REMAIN
EG	EQUIPMENT GROUND
ESB	ENERGY SAVING BALLAST
GFI	GROUND FAULT PROTECTION
G, GND	GROUND
GWB	GYP SUM WALL BOARD
MTG	MOUNTING
MTD	MOUNTED
M.H.	MOUNTING HEIGHT
N/A	NOT APPLICABLE
U.O.N.	UNLESS OTHERWISE NOTED
R	REMOVE
RL	RELOCATED
WP	WEATHER PROOF

#### ADDITIONAL SCOPE OF WORK NOTES

- PROVIDE ALL REQUIRED WORK FOR THE REMOVAL OF ANY EXISTING SYSTEMS AS INDICATED OR SPECIFIED, AND INSTALLATION OF ALL OF THE NEW HOUSE LIGHTING AND CONTROLS, THEATRICAL LIGHTING AND CONTROL SYSTEMS, THEATRICAL SOUND SYSTEMS, VIDEO SYSTEMS, POWER REQUIREMENTS, RACEWAYS AND BOXES. WORK SHALL BE PERFORMED BY QUALIFIED CONTRACTORS, INCLUDING AN ELECTRICAL SUB, THEATRICAL LIGHTING SYSTEMS SUB, AND THEATRICAL SOUND SYSTEMS SUB. SUBDIVISION OF THE WORK BY TRADE SHALL BE THE RESPONSIBILITY OF THE GENERAL/PRIME CONTRACTOR, EXCEPT WHERE THE WORK IS REQUIRED TO BE INSTALLED BY THE SPECIFIC PROPERLY QUALIFIED (AND LICENSED WHERE REQUIRED) SUB-CONTRACTOR. REFER TO THE SPECIFICATIONS FOR MORE REQUIREMENTS.
- PROVIDE ALL REQUIRED SCAFFOLDING AS NECESSARY FOR THE WORK. PROTECT THE FLOOR AND WALLS FROM SCAFFOLDING ERECTION AND REMOVAL.
- PROVIDE ALL FLOORING, WALL AND CEILING WORK NECESSARY FOR THE WORK, INCLUDING DEMOLITION, PATCHING, REPAIRING AND PAINTING.
- PROTECT EXISTING WALL MOUNTED ACOUSTICAL PANELS. THESE PANELS ARE NEW. CONTACT PANEL SUPPLIER/INSTALLER FOR MEANS AND METHODS FOR PROTECTION, REMOVAL AND REINSTALL (IF REQUIRED), AND CUTTING FOR INSTALLATION OF NEW DEVICES AND EQUIPMENT.
- THE CONTRACTOR SHALL PROVIDE ALL REQUIRED CEILING WORK FOR THE INSTALLATION OF THE NEW HOUSE LIGHTING IN MEZZANINE. THE INTENT AND EXPECTATION IS FOR SECTIONS OF CEILING TO BE REMOVED SUCH THAT NEW SHEETS OF GWB CEILING CAN BE REINSTALLED, REATCHED TO STRUCTURE, PATCHED IN AND THE ENTIRE CEILING PAINTED SO IT ALL MATCHES. THE CONTRACTOR MAY PROPOSE ALTERNATIVE MEANS AND METHODS THAT SAVE TIME OR SAVE COST. ALTERNATIVE METHODS SHALL BE DETAILED IN THE CONTRACTOR'S PROPOSAL.
- PROTECT ALL OF THE EXISTING AUDITORIUM SEATING FROM POTENTIAL DAMAGE DURING CONSTRUCTION. THE SEATING CAN BE REMOVED AND REINSTALLED OR COVERED AND PROTECTED, AT THE CONTRACTOR'S OPTION. DAMAGE WILL REQUIRE NEW SEATING OR REPAIR TO NEW CONDITION.
- EXISTING FIRE ALARM SYSTEM SHALL BE MAINTAINED AND PROTECTED, AND SHALL BE OPERATIONAL DURING THE CONSTRUCTION PERIOD. OTHER PARTS OF THE BUILDING MAY BE OCCUPIED AT TIMES AND THE FIRE ALARM MUST BE OPERATING. ANY REQUIRED DOWNTIME CAN BE AND SHALL BE SCHEDULED WITH ADVANCED NOTICE.

#### GENERAL NOTES: (THESE NOTES APPLY TO ALL SHEETS)

- ALL ELECTRICAL WORK SHALL MEET ALL OF THE REQUIREMENTS OF THE FOLLOWING:
  - FLORIDA BUILDING CODE (FBC) 5TH EDITION (2014); THIS CODE INCLUDES THE 2014 FBC BUILDING, MECHANICAL, PLUMBING, FUEL GAS AND ENERGY CONSERVATION VOLUMES. FURTHER, SEE "REFERENCED STANDARDS" IN THE FBC BUILDING CHAPTER 3; FBC, PLUMBING CHAPTER 4; FBC, MECHANICAL CHAPTER 15; FBC, FUEL GAS CHAPTER 8, FBC, ENERGY CONSERVATION CHAPTER 5.) (EFFECTIVE JUNE 30, 2015)
  - 5TH EDITION OF THE FLORIDA FIRE PREVENTION CODE (FFPC); (THIS CODE ALSO INCLUDES THE FLORIDA VERSIONS OF NFPA 1 AND NFPA 101.) (EFFECTIVE DECEMBER 31, 2014)
  - 2011 NATIONAL ELECTRIC CODE.
  - 2014 STATE REQUIREMENTS FOR EDUCATIONAL FACILITIES (SREF); (EFFECTIVE NOVEMBER 4, 2014)
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY THE EXISTING CONDITIONS TO GAIN KNOWLEDGE OF THE SCOPE OF WORK INVOLVED.
- "PROVIDE" SHALL MEAN "FURNISH AND INSTALL".
- IN GENERAL, THESE DRAWINGS ARE SCHEMATIC IN NATURE AND SHOULD NOT BE SCALED. IT SHALL NOT BE THE INTENT OF THESE PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. PROVIDE ALL ITEMS NECESSARY FOR A COMPLETE AND OPERATIONAL SYSTEM.
- ELECTRICAL INSTALLATION SHALL BE CLOSELY COORDINATED WITH ALL OTHER TRADES. REVIEW THE ENTIRE SET OF DOCUMENTS FOR COORDINATION; NO COST SHALL BE ASSOCIATED WITH ILL-TIMED INSTALLATION INCLUDING ANY REPAIRS OR REPLACEMENTS.
- ALL CONDUITS AND BOXES SHALL BE CONCEALED UNLESS OTHERWISE NOTED. ALL CONDUIT RUNS ARE SCHEMATIC IN NATURE. EXACT ROUTING TO BE DETERMINED IN THE FIELD UNLESS OTHERWISE NOTED.
- APPLY A BITUMASTIC COATING FOR ALL CONDUITS PENETRATING FLOOR SLABS FROM BELOW GRADE.
- PROVIDE ALL REQUIRED PULL BOXES, JUNCTION BOXES, ETC. FOR A COMPLETE INSTALLATION.
- PATCH, REPAIR AND REPAINT ALL WALLS THAT HAVE BEEN DAMAGED DUE TO ELECTRICAL ROUGH-IN. REMOVE ANY UNUSED CONDUIT AND WIRE.
- PROVIDE FIRE-STOPPING AT ALL FIRE WALL PENETRATIONS. USE A U.L. APPROVED SYSTEM LISTED FOR THE ASSOCIATED INSTALLATION.
- ALL CONDUCTORS SHALL BE STRANDED COPPER, THHN/THWN, MINIMUM #12 AWG. ALL CONDUCTORS SHALL BE IN CONDUIT. FLEXIBLE CONDUIT SHALL BE LIMITED TO A MAXIMUM OF 6'-0" IN LENGTH.
- MC CABLE OR OTHER PREMANUFACTURED CABLE SHALL NOT BE USED UNLESS APPROVED BY THE OWNER AND ENGINEER.
- ALL CIRCUITS SHALL CONTAIN A SEPARATE, GREEN, COPPER GROUNDING CONDUCTOR.
- ALL RECEPTACLES SHALL HAVE A GROUND TERMINAL.
- WHEN REUSING OR EXTENDING EXISTING CIRCUITS, VERIFY ALL CIRCUIT NUMBERS AND VERIFY ANY EXISTING LOAD. CIRCUITS MAY BE PICKED UP AT AN EXISTING JUNCTION BOX IF AVAILABLE RATHER THAN PROVIDING A SEPARATE HOMERUN TO A PANEL.
- RECESSED LIGHTING FIXTURES SHALL BE SUPPORTED FROM THE STRUCTURE. DO NOT SUPPORT FIXTURES FROM THE CEILING GRID, MECHANICAL PIPING, DUCTWORK, CONDUIT OR OTHER NON-STRUCTURAL BUILDING MEMBERS. PROVIDE SUPPLEMENTAL STEEL AS REQUIRED FOR INSTALLATION.
- THE COLOR OF ALL RECEPTACLES, TOGGLE SWITCHES AND COVERPLATES SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO ORDERING.
- PANELBOARDS SHALL BE ACCURATELY LABELED TO IDENTIFY FINAL CIRCUIT NUMBERS UTILIZED, THEIR LOAD AND LOCATION.
- BRANCH CIRCUITS SHALL BE RUN UNDERGROUND ROUTED CONCEALED IN WALLS AND ABOVE CEILINGS.
- PROVIDE FIRE RETARDANT U.L. APPROVED SEALANT ON ALL PENETRATIONS OF FIRE RATED PARTITIONS, WALLS AND STRUCTURAL SLABS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY, PRIOR TO SUBMITTING BID, LOCATIONS OF ALL SUCH FIRE RATED PARTITIONS, WALL AND STRUCTURAL SLABS.
- PROVIDE HANDLE TIES FOR 2 OR MORE SINGLE POLE WITH SHARED NEUTRALS TO COMPLY WITH NEC 210.4 (B)
- SEE SPECIFICATIONS FOR MORE REQUIREMENTS.

#### GENERAL DEMOLITION NOTES

- PERFORM LIMITED DEMOLITION WHERE REQUIRED OR SPECIFIED. ALL FLOORS, WALLS, CEILINGS AND OTHER FINISHES SHALL BE PROTECTED AND REPAIRED WHERE NECESSARY. ANY PATCHING, REPAIRS, PAINTING, SHALL BE PERFORMED AND COMPLETED IN A MANNER IN WHICH IT MEETS OR EXCEEDS THE CONDITION PRIOR TO CONSTRUCTION. THE ENGINEER OR OWNER SHALL DETERMINE IF THE WORK IS ACCEPTABLE.
- THE GENERAL INTENT IS FOR THE EXISTING LIGHTING AND SOUND SYSTEMS TO REMAIN AND BE SUPPLEMENTED WITH THE NEW, UNLESS SPECIFIED OR INDICATED OTHERWISE.

#### PHASING AND EXISTING CONDITIONS

- REFER TO THE RFP DOCUMENT FOR THE REQUIRED SCHEDULE AND TIME PERIOD FOR CONSTRUCTION AND COMPLETION. PARTS OF THE AUDITORIUM BUILDING WILL BE IN OPERATION AND OCCUPIED. THE CONTRACTOR SHALL MAINTAIN THE OPERATION OF ALL IMPORTANT AND CRITICAL SYSTEMS, INCLUDING POWER, LIGHTING, FIRE ALARM AND INTERCOM/PAGING. ANY REQUIRED SHUTDOWNS SHALL BE PRIOR APPROVED AND SCHEDULED WITH THE OWNER.
- SPECIFIC SPECIAL EVENTS:** THE FOLLOWING EVENTS ARE SCHEDULED ON CAMPUS AT THE BEGINNING OF THE SCHOOL YEAR. THESE EVENTS WILL NEED TO BE ACCOMMODATED BY THE CONTRACTOR. AS A MINIMUM, ALL AUDITORIUM LIFE SAFETY SYSTEMS (EMERGENCY LIGHTS, EXIT SIGNS, FIRE ALARMS) SHALL BE OPERATIONAL AND THE AUDITORIUM MADE SAFE AND FREE FROM CONSTRUCTION DEBRIS OR MATERIALS. THE HOUSE LIGHTING AND A SOUND SYSTEM SHALL BE OPERATIONAL AND AVAILABLE. THE HOUSE LIGHTING DIMMING AND CONTROLS SHALL BE OPERATIONAL. THE CONTRACTOR MAY PROVIDE A PORTABLE SOUND SYSTEM IF NECESSARY IF THE MAIN SOUND SYSTEM IS NOT OPERATIONAL. ANY PORTABLE SYSTEM SHALL HAVE SUFFICIENT AND ACCEPTABLE AUDIBILITY AND INTELLIGIBILITY. AS JUDGED BY THE SCHOOL PRINCIPAL, OWNER AND ENGINEER. THE AIR CONDITIONING SYSTEM SHALL BE AVAILABLE. THE RESTROOM FACILITIES SHALL BE AVAILABLE. ACCESS TO ALL SPACES SHALL BE CLEAR, SAFE, AND AVAILABLE.
  - THE AUDITORIUM IS USED AT THE BEGINNING OF SCHOOL FOR SEVENTH GRADE ASSEMBLIES, OPEN HOUSE AND 6TH AND 9TH GRADE ORIENTATION. SCHEDULED DATES ARE: AUGUST 15 - 23.

REVISIONS	BY

**Marathon High School**  
Theatrical Lighting and Sound Improvements  
350 Sombro Beach Road  
Marathon, FL 33050

**Monroe County School District**  
241 Trumbo Rd.  
Key West, Florida 33040

#### CONSTRUCTION DOCUMENTS

#### ELECTRICAL LEGEND AND GENERAL NOTES

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Florida Engineering License No. 6691

DRAWN	TRG
CHECKED	RCA
DATE	2/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	


E0.1




Drawing File: I:\6xxx\16020.001\16020.001\16020.001x\_mhs.dwg EC02  
 Plotted by: tm Feb 17, 2017 - 5:01pm

**FIXTURE 'A'**

**ETC®**  
115/120V



**Pro Four-Cell Pendant**  
ArcSystem Series



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**GENERAL INFORMATION**

The compact, Pro Four-Cell Pendant is ideal for use in medium- to long-throw, pendant style applications. The housing is equipped with a half-inch captive nut for connecting threaded rod, providing multiple hanging options. Manufactured from high-grade, powder-coated aluminum and steel, the luminaire is entirely convection cooled for silent operation.

The Pro Four-Cell Pendant includes an onboard power supply and connects directly to a 120V mains supply. Intensity control is achieved either with a direct, wired-DMX connection to the luminaire's RJ45/Ethercon connectors, or wirelessly using the separate ArcMesh TX1 Transmitter.

ArcSystem has been specifically developed for auditorium lighting applications where high-quality, extremely accurate and smooth dimming is required. The use of onboard device management in the driver allows all luminaires to be addressed remotely, ensuring fast and simple installation.

**APPLICATIONS**

- Auditoriums
- Work lights
- Lobbies
- Houses of worship
- Museums
- Studios

**FEATURES**

- Wired DMX or wireless (ArcMesh) control protocols
- Stepless, smooth dimming to absolute zero
- Convection cooled
- Fan-free, silent operation
- Various color options
- Available in a Dual-Input UL924 Listed Emergency version

**ORDERING INFORMATION**

**NON-EMERGENCY VERSION**

ARC4R					
MODEL 4- Pro Four-Cell Pendant	COLOR TEMP 2- 2700K 3- 3000K	BEAM ANGLE 19- 19° 24- 24° 37- 37° 60- 60°	COLOR W- White B- Black C- Custom	TYPE H-Fixed hanging point	

**EXAMPLE**

ARC4R	3	37	B	H	
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ARC4R37BH - Pro Four-Cell, 3000K, 37 degree, black pendant luminaire.

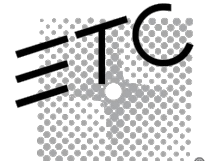
**EMERGENCY VERSION**

ARCE4R					
MODEL 4- Pro Four-Cell Pendant	COLOR TEMP 2- 2700K 3- 3000K	BEAM ANGLE 19- 19° 24- 24° 37- 37° 60- 60°	COLOR W- White B- Black C- Custom	TYPE H-Fixed hanging point	

**EXAMPLE**

ARCE4R	3	37	B	H	
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ARCE4R37BH - Pro Four-Cell Emergency, 3000K, 37 degree, black pendant luminaire.



1 of 7

**FIXTURE 'B'**

**ETC®**  
115/120V



**Pro One-Cell Fixed**  
ArcSystem Series



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**GENERAL INFORMATION**

The compact Pro One-Cell Fixed luminaire is a single-cell solution that is ideally suited for recessed installations in areas that require short- to medium-throw illumination. With a high grade, wet coat painted metal construction, the Pro One-Cell Fixed delivers the quality performance of the larger multi-cell versions in a much smaller form factor.

The Pro One-Cell Fixed luminaire requires a direct connection to the D1 Driver (see separate datasheet). In conjunction with the driver unit, the luminaire can be dimmed using either a wired-DMX connection or the onboard wireless ArcMesh protocol.

ArcSystem has been specifically developed for auditorium lighting applications where high-quality, extremely accurate and smooth dimming is required. The use of onboard device management in the driver allows all fixtures to be addressed remotely, ensuring fast and simple installation.

**APPLICATIONS**

- Auditoriums
- Work lights
- Lobbies
- Houses of worship
- Museums
- Studios

**FEATURES**

- Wired-DMX or wireless (ArcMesh) control protocols
- Stepless smooth dimming to absolute zero
- Convection cooled
- Fan-free, silent operation
- Various color options

**ORDERING INFORMATION**

**NON-EMERGENCY VERSION**

ARCP1					
MODEL 1- Pro One-Cell	COLOR TEMP 2- 2700K 3- 3000K	BEAM ANGLE 18- 18° 30- 30° 50- 50°	BEZEL COLOR W- White B- Black C- Custom	TYPE F-Fixed	

**EXAMPLE**

ARCP1	3	50	W	F	
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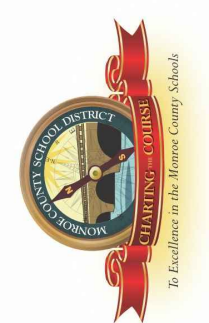
ARCP1300F - Pro One-Cell, 3000K, 50 degree, white bezel fixed luminaire.



1 of 5

LUMINAIRE SCHEDULE (HOUSE LIGHTING)						
TYPE	DESCRIPTION	VOLTS	WATTS	BALLAST (IF APPLICABLE)	LAMPS	MOUNTING
A	LED PENDANT MOUNTED LUMINAIRE, ALUMINUM AND STEEL HOUSING, ALL BLACK HOUSING AND PENDANT, ONBOARD DRIVER, STEPLESS DMX WIRELESS DIMMING, 60° BEAM ANGLE. ETC LIGHTING PRO FOUR-CELL SERIES ARC4R-2-60-B-H OR APPROVED EQUIVALENT	120/277	93	LED DRIVER WITH DMX DIMMING. PROVIDE WIRELESS INTENSITY CONTROL VIA ETC ARCMESH NETWORK. PROVIDE REQUIRED TX1 TRANSMITTERS	LED, 5963 LUMENS, 2700K, 60° BEAM ANGLE	PENDANT MOUNTED. SEE FLOOR PLAN FOR MOUNTING HEIGHT. (NOTE TO CONTRACTOR: INTENT IS TO USE THE SAME MOUNTING HEIGHT AS EXISTING.)
B	6" LED DOWNLIGHT, ALUMINUM AND STEEL HOUSING, STEPLESS DMX WIRELESS DIMMING, 50° BEAM ANGLE, WHITE. ETC LIGHTING PRO ONE-CELL FIXED SERIES ARCP1-2-50-B-F OR APPROVED EQUIVALENT	120/277	20	LED DRIVER WITH DMX DIMMING. PROVIDE WIRELESS INTENSITY CONTROL VIA ETC ARCMESH NETWORK. PROVIDE REQUIRED TX1 TRANSMITTERS	LED, 1646 LUMENS, 2700K, 50° BEAM ANGLE	RECESSED FLANGE. PROVIDE ALL REQUIRED MOUNTING HARDWARE, SUPPORT AND ACCESSORIES.
C	LED AISLE LIGHTING LUMINAIRE. PROVIDE CUSTOM LENGTHS REQUIRED TO REPLACE EXISTING. FIELD MEASURE FOR REQUIRED LENGTHS. 6" ON CENTER LED SPACING. DIMMABLE. REUSE EXISTING CIRCUIT AND EXTEND AND MODIFY AS NECESSARY. FIELD VERIFY CARPET-TO-CARPET AND CARPET-TO-EDGE LENGTHS REQUIRED. CLEAR LENS. TIVOLI SATT-XX-27-06-C-X. PLUS POWER SUPPLIES. PROVIDE 5 YEAR WARRANTY.	120 (FIELD VERIFY)	LESS THAN 1 WATT PER 120 FEET	PROVIDE ALL REQUIRED POWER SUPPLIES. REPLACE EXISTING. POWER SUPPLIES SHALL BE TIVOLI JT SERIES.	LED, 2700K	IN FLOOR. REPLACE EXISTING. CUT AND PATCH FLOOR AS NEEDED. PROVIDE ALL REQUIRED MOUNTING HARDWARE. BASE SHALL BE INSTALLED WITH BOTH GLUE AND SCREWS.

