

## **BID ADDENDUM NO. 3**

May 16, 2018

Elmira City School District  
Ernie Davis Academy 2018 Additions & Alterations  
HUNT No.: 2012-211

SED #07-06-00-01-0-038-026

The following Addendum items shall be considered a part of the contract documents prepared by HUNT ENGINEERS, ARCHITECTS & LAND SURVEYORS; P.C., Bid Document date of June 29, 2017; issued for bid April 25, 2018.

**Project Manual Sections issued by this Addendum:**

03 45 00 – Architectural Precast Concrete

**Drawings issued by this Addendum:**

A8.10 – First Floor Wall Finish Plan – Area D

A8.12 – First Floor Wall Finish Plan – Area F & H

A8/16 – Second Floor Finish Plan – Area C & H

TR3.1 – Rigging System Details

TR3.2 – Rigging System Details

TS2.1 – Sound System Flow Diagrams

TS3.1 – Sound System Details

TS4.1 – Sound System Notes & Schedules

AD3-A1 – Partition Type

**Revisions to Project Manual issued by this Addendum:**

**ITEM AD3-1 Refer to Section 00 01 12, Table of Contents**

**ADD** Section 03 45 00, Architectural Precast Concrete as issued by this addendum.

**ITEM AD3-2 Refer to Section 04 72 00, Cast Stone Masonry**

**DELETE** Section 04 72 00 in its entirety.

**ITEM AD3-3 Refer to Section 09 61 09, Water Vapor Emission Control Systems**

**AMEND** Paragraph 3.6, B to read, “For Water Vapor Emission Control systems at new concrete slabs refer to Section 03 30 00.

**Revisions to Drawings issued by this Addendum:**

**ITEM AD3-4 Refer to Drawing A7.1, Partition Types & Details**

AMEND Partition Types 2, 2A, 2B & 2C as shown in drawing AD3-A1 as issued by this addendum.

**ITEM AD3-5 Refer to Drawing A8.10, First Floor Wall Finish Plan – Area D**

DELETE Drawing A8.10 in its entirety and ADD Drawing A8.10 as issued by this addendum.

**ITEM AD3-6 Refer to Drawing A8.12, First Floor Wall Finish Plan – Area F & H**

DELETE Drawing A8.12 in its entirety and ADD Drawing A8.12 as issued by this addendum.

**ITEM AD3-7 Refer to Drawing A8.16, Second Floor Finish Plan – Area C & H**

DELETE Drawing TR3.1 in its entirety and ADD Drawing TR3.1 as issued by this addendum.

**ITEM AD3-8 Refer to Drawing TR3.1, Rigging System Details**

DELETE Drawing TR3.1 in its entirety and ADD Drawing TR3.1 as issued by this addendum.

**ITEM AD3-9 Refer to Drawing TR3.2, Rigging System Details**

DELETE Drawing TR3.2 in its entirety and ADD Drawing TR3.2 as issued by this addendum.

**ITEM AD3-10 Refer to Drawing TS2.1, Sound System Flow Diagrams**

DELETE Drawing TS2.1 in its entirety and ADD Drawing TS2.1 as issued by this addendum.

**ITEM AD3-11 Refer to Drawing TS3.1, Sound System Details**

DELETE Drawing TS3.1 in its entirety and ADD Drawing TS3.1 as issued by this addendum.

**ITEM AD3-12 Refer to Drawing TS4.1, Sound System Notes & Schedules**

DELETE Drawing TS4.1 in its entirety and ADD Drawing TS4.1 as issued by this addendum.

**ITEM AD3-13 Refer to Drawings P0.1 through P0.6, Plumbing Demolition Plans**

AMEND Demolition Note D39 to read, “Trench location required for use in new construction. General Contractor to saw cut and remove existing slab on grade and to trench, backfill and compact trench to accommodate new plumbing piping trench. Plumbing Contractor to install new plumbing piping in trench. General contractor to patch and prepare surface for new construction. Trench location shown on drawing is for reference only and shall not be scaled. Plumbing Contractor shall determine required trench width and depth needed to obtain proper slope. Plumbing contractor to coordinate saw cut area with General Contractor.”

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Addendum No 2

**ITEM AD3-14 Refer to Drawings P1.1 through P1.9, Plumbing Plans**

**AMEND** Drawing Note 11 to read, “General Contractor to saw cut and remove existing slab on grade, trench, backfill and compact trench to accommodate new plumbing piping trench. Plumbing Contractor to install new plumbing piping in trench. General Contractor to patch and prepare surface for new construction. Trench location shown on drawing is for reference only and shall not be scaled. Plumbing Contractor shall determine required trench width and depth needed to obtain proper slope. Plumbing Contractor to coordinate saw cut area with General Contractor.”

