ELECTRICAL ABBREVIATIONS

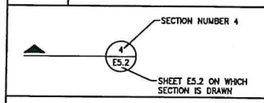
ABBREV.	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
A	AMPERE
AF	AMPERE FUSE/AMPERE FRAME
AWG	AMERICAN WIRE GAUGE
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AIC	AVAILABLE INTERRUPTING CURRENT (AMPS)
C	CONDUIT OR CEILING MOUNTED
CB	CIRCUIT BREAKER
CU	COPPER
CT	CURRENT TRANSFORMER
DIA	DIAMETER
DISC	DISCONNECT
EMT	ELECTRICAL METALLIC TUBING
EWC	ELECTRIC WATER COOLER
EPO	EMERGENCY POWER OFF
(E)	EXISTING ELECTRICAL EQUIPMENT OR WORK
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FLA	FULL LOAD AMPS
F	FUSE
G/GRD	GROUND
GFCI/GFI	GROUND FAULT CIRCUIT INTERRUPTER
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
IG	ISOLATED GROUND
KV	KILOVOLT
KVA	KILOVOLT AMPERE
KW	KILOWATT
KWH	KILOWATT HOUR
LP	LIGHTING PANEL
MCB	MAIN CIRCUIT BREAKER
MDP	MAIN DISTRIBUTION PANEL
MLO	MAIN LUG ONLY
MAX	MAXIMUM
MIN	MINIMUM
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
N/NEU	NEUTRAL
NF	NON-FUSIBLE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NIC	NOT IN CONTRACT
PH. OR #	PHASE
P	POLE
PF	POWER FACTOR
PVC	POLYVINYL CHLORIDE (PLASTIC)
(R)	RELOCATED EXISTING ELECTRICAL EQUIPMENT
(RR)	REMOVE AND REINSTALL
RMC	RIGID METALLIC CONDUIT
RP	RECEPTACLE PANEL
TBB	TELEPHONE BACKBOARD
TYP.	TYPICAL
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
USB	UNIVERSAL SERIAL BUS
V	VOLT
VA	VOLT AMPERE
W	WATT
WG	WIRE GUARD
WP	WEATHERPROOF
XFMR	TRANSFORMER

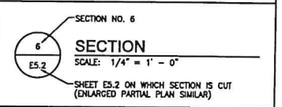
DRAWING INDEX

SHT NO	DESCRIPTION
E0.00	ELECTRICAL GENERAL INFORMATION
E1.2.05G	ELECTRICAL FLOOR PLAN – UNIT G
E5.01	THEATRICAL LIGHTING CONTROL SYSTEM – ONE LINE DIAGRAM
E6.01	ELECTRICAL SPECIFICATIONS AND BILL OF MATERIALS

DRAWING NOTATION

SYMBOL	DESCRIPTION
L1	LIGHTING FIXTURE TAG
⟨1⟩	CONSTRUCTION KEY NOTE NUMBER 1
⟨1⟩	DEMOLITION KEY NOTE NUMBER 1
◇20	COPPER FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE)
□20	ALUMINUM FEEDER SIZE TAG (REFER TO FEEDER SCHEDULE)
EQUIPMENT	EQUIPMENT TAG
———	EXISTING DEVICES OR EQUIPMENT
———	NEW OR MODIFIED DEVICES OR EQUIPMENT
———	NEW OR MODIFIED UNDERGROUND WIRING
———//———	EXISTING SYSTEM COMPONENT TO BE REMOVED
	POINT OF NEW CONNECTION





APPLICABLE CODES AND REGULATIONS

YEAR	CODE
2015	MICHIGAN BUILDING CODE
2015	MICHIGAN ENERGY CODE
2015	MICHIGAN RESIDENTIAL CODE
2015	MICHIGAN REHABILITATION CODE
2017	MICHIGAN ELECTRICAL CODE RULES, PART 8
2017	NATIONAL ELECTRICAL CODE (NFPA 70)
2013	NFPA 20
2013	NFPA 72
2013	NFPA 101
2013	NFPA 110
2009	ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS & FACILITIES
1985	DETROIT ELEVATOR CODE