REVISIONS	BY



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CONSTRUCTION DOCUMENTS

LUMINAIRE SCHEDULE AND CUT SHEETS

**AGI**  
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Florida Engineering Business Number 6092

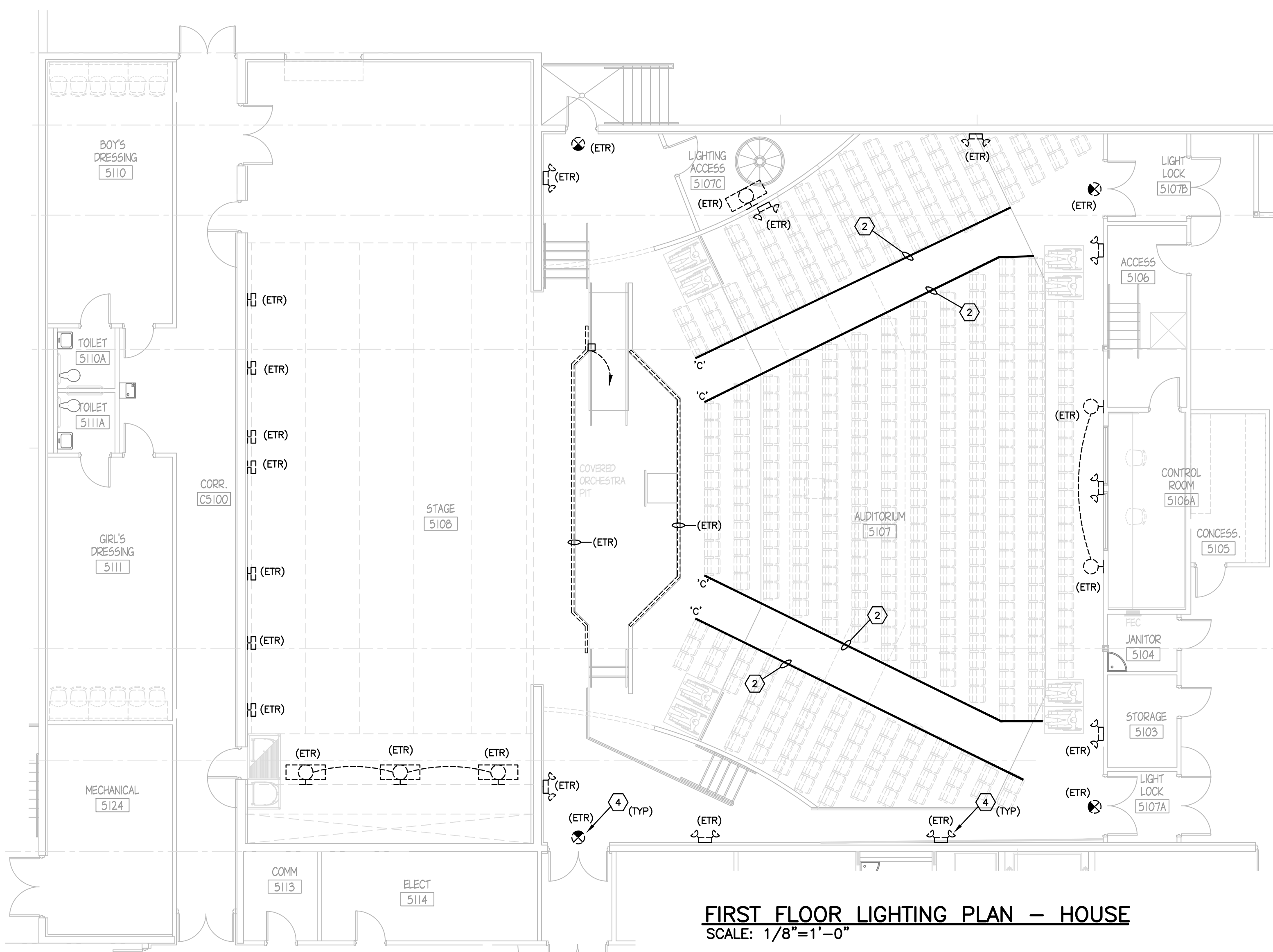
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DATE	2/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	E0.2

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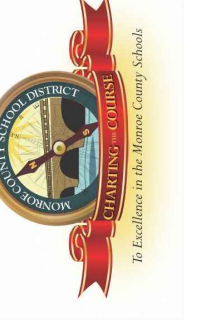


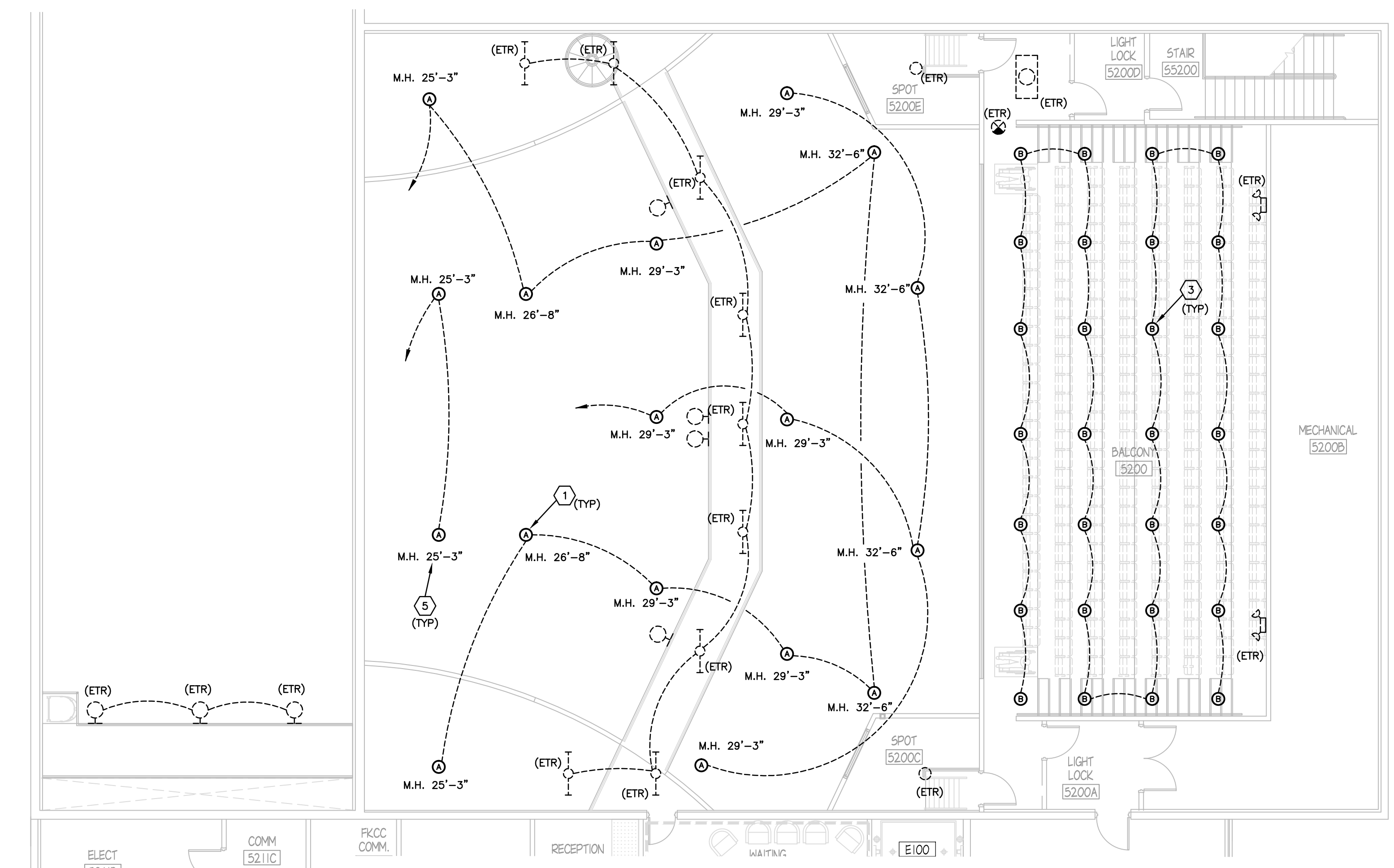


**FIRST FLOOR LIGHTING PLAN – HOUSE**  
SCALE: 1/8"=1'-0"

- DRAWING NOTES:**
- 1 PROVIDE NEW HOUSE LIGHTING LUMINAIRE PER THE LUMINAIRE SCHEDULE. EXTEND THE EXISTING POWER CIRCUIT AS NECESSARY AND MAKE ALL CONNECTIONS TO THE NEW LUMINAIRE. PROVIDE SUPPORT TO STRUCTURE AS NEEDED TO SECURE THE LUMINAIRE.
  - 2 PROVIDE NEW LED AISLE LIGHTING IN EXISTING LOCATIONS. EXTEND EXISTING POWER AND CONTROLS AS REQUIRED.
  - 3 PROVIDE ALL REQUIRED REPAIRS TO THE CEILINGS TO PATCH THE OPENINGS FOR THE NEW LUMINAIRES IN THE MEZZANINE. CEILING REPAIRS SHALL BE MADE SUCH THAT THE CEILINGS LOOK NEW AND THERE ARE NO NOTICEABLE BLEMISHES OR AREAS THAT DO NOT MATCH THE SURROUNDING CEILING AREAS. FLOORS AND WALLS SHALL BE PROTECTED AND REPAIRED WHERE DAMAGED. REFER TO ADDITIONAL SCOPE OF WORK NOTE #5, SHEET E0.1.
  - 4 EXISTING EXIT SIGNS AND EMERGENCY LIGHTING SHALL REMAIN AND BE PROTECTED. ENSURE POWER IS CONNECTED OR BATTERIES ARE DISCONNECTED IF OUTAGES ARE REQUIRED, SUCH THAT THE BATTERIES ARE MAINTAINED.
  - 5 TYPICAL MOUNTING HEIGHT. NOTE TO CONTRACTOR: INTENT IS TO USE THE SAME MOUNTING HEIGHT AS EXISTING.

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**SECOND FLOOR LIGHTING PLAN – HOUSE**  
SCALE: 1/8"=1'-0"

CONSTRUCTION DOCUMENTS

LIGHTING PLAN – HOUSE

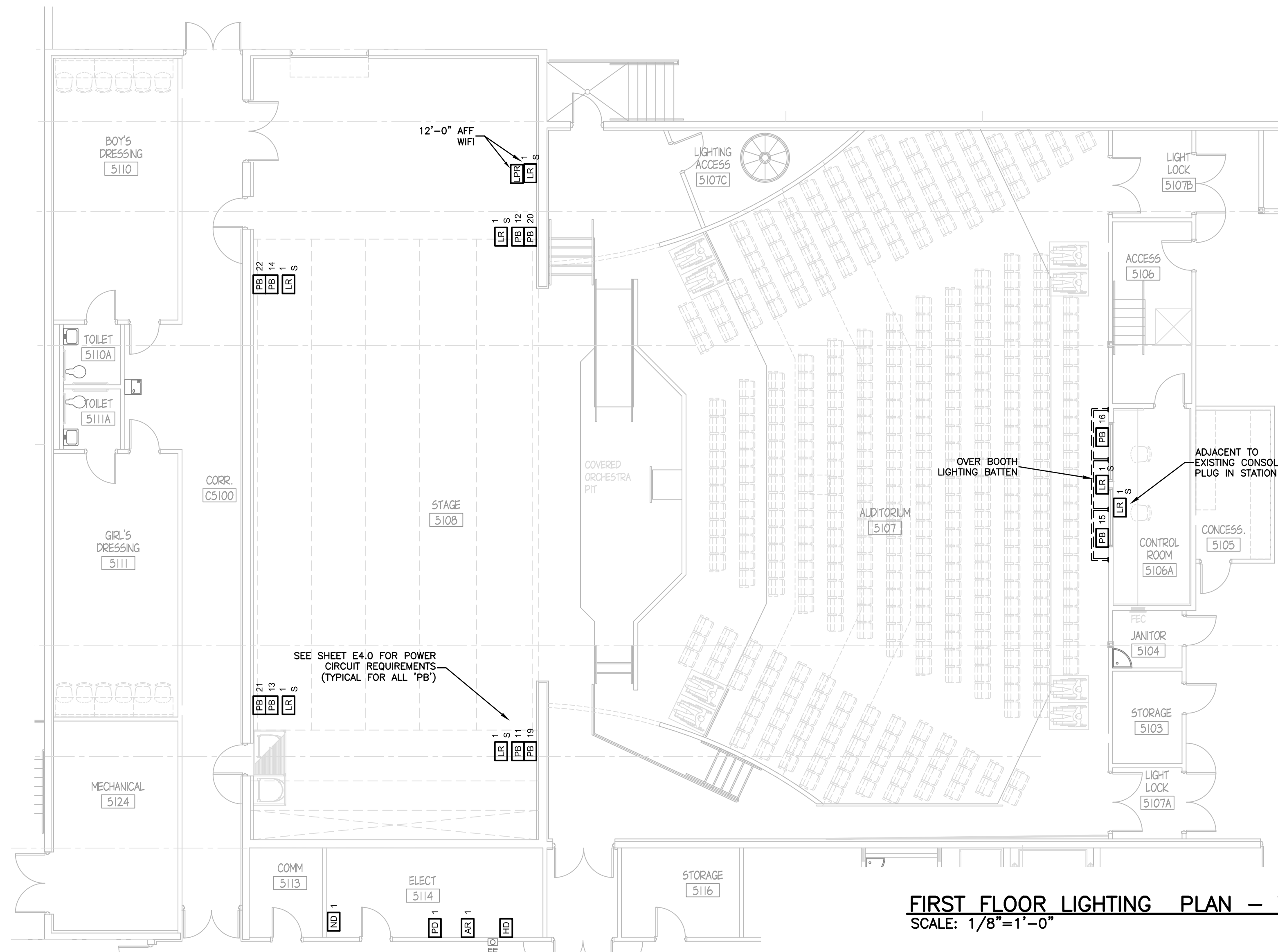
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SHEET	E1.1

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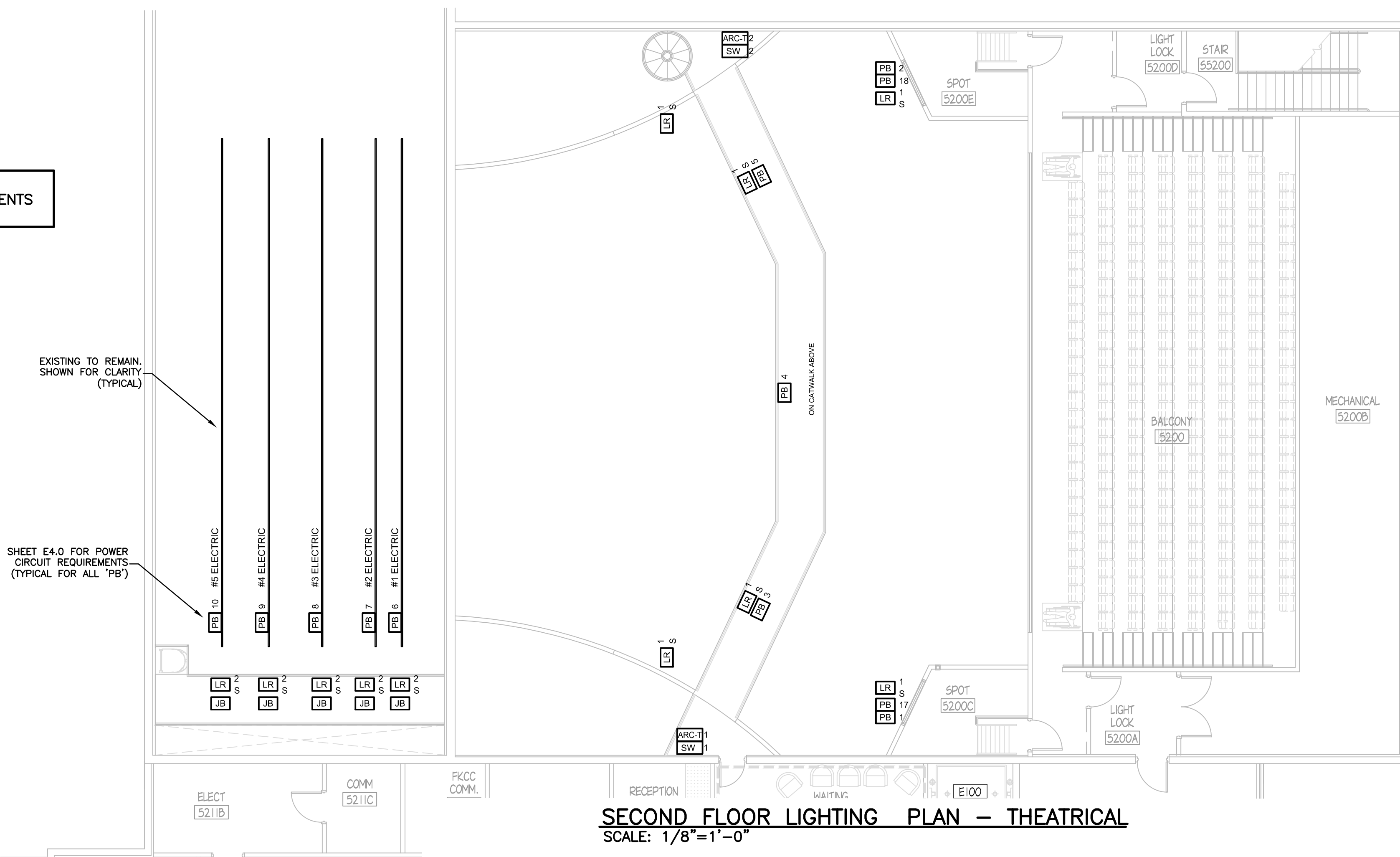
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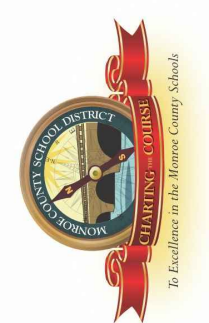
**FIRST FLOOR LIGHTING PLAN - THEATRICAL**  
 SCALE: 1/8"=1'-0"

SEE 'TL' LIGHTING SHEETS FOR MORE REQUIREMENTS



**SECOND FLOOR LIGHTING PLAN - THEATRICAL**  
 SCALE: 1/8"=1'-0"

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CONSTRUCTION DOCUMENTS

LIGHTING PLAN - THEATRICAL

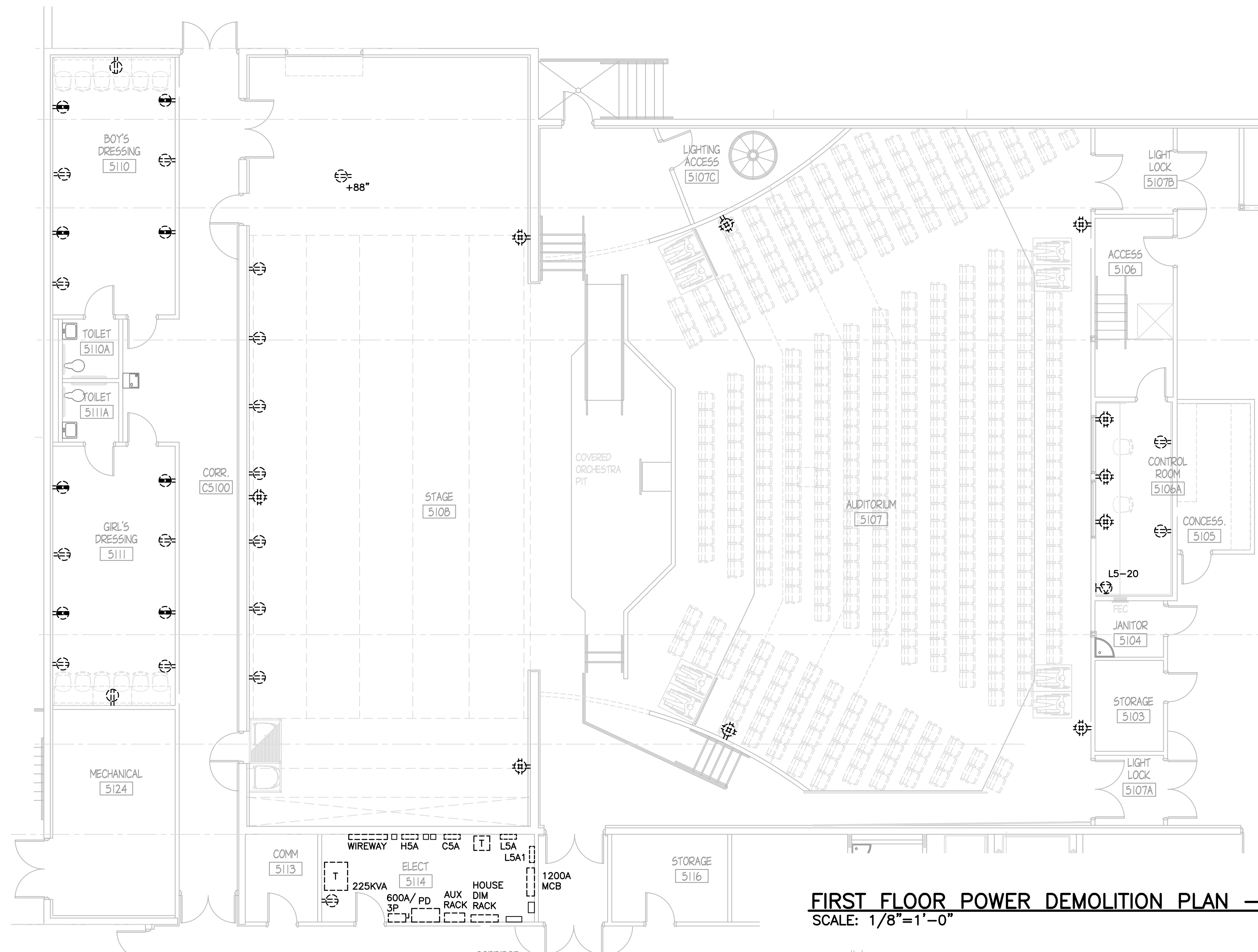
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AGI PROJECT	16020
SHEET	E1.2