End of Addendum (3)

SECTION 03 45 00  
PRECAST ARCHITECTURAL CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Architectural precast concrete wall panels.
- B. Architectural precast concrete sills.
- C. Architectural precast concrete accessories.
- D. Supports, anchors, and attachments.
- E. Grouting under panels.

1.2 RELATED REQUIREMENTS

- A. Section 03 30 00 - Cast-in-Place Concrete.
- B. Section 05 40 00 - Cold-Formed Metal Framing.
- C. Section 07 21 00 - Thermal Insulation.
- D. Section 07 62 00 - Sheet Metal Flashing and Trim.
- E. Section 07 92 00 - Joint Sealants: Sealing perimeter and intermediate joints.
- F. Section 08 51 13 - Aluminum Windows: Product requirements for window anchors for placement by this section.

1.3 REFERENCE STANDARDS

- A. ACI 301 - Specifications for Structural Concrete; 2010 (Errata 2012).
- B. ACI 318 - Building Code Requirements for Structural Concrete and Commentary; 2011.
- C. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- D. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2015.
- E. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- F. ASTM A185/A185M - Standard Specification for Steel Welded Wire Reinforcement, Plain, for Concrete; 2007.
- G. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2014.
- H. ASTM A325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2014.
- I. ASTM A325M - Standard Specification for Structural Bolts, Steel, Heat Treated 830 MPa Minimum Tensile Strength (Metric); 2014.
- J. ASTM A497/A497M - Standard Specification for Steel Welded Wire Reinforcement, Deformed, for Concrete; 2007.

- K. ASTM A563 - Standard Specification for Carbon and Alloy Steel Nuts; 2007a (Reapproved 2014).
- L. ASTM A563M - Standard Specification for Carbon and Alloy Steel Nuts [Metric]; 2007.
- M. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon Steel Bars for Concrete Reinforcement; 2015.
- N. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2015.
- O. ASTM A767/A767M - Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement; 2009.
- P. ASTM A775/A775M - Standard Specification for Epoxy-Coated Steel Reinforcing Bars; 2007b (Reapproved 2014).
- Q. ASTM C31/C31M - Standard Practice for Making and Curing Concrete Test Specimens in the Field; 2012.
- R. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2013.
- S. ASTM C143/C143M - Standard Test Method for Slump of Hydraulic-Cement Concrete; 2012.
- T. ASTM C150/C150M - Standard Specification for Portland Cement; 2015.
- U. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a.
- V. ASTM C330/C330M - Standard Specification for Lightweight Aggregates for Structural Concrete; 2014.
- W. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2015.
- X. AWS D1.4/D1.4M - Structural Welding Code - Reinforcing Steel; 2011.
- Y. IAS AC157 - Accreditation Criteria for Fabricator Inspection Programs for Reinforced and Precast/Prestressed Concrete; 2010.
- Z. PCI MNL-117 - Manual for Quality Control for Plants and Production of Architectural Precast Concrete Products; 2007.
- AA. PCI MNL-120 - PCI Design Handbook - Precast and Prestressed Concrete; 2010, Seventh Edition.
- AB. PCI MNL-122 - Architectural Precast Concrete; 2007, Third Edition.
- AC. PCI MNL-123 - Design and Typical Details of Connections for Precast and Prestressed Concrete; 1988, Second Edition.
- AD. PCI MNL-135 - Tolerance Manual for Precast and Prestressed Concrete Construction; 2000.

#### 1.4 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Meeting: Convene one week prior to commencing work of this section.

#### 1.5 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's information on accessory products, including pigments, admixtures, inserts, plates, etc.

- C. Shop Drawings: Indicate layout, unit locations, configuration, unit identification marks, reinforcement, connection details, support items, location of lifting devices, dimensions, openings, and relationship to adjacent materials. Provide erection drawings.
  - 1. Include details of mix designs.
- D. Samples: Submit selection samples, 4 by 4 inch in size, illustrating surface finish, color and texture.
- E. Fabricator's Qualification Statement: Provide documentation showing precast concrete fabricator is accredited under IAS AC157.
- F. Fabricator Qualification Statement: \_\_\_\_\_.
- G. Maintenance Data: Indicate surface cleaning instructions.

#### 1.6 QUALITY ASSURANCE

- A. Design Engineer Qualifications: Design precast concrete units under direct supervision of a Professional Structural Engineer experienced in design of precast concrete and licensed in the State in which the Project is located.
- B. Fabricator Qualifications:
  - 1. Firm having at least 5 years of documented experience in production of precast concrete of the type required.
  - 2. Plant certified under Precast/Prestressed Concrete Institute Plant Certification Program; product group and category A1 - Architectural Precast Concrete.
  - 3. Plant certified under Architectural Precast Association Plant Certification Program for production of architectural precast concrete.
  - 4. Fabricator Qualifications: Precast concrete fabricator accredited by IAS according to IAS AC157.
- C. Welder Qualifications: Qualified within previous 12 months in accordance with AWS D1.1/D1.1M and AWS D1.4/D1.4M.

#### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Handling: Lift and support precast units only from support points.
- B. Blocking and Lateral Support During Transport and Storage: Use materials that are clean, non-staining, and non-harmful to exposed surfaces. Provide temporary lateral support to prevent bowing and warping.
- C. Protect units to prevent staining, chipping, or spalling of concrete.
- D. Mark units with date of production in location that will be concealed after installation.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Architectural Precast Concrete:
  - 1. Any manufacturer holding a PCI Group A Plant Certification for the types of products specified; see [www.pci.org](http://www.pci.org).
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.2 PRECAST UNITS

- A. Precast Architectural Concrete Units: Comply with PCI MNL-120, PCI MNL-122, PCI MNL-123, PCI MNL-135, and ACI 318.
  - 1. Design Loads: Static loads, anticipated dynamic loading, including positive and negative wind loads, thermal movement loads, and erection forces as defined by applicable code.
  - 2. Calculate structural properties of units in accordance with ACI 318.
  - 3. Accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.
  - 4. Provide connections that accommodate building movement and thermal movement and adjust to misalignment of structure without unit distortion or damage.
- B. Finish Type A: Ensure exposed-to-view finish surfaces of precast units are uniform in color and appearance.

## 2.3 REINFORCEMENT

- A. Comply with requirements of Section 03 30 00 - Cast-in-Place Concrete.

## 2.4 CONCRETE MATERIALS

- A. Cement: ASTM C150/C150M, Type I - Normal Portland type.
- B. Fine and Coarse Structural Aggregates: ASTM C33/C33M.
- C. Surface Finish Aggregate: Conforming to sample in office of Architect.
- D. Fiber Reinforcement: Synthetic fiber shown to be resistant to long-term deterioration when exposed to moisture and alkalis; 1/2 inch length.
- E. Air Entrainment Admixture: ASTM C260/C260M.
- F. Grout:
  - 1. Non-shrink, non-metallic, minimum 10,000 psi, 28 day strength.

## 2.5 SUPPORT DEVICES

- A. Connecting and Support Devices; Anchors and Inserts: ASTM A36/A36M steel; hot-dip galvanized in accordance with ASTM A153/A153M.
  - 1. Clean surfaces of rust, scale, grease, and foreign matter.
- B. Bolts, Nuts, and Washers: ASTM A307 heavy hex bolts, Type A, hot-dip galvanized, with matching ASTM A563 (ASTM A563M) nuts and matching washers.

## 2.6 ACCESSORIES

- A. Bearing Pads: High density plastic; Shore A Durometer; 1/8 inch thick, smooth both sides.
- B. Reglets: Specified in Section 07 62 00.
- C. Sealant: Specified in Section 07 92 00 - Joint Sealants.

## 2.7 FABRICATION

- A. Fabricate in conformance with PCI MNL-117 and PCI MNL-135.
- B. Maintain plant records and quality control program during production of precast units. Make records available upon request.
- C. Use rigid molds, constructed to maintain precast unit uniform in shape, size, and finish.

- D. Use form liners in accordance with manufacturer's instructions.
- E. Maintain consistent quality during manufacture.
- F. Fabricate connecting devices, plates, angles, items fit to steel framing members, inserts, bolts, and accessories. Fabricate to permit initial placement and final attachment.
- G. Embed reinforcing steel, anchors, inserts plates, angles, and other cast-in items.
- H. Place recessed flashing reglets continuous and straight.
- I. Locate hoisting devices to permit removal after erection.
- J. Cure units to develop concrete quality, and to minimize appearance blemishes such as non-uniformity, staining, or surface cracking.

## 2.8 FINISH - SUPPORT DEVICES

- A. Clean surfaces of rust, scale, grease, and foreign matter.

## 2.9 FABRICATION TOLERANCES

- A. Conform to PCI MNL-117 and PCI MNL-135, except as specifically amended below.
  - 1. Maximum Variation From Nominal Face Dimensions: Plus or minus 3/32 in.
  - 2. Maximum Variation From Square or Designated Skew: Plus or minus 1/8 inch in 10 feet.
  - 3. Maximum Variation from Thickness: Plus or minus 1/8 in.
  - 4. Maximum Misalignment of Anchors, Inserts, Openings: Plus or minus 1/8 inch.
  - 5. Maximum Bowing of Members: Plus or minus length/360.

## 2.10 SOURCE QUALITY CONTROL

- A. Provide testing of concrete mix.

# PART 3 EXECUTION

## 3.1 EXAMINATION

- A. Verify that building structure, anchors, devices, and openings are ready to receive work of this section.

## 3.2 PREPARATION

- A. Provide for erection procedures and induced loads during erection. Maintain temporary bracing in place until final support is provided.