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SES Project #19 0865 01

PROJECT

Anchor Bay Schools

Anchor Bay High Scl
Auditorium Lighting
Controls Upgrade

New Baltimore, Michigan

SHEET

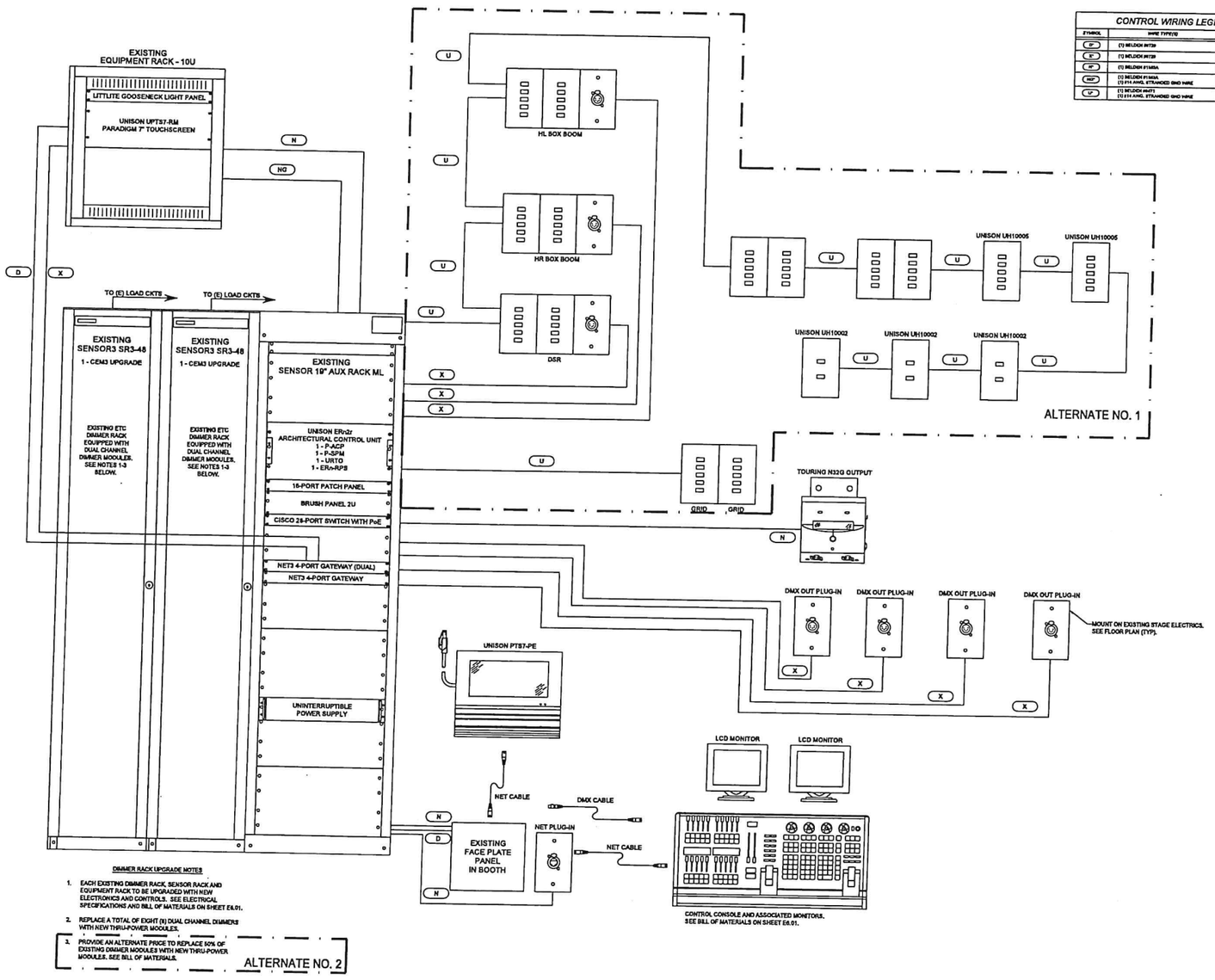
ELECTRICAL GENER
INFORMATION

PROJECT NUMBER

2017-027.2

SHEET NUMBER

E0.00



DIMMER RACK UPGRADE NOTES

1. EACH EXISTING DIMMER RACK, SENSOR RACK AND EQUIPMENT RACK TO BE UPGRADED WITH NEW ELECTRONICS AND CONTROLS. SEE ELECTRICAL SPECIFICATIONS AND BILL OF MATERIALS ON SHEET E5.01.
2. REPLACE A TOTAL OF EIGHT (8) DUAL CHANNEL DIMMERS WITH NEW THRU-POWER MODULES.
3. PROVIDE AN ALTERNATE PRICE TO REPLACE 50% OF EXISTING DIMMER MODULES WITH NEW THRU-POWER MODULES. SEE BILL OF MATERIALS.

ALTERNATE NO. 2

CONTROL WIRING LEGEND

SYMBOL	WIRE TYPE(S)	SIGNAL
D	(1) BELDEN #8729	DMX INPUT
X	(1) BELDEN #8729	DMX OUTPUT
N	(1) BELDEN #1583A	ETCnet (Cat5e)
NG	(1) BELDEN #1583A (1) #14 AWG, STRANDED GND WIRE	ETCnet (Cat5e) (WITH GROUND)
U	(1) BELDEN #8471 (1) #14 AWG, STRANDED GND WIRE	UNISON

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PROJECT
Anchor Bay Schools
Anchor Bay High School
Auditorium Lighting
Controls Upgrade

New Baltimore, Michigan

SHEET
THEATRICAL LIGHTING CONTROL SYSTEM - ONE LINE DIAGRAM

PROJECT NUMBER
2017-027.2

SHEET NUMBER
E5.01

BILL OF MATERIAL

BASE BID:

Power Control Devices - to consist of:
Server Rack Assessment to consist of:

(2)	7140A1003	**CEM3 - CEM3 Control Module**
(2)	7141K1005	**PWRPKG CLAS SR48 - Power Package upgrade kit for SR48 racks with CEM Classic processor:** Hardware to consist of: CEM3 backplane, rack fan, door foam, air filters, and one power cube. Services to consist of: rack cleaning, installation of hardware, CEM3 programming. CEM3 training
(1)	9-XXM1100	**PWRPKG 3YR** - 3-year warranty for Power Package upgrade

Equipment Racks to consist of:
Control Equipment Rack #1 - Accessories to consist of:

(1)	SGN1256-M	**CISCO SG350-28P** - Cisco Switch - 24 RJ-45 ports of 10/100/1000 PoE+ (195W total allowance) - 2 combo ports of RJ-45 or mini-GBIC/SFP - 2 ports of mini-GBIC/SFP
(1)	10033	**PATCH PANEL** - 1U, 19" rack-mount custom patch panel (use for custom labeling and mixed fiber optic and UTP networks)
(24)	N2027	Cat5e Modular Jack for above Patch Panel
(1)	SGL1062	**MAP 882** - 2U Brush Grommet Panel
(24)	N4035	2' CAT5 Patch cable, black
(1)	PJPS1012	**MAP 1000R** - 1000VA / 750W rack-mount UPS

Control Devices to consist of:
Ion XE Control Console to consist of:

(1)	4311A1021 US	**ION XE 20 2K-US** - Ion Xe 20 Console with 2048 Outputs/Parameters to include: 10,000 Control Channels 10,000 Cues 4 - Encoders 1 - High Resolution Level Wheel 2 - Ethernet Port 4 - DMX Output Connectors 2 - Display Port 20 - 60mm non-motorized faders and associated displays Solid State Hard Drive USB Ports 1 - ION Xe - Dust Cover 1 - 6' Power Cord Edison 1 - 3 button scroll mouse 1 - keyboard 1 - M7183 Littlite LED console work light
(1)		**PTS7-PE** - Unison Paradigm 7" Portable Touchscreen Station

Console Console Accessories to consist of:

(2)	M241	22" Widescreen LCD Touch Screen Monitor (Industrial Grade) (for use with Win7 consoles)
(1)	4268A1100-4	**RSN-DMX2-O-P-4** - Response Mk2 Two-port DMX/RDM Portable Gateway to include: - Gateway Electronics with two 5-pin XLR DMX output connectors - Backbox with mounting bracket and Ethernet input - Display and 4-button user interface - Black Finish
(1)	4105K1001	**UBOLT** - U-Bolt Kit Hardware Kit for Portable (Touring) Net3 Two Port Gateway
(4)	1094A1034	**ECPB DMXOUT** - DMX Output Control Plug-in Station with: 1 - XLR-5F DMX Out Connector (Labeled DMX OUTPUT)
(4)	1064A1023	**ECPB PB1** - ETC 1-gang Surface Mount Back Box (2 5" deep)
(4)	2100A1J02	**ECPB PB-U** - U-Bolt Kit for 1 and 2 gang ECPB Plug-in Station (includes hanger bracket and 2 U-bolts, back box not included but required)
(1)	1094A1045	**ECPB NET** - ETCNet Control Plug-in Station with: 1 - RJ-45 (568B) Connector in XLR case

Equipment Racks to consist of:
Control Equipment Rack #1 - Accessories to consist of:

(1)	7180A1013	**ERN2-RM-120** - ERn2 Enclosure Rack-mount 100-120V
(1)	7180A1029	**P-ACP3** - Paradigm Architectural Control Processor
(1)	7182A1001	**P-SPM** - Paradigm Station Power Module - supports 32 stations and (1) 500m wire segment
(1)	7180A1005	**ERN-RPS** - ERn Redundant Power Supply Module - Cannot be used with ERn NET
(1)	7180A1006	**URTO** - Unison Ride Thru Option Kit - Can't be used with UBPO
(1)	4268A1202	**RSN-DMX4-T** - Response Mk2 Four-port DMX/RDM Gateway to include: - Four 3-pin terminal DMX connectors - Display and 4 button user interface - RJ45 Ethernet input - Black Finish
(2)	4268A1026	**RSN-DMX4-T-RACK** - Response Mk2 Four-port DMX/RDM Gateway to include. - Four 3-pin terminal DMX connectors - Display and 4 button user interface - RJ45 Ethernet input - Black Finish - 1U Rack Mount Kit

Control Equipment Rack #2 - Accessories to consist of:

(1)	SGHW1177	Dual Gooseneck LED Rack Light Panel
(1)	7184A1501-4	**P-T57-4** - Paradigm 7" Touchscreen Station to include: - 7" Black Touchscreen Assembly - Mounting Collar - LinkConnect/ Ethernet termination kit
(1)	7184A1521	**P-T57-RM** - Paradigm 7" Touchscreen Rack-Mount Kit

Manufacture's Services:

A. Provide three (3) year limited warranty on parts and workmanship with exceptions called out in ETC's Terms and conditions, http://www.etcconnect.com/support/warranty.aspx.
B. Provide services of a factory engineer to startup system and instruct user personnel. Include one (1) 8hr day training for operation of new system upgrade. Provide three (3) weeks notice to owner to schedule training.
C. Provide operation manuals and include all approved drawing submittals.