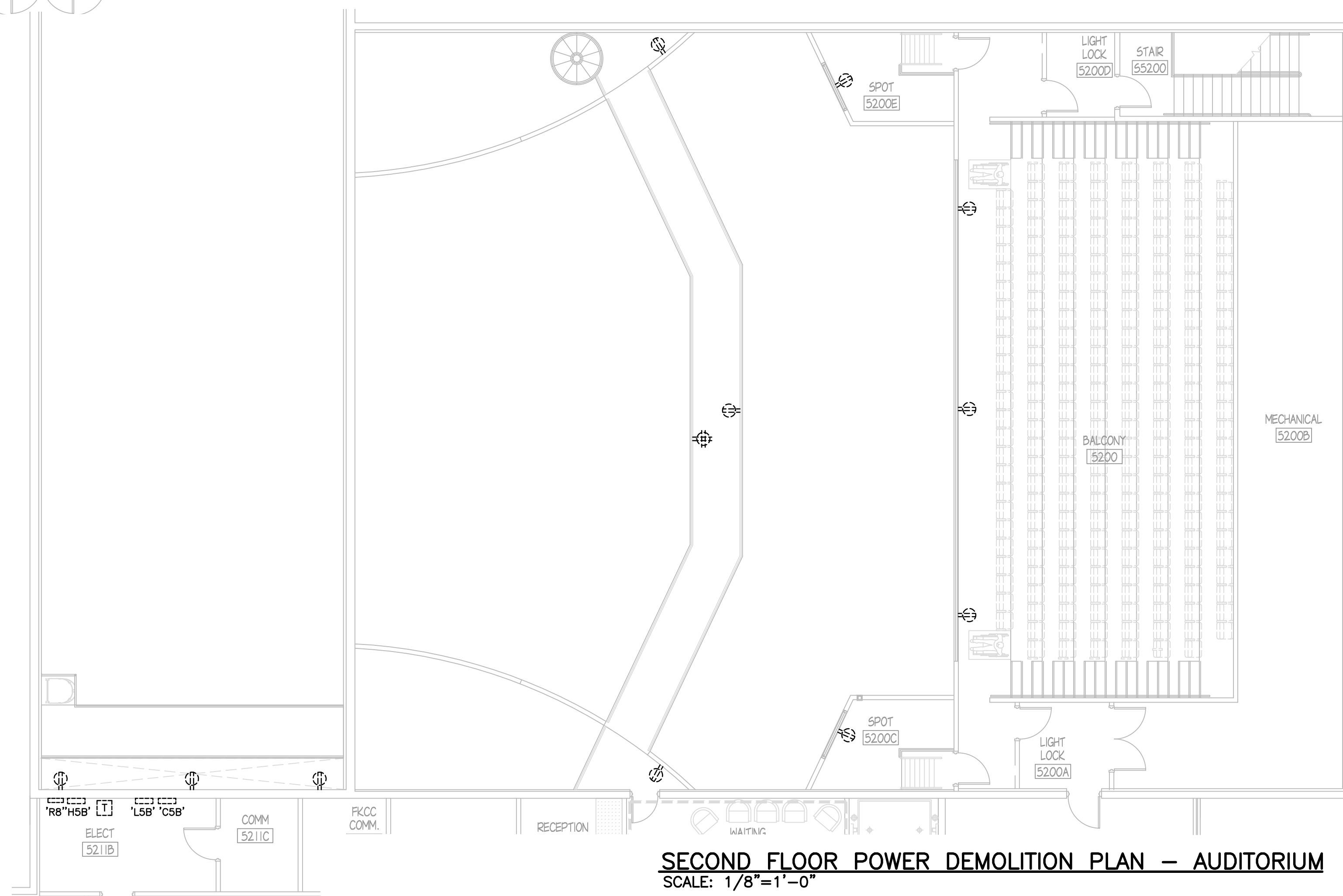
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FIRST FLOOR POWER DEMOLITION PLAN – AUDITORIUM  
 SCALE: 1/8"=1'-0"




SECOND FLOOR POWER DEMOLITION PLAN – AUDITORIUM  
 SCALE: 1/8"=1'-0"

**DEMOLITION GENERAL NOTES:**

1. THIS DRAWING IS INTENDED TO INDICATE THE EXISTING SYSTEMS AND BOXES. THE INTENT IS FOR LIMITED SELECTIVE DEMOLITION. ALL OTHER DEVICES AND SYSTEMS ARE TO REMAIN.
2. SPLICE AND EXTEND CIRCUITS AS NECESSARY TO MAINTAIN CIRCUIT CONTINUITY TO EXISTING RECEPTACLES AND OTHER EQUIPMENT WHICH IS TO REMAIN. VOICE/DATA CABLING SHALL NOT BE SPLICED.
3. DASHED RECEPTACLE AND DEVICES INDICATE EXISTING. DEVICES INDICATED WITH (R) ARE TO BE REMOVED. IF NOT INDICATED WITH (R), THE DEVICE IS EXISTING TO REMAIN.

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**CONSTRUCTION DOCUMENTS**

**POWER DEMOLITION PLAN – AUDITORIUM**

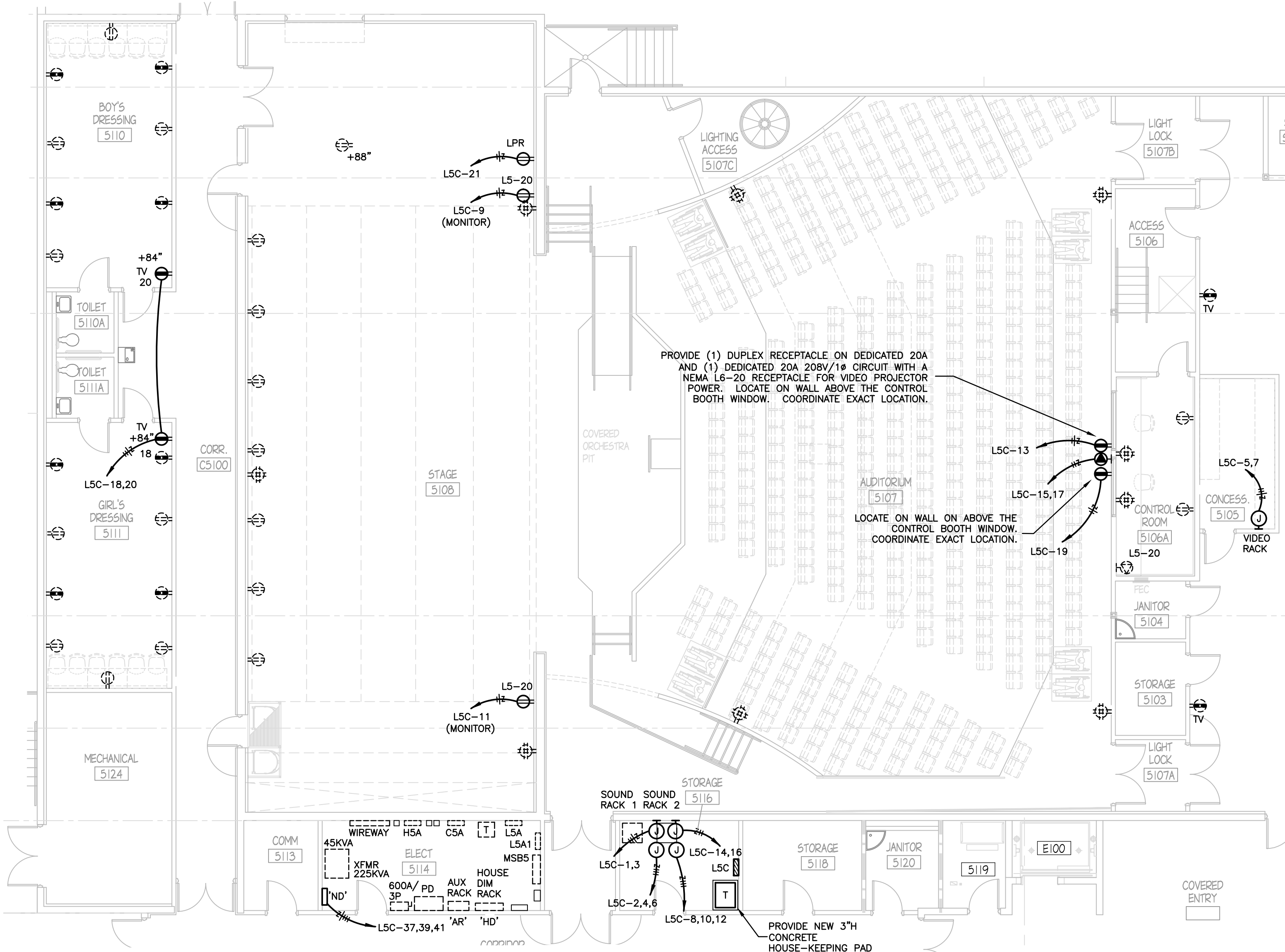
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AGI PROJECT	16020
SHEET	E2.0

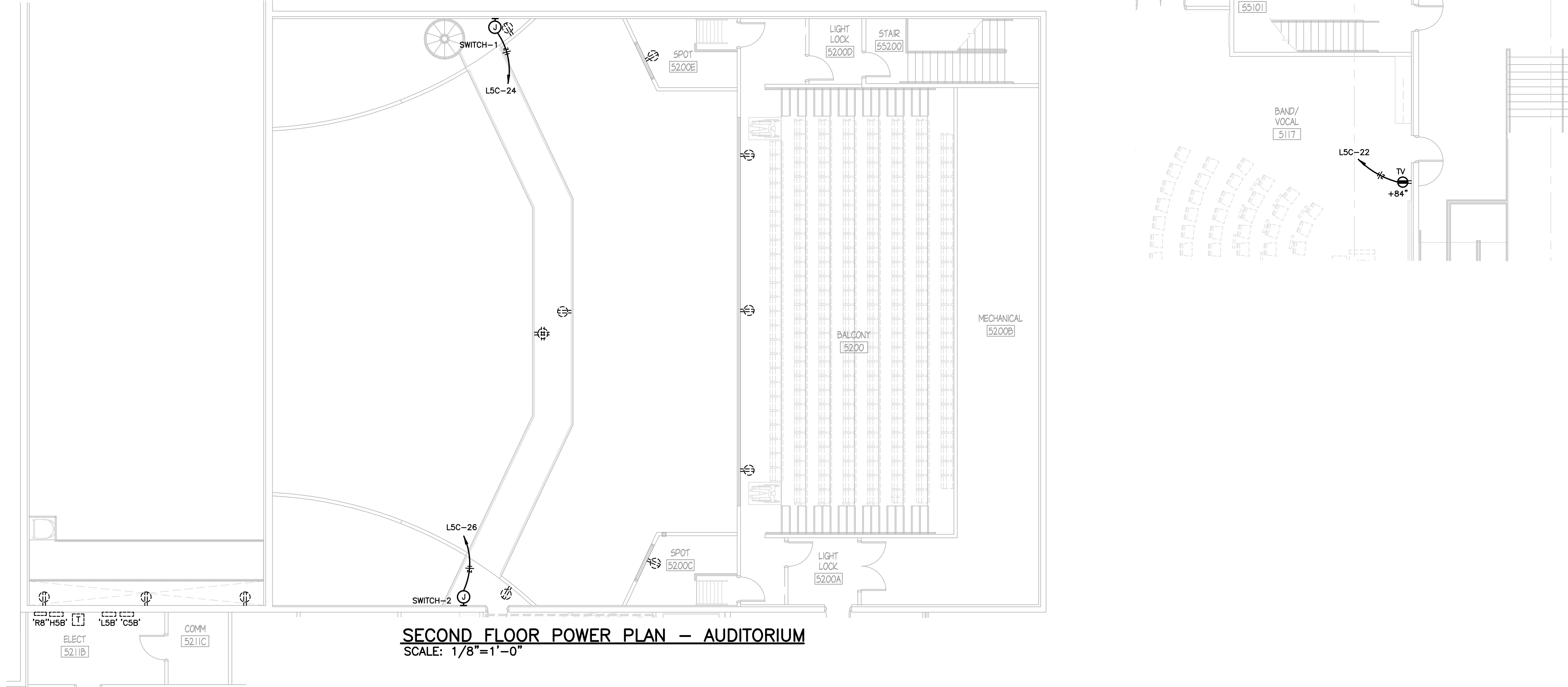
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**FIRST FLOOR POWER PLAN - AUDITORIUM**  
 SCALE: 1/8"=1'-0"



**SECOND FLOOR POWER PLAN - AUDITORIUM**  
 SCALE: 1/8"=1'-0"

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**CONSTRUCTION DOCUMENTS**

**POWER PLAN - AUDITORIUM**

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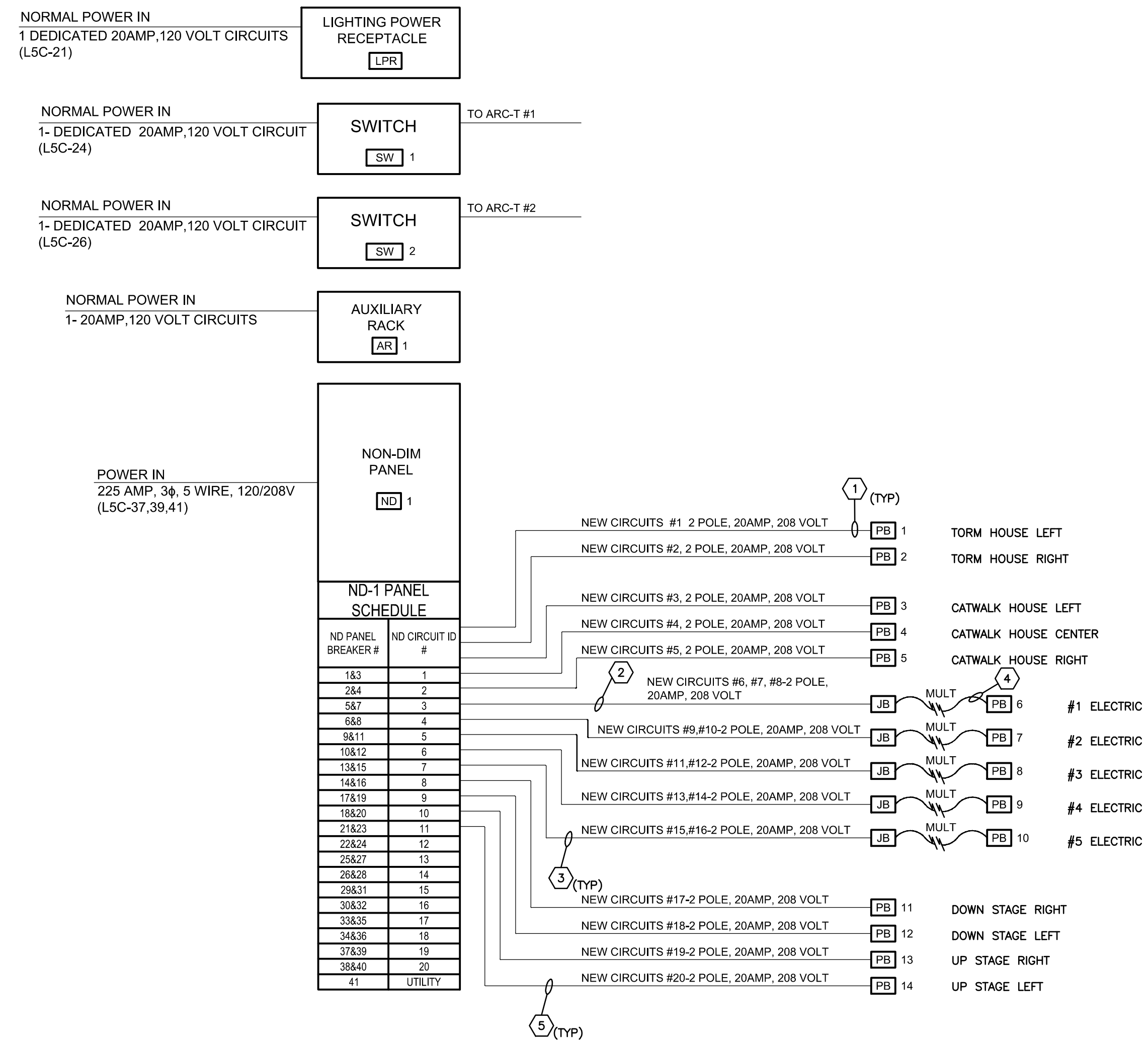
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DATE	2/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	E2.1

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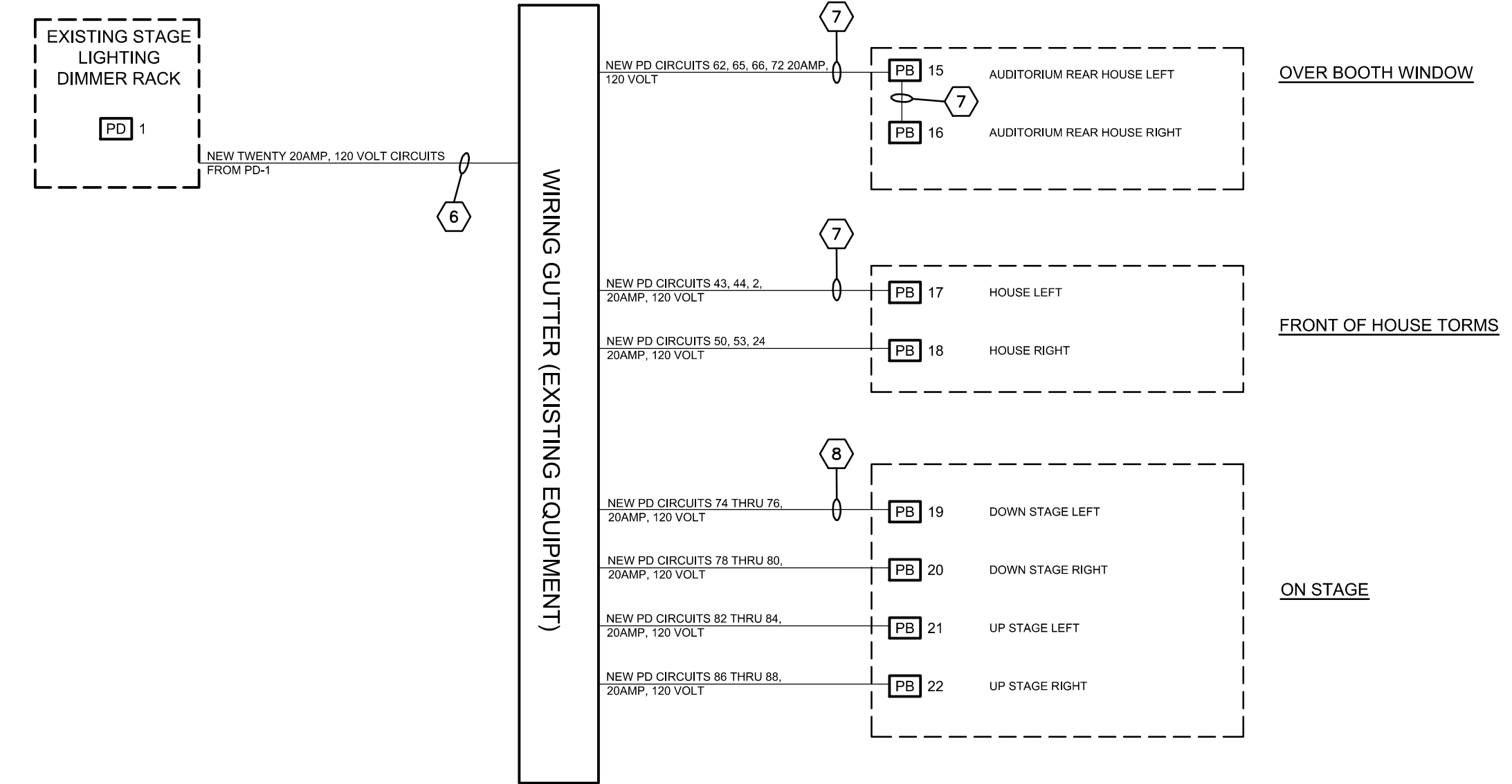


**DRAWING NOTES:**

- 3/4" C; 2 #10, 1 #10 GROUND. TYPICAL FOR PB1 THROUGH PB5.
- 1" C; 6 #10, 1 #10 GROUND
- 3/4" C; 4 #10, 1 #10 GROUND. TYPICAL FOR JB ELECTRIC #2 THROUGH #5.
- PROVIDE MULTI-CABLE CONNECTION BETWEEN JB AND ELECTRICS (ALL 1 THROUGH 5). TYPE SOOW, #10 AWG. GENERAL CABLE CAROL SUPER VU-TRON CAT. #09020
- 3/4" C; 2 #10, 1 #10 GROUND. TYPICAL FOR PB11 THROUGH PB14.
- WIRE GUTTER IS ADJACENT TO STAGE DIMMER RACK. DERATING NOT REQUIRED. PROVIDE 2" C; 20 #10, 20 #10 NEUTRAL, 7 #10 GROUND.
- 1" C; 4 #10, 4 #10 NEUTRAL, 1 #10 GROUND. TYPICAL FOR PB15 THROUGH 18
- 3/4" C; 2 #10, 2 #10 NEUTRAL, 1 #10 GROUND. TYPICAL FOR PB19 THROUGH 20.