## 3.3 ERECTION

- A. Erect units without damage to shape or finish. Replace or repair damaged panels.
- B. Erect units level and plumb within allowable tolerances.
- C. Align and maintain uniform horizontal and vertical joints as erection progresses.
- D. When units require adjustment beyond design or tolerance criteria, discontinue affected work; advise Architect.
- E. Fasten units in place with mechanical connections.

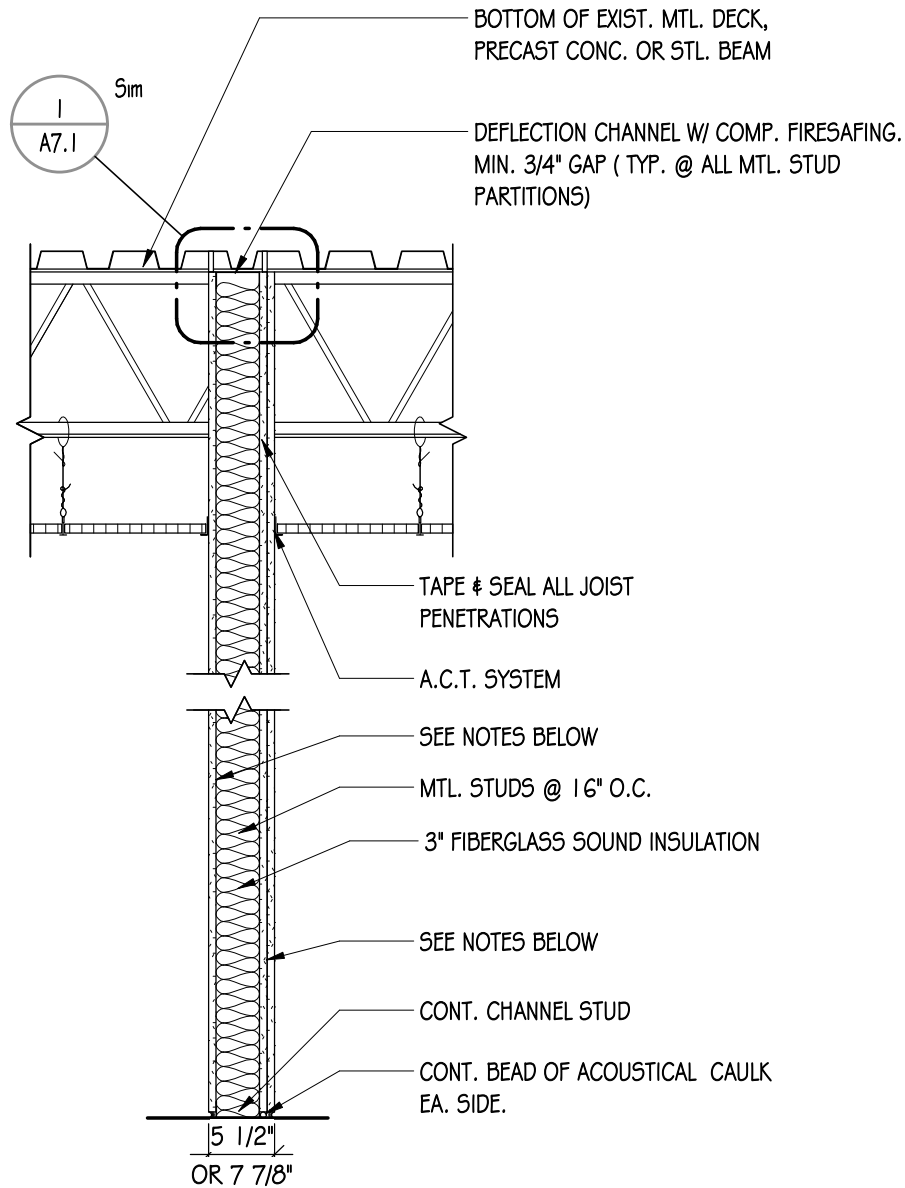


- F. Set vertical units dry, without grout, attaining joint dimension with lead or plastic spacers. Pack grout to base of unit.
- G. Exposed Joint Dimension: 1/2 inch. Adjust units so that joint dimensions are within tolerances.

#### 3.4 TOLERANCES

- A. Erect members level and plumb within allowable tolerances. Conform to PCI MNL-135 .