Alternate No.1

Provide an Alternate price to replace all existing Architectural Unison Control Stations with new Custom Unison Control Stations as listed below.

(1)	Custom	4 - Gang UH10005 / UH10005 / DMX Output Control Plug-in Station with: 2 - UH10005 5-button stations(s) 1 - XLR-5FDMX DMX Out Connector(s) with voltage barrier and custom legends as required
(3)	Custom	4- Gang UH10005 / UH10005 Control Station with: 2 - UH10005 5-button stations(s) with voltage barrier and custom legends as required
(3)	7181A2202-1A	UH10002-11 - Cream 1 gang faceplate assembly to include the following: 1 - "On" Select Switch 1 - "Off" Select Switch
(3)	7181B2005	UH10002 - 1-gang, 2-button electronics assembly w/lift Port
(2)	20007	UH10005-_2 - Standard Color (Color TBD) 1-gang faceplate assembly to include the following: 5 - Select Switches Custom nomenclature to be determined
(2)	7181B2006	UH10005 - 1-gang, 5 button electronics assembly w/lift Port

Alternate No.2
Provide an add Alternate price to replace 50% of the existing dimmer modules with new Thru-Power modules. Include all associated cost to test and commission dimmer rack for services rendered.

BASIC ELECTRICAL REQUIREMENTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS
A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS, SPECIAL CONDITIONS AND DIVISION 1 SPECIFICATION SECTIONS, APPLY TO WORK OF THIS SECTION.
B. PROVIDE ALL ITEMS, ARTICLES, MATERIALS, OPERATIONS OR METHODS LISTED, MENTIONED OR SCHEDULED ON DRAWINGS AND/OR NOTED, INCLUDING ALL LABOR, MATERIALS, EQUIPMENT AND PROCESSES NECESSARY AND INCIDENT FOR THEIR COMPLETION.

1.02 DRAWINGS
A. THE DRAWINGS SHOW THE LOCATION AND GENERAL ARRANGEMENT OF EQUIPMENT, ELECTRICAL SYSTEMS AND RELATED ITEMS. THEY SHALL BE FOLLOWED AS CLOSELY AS ELEMENTS OF THE CONSTRUCTION WILL PERMIT.
B. EXAMINE THE DRAWINGS OF OTHER TRADES AND VERIFY THE CONDITIONS GOVERNING THE WORK ON THE JOB SITE. ARRANGE WORK ACCORDINGLY, PROVIDING SUCH FITTINGS, CONDUIT, JUNCTION BOXES AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS.
C. DEVIATIONS FROM THE DRAWINGS, WITH THE EXCEPTION OF MINOR CHANGES IN ROUTING AND OTHER SUCH INCIDENTAL CHANGES THAT DO NOT AFFECT THE FUNCTIONING OR SERVICEABILITY OF THE SYSTEMS, SHALL NOT BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.

1.03 CODES, PERMITS AND FEES
A. UNLESS OTHERWISE INDICATED, ALL REQUIRED PERMITS, LICENSES, INSPECTIONS, APPROVALS AND FEES FOR ELECTRICAL WORK SHALL BE SECURED AND PAID FOR BY THE CONTRACTOR. ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES, RULES AND REGULATIONS.
B. ALL WORK SHALL BE EXECUTED IN ACCORDANCE WITH THE RULES AND REGULATIONS SET FORTH IN LOCAL AND STATE CODES. PROVIDE ANY DETAILED DRAWINGS OR DATA WHICH MAY BE REQUIRED BY THE GOVERNING AUTHORITIES. WHERE THE DRAWINGS AND/OR SPECIFICATIONS INDICATE MATERIALS OR CONSTRUCTION IN EXCESS OF CODE REQUIREMENTS, THE DRAWINGS AND/OR SPECIFICATIONS SHALL GOVERN.

1.04 STANDARDS OF MATERIAL AND WORKMANSHIP:
A. ALL MATERIALS SHALL BE NEW. THE ELECTRICAL AND PHYSICAL PROPERTIES OF ALL MATERIALS, AND THE DESIGN, PERFORMANCE CHARACTERISTICS, AND METHODS OF CONSTRUCTION OF ALL ITEMS OF EQUIPMENT, SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS, APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING RECOGNIZED AUTHORITIES:
1. AMERICAN NATIONAL STANDARDS INSTITUTE
2. ASTM AMERICAN SOCIETY FOR TESTING MATERIALS
3. CEMA MOLDED CABLE ENGINEERS ASSOCIATION
4. IEEE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
5. NEC NATIONAL ELECTRICAL CODE
6. NEMA NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
7. UNDERWRITERS LABORATORIES, INC.
B. ALL EQUIPMENT OF THE SAME OR SIMILAR SYSTEMS SHALL BE BY THE SAME MANUFACTURER.