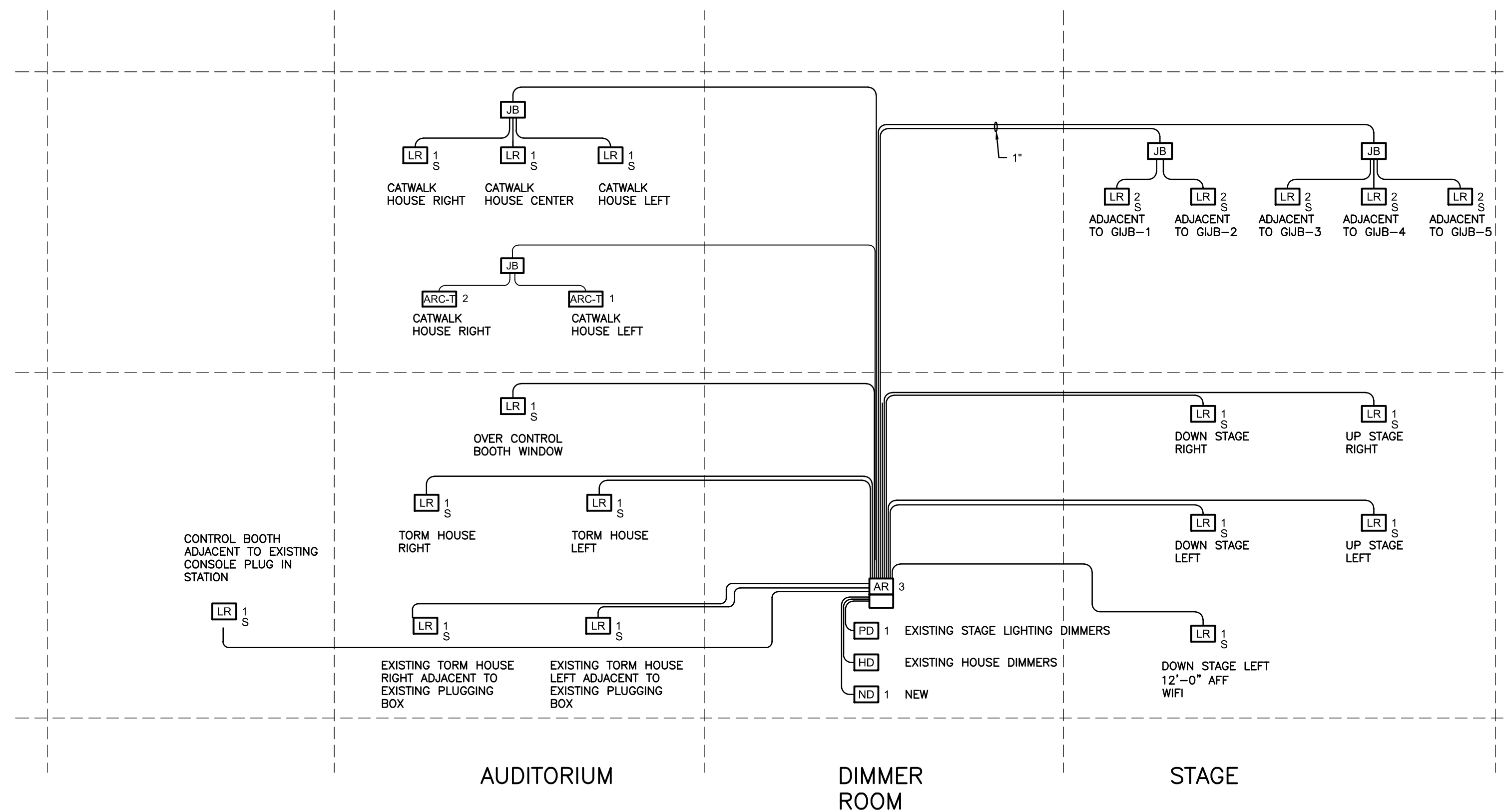
**GENERAL NOTES:**

- CIRCUITS THAT ARE RUN TO NEW LOCATIONS ARE RUN PARALLEL TO THEIR EXISTING LOCATIONS.
- PROVIDE DEDICATED NEUTRALS FOR ALL 120 VOLT CIRCUITS.



**POWER AND NON-DIM CIRCUIT DISTRIBUTION RISER DIAGRAM**  
NOT TO SCALE

**NEW STAGE DIMMING CIRCUIT DISTRIBUTION RISER DIAGRAM**  
NOT TO SCALE



**GENERAL NOTES:**

- ALL CONDUIT, BACK BOXES AND ENCLOSURES PROVIDED BY DIVISION 26 UNLESS SPECIFICALLY NOTED OTHERWISE.
- REVIEW ANY RELATED RISER DIAGRAM, DEVICE LEGEND, FLOOR PLAN, AND CIRCUIT DISTRIBUTION DOCUMENTS FOR DETAILS.
- ALL CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
- INSTALL A PULL STRING IN ALL CONDUIT. FLAG EACH PULL STRING WITH UNIQUE CONDUIT NUMBER.
- INSTALL PLASTIC BUSHINGS ON ALL CONDUIT ENDS.

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CONSTRUCTION DOCUMENTS

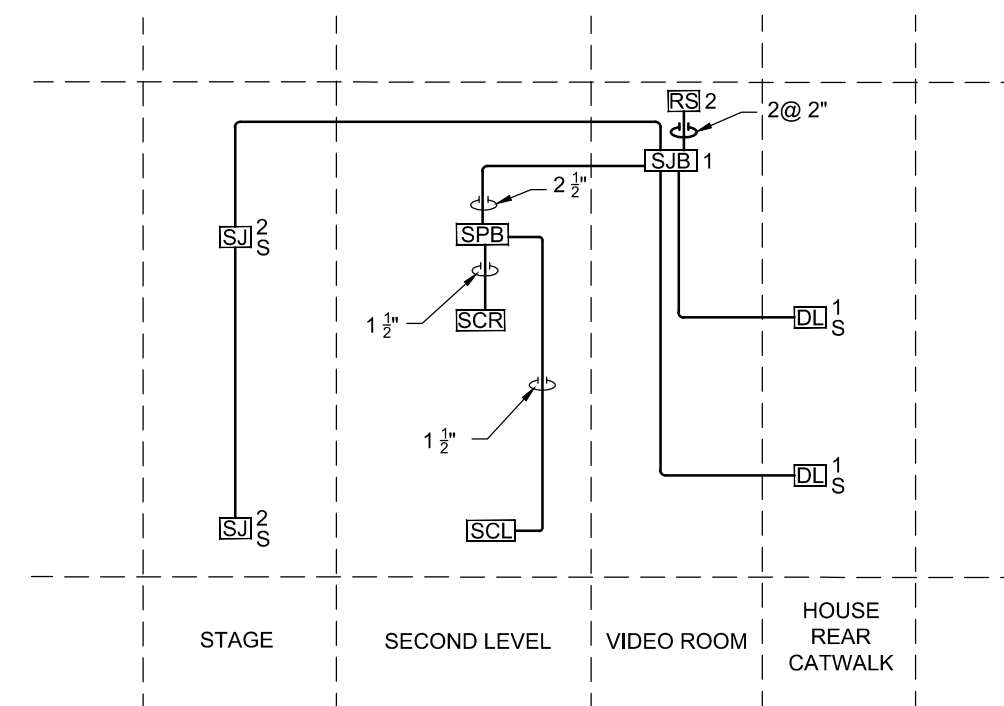
POWER RISER DIAGRAM

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E4.0

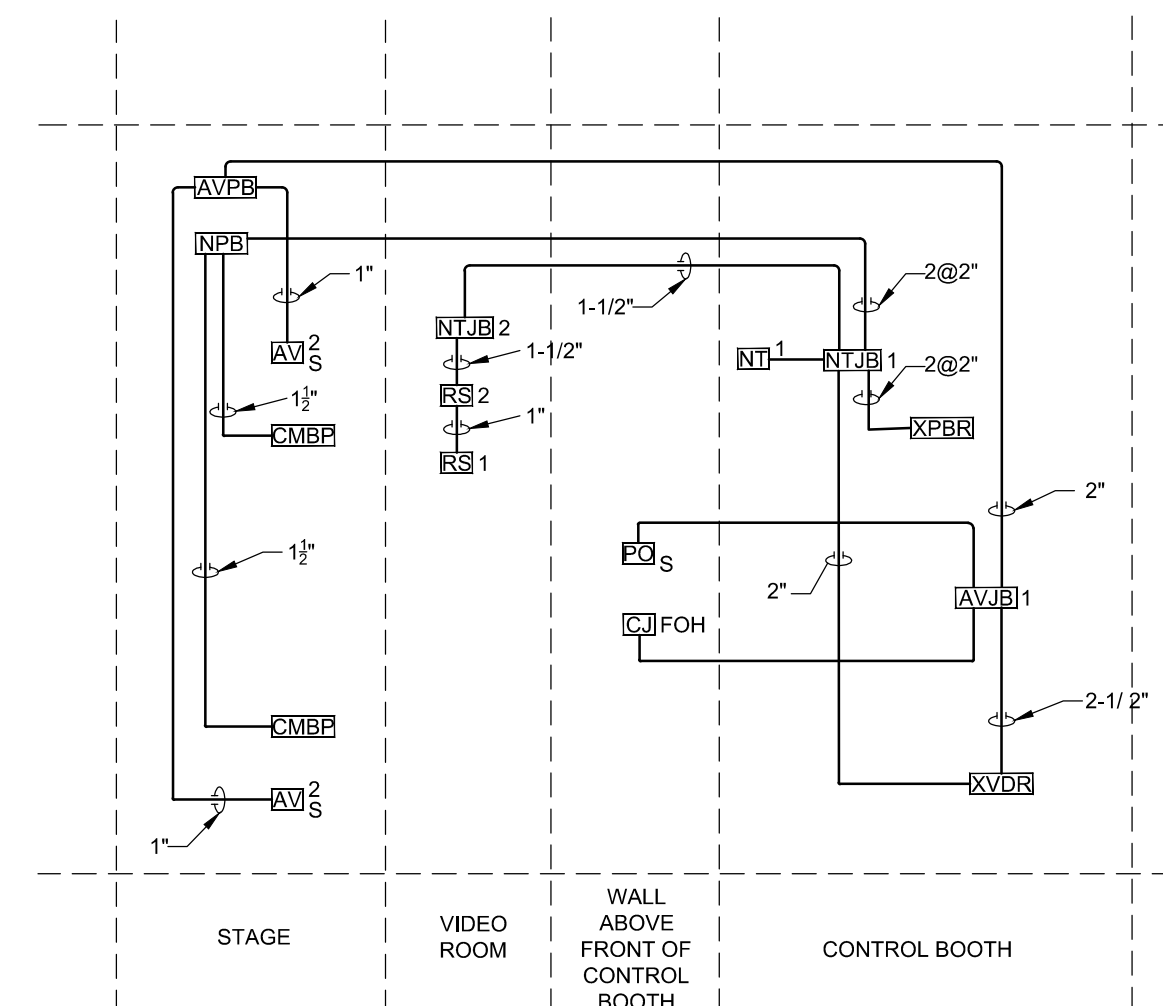




**NOTES: SPEAKER SYSTEMS RISERS**

1. ALL CONDUIT, BACKBOXES AND ENCLOSURES PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
2. REVIEW ANY RELATED RISER DIAGRAM, DEVICE LEGEND, FLOOR PLAN, CIRCUIT DISTRIBUTION, OR OTHER CONTRACT DOCUMENT FOR DETAILS.
3. ALL CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
4. INSTALL BUSHINGS ON ALL EXPOSED CONDUIT ENDS.
5. INSTALL PULL STRING IN EACH CONDUIT. FLAG EACH PULL STRING WITH UNIQUE CONDUIT NUMBER.

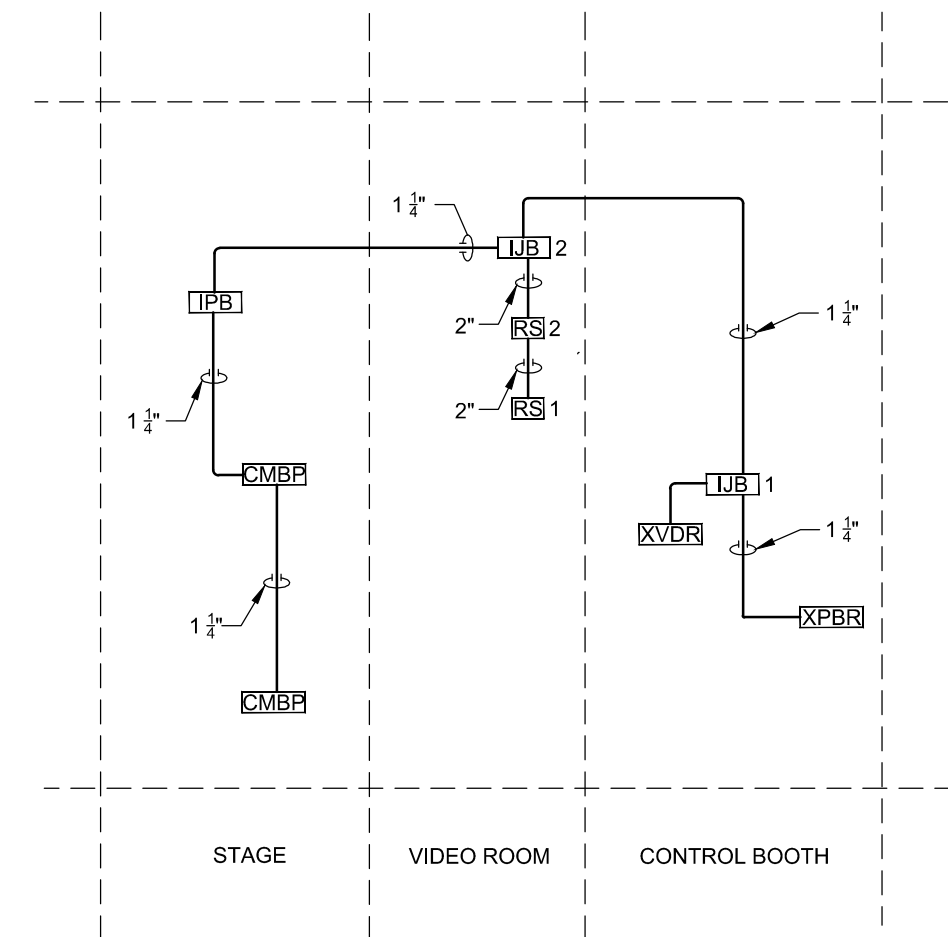
**SPEAKER SYSTEM RACEWAY RISER DIAGRAM**  
 NOT TO SCALE



**NOTES: AUDIO AND VIDEO NETWORK SYSTEMS**

1. ALL CONDUIT, BACKBOXES AND ENCLOSURES PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
2. REVIEW ANY RELATED RISER DIAGRAM, DEVICE LEGEND, FLOOR PLAN, CIRCUIT DISTRIBUTION, OR OTHER CONTRACT DOCUMENT FOR DETAILS.
3. ALL CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
4. INSTALL BUSHINGS ON ALL EXPOSED CONDUIT ENDS.
5. INSTALL PULL STRING IN EACH CONDUIT. FLAG EACH PULL STRING WITH UNIQUE CONDUIT NUMBER.

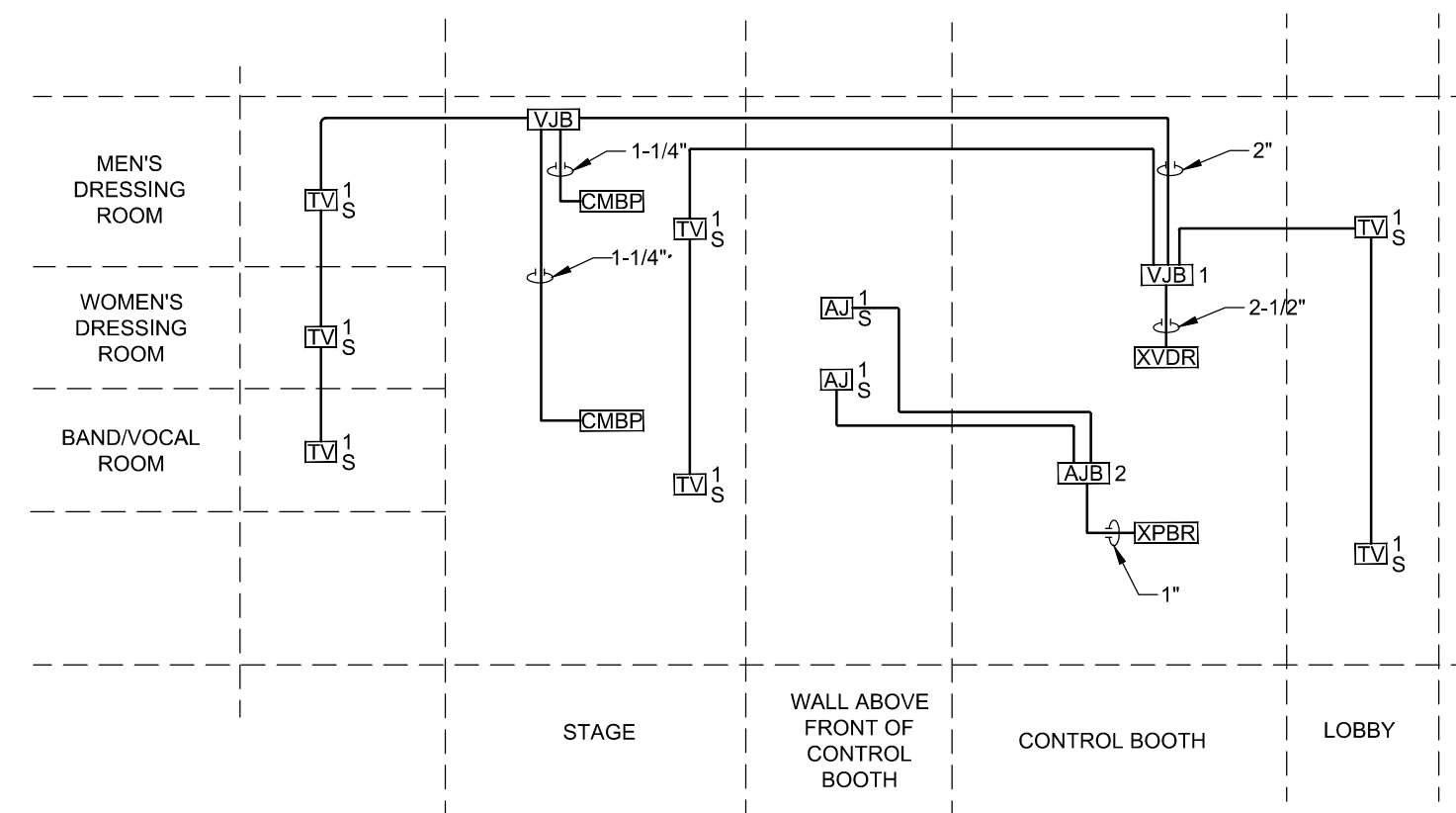
**AUDIO AND VIDEO NETWORK SYSTEMS RACEWAY RISER DIAGRAM**  
 NOT TO SCALE



**NOTES: INTERCOM / LINE LEVEL**

1. ALL CONDUIT, BACKBOXES AND ENCLOSURES PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
2. REVIEW ANY RELATED RISER DIAGRAM, DEVICE LEGEND, FLOOR PLAN, CIRCUIT DISTRIBUTION, OR OTHER CONTRACT DOCUMENT FOR DETAILS.
3. ALL CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
4. INSTALL BUSHINGS ON ALL EXPOSED CONDUIT ENDS.
5. INSTALL PULL STRING IN EACH CONDUIT. FLAG EACH PULL STRING WITH UNIQUE CONDUIT NUMBER.

**INTERCOM/LINE LEVEL RACEWAY RISER DIAGRAM**  
 NOT TO SCALE



**NOTES: ANALOG VIDEO AND ANTENNA SYSTEMS**

1. ALL CONDUIT, BACKBOXES AND ENCLOSURES PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE.
2. REVIEW ANY RELATED RISER DIAGRAM, DEVICE LEGEND, FLOOR PLAN, CIRCUIT DISTRIBUTION, OR OTHER CONTRACT DOCUMENT FOR DETAILS.
3. ALL CONDUIT IS 3/4" UNLESS NOTED OTHERWISE.
4. INSTALL BUSHINGS ON ALL EXPOSED CONDUIT ENDS.
5. INSTALL PULL STRING IN EACH CONDUIT. FLAG EACH PULL STRING WITH UNIQUE CONDUIT NUMBER.

**ANALOG VIDEO AND ANTENNA SYSTEM RACEWAY RISER DIAGRAM**  
 NOT TO SCALE

**AV SYSTEM POWER:**

1. EQUIPMENT RACK POWER: RACK POWER SHALL TERMINATE IN A JBOX WITHIN RACK. THIS JBOX AND ALL INTERNAL RACK POWER WIRING WILL BE PROVIDED BY THE SYSTEM CONTRACTOR. ALL OTHER WIRING, CONDUIT, ETC SHALL BE DONE BY THE ELECTRICAL CONTRACTOR.
- 1.1. SOUND RACK 2 - 2 DEDICATED 20A CIRCUITS AND 8 DEDICATED 30 AMP CIRCUITS.
- 1.2. VIDEO RACK 1 - TWO DEDICATED 20A CIRCUITS.
2. ONSTAGE MONITOR POWER:
  - 2.1. MONITOR POWER - TWO DEDICATED 20A CIRCUITS TERMINATED WITH NEMA L5-20 RECEPTACLES. ONE CIRCUIT PER LOCATION. LOCATIONS ARE DOWN STAGE LEFT AND DOWNSTAGE RIGHT NEXT TO CMBP.
3. VIDEO POWER:
  - 3.1. VIDEO PROJECTOR - ONE DEDICATED 20A 120V CIRCUIT WITH A DUPLEX RECEPTACLE AND 1 DEDICATED 20A 208V (SINGLE PHASE) CIRCUIT WITH A NEMA L6-20 RECEPTACLE AT THE VIDEO PROJECTOR LOCATION PO.
  - 3.2. FOH CAMERA POWER - ONE DEDICATED 20A CIRCUIT WITH A DUPLEX RECEPTACLE AT THE FRONT OF HOUSE CAMERA LOCATION CFOH.
  - 3.3. TVS - A DUPLEX RECEPTACLE LOCATED AT EACH OF THE 7 TV LOCATIONS.