END OF SECTION



## PARTITION TYPE

- |           |  |
|-----------|--|
| <b>2</b>  | (2) LAYERS 5/8" HIGH IMPACT GWB CORRIDOR SIDE<br>& (1) LAYER 5/8" HIGH IMPACT GWB OTHER SIDE ON<br>3 5/8" MTL. STUD; UL #U425 (1 HR RATED) |
| <b>2A</b> | SAME AS TYPE 2, W/ 6" MTL. STUD; UL#U425   |
| <b>2B</b> | SAME AS TYPE 2A, (2) LAYERS 5/8" HIGH IMPACT GWB<br>EA. SIDE; UL#U425 (2 HR RATED)   |
| <b>2C</b> | SAME AS TYPE 2, W/ (1) LAYER 5/8" HIGH IMPACT GWB<br>EA. SIDE; NO UL #   |

### PARTITION TYPE

**ELMIRA CITY SCHOOL DISTRICT  
EDA 2018 ADDITION & ALTERATIONS**

933 HOFFMAN ST, ELMIRA, NY 14905

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HORSEHEADS, NY

ROCHESTER, NY

TOWANDA, PA

**AD3-A1**

DATE:  
03/24/15

PROJECT NO:  
2012 - 211

















**AUDITORIUM REMOVAL SYMBOLS KEY**

Device	Description	Box Description
	Audio Racks 1 1/2" DIA - for Specific Rack Information See T53.1	
	Power - Duplex Outlet- 20A-1 20VAC	
	Plate with (4) Neutrik XLR-F Connectors	Existing To Remain
	Single Gang Plate with (2) Neutrik XLR-F Connectors	Existing Surface Mounted Raceway To Remain
	Single Gang Plate with (2) Neutrik XLR-F Connectors	
	Plate with (2) Neutrik NL-4 Connectors	Existing To Remain
	Plate With ELCO EDAC Connector	Existing To Remain
	Power Junction Box	Existing To Remain

**AUDITORIUM SYMBOLS KEY**

Device	Description	Box Size	Mounting
	Indicates conduit size and/or wire runs		
	Moment to device		
	Audio Racks 1 1/2" DIA - for Specific Rack Information See T53.1		
	Power - Duplex Outlet- 20A-1 20VAC	1 Gang	Mount As Standard Electrical Outlet Height, In Rack Or As Indicated
	Plate with (4) Neutrik XLR-F Connectors	2 Gang	Surface Mounted At Std Electrical Outlet Height
	Plate with (2) Neutrik XLR-F Connectors	1 Gang	Mounted To The Front Of The Stage To Existing Metal Raceway
	Plate with (2) Neutrik XLR-F Connectors	1 Gang	Mounted To The Front Of The Stage To Existing Metal Raceway
	Plate with (1) Neutrik Ethernet Connector	1 Gang	Mounted To The Front Of The Stage To Existing Metal Raceway
	Whirlwind MIP2 Input Plate	1 Gang	Mounted To The Front Of The Stage To Existing Metal Raceway
	Plate with (2) Neutrik NL-4 Connectors	Existing	2 Gang
	Crestron DM-TX-200-C-2G With Decora Plate	2 Gang	Surface Mounted As Indicated
	Crestron DM-RMC-SCALER-C Mounted To Backbox	2 Gang	Surface Mounted As Indicated
	Crestron C2N-BG Button Station With Decora Plate	1 Gang	Surface Mounted At Std Switch Height
	Plate With ELCO EDAC Connector		Existing To Remain
	Main Speaker - Plate with (1) Neutrik NL-4 Connector	1 Gang	Mount Flush Into Ceiling
	Standard Outlet Box With a Blank Plate	Existing	2 Gang
	Hanging Mic Box - (4) Channel Pro Co Roadmaster Style		Mount To Pipe Batten As Indicated. See T53.1 For More Information
	Existing Power Junction Box		
	Speaker Junction Box	12x12x6	Surface Mounted As Indicated
	Da-Lite External Low Voltage Control		Surface Mounted To Existing Structural Steel As Indicated
	Plate with (4) Neutrik XLR-F Connectors	Existing	2 Gang
	Telex WP-2 - 2-Channel Intercam Plate	1 Gang	Flush Mounted At Std Switch Height

Note: All backboxes for standard plates are to be square. Boxes with rounded corners will not be accepted.

**CONTRACTOR SCOPE OF WORK (RELATED TO THE SOUND SYSTEM):**

The Division 2G Contractor (The Electric Contractor, Hereafter Referred To As The EC) Shall Perform All Work As Described Below And On Each TS Series Drawing. All Work Shall Conform To The Standards Of Division 2G Specifications And Spec Section 191000:

**BOXES, CONDUIT & WIRE:**

The contractor shall provide (provide means to furnish and install) all conduit, duplex or quad outlets and related faceplates, multiple device boxes, miscellaneous hardware and all installation labor to provide complete conduit layouts and control, low and load crossbars as indicated. All devices shown on the drawings are indicated in approximate locations. The contractor shall coordinate the exact locations of all devices shown with the owner, existing obstructions and any other AV related items that they may need to be located near or in conjunction with. The contractor shall determine all final locations prior to routing or installing any conduit or backboxes.

The contractor shall provide all wiring run in conduit. No conduit shall be allowed to be located beyond 50N ft.

The contractor shall terminate all conduits into racks, junction boxes, pull-boxes or other appropriate devices as indicated. No cut off conduits with end bushings and wiring dangling out the end shall be allowed.