1.05 RECORD DRAWINGS
A. PROVIDE COMPLETE OPERATING AND MAINTENANCE INSTRUCTION MANUALS COVERING ALL ELECTRICAL EQUIPMENT HEREIN SPECIFIED, TOGETHER WITH PARTS LISTS. ALL LITERATURE SHALL BE SUBMITTED TO THE ARCHITECT IN AN ELECTRONIC FORMAT.
B. THE OPERATING AND MAINTENANCE INSTRUCTIONS SHALL INCLUDE A BRIEF, GENERAL DESCRIPTION FOR ALL ELECTRICAL SYSTEMS INCLUDING, BUT NOT LIMITED TO, ROUTINE MAINTENANCE PROCEDURES, TROUBLE-SHOOTING PROCEDURES AND SHOP DRAWINGS.
C. ANY EQUIPMENT OFFERED AS A SUBSTITUTION SHALL BE EQUAL IN QUALITY, DURABILITY, APPEARANCE, CAPACITY, AND EFFICIENCY THROUGH ALL RANGES OF OPERATION, SHALL CONFORM WITH ARRANGEMENTS AND SPACE LIMITATIONS OF THE EQUIPMENT SHOWN ON THE PLANS AND/OR SPECIFIED, SHALL BE COMPATIBLE WITH THE OTHER COMPONENTS OF THE SYSTEM, ALL COSTS TO MAKE THESE ITEMS OF EQUIPMENT COMPLY WITH THESE REQUIREMENTS INCLUDING, BUT NOT LIMITED TO, CONDUIT, WIRING, BUS WORK, ENCLOSURES AND BUILDING ALTERATIONS SHALL BE INCLUDED IN THE ORIGINAL BID. SIMILAR EQUIPMENT SHALL BE BY ONE MANUFACTURER.

1.06 SHOP DRAWINGS/SUBMITTALS
A. ALL SHOP DRAWINGS SHALL BE SUBMITTED IN GROUPINGS OF SIMILAR AND/OR RELATED ITEMS. INCOMPLETE SUBMITTAL GROUPINGS WILL BE RETURNED UNCHECKED.
B. SUBMIT FOR APPROVAL SHOP DRAWINGS FOR ALL ELECTRICAL SYSTEMS OR EQUIPMENT BUT NOT LIMITED TO THE SECTIONS OF SPECIFICATIONS. WHERE ITEMS ARE REFERRED TO BY SYMBOLIC DESIGNATION, REFER TO OTHER SECTIONS OF THE ELECTRICAL SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

1.07 MANUFACTURERS LISTED
A. THE LISTING OF SPECIFIC MANUFACTURERS DOES NOT IMPLY ACCEPTANCE OF THEIR PRODUCTS THAT DO NOT MEET THE SPECIFIED RATINGS, FEATURES AND FUNCTIONS. MANUFACTURERS LISTED ARE NOT RELIEVED FROM MEETING THESE SPECIFICATIONS IN EVERY DETAIL.
B. PRODUCTS IN COMPLIANCE WITH THE SPECIFICATIONS AND MANUFACTURED BY OTHERS NOT NAMED WILL BE CONSIDERED ONLY IF PRE-APPROVED BY THE OWNER/ENGINEER TEN (10) DAYS PRIOR TO BID DATE.

1.08 USE OF EQUIPMENT
A. THE USE OF ANY EQUIPMENT, OR ANY PART THEREOF FOR PURPOSES OTHER THAN TESTING EVEN WITH THE OWNER'S CONSENT, SHALL NOT BE CONSTRUED TO BE AN ACCEPTANCE OF THE WORK OR THE PART OF THE OWNER, NOR BE CONSTRUED TO RELIEVE THE OWNER IN ANY WAY TO ACCEPT DEFECTIVE WORK OR DEFECTIVE MATERIALS.
B. DO NOT USE OWNER'S LAMPS FOR TEMPORARY LIGHTING EXCEPT AS ALLOWED AND SPECIFIED BY THE OWNER. EQUIP LIGHTING FIXTURES WITH NEW LAMPS WHEN THE PROJECT IS TURNED OVER TO THE OWNER.