REVISIONS	BY

  
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**CONSTRUCTION DOCUMENTS**

**POWER RISER DIAGRAM**

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EXISTING PANEL 'MSB5'

PANEL: MSB5 AIC RATING: EXIST SERVICE: 277/480 V.,											3PH,4W			MLO: 0 AMPS MCB: 1000 AMPS		
DESCRIPTION	KVA	BKR	CKT	A	B	C	CKT	BKR	KVA	DESCRIPTION						
E EQ; ELEVATOR	10.6	3P	1				2	3P	7.2	EQ;						
E EQ; ELEVATOR	10.6	80	3				4	50	7.2	EQ;						
E EQ; ELEVATOR	10.6	"	5				6	"	7.2	EQ;						
E A/C; CUS.2.1	12.4	3P	7				8	3P	0	EQ; SPD						
E A/C; CUS.2.1	12.4	90	9				10	30	0	EQ; SPD						
E A/C; CUS.2.1	12.4	"	11				12	"	0	EQ; SPD						
N PNL L5C VIA XFMR	27.3	3P	13				14	-	0	SPACE						
N PNL L5C VIA XFMR	25.9	175	15				16	-	0	SPACE						
N PNL L5C VIA XFMR	23.9	"	17				18	-	0	SPACE						
E PNL; H5A	37.4	3P	19				20	-	0	SPACE						
E PNL; H5A	37.4	100	21				22	-	0	SPACE						
E PNL; H5A	37.4	"	23				24	-	0	SPACE						
E PNL; L5A VIA XFMR	40.6	3P	25				26	3P	26	PNL; H5B						
E PNL; L5A VIA XFMR	40.6	225	27				28	200	26	PNL; H5B						
E PNL; L5A VIA XFMR	40.6	"	29				30	"	26	PNL; H5B						
E PNL; H5A2	46.3	3P	31				32	3P	60	STAGE DIMMER VIA XFMR						
E PNL; H5A2	46.3	350	33				34	350	60	STAGE DIMMER VIA XFMR						
E PNL; H5A2	46.3	"	35				36	"	60	STAGE DIMMER VIA XFMR						
E SPACE	0	-	37				38	-	0	SPACE						
E SPACE	0	-	39				40	-	0	SPACE						
E SPACE	0	-	41				42	-	0	SPACE						
A PH = 267.80				B PH = 266.40				C PH = 264.40								
SERVES	CONN LOAD	FACTOR	FEED	DIVERSITY	KVAD	PANEL KVAD										
LIGHTING	0.00	x 1.25	=	0.00	x	=										
RECEPT	0.00	x "	=	0.00	x	=										
MISC EQUIP	53.40	x 1.00	=	53.40	x	=										
A/C	37.20	x 1.00	=	37.20	x	=										
HEATING	0.00	x 1.00	=	0.00	x	=										
LARGEST MOTOR	0.00	x 1.25	=	0.00	x	=										
OTHER MOTORS	0.00	x 1.00	=	0.00	x	=										
OTHER	708.00	x 1.00	=	708.00	x	=										
SPARE																
TOTALS	798.60	KVA		830.40	KVA											

\* PER N.E.C. TABLE 220.44

ABBREVIATIONS:

E = EXISTING CIRCUIT TO REMAIN.  
 N = PROVIDE NEW BREAKER, CONDUIT AND WIRE.  
 R = REUSE EXISTING CIRCUIT BREAKER TO FEED NEW LOAD. PROVIDE CONDUIT AND WIRE AS REQUIRED  
 S = SPARE OUT EXISTING BREAKER. REMOVE ALL ABANDONED CONDUCTORS AND CONDUIT.

NEW PANEL 'L5C'

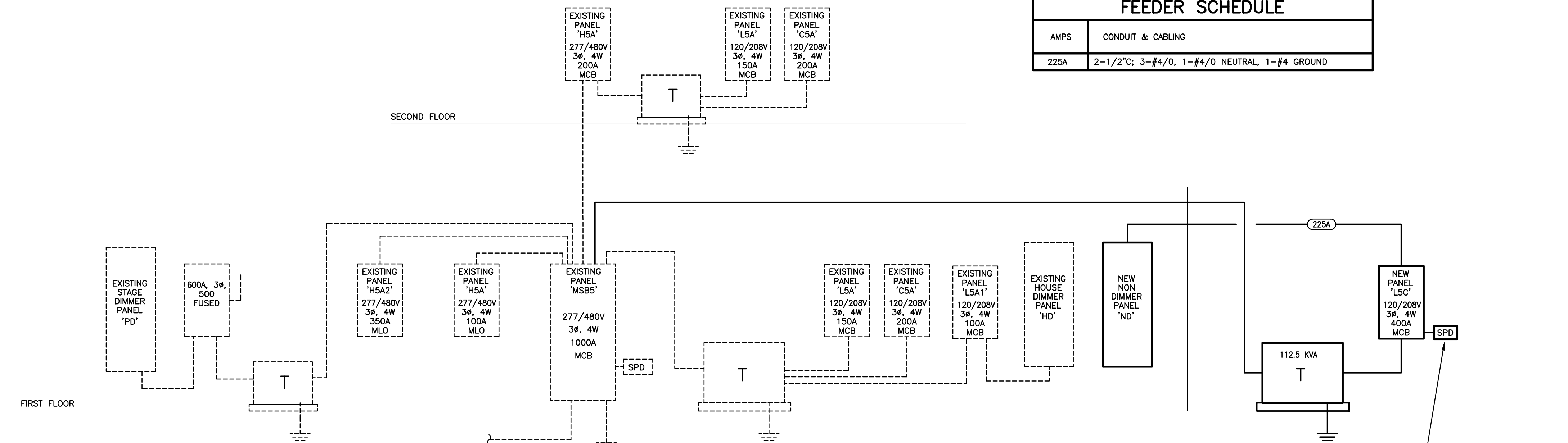
PANEL: L5C AIC RATING: 10000 AMPS SERVICE: 120/208 V.,											3PH,4W			MLO: 0 AMPS MCB: 400 AMPS		
DESCRIPTION	KVA	BKR	CKT	A	B	C	CKT	BKR	KVA	DESCRIPTION						
EQ; SOUND RACK 2	1.4	20	1				2	30	2	EQ; SOUND RACK 2						
EQ; SOUND RACK 3	1.4	20	3				4	30	2	EQ; SOUND RACK 3						
EQ; VIDEO RACK	1.4	20	5				6	30	2	EQ; SOUND RACK 4						
EQ; VIDEO RACK	1.4	20	7				8	30	2	EQ; SOUND RACK 5						
REC; MONITOR	1	20	9				10	30	2	EQ; SOUND RACK 6						
REC; PROJECTOR	1	20	11				12	30	2	EQ; SOUND RACK 7						
REC; PROJECTOR	1	20	13				14	30	2	EQ; SOUND RACK 8						
REC; PROJECTOR	1	2P	15				16	30	2	EQ; SOUND RACK 9						
REC; CAMERA	1	20	17				18	20	1	REC; TELEVISION						
REC; CAMERA	1	20	19				20	20	1	REC; TELEVISION						
REC; LPR	1.2	20	21				22	20	1	REC; TELEVISION						
SPARE	0	20	23				24	20	1.2	EQ; SWITCH-1						
SPARE	0	20	25				26	20	1.2	EQ; SWITCH-2						
SPARE	0	20	27				28	20	0	SPARE						
SPARE	0	20	29				30	20	0	SPARE						
SPACE	0	-	31				32	20	0	SPACE						
SPACE	0	-	33				34	20	0	SPACE						
SPACE	0	-	35				36	-	0	SPACE						
EQ; NON-DIM	14.3	3P	37				38	3P	0	EQ; SPD						
EQ; NON-DIM	14.3	225	39				40	30	0	EQ; SPD						
EQ; NON-DIM	14.3	"	41				42	"	0	EQ; SPD						
A PH = 27.30				B PH = 25.90				C PH = 23.90								
SERVES	CONN LOAD	FACTOR	FEED	DIVERSITY	KVAD	PANEL KVAD										
LIGHTING	0.00	x 1.25	=	0.00	x	=										
RECEPT	10.20	x "	=	10.10	x	=										
MISC EQUIP	66.90	x 1.00	=	66.90	x	=										
A/C	0.00	x 1.00	=	0.00	x	=										
HEATING	0.00	x 1.00	=	0.00	x	=										
LARGEST MOTOR	0.00	x 1.25	=	0.00	x	=										
OTHER MOTORS	0.00	x 1.00	=	0.00	x	=										
OTHER	0.00	x 1.00	=	0.00	x	=										
SPARE																
TOTALS	77.10	KVA		143.94	KVA											

\* PER N.E.C. TABLE 220.44

TRANSFORMER SCHEDULE						
KVA	480 VOLT PRIMARY, 3ø			120/208 VOLT SECONDARY, 3ø, 4 WIRE		
	FLA	CB	CONDUCTOR	FLA	CB	CONDUCTOR
112.5	135	175	2" C; 3-#2/0, 1 #6 GND.	312	400	4" C; 3-#500 KCMIL, 1-#500KCMIL NEUTRAL, 1-#1/0 GROUND

NOTES:  
 1. CONDUCTORS ARE COPPER & NO PROVISIONS FOR VOLTAGE DROP IS MADE.  
 2. SECONDARY TRANSFORMER GROUND SHALL BE BONDED TO BUILDING GROUNDING SYSTEM VIA GROUND CONDUCTOR SIZED EQUIVALENT TO SECONDARY GROUND CONDUCTOR.


FEEDER SCHEDULE	
AMPS	CONDUIT & CABLING
225A	2-1/2" C; 3-#4/0, 1-#4/0 NEUTRAL, 1-#4 GROUND



AUDITORIUM ELECTRICAL RISER DIAGRAM  
 NOT TO SCALE

PROVIDE SURGE PROTECTION DEVICE. 120/208 VOLT, 3 PHASE, 4 WIRE. 200,000 AMPS PER PHASE MINIMUM SURGE CURRENT RATING. UL TYPE 2. 200 KAIC RATED, PQ PROTECTION MODEL NUMBER PQ200, OR APPROVED EQUAL. PROVIDE 3 #10, 1 #10 NEUTRAL, AND 1 #10 GND.

REVISIONS	BY

  
**Marathon High School**  
**Theatrical Lighting and Sound Improvements**  
 350 Sombbrero Beach Road  
 Marathon, FL 33050  
**Monroe County School District**  
 241 Trumbo Rd.  
 Key West, Florida 33040

CONSTRUCTION DOCUMENTS

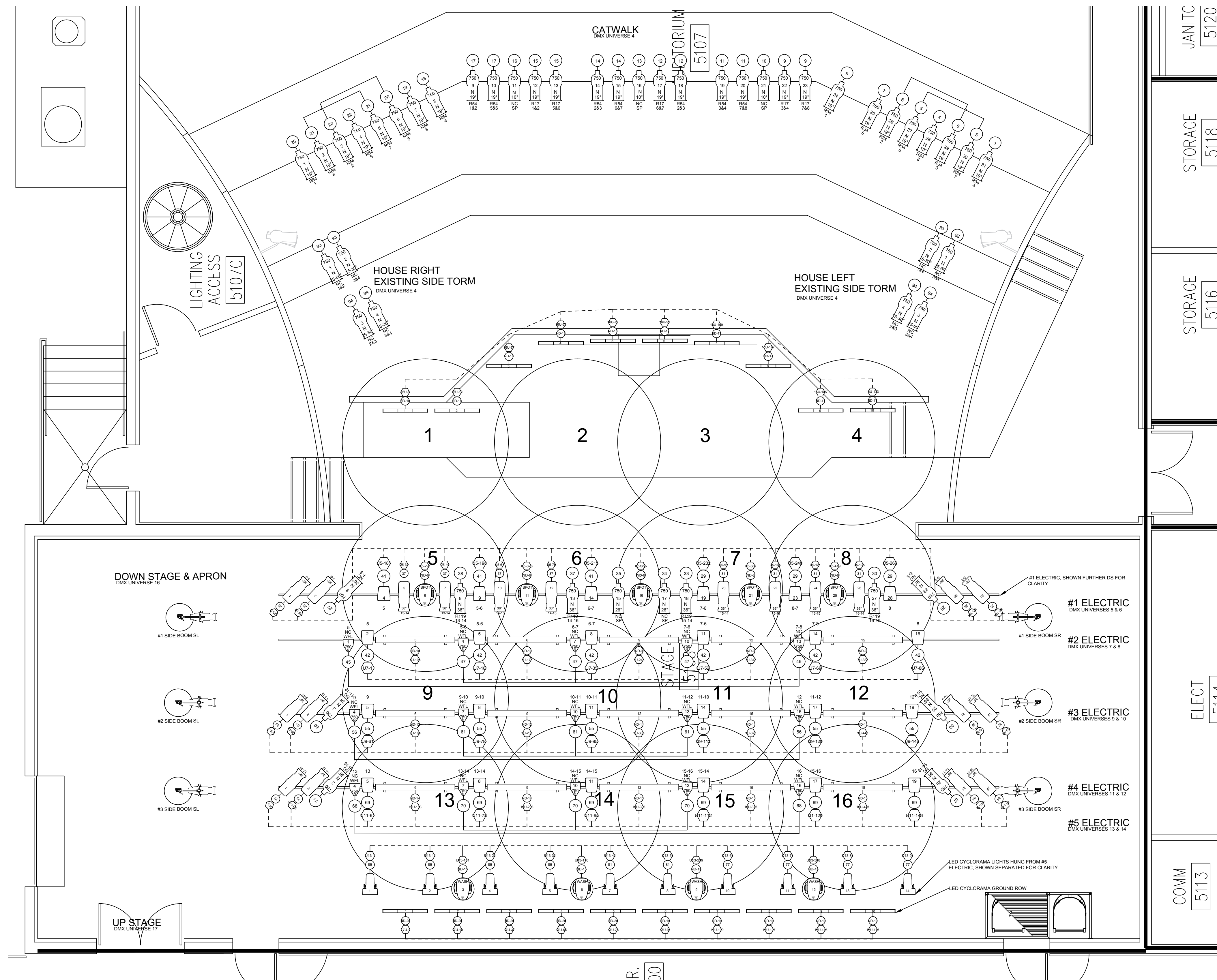
PANEL SCHEDULES

**AGI**  
 Anston-Greenlee, Inc.  
 Mechanical & Electrical Consulting Engineers  
 1115 West Harbor Avenue, Tampa, FL 33622 (813) 963-1919  
 Email: agi@anston-greenlee.com Florida Engineering License Number 6061

DRAWN	TRG
CHECKED	RCA
DATE	2/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	E5.0

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**LIGHT PLOT**  
SCALE: 1/4"=1'-0"

**LEGEND**  
SCALE: NA

QTY	SYMBOL	DESCRIPTION
AS SHOWN		10 DEGREE
AS SHOWN		14 DEGREE
AS SHOWN		19 DEGREE
AS SHOWN		26 DEGREE
AS SHOWN		36 DEGREE
AS SHOWN		50 DEGREE
AS SHOWN		LED ERS 15 CH MODE
AS SHOWN		PAR
AS SHOWN		LED PAR ZOOM TR16 / 17CH
AS SHOWN		ETC LUSTER 2 W/ CYC. ATT. DIRECT MODE / 10 CH
AS SHOWN		CHAVUET BATTEN 72 TOUR LED STRIP TR16 MODE / 18 CH
AS SHOWN		CHAVUET B-2805FC LED STRIP 5 CELL / 70 CH MODE
AS SHOWN		CHAVUET MK 2 32 CH MODE
AS SHOWN		CHAVUET MK 2 SINGLE MODE / 69 CH

TYPICAL	

E - INDICATES EXISTING INCANDESCENT FIXTURE  
 N - INDICATES NEW INCANDESCENT FIXTURE  
 \* - INDICATES DROP IN IRIS  
 MED BKUP - INDICATES TEMPLATE & HOLDER

INDICATES 2PAG TWO-FER  
 INDICATES POWER & DATA JUMPER

**NOTES TO INSTALLER:**

- UNCRATE AND LAMP ALL LIGHTING FIXTURES.
- TAKE CARE NOT TO TOUCH LAMP ENVELOPE. READ LAMP MANUFACTURER'S INSTALLATION INSTRUCTIONS BEFORE PROCEEDING.
- USE MINIMUM REQUIRED LENGTH OF STAGE CABLE TO REACH DESIGNATED CIRCUIT.
- HANG EACH FIXTURE WITH COLOR AND SAFETY CABLE INSTALLED.
- FOCUS ALL FIXTURES AS PER AREA DESIGNATIONS.
- USE 'TWO-FERS' WHERE NEEDED.
- ALL COLORS REFERENCE ROSCO LUX NUMBERS.
- UNCRATE, ASSEMBLE, AND INSTALL THE LIGHTING CONTROLLER AND ACCESSORIES IN THE CONTROL BOOTH.
- HANG ALL UNUSED EQUIPMENT ON UP STAGE PIPE BATTEN.

REVISIONS	BY

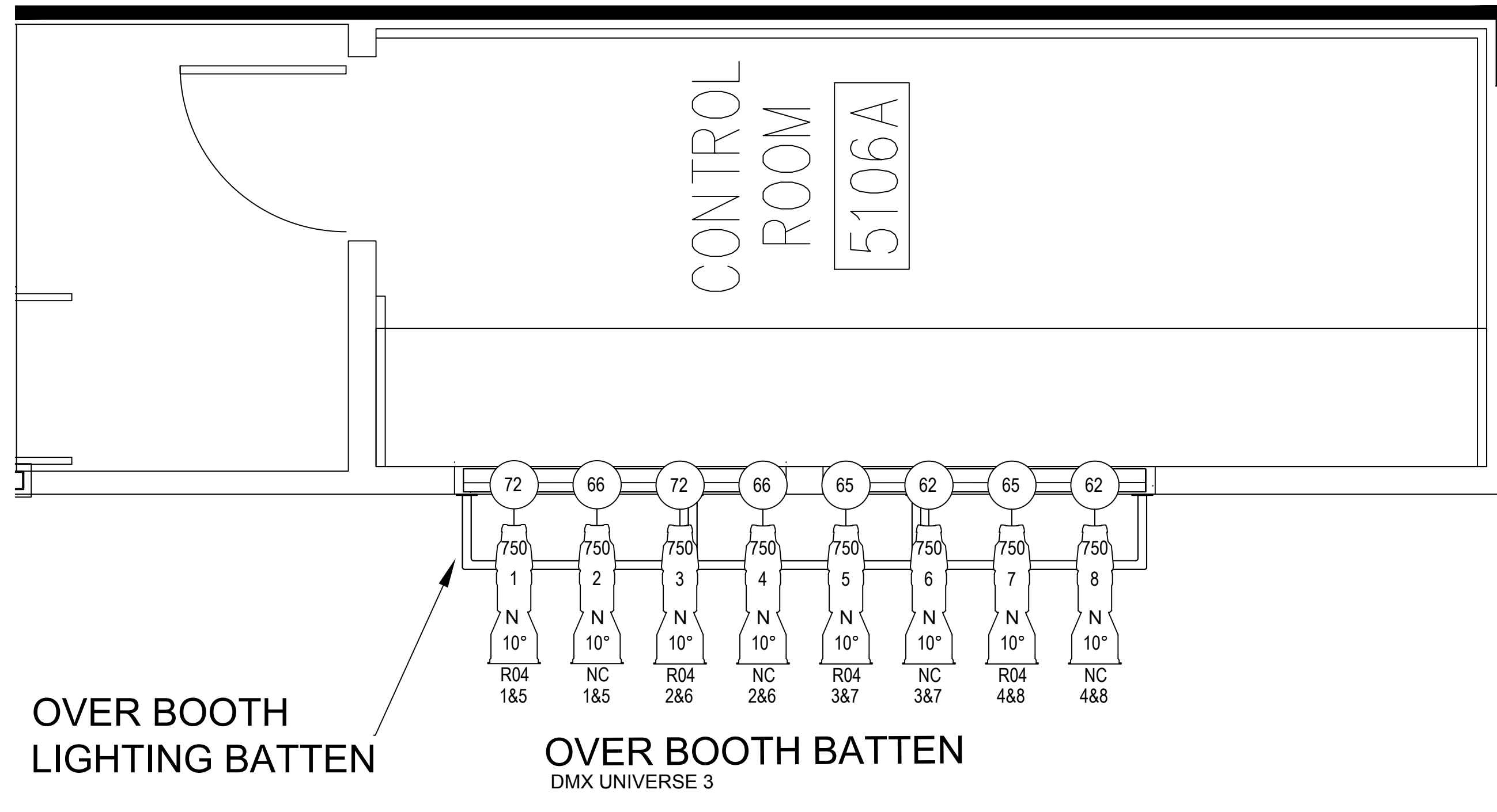
**Marathon High School  
Theatrical Lighting and Sound Improvements**  
 350 Sombiero Beach Road  
 Marathon, FL 33050  
**Monroe County School District**  
 241 Trumbo Rd.  
 Key West, Florida 33040

**CONSTRUCTION DOCUMENTS**  
 STAGE LIGHTING - LIGHT PLOT  
 Anston-Greenless, Inc.  
 Mechanical & Electrical Consulting Engineers  
 1114 West Fisher Avenue, Tampa, FL 33621, (813) 776-1919  
 www.anston-greenless.com  
 Florida Engineering Business Number 0001  
**AGI**

DRAWN	TSG
CHECKED	AJC
DATE	02/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	
<b>TL1.1</b>	