The contractor shall refer to all AV related notes, drawing arrow notes and written specifications for work clarification and additional scope of work as it relates to assembly, installation labor, labeling requirements and/or coordination with other trades. Labeling requirements outlined in the written specifications are extensive and detailed.

All conduits are to be clearly labeled as to their origin and destination in a simple, logical manner (permanent black marker on conduit acceptable). The EC will provide documentation to the related contractor as to the source, destination and routing of conduits as part of normal coordination on the project. Labeling shall be done in neat, block letters.

All junction boxes, switch boxes and backboxes indicated on drawings are to be labeled with the nomenclature indicated on the drawing. (Permanent black marker on boxes is acceptable if easily visible and marked inside the box and on the cover, unless the box will be painted. If the box is to be painted, provide a protected tag for nomenclature after painting). All labeling shall be done with neat, simple block lettering.

The contractor shall use a permanent black marker to inscribe the corresponding panel and circuit number on the back of each cover plate and shall also provide a durable tag inside each outlet box stating the same information.

The contractor shall provide blank cover plates for any switch box or junction box that does not have a specific device plate indicated on the drawings symbols keys. All cover plates shall be provided in a color and style that matches other cover plates in the immediate vicinity of the indicated device or as determined by the owner. Cover plates shall be "form fitting" and shall not have sharp edges that protrude out past edges of backboxes.

All conduits are to be concealed unless specifically called out on drawings as exposed. Any visible conduits and boxes are to conform to general contract requirements and Division 26 for finish and installation requirements.

Back-to-back outlets in common walls shall not be permitted. All outlet boxes shall be separated by at least one stud baywidth.

Note - All circuits are required to have separate hot and neutral conductors. Provide ground wiring as required by applicable code. All circuits shall be calculated for full rated loads, constant duty non diversity unless otherwise specified. Size wire gauges and conduit sizing to allow for full load operation after taking into account all derating for distance, voltage drop and other conditions required by the most recent national electric code (NEC), the New York State building codes and local codes.

The contractor shall leave at least 3" excess wire at each end unless otherwise indicated on the drawing. Secure ends of all pulled wire to prevent accidental removal or damage during construction. The contractor shall provide continuous pull strings (for future use) in all conduits even after all indicated wire is pulled in.

Where conduit is indicated with no wire called out on the plan drawings, the contractor shall provide the conduit empty. The contractor shall provide continuous pull strings in all empty conduits, tied off at both ends. Wire must be able to be pulled through the conduits without exceeding the pull specs of the wire to be pulled. Typical pulling tension for cables of this type is between 35 and 50 lbs. tension.

Wiring Standards - Plenum Rated Cable: Unless specifically noted on the drawings, all low voltage wiring is to be CL2/CL3 wiring. Where specific plenum conduits exist its has been noted to use a plenum rated cable. Where wiring runs occur in concealed spaces - walls, ceilings, etc. - and are not enclosed in conduit the contractor must verify the space is not being used as a plenum path. Any areas encountered that are plenums must have plenum cable or the wiring must be contained in conduit rated for the plenum application. Field verify conditions prior to ordering or installing cabling.

In some areas wiring may be called out as CL3 not in conduit. In these areas the contractor must provide adequate attachment and support to protect the cable from potential damage using the best routing. Wiring may not be left lying loose in any area unless fully protected (i.e. inside a wall).

The contractor shall radius all conduits where possible. Conduit runs are not to exceed 270 degrees of radius bend. Where elbows and pull boxes are unavoidable, locate these in easily accessible locations not requiring special equipment to reach. Any elbows used must be sweeps and must be accessible without the use of special equipment. If more than 270 degrees of bend is required, the contractor shall provide accessible pull boxes.

The contractor shall provide all power circuits indicated on TS drawings and associated conduit, backboxes, wire, termination and duplex outlets. Termination of these outlets will be to panel boards as indicated. These outlets may also be indicated on E series drawings. Check TS and E drawings and verify there is no duplication of devices. Some outlets are to be installed in racks - coordinate with the contractor for exact locations within each rack.

The contractor is responsible for fire stopping all penetrations in new and existing fire rated assemblies resulting from the work of the contract.

**CONDUITS/PLATES:**

The contractor shall provide all cover plates for back boxes or switch boxes as indicated on the drawings.

**CONTRACTOR POWER SYSTEM DRAWING NOTES:**

Each note indicates a typical location for the type of work to be performed or equipment to be provided. The contractor shall provide for all instances of typical work indicated. All drawing notes may not appear on the referenced on each drawing; however, all notes still apply to the work indicated within each note and shall be performed by the referenced contractor(s).

Failure by the contractor to adhere to any of the specific notes on these drawings shall result in the repairing, replacing or reinstalling extensive system components, conduit, wire or related items at his own expense and at no additional cost to the owner in order to bring the installation up to the standards and details set forth in these contract documents.