PART 2 EXECUTION

2.01 INSTALLATION OF EQUIPMENT
A. INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH ALL DIRECTIONS AND RECOMMENDATIONS FURNISHED BY THE MANUFACTURER, WHERE SUCH DIRECTIONS ARE IN CONFLICT WITH THE DRAWINGS AND SPECIFICATIONS, REPORT SUCH CONFLICTS TO THE ARCHITECT/ENGINEER FOR RESOLUTION.
B. DO NOT PENETRATE OR OTHERWISE NOTCH OR CUT STRUCTURAL MEMBERS, INCLUDING FASTENERS AND SHEAR BOLTS, WITHOUT APPROVAL OF STRUCTURAL ENGINEER.
C. MAKE PENETRATIONS PERPENDICULAR TO SURFACES UNLESS OTHERWISE INDICATED.
D. PROVIDE SLEEVES FOR PENETRATIONS AS INDICATED OR AS REQUIRED TO FACILITATE INSTALLATION. SET SLEEVES FLUSH WITH EXPOSED SURFACES UNLESS OTHERWISE INDICATED OR REQUIRED.
E. CONCEAL BOXES FOR CONDUIT RISERS UNLESS OTHERWISE ABOVE CEILING.
F. SEAL INTERIOR OF CONDUITS ENTERING THE BUILDING FROM UNDERGROUND AT FIRST ACCESSIBLE POINT TO PREVENT ENTRY OF MOISTURE AND GASES.
G. WHERE CONDUITS PENETRATE WATERPROOF MEMBRANE, SEAL AS REQUIRED TO MAINTAIN INTEGRITY OF MEMBRANE.
H. MAKE PENETRATIONS FOR ROOF-MOUNTED EQUIPMENT WITHIN ASSOCIATED EQUIPMENT OPENINGS AND CURBS WHERE POSSIBLE TO MINIMIZE ROOFING SYSTEM PENETRATIONS. WHERE PENETRATIONS ARE NECESSARY, SEAL AS INDICATED OR AS REQUIRED TO PRESERVE INTEGRITY OF ROOFING SYSTEM AND MAINTAIN ROOF WARRANTY. INCLUDE PROPOSED LOCATIONS OF PENETRATIONS AND METHODS FOR SEALING WITH SUBMITTALS.

2.02 COORDINATION
A. INSTALL WORK TO AVOID INTERFERENCE WITH WORK OF OTHER TRADES. REMOVE AND RELOCATE ANY WORK THAT CAUSES AN INTERFERENCE AT CONTRACTOR'S EXPENSE. DISPUTES REGARDING THE CAUSE OF AN INTERFERENCE WILL BE RESOLVED BY THE CONSTRUCTION MANAGER OR ARCHITECT/ENGINEER.

2.03 CHASES AND RECESSES
A. PROVIDED BY THE ARCHITECTURAL TRADES, BUT THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACCURATE LOCATION AND SIZE.

2.04 CUTTING, PATCHING AND DAMAGE TO OTHER WORK
A. REFER TO GENERAL CONDITIONS FOR REQUIREMENTS.
B. ALL CUTTING, PATCHING AND REPAIR WORK SHALL BE PERFORMED BY THE CONTRACTOR THROUGH APPROVED, QUALIFIED SUBCONTRACTORS. CONTRACTOR SHALL INCLUDE FULL COST OF SAME IN BID.

2.05 EQUIPMENT CONNECTIONS
A. MAKE CONNECTIONS TO EQUIPMENT, MOTORS, LIGHTING FIXTURES, AND OTHER ITEMS INCLUDED IN THE WORK IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS AND ROUGH-IN MEASUREMENTS FURNISHED BY THE MANUFACTURERS OF THE PARTICULAR EQUIPMENT FURNISHED. ALL ADDITIONAL CONNECTIONS NOT SHOWN ON THE DRAWINGS, BUT CALLED OUT BY THE EQUIPMENT MANUFACTURER'S SHOP DRAWINGS SHALL BE PROVIDED.

2.06 ACCESS DOORS
A. COORDINATE REQUIREMENTS FOR ACCESS DOORS WITH ARCHITECT.

2.07 CLEANING
A. ALL DEBRIS SHALL BE REMOVED DAILY AS REQUIRED TO MAINTAIN THE WORK AREA IN A NEAT, ORDERLY CONDITION.
B. FINAL CLEANUP SHALL INCLUDE, BUT NOT BE LIMITED TO, BRUSHING OF FIXTURE LOUVERS OR LENSES, SWITCHGEARS, SUBSTATIONS, MOTOR CONTROL COVERS, PANELS, ETC. FIXTURE REFLECTORS AND LOUVERS OR LENSES SHALL BE LEFT WITH NO WATER SPOTS OR CLEANING STREAKS.

2.08 PROTECTION AND HANDLING OF EQUIPMENT AND MATERIALS
A. EQUIPMENT AND MATERIALS SHALL BE PROTECTED FROM THEFT, INJURY OR DAMAGE.
B. PROTECT CONDUIT OPENINGS WITH TEMPORARY PLUGS OR CAPS.
C. PROVIDE ADEQUATE STORAGE FOR ALL EQUIPMENT AND MATERIALS DELIVERED TO THE JOB SITE. LOCATION OF THE SPACE WILL BE DESIGNATED BY THE CONSTRUCTION MANAGER OR ARCHITECT/ENGINEER. EQUIPMENT SET IN PLACE IN UNPROTECTED AREAS MUST BE PROVIDED WITH TEMPORARY PROTECTION.

2.09 EXTRA WORK
A. FOR ANY EXTRA WORK WHICH MAY BE PROPOSED, THIS CONTRACTOR SHALL FURNISH TO THE CONSTRUCTION MANAGER, AN ITEMIZED BREAKDOWN OF THE ESTIMATED COST OF THE MATERIALS AND LABOR REQUIRED TO COMPLETE THIS WORK. THE CONTRACTOR SHALL PROCEED ONLY AFTER RECEIVING A WRITTEN ORDER FROM THE CONSTRUCTION MANAGER ESTABLISHING THE AGREED PRICE AND DESCRIBING THE WORK TO BE DONE.