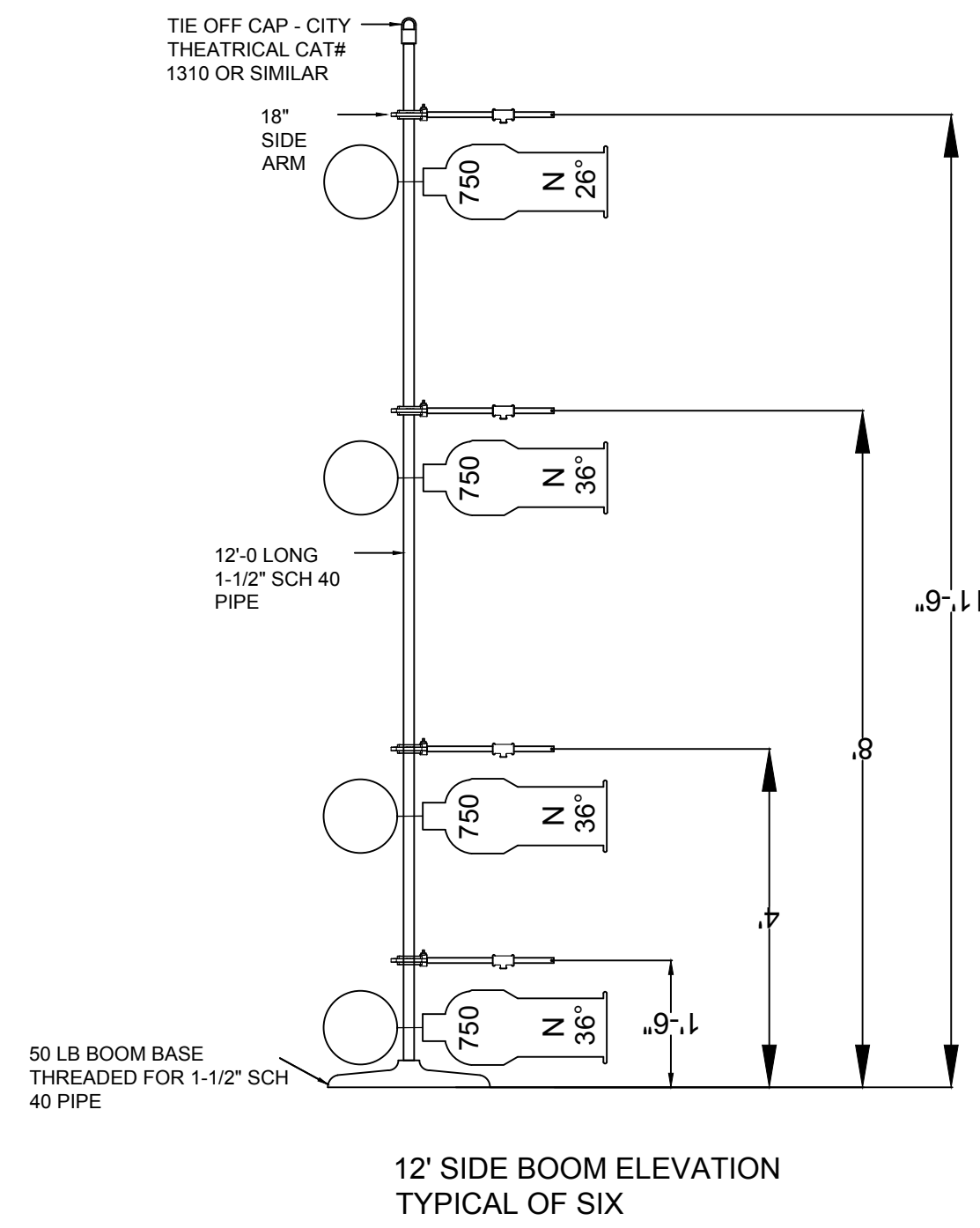
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OVER BOOTH LIGHTING BATTEN

OVER BOOTH BATTEN  
DMX UNIVERSE 3



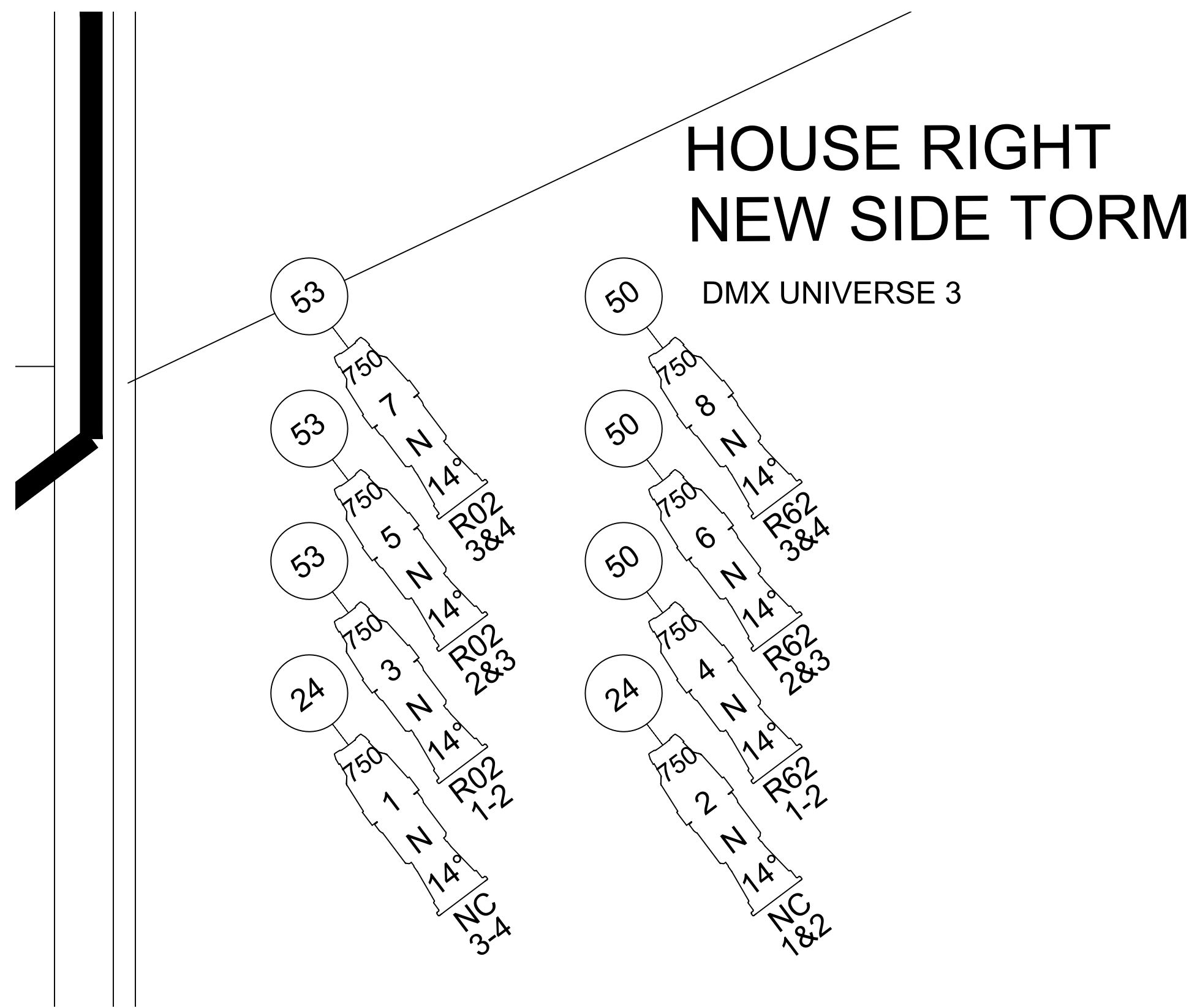
12' SIDE BOOM ELEVATION  
TYPICAL OF SIX

STAGE LIGHTING - OVER BOOTH BATTEN

SCALE: 1/2"=1'0"

STAGE LIGHTING - BOOM ELEVATION

SCALE: 1/2"=1'0"

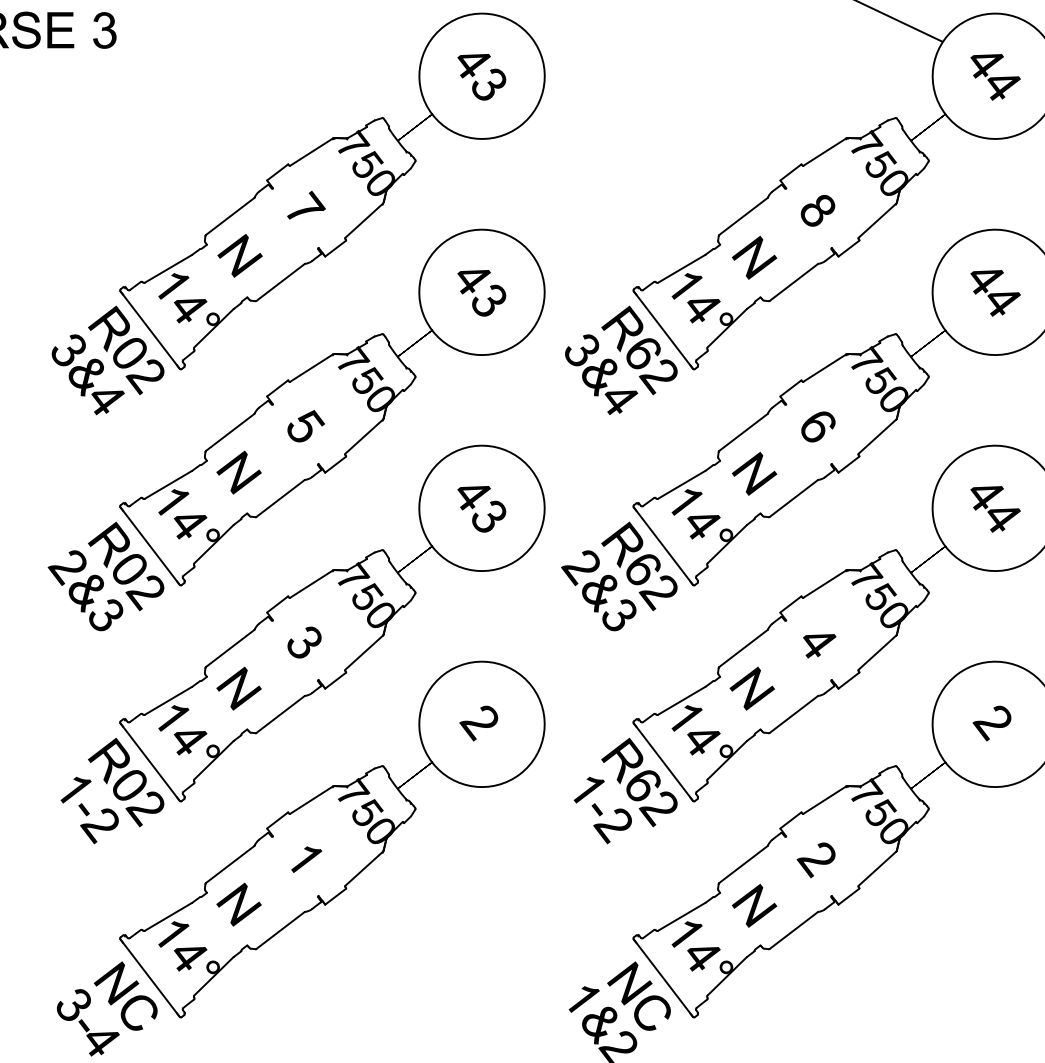


HOUSE RIGHT  
NEW SIDE TORM  
DMX UNIVERSE 3

STAGE LIGHTING - HOUSE RIGHT TORM

SCALE: 3/4"=1'0"

HOUSE LEFT  
NEW SIDE TORM  
DMX UNIVERSE 3



STAGE LIGHTING - HOUSE LEFT TORM

SCALE: 3/4"=1'0"

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CONSTRUCTION DOCUMENTS

STAGE LIGHTING - LIGHT PLOT  
  

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 Mechanical & Electrical Consulting Engineers  
 1118 West Fisher Avenue, Tampa, FL 33627 (813) 776-1919  
 www.agiconsulting.com Florida Engineering Business Number 0001

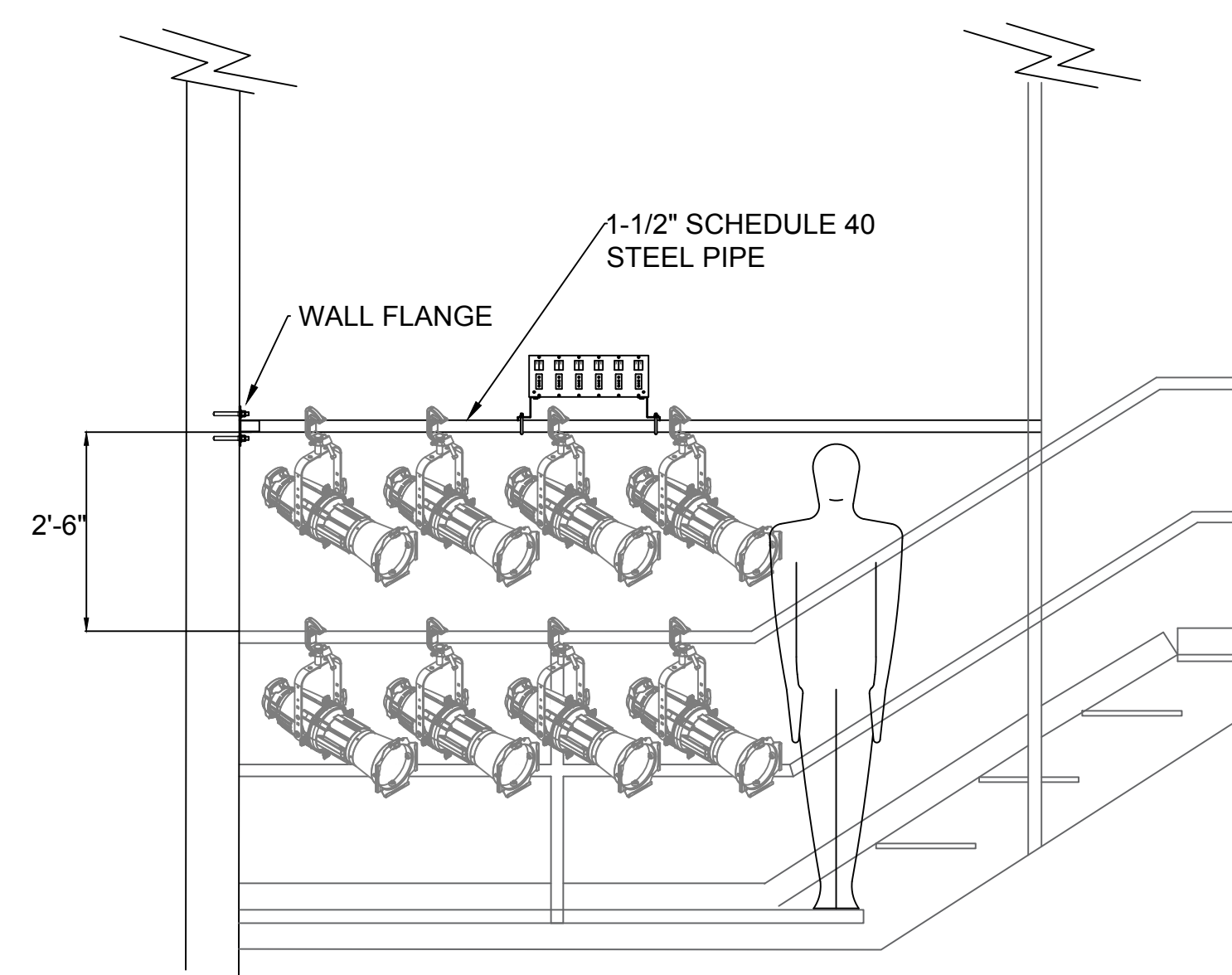
DRAWN	TSG
CHECKED	AJC
DATE	02/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	TL1.2

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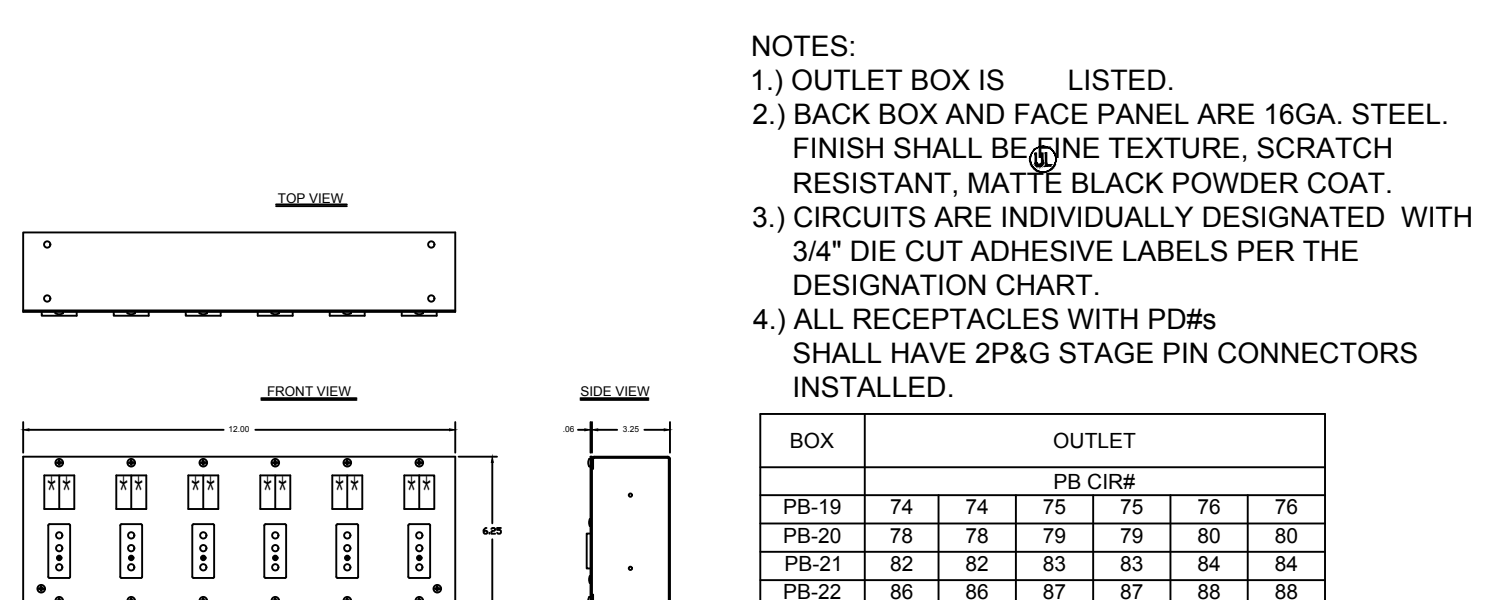








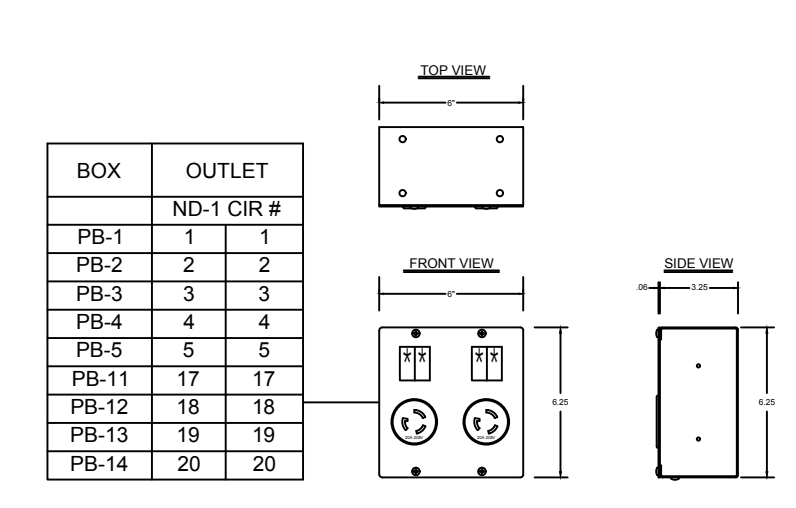
NEW TORM LIGHTING BATTEN  
DETAIL



THREE CIRCUIT SURFACE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH PD#s SHALL HAVE 2P&G STAGE PIN CONNECTORS INSTALLED.

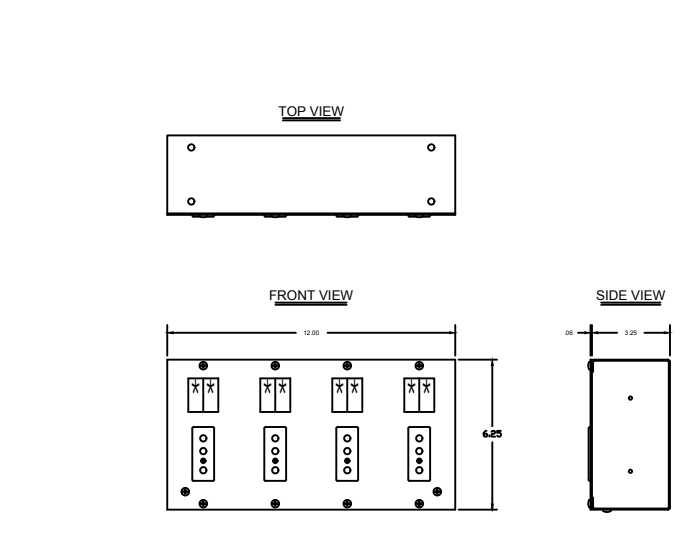
BOX	OUTLET					
	PB CIR#					
PB-19	74	74	75	75	76	76
PB-20	76	78	79	79	80	80
PB-21	82	82	83	83	84	84
PB-22	86	86	87	87	88	88



ONE CIRCUIT SURFACE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH ND#s (NON-DIM PANEL) SHALL HAVE L6-20 STAGE TWIST LOCK CONNECTORS INSTALLED.