Branch circuits indicated are for the dedicated use of the specified system (Audio, video), theatrical lighting or imaging. No other connections may be made or branches added to these circuits. Each circuit must have a separate hot, neutral, and ground conductor. Conduit grounds are not acceptable for these circuits. All wire to be THHN Stranded with Gauge as required by NEC. All grounds to be #12 minimum THHN Stranded copper. Where ISO ground panels are provided the THHN ground wire will be sized for ISO ground. Building ground to switch boxes on ISO ground circuits as required by NEC.

Neutrals and grounds may not be shared with any other circuits.

The branch circuits indicated are to be installed as indicated. The EC shall coordinate with the appropriate contractor where connections are to be made within racks and equipment furnished by others to provide well timed construction progress.

See E series drawings for panel designations and origination. Do not duplicate circuits.

All indicated circuits shall be individual, independent, home-run circuits to a panel/breaker box as indicated on the E series drawings (unless otherwise noted or indicated as being paralleled with another). Provide circuits in voltage, wattage, phase and ampacity and underwrite each circuit into a backbox or other device as indicated.

If a circuit designated does not appear on the E series panel schedules, the EC shall still be responsible for providing the circuit to a panel designated by the electrical engineer for the project. Typically the panel will be within 150 feet of the branch circuit location.

The contractor shall provide all backboxes in sizes as indicated. No multi-gang backboxes with raised, tie ring, extension ring or mud ring style reducers to obtain the specified faceplate gang size shall be acceptable in lieu of the indicated device backbox. Any multi-gang devices with these extension rings used shall be replaced and the specified backbox sizes provided by the contractor at no additional cost to the owner. The contractor shall install all backboxes flush, plumb and level.

The contractor shall provide all surface mounted boxes as full-sized backboxes so that the coverplate plates do not protrude beyond the box edges. All boxes to be Thomas & Betts AF5 style boxes or equivalent size. Any boxes that are smaller than the coverplate plate will not be accepted. The intent is for faceplate to be the same size as the backbox in order to prevent sharp or protruding edges that could catch or snag clothing, etc. or cause injury.

All locations & clearances shown for the AV system & other related devices are specific & critical and may not be altered in the field without obtaining prior written permission from the consultant. Any new proposed locations or field obstructions must be communicated to the consultant in writing and clearly indicated on scaled plan drawings by the contractor. The contractor shall properly & completely seal all wall & floor conduit penetrations entering or exiting racks to ensure that airflow passes through racks as intended by manufacturers. Any racks, wiring, conduit and related devices that are installed in locations other than those indicated on the bid documents or approved in writing post bid will be removed and reinstalled in the correct locations in an as new manner by the contractor at no additional cost to the owner (unless obstructions are present which precludes the indicated locations, in which case the consultant shall choose the final locations and indicate this in writing prior to their installation).

THE FOLLOWING RULES APPLY TO ALL POWER, AUDIO CONTROL, VIDEO SIGNAL & CONDUIT RUNS - All different categories of wiring should run inside their own, separate metal conduit to ensure signal integrity. If boxes or underground conduits are run in PVC pipe or in PVC elbows or pullboxes are used on any conduit runs, then each conduit shall have a separate #10 ground/wire wire installed and bonded at both ends and tied back to earth ground and all PVC elbows or connectors are to be ground strapped across. Signal types allowable inside "common conduit" runs shall be as follows: Lighting load wiring in separate metal conduit. Winch power in separate metal conduit. Winch control in separate metal conduit. Line in mic level audio signals in separate metal conduit. Speaker level audio signals in separate metal conduit. Lighting control in separate metal conduit. Audio power in separate metal conduit. Video signals in separate metal conduit. Large load wiring (dimmer power, etc.) should not run near any of the low voltage lines, especially audio lines. Power conduits shall not run parallel with any audio or video signal or lighting control conduits within 6" of each other. Any power conduits which must cross audio or video signal or lighting control conduits shall do so at 90 degree angles. No audio, video, intercom or control wiring shall be allowed to run within 6" of or behind any electrical panels, dimmer racks, fan/water units, server farms, network racks or any other large IT producing units.

**GENERAL NOTES:**

Do not scale plans.

Field verify all dimensions before ordering material or performing any work. Location of all devices must be coordinated with existing and/or new architectural, mechanical, electrical and structural elements. Where conflicts occur contact the architect, construction manager and consultant in writing for clarification before performing any work. If the contractor chooses to proceed without clarification they do so at their own risk. Any work done by the contractor without clarification will be re-done at no cost to the owner at the request of the architect, owner, construction manager or consultant.