2.10 DRAWINGS AND MEASUREMENTS
A. THESE SPECIFICATIONS AND ACCOMPANYING DRAWINGS ARE INTENDED TO DESCRIBE AND PROVIDE FOR FINISHED WORK. THEY ARE INTENDED TO BE COOPERATIVE, AND WHAT IS CALLED FOR BY EITHER SHALL BE AS BINDING AS IF CALLED FOR BY BOTH. THE CONTRACTOR WILL UNDERSTAND THAT THE WORK HEREIN DESCRIBED SHALL BE COMPLETE IN EVERY DETAIL.
B. THE DRAWINGS ARE NOT INTENDED TO BE SCALED FOR ROUGH-IN MEASUREMENTS NOR TO SERVE AS SHOP DRAWINGS. FIELD MEASUREMENTS NECESSARY FOR ORDERING MATERIALS AND FITTING THE INSTALLATION TO THE BUILDING CONSTRUCTION AND ARRANGEMENT SHALL BE TAKEN BY THE CONTRACTOR. THE CONTRACTOR SHALL CHECK LATEST ARCHITECTURAL DRAWINGS AND LOCATE LIGHT SWITCHES FROM SAME, WHERE DOOR SWINGS ARE REVERSED FROM ELECTRICAL DRAWINGS.

MINOR ELECTRICAL DEMOLITION

PART 1 GENERAL

1.01 SUMMARY
A. THE WORK COVERED UNDER THIS SECTION CONSISTS OF THE FURNISHING OF ALL NECESSARY LABOR, SUPERVISION, MATERIALS, EQUIPMENT, AND SERVICES TO COMPLETELY EXECUTE THE SYSTEM OF MINOR ELECTRICAL DEMOLITION AS DESCRIBED IN THIS SPECIFICATION.
B. IT IS THE CONTRACTORS OBLIGATION TO BECOME FAMILIAR WITH THE EXTENT OF DEMOLITION AND THE EXISTING CONDITION BEFORE SUBMITTING THEIR BID.
C. DURING DEMOLITION IF THE CONTRACTOR DISCOVERS UNFORESEEN SIGNIFICANT NEW CODE COMPLIANCE CONDITIONS OF THE EXISTING INSTALLATION THEY SHALL NOTIFY THE ARCHITECT AND OWNER IMMEDIATELY IN WRITING.
D. DURING DEMOLITION THE CONTRACTOR SHALL RECORD ON THE AS-BUILTS ALL DISCONNECTED CIRCUITS NUMBERS THAT CAN BE USED FOR FUTURE CIRCUITING.

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PROJECT
Anchor Bay Schools
Anchor Bay High School
Auditorium Lighting Controls Upgrade
New Baltimore, Michigan