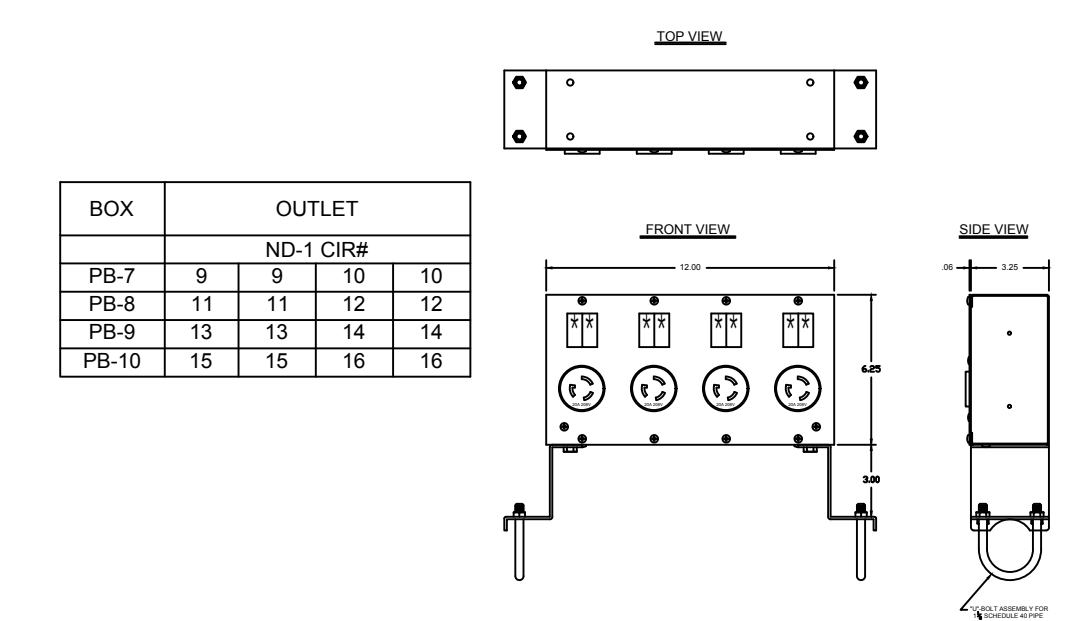
BOX	OUTLET	
	ND-1 CIR #	
PB-1	1	1
PB-2	2	2
PB-3	3	3
PB-4	4	4
PB-5	5	5
PB-11	17	17
PB-12	18	18
PB-13	19	19
PB-14	20	20



FOUR CIRCUIT SURFACE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH PD#s SHALL HAVE 2P&G STAGE PIN CONNECTORS INSTALLED.

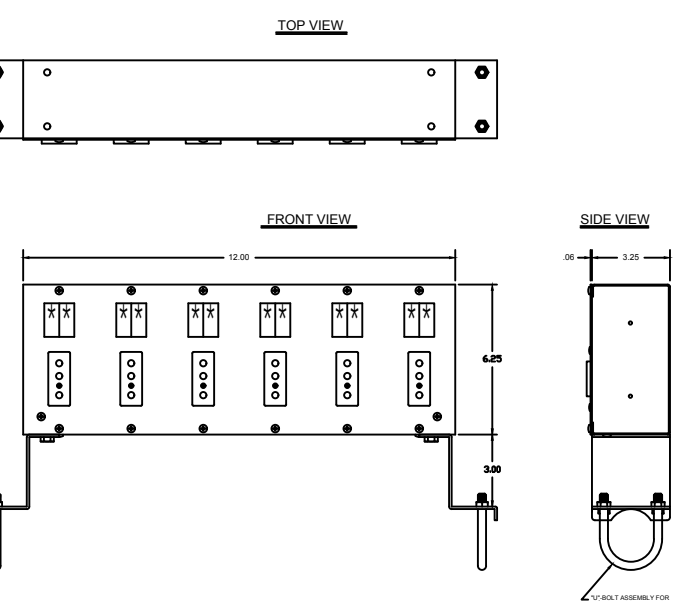
BOX	OUTLET			
	PD CIR#			
PB-15	62	65	66	72
PB-16	62	65	66	72



TWO CIRCUIT PIPE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH ND#s (NON-DIM PANEL) SHALL HAVE L6-20 STAGE TWIST LOCK CONNECTORS INSTALLED.

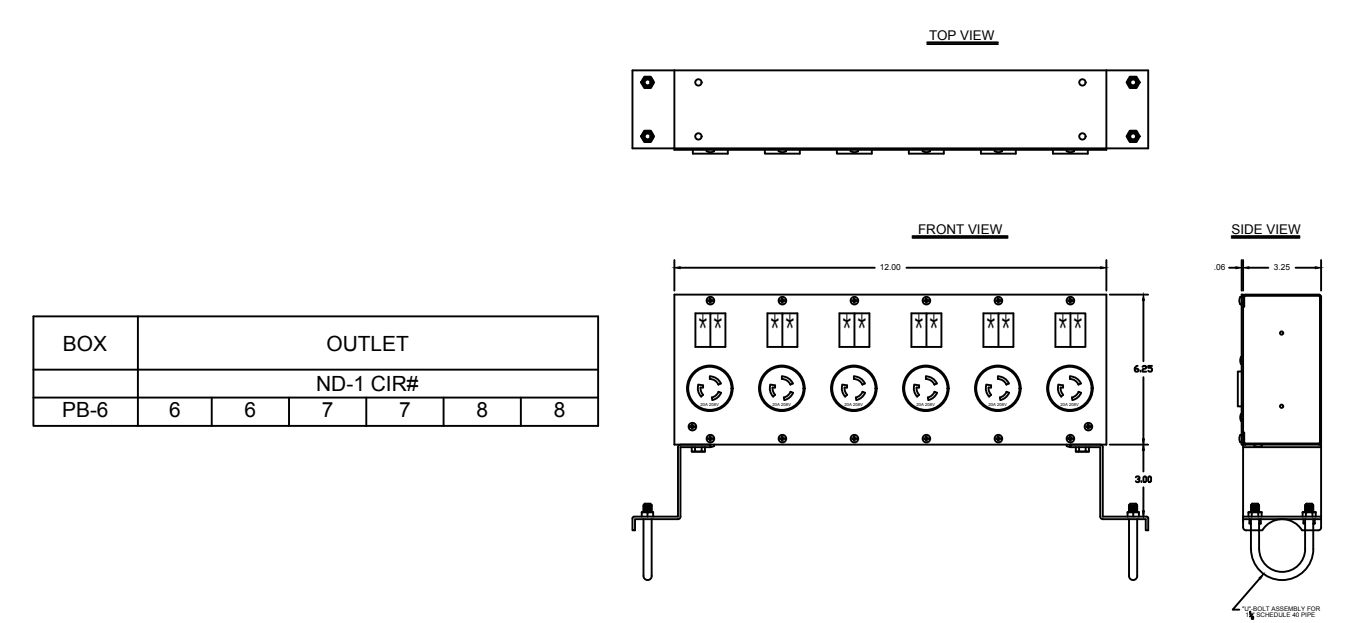
BOX	OUTLET			
	ND-1 CIR#			
PB-7	9	9	10	10
PB-8	11	11	12	12
PB-9	13	13	14	14
PB-10	15	15	16	16



THREE CIRCUIT PIPE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH PD#s SHALL HAVE 2P&G STAGE PIN CONNECTORS INSTALLED.

BOX	OUTLET					
	PD CIR#					
PB-17	2	2	43	43	44	44
PB-18	24	24	50	50	53	53

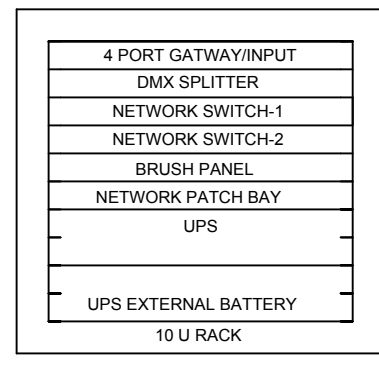


THREE CIRCUIT PIPE MOUNT OUTLET BOX

- NOTES:  
 1.) OUTLET BOX IS LISTED.  
 2.) BACK BOX AND FACE PANEL ARE 16GA. STEEL. FINISH SHALL BE FINE TEXTURE, SCRATCH RESISTANT, MATTE BLACK POWDER COAT.  
 3.) CIRCUITS ARE INDIVIDUALLY DESIGNATED WITH 3/4" DIE CUT ADHESIVE LABELS PER THE DESIGNATION CHART.  
 4.) ALL RECEPTACLES WITH ND#s (NON-DIM PANEL) SHALL HAVE L6-20 STAGE TWIST LOCK CONNECTORS INSTALLED.

BOX	OUTLET					
	ND-1 CIR#					
PB-6	6	6	7	7	8	8

TORM LADDER DETAIL  
SCALE: 1/2"=1'-0"

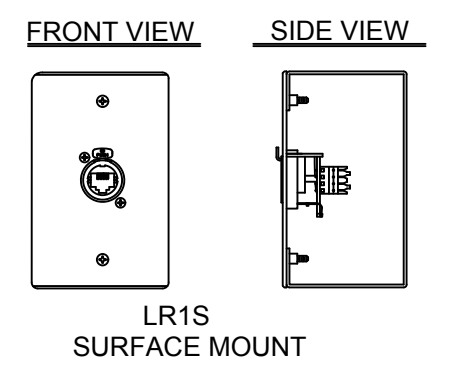
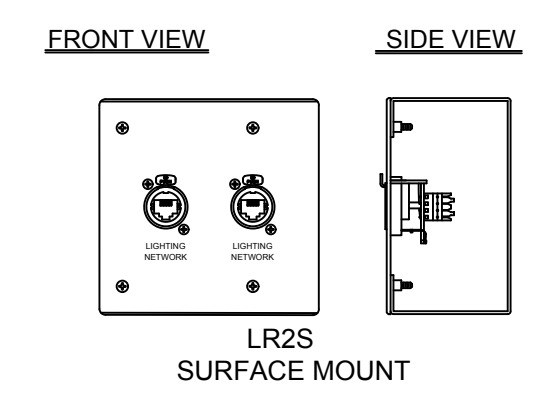


AUXILIARY RACK (AR-1)  
DIMMER ROOM

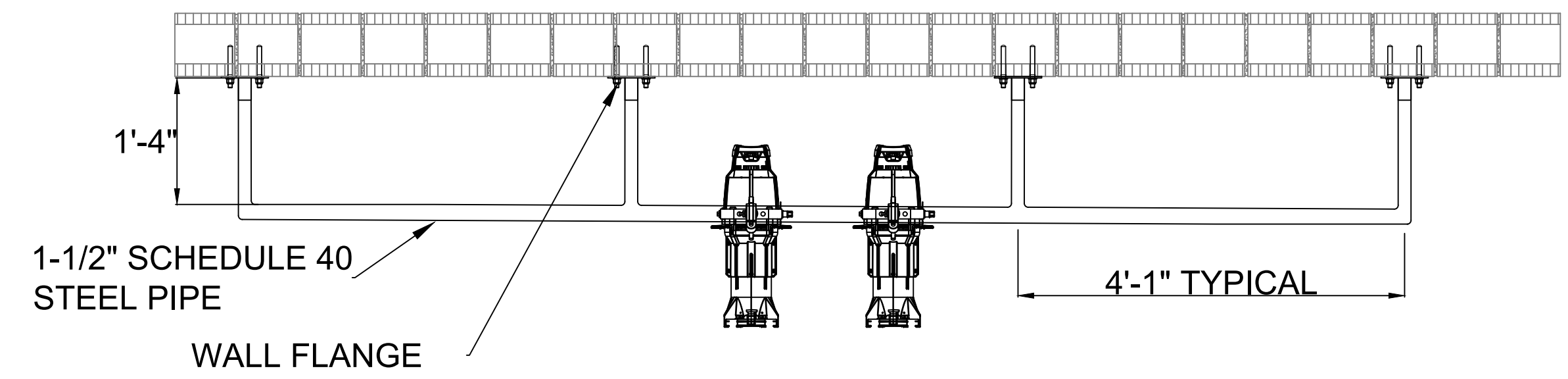
AUXILIARY RACK  
SCALE: 1"=1'-0"

PD PLUGGING BOXES  
SCALE: 1-1/2"=1'-0"

NON-DIM PLUGGING BOXES  
SCALE: 1/2"=1'-0"

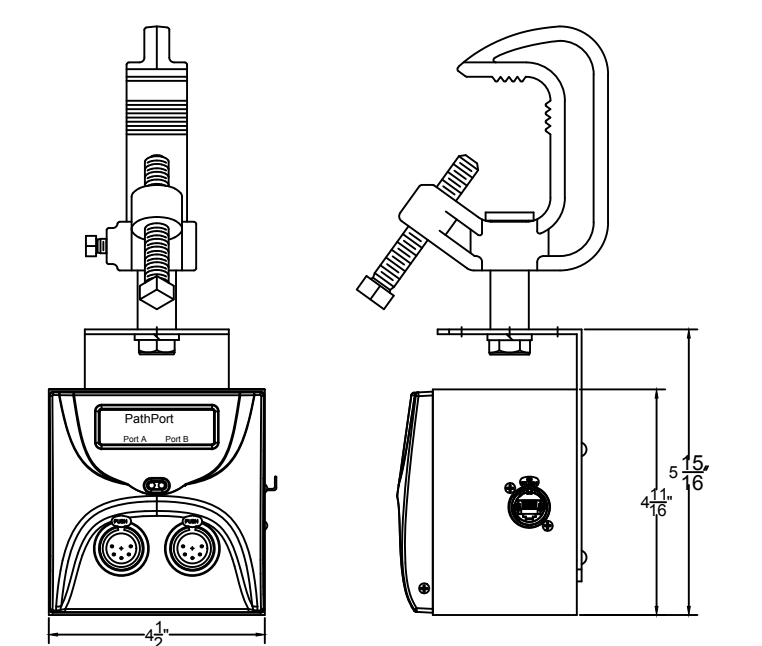


- NOTES:  
 1.) FACE PANEL IS .08 ALUMINUM FINISHED IN A BLACK FINE-TEXTURED POWDER COAT.  
 2.) ALL NOMENCLATURE IS ENGRAVED IN WHITE.  
 3.) BACK BOX IS CONSTRUCTED OF 16 GA. STEEL AND IS FINISHED IN A BLACK FINE-TEXTURED POWDER COAT.



OVER BOOTH BATTEN DETAIL  
SCALE: 1"=1'-0"

LIGHTING NETWORK DETAIL  
SCALE: 3"=1'-0"



PORTABLE NODES  
SCALE: 3"=1'-0"

- NOTES: DUAL OUTPUT PORTABLE NODE  
 1.) THE NODE FACEPLATE SHALL BE CONSTRUCTED OF DURABLE CAST ALUMINUM. PRODUCTS UTILIZING A PLASTIC FACEPLATE DO NOT MEET THE DURABILITY REQUIREMENTS FOR THE APPLICATION.  
 2.) PORTABLE NODES SHALL BE INSTALLED IN A MATCHING BACK BOX SUPPLIED BY THE NODE MANUFACTURER.  
 3.) NODES AND SURFACE MOUNT BACK BOXES SHALL BE PROVIDED IN MATTE BLACK FINISH.  
 4.) ALL NOMENCLATURE SHALL BE REVERSED SILK SCREENED ONTO 10 MIL VELVET LEXAN ADHESIVE LABELS PLACED ON UNIT.  
 5.) PROVIDE IN QUANTITIES AS SHOWN ON THE SYSTEM ONE LINE DRAWING.

REVISIONS	BY

Marathon High School  
Theatrical Lighting and Sound Improvements  
350 Somboro Beach Road  
Marathon, FL 33050

Monroe County School District  
241 Trumbo Rd.  
Key West, Florida 33040

BUILDING BRIDGES TO SUCCESS

CONSTRUCTION DOCUMENTS  
STAGE LIGHTING – DISTRIBUTION & DETAILS

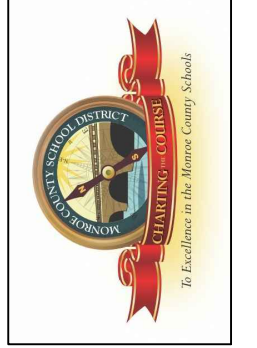
Anston-Greenlee, Inc.  
Mechanical & Electrical Consulting Engineers  
1014 West Windsor Avenue, Tampa, FL 33627 (813) 978-1910  
Fax: (813) 978-1911 Florida Engineering Business Number 0001

AGI

DRAWN
TSG
CHECKED
AJC
DATE
02/17/17
SCALE
AS NOTED
AGI PROJECT
16020
SHEET
<b>TL1.4</b>

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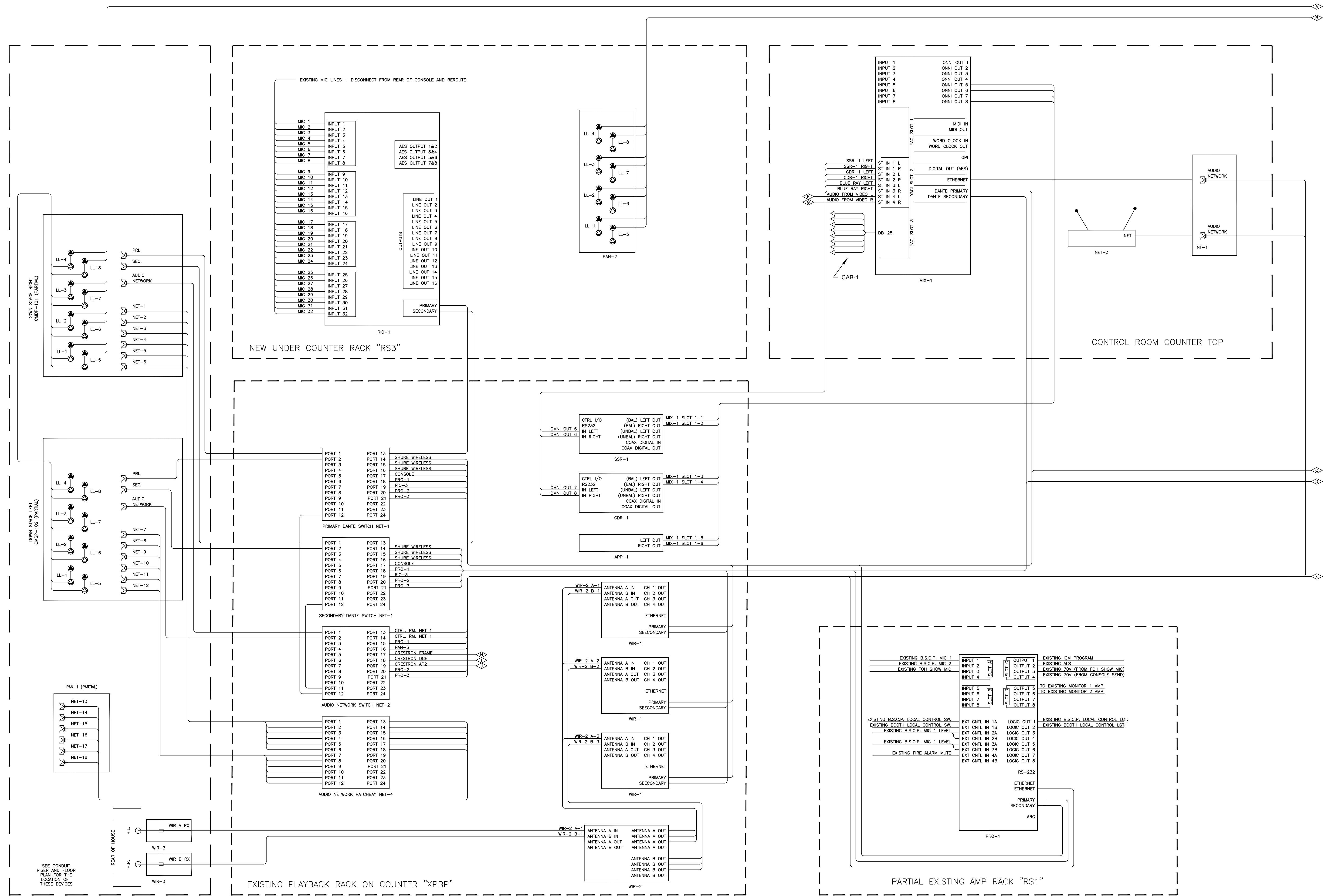
CONSTRUCTION DOCUMENTS

SOUND SYSTEM ONE—Line 1

AGI  
Anston-Greenlees, Inc.  
Mechanical & Electrical Consulting Engineers  
1115 West Harbor Avenue, Tampa, FL 33602 (813) 288-1919  
Florida Engineering License Number 6076

DRAWN	TSG
CHECKED	AJC
DATE	02/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	