SHEET
ELECTRICAL SPECIFICATIONS AND BILL OF MATERIALS

PROJECT NUMBER
2017-027.2

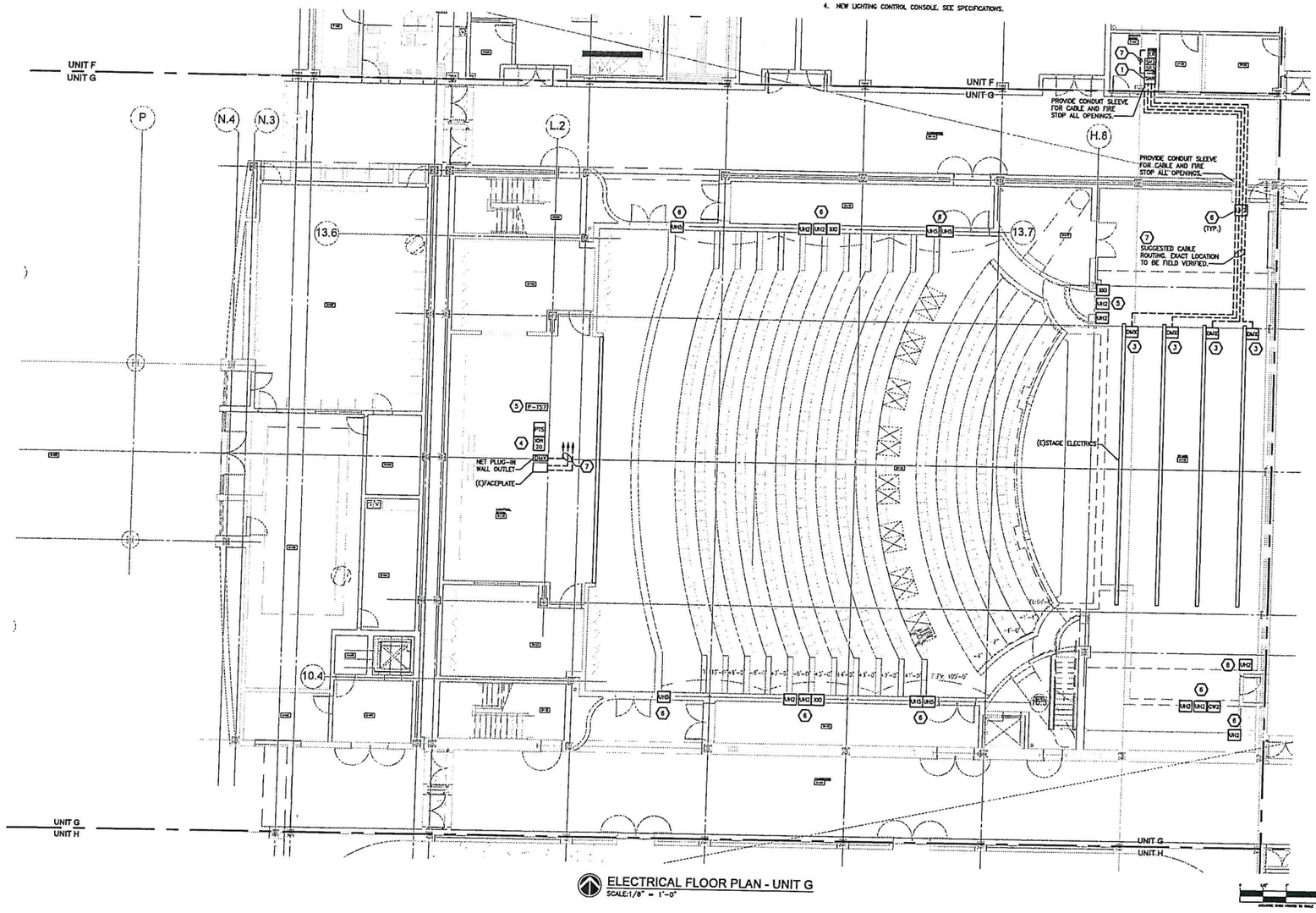
SHEET NUMBER
E6.01

GENERAL NOTES

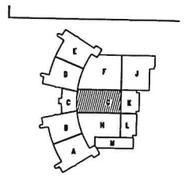
1. REMOVE AND REINSTALL EXISTING CEILING TILES AS REQUIRED TO FACILITATE INSTALLATION OF WIRING ABOVE CEILINGS. PROVIDE FIRE STOP FOR ALL FLOOR AND WALL PENETRATIONS.
2. ALL LOW VOLTAGE WIRE AND SUPPORTS INSTALLED ABOVE STAGE TO BE BLACK COLOR.
3. ALL LOW VOLTAGE WIRING TO BE CONCEALED ABOVE ACCESSIBLE CEILING SPACE. ANY EXPOSED WIRING TO BE INSTALLED IN CONDUIT RACEWAYS.

KEYED NOTES

1. EXISTING ETC DIMMER RACK TO BE UPGRADED WITH NEW ELECTRONICS AND DIMMER MODULES. REFER TO THEATRICAL LIGHTING CONTROLS ONE LINE DIAGRAM AND SPECIFICATIONS SHEETS E5.01 & E6.01. INCLUDE ALTERNATE PRICES NO. 1 AND NO. 2 AS INDICATED.
2. DISCONNECT AND REMOVE EXISTING LIGHTING CONTROL BOARD COMPLETE WITH PATCH CABLES BACK TO WALL BOX. HAND OVER LIGHTING CONTROL BOARD TO OWNER OR DISCARD AS DIRECTED.
3. ECP10 DMX512 GATEWAY. REFER TO THEATRICAL LIGHTING CONTROL DIAGRAM FOR WIRING REQUIREMENTS.
4. NEW LIGHTING CONTROL CONSOLE. SEE SPECIFICATIONS.
5. UNISON TOUCH SCREEN. EXACT LOCATION TO BE VERIFIED WITH AUDITORIUM DIRECTOR. REFER TO THEATRICAL LIGHTING CONTROL DIAGRAM.
6. ALTERNATE PRICE NO. 1: UNISON/PRESET ENTRY STATION. SEE THEATRICAL CONTROL DIAGRAM AND BILL OF MATERIAL FOR WIRING REQUIREMENTS.
7. LOW VOLTAGE WIRING TO SENSOR RACK. REFER TO THEATRICAL LIGHTING CONTROL WIRING DIAGRAM FOR WIRING REQUIREMENTS. EXACT ROUTING OF WIRING TO BE DETERMINED IN THE FIELD. PROVIDE ALL CABLE SUPPORTS.



ELECTRICAL FLOOR PLAN - UNIT G
SCALE: 1/8" = 1'-0"



ISSUE DATE	ISSUED FOR
03/23/2021	BIDS
DRAWN	JPS
CHECKED	PA
APPROVED	SET

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SES Project #19 0865 01

PROJECT
Anchor Bay Schools
Anchor Bay High School
Auditorium Lighting
Controls Upgrade

New Baltimore, Michigan

SHEET
ELECTRICAL FLOOR PLAN - UNIT G

PROJECT NUMBER
2017-027.2

SHEET NUMBER
EL2.05G