TS1.1



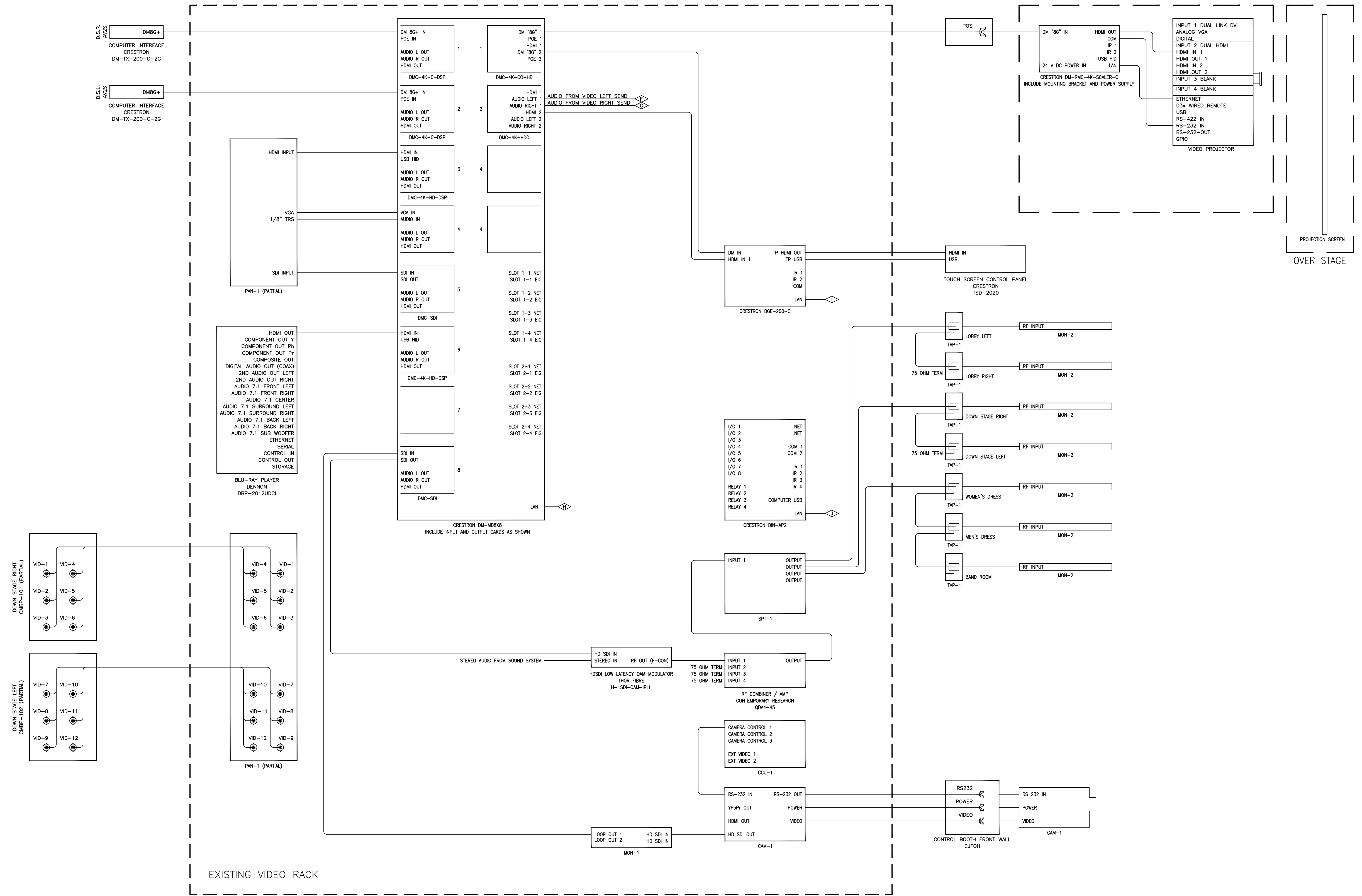
SOUND SYSTEM ONE—LINE 1  
SCALE: NTS

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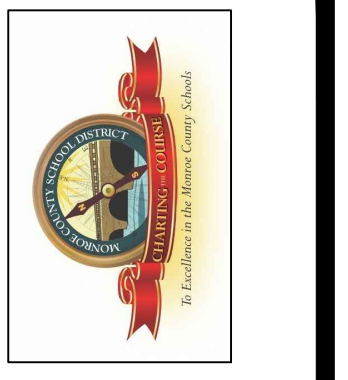








REVISIONS	BY



Marathon High School  
 Theatrical Lighting and Sound Improvements  
 350 Sombbrero Beach Road  
 Marathon, FL 33050  
 Monroe County School District  
 241 Trumbo Rd.  
 Key West, Florida 33040

CONSTRUCTION DOCUMENTS

VIDEO SYSTEM ONE-LINE

**AGI**  
 Anston-Greenlees, Inc.  
 Mechanical & Electrical Consulting Engineers  
 1115 West Harbor Avenue, Tampa, FL 33602  
 Phone: 813.288.9199  
 Fax: 813.288.9199  
 Florida Engineering Business Number: 0067

DRAWN	TSG
CHECKED	AJC
DATE	02/17/17
SCALE	AS NOTED
AGI PROJECT	16020
SHEET	

TS1.3

VIDEO SYSTEM ONE-LINE  
 SCALE: NTS

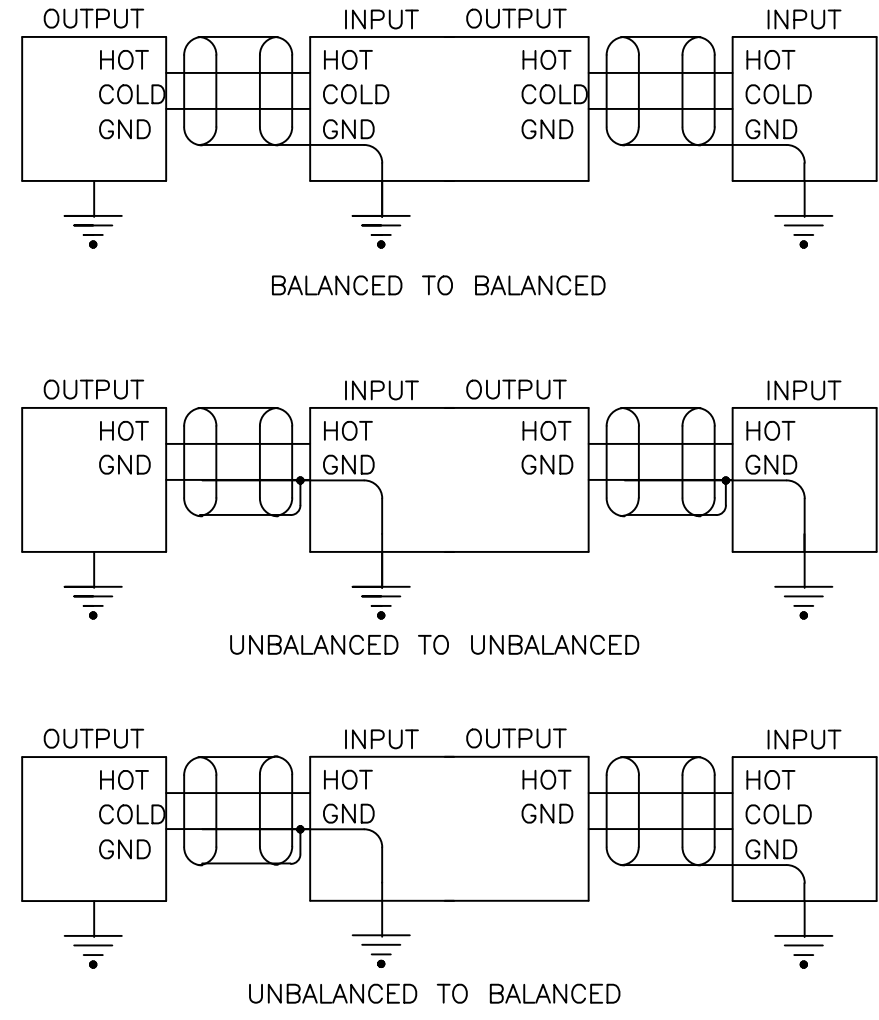
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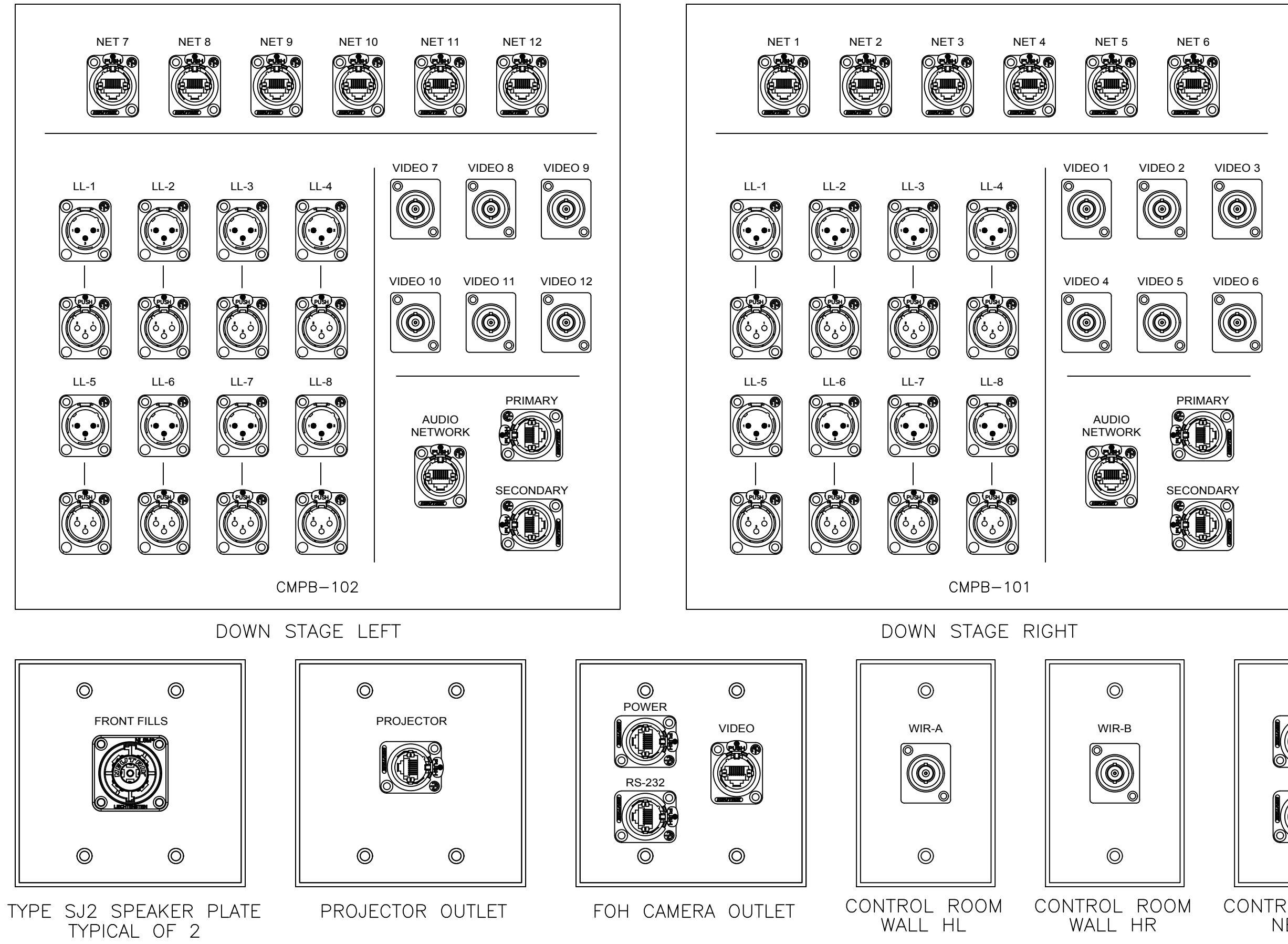
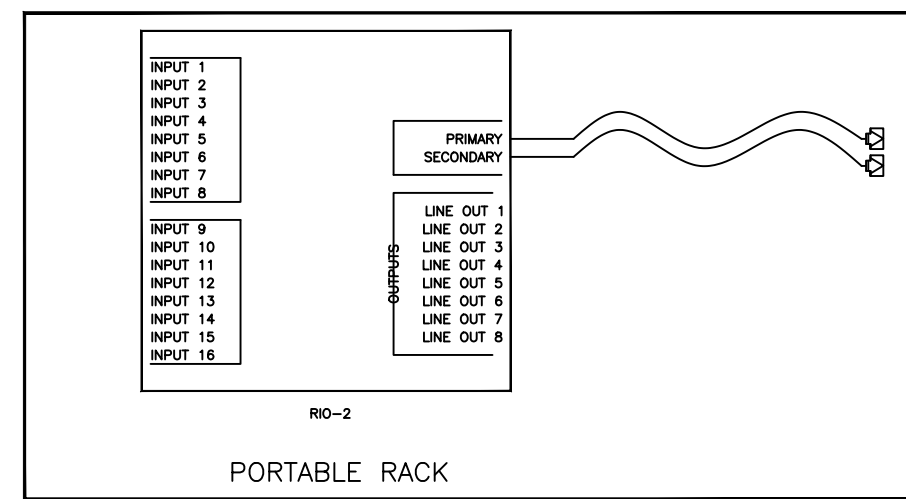
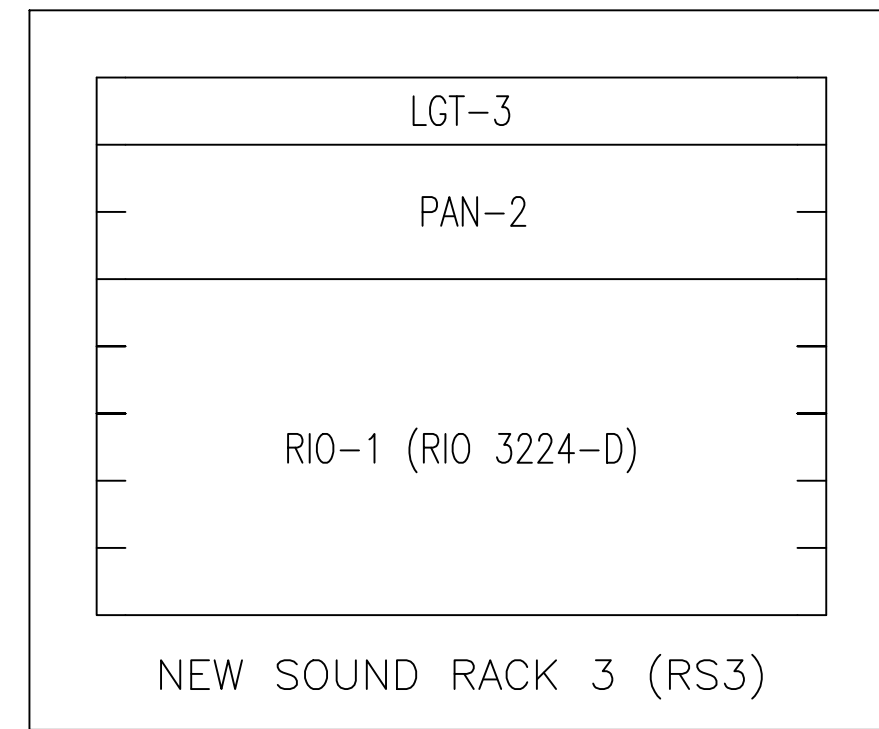
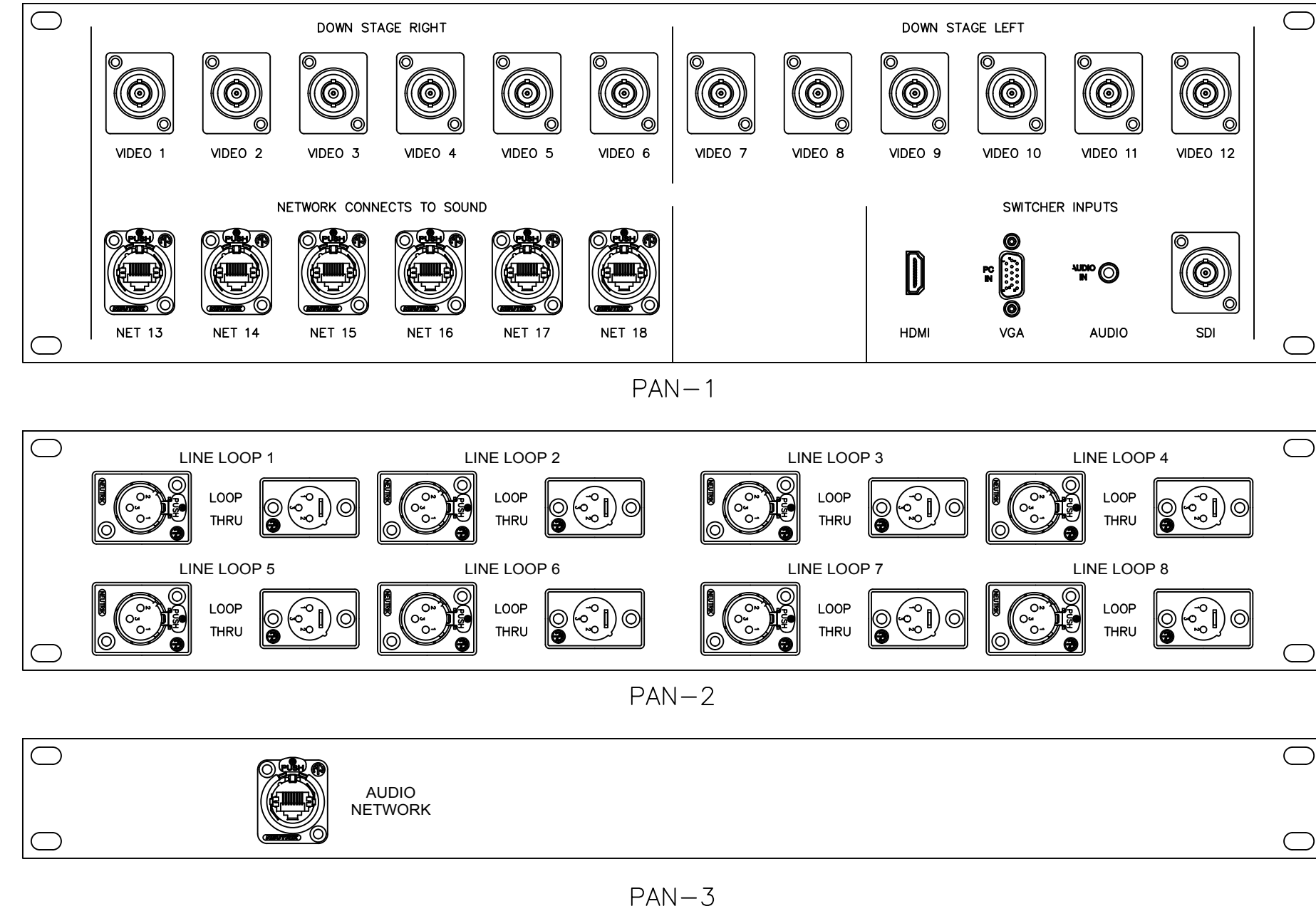
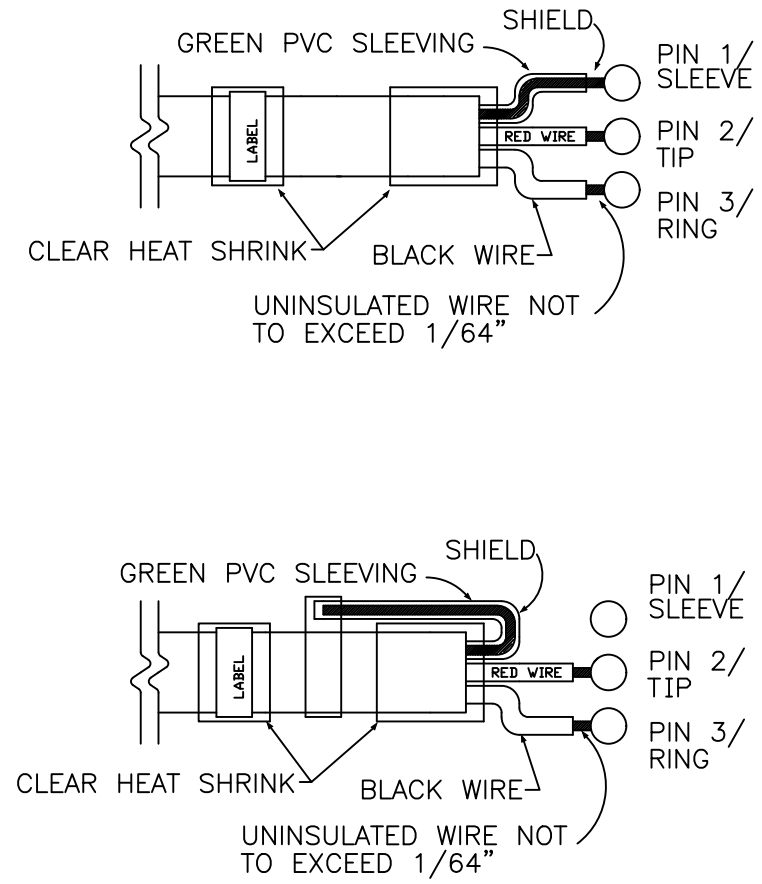




VENT
BLANK
BLANK
LGT-3
SEQ-1 (POWER SWITCH)
VENT
BLANK
PRO-2 (MAIN SYSTEM)
VENT
PRO-1 (MAIN SYSTEM)
VENT
PAN-3
BLANK
BLANK
DWR-3
AMP-1 L/R DELAYS+FRNT FILLS
VENT
AMP-1 RIGHT ZONE 1+2 MID+HIGH
VENT
AMP-1 LEFT ZONE 3+4 MID+HIGH
VENT
AMP-1 LEFT ZONE 1+2+3+4 LOW
VENT
AMP-1 RIGHT ZONE 1+2 MID+HIGH
VENT
AMP-1 RIGHT ZONE 3+4 MID+HIGH
VENT
AMP-1 RIGHT ZONE 1+2+3+4 LOW
VENT
AMP-2 MAINS LEFT SUBS
VENT
AMP-2 MAINS RIGHT SUBS
VENT
NEW SOUND RACK 2 (RS2)



NOTES:  
A TRS PATCHBAY JACK IS TO BE WIRED AS A BALANCED DEVICE.  
LEAVE ALL CIRCUIT GROUND TO CHASSIS GROUND JUMPERS IN PLACE.  
WHERE SHIELD IS "LIFTED", SLEEVE WITH GREEN P.V.C. TUBING. FOLD BACK OVER THE CABLE AND CAP WITH A SEPARATE PIECE OF HEATSHRINK. LEAVE SHIELD DRAIN WIRE THE SAME LENGTH AS THE CIRCUIT CONDUCTORS.  
HOT TO BE RED OR WHITE.  
COLD (GND IN UNBALANCED) TO BE BLACK.



REVISIONS	BY

Marathon High School  
Theatrical Lighting and Sound Improvements  
350 Sombrero Beach Road  
Marathon, FL 33050  
Monroe County School District  
241 Trumbo Rd.  
Key West, Florida 33040

CONSTRUCTION DOCUMENTS

PLATES, RACKS & DETAILS

Anston-Greenlees, Inc.  
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1115 West Harbor Avenue, Tampa, FL 33602, Tel: 813-988-9919  
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**AGI**

DRAWN TSG  
CHECKED AJC  
DATE 02/17/17  
SCALE AS NOTED  
AGI PROJECT 16020  
SHEET

**TS1.5**

ROBERT C. ANSTON, P.E. 40858  
TO THE BEST OF MY KNOWLEDGE, THESE DRAWINGS  
AND THE PROJECT MANUAL ARE COMPLETE AND  
COMPLY WITH THE 2014 FLORIDA BUILDING CODE