Where work is provided by others (i.e. conduit, backboxes, rack installations, etc.), the specialties contractor (audio, AV, lighting or imaging) is responsible to verify installation conditions that relate to his work. If installation of related work is substandard, deficient or missing items (this includes crooked backboxes in architecturally sensitive areas, missing pull boxes, incorrect conduit sizes, items that deviate from contract documents, etc.) then the specialties contractor shall stop his work and generate a written RFI through proper channels based upon construction documents. The specialties contractor shall not install his work to any unapproved devices, etc. provided by others until such work has been repaired/returned to a satisfactory condition and until he has received written authorization from the construction manager to proceed. If the specialties contractor ignores substantial installation work by others and proceeds to install his devices to these items, then he accepts and bears sole responsibility to repair, install and correct any found deficiencies to the satisfaction of the owner upon final inspection.

Where work is critically dimensioned to work provided by others it is the sole responsibility of the contractor to verify the intended location of other elements with other contractors by reviewing their shop drawings.

Coordinate all work for symmetrical installation with relation to height and level with architectural elements, switches, outlets, and other controls.

This drawing represents the configuration of a system. It does not in any way constitute instructions for installation except with regards to configurations. The sole responsibility for field verification of dimensions, installation/functionality methods, code conformance, safety issues, and the quality and performance of their work shall be that of the installing contractor.

This drawing is to be interpreted in conjunction with other drawings in the construction set as well as written specifications for the system. The contents of the drawings do not in any way negate the contents of the work, if the written specifications in any way negate the contents of the drawings.

If there are inconsistencies between written specifications and drawings or between any drawing and other drawings in the construction document set it is the responsibility of the contractor to obtain clarification before making the project. If no clarification has been obtained prior to bid the contractor will advise by the decision of the architect and consultant at no additional cost to the owner over 1 week has to be re-done.

Obtain shop drawings from related trades to verify the intended configurations and scheduling of their work. The contractor is responsible for coordinating their work with other related trades in a manner that avoids conflicts of work and scheduling.

**REMOVAL NOTES:**

Each Note Indicates A Typical Location For The Type Of Work To Be Performed Or Equipment To Be Provided. Sound Contractor Shall Provide For All Instances Of Typical Work Indicated. All Drawing Notes May Not Appear Or Be Referenced On Each Drawing; However, All Notes Still Apply To The Work Indicated Within Each Note.

- Contractor shall disconnect and remove all existing mic plates from the existing surface mount raceway. Contractor shall label all wiring upon removal for reuse. Where existing wiring is not long enough to be reused at the new locations, contractor shall remove wiring. All removed items shall be properly disposed of.
- Contractor shall disconnect and remove all existing mic plates and backboxes surface mounted to the front of the stage directly above the existing surface mount raceway. Contractor shall repair any damage to the front of the stage left from removal. Dispose of all items removed.
- Contractor shall disconnect and remove the existing mic plate for the overhead hanging mics. Tie off inside box and label wiring for reuse.
- Contractor shall disconnect and remove all equipment not being reused in the stage audio rack. See T53.1 for rack elevation of what equipment is being reused. All equipment not being reused shall be turned over to the owner.
- Contractor shall disconnect and remove all equipment not being reused in the booth audio rack. See T53.1 for rack elevation of what equipment is being reused. All equipment not being reused shall be turned over to the owner.
- Contractor shall disconnect and remove the existing main speaker column arrays and all associated mounting hardware. Contractor shall remove wiring and patch all holes left from removal. Return all removed items from the owner.
- Contractor shall disconnect and remove the existing projection screen. Cap existing wiring, tie off and protect for reuse. Return projection screen to the owner.
- Contractor shall disconnect and remove the existing custom input/output box surface mounted in the control booth and all associated wiring. Contractor shall patch any holes left from removal.
- Contractor shall disconnect and remove the existing projection screen control plate. If line wiring continues, contractor shall splice wiring inside the box with nine butt-splices and place a blank cover plate on the box.

**CONTRACTOR DRAWING NOTES:**

Each Note Indicates A Typical Location For The Type Of Work To Be Performed Or Equipment To Be Provided. Sound Contractor Shall Provide For All Instances Of Typical Work Indicated. All Drawing Notes May Not Appear Or Be Referenced On Each Drawing; However, All Notes Still Apply To The Work Indicated Within Each Note.

- Contractor shall install projection screen low voltage control to the bottom flange of structural steel adjacent to the existing power junction box. Cut existing wiring for the projection screen power to length and terminate to low voltage control. Provide new type SJOW cable from low voltage control to projection screen. See TR series drawings for cable dress and cable length for travel requirements.
- Contractor shall provide surface mount Wircelid raceway painted to match the wall from the booth audio rack to under the countertop for new wiring from rack devices to interface to the console.
- Contractor shall provide 2-gang blank coverplate for existing box. Punch hole in top of existing box for multicore cable ext. Terminate multicore cable to existing wiring with insulated butt-splices. See TR series drawings for cable length requirements for button travel.
- Contractor shall verify mounting method of new plates to the existing raceway. Replace mounting brackets if they are not able to be reused or if existing mounting method will not be able to be maintained.
- Contractor shall surface mount boxes to the existing Tectum wall panel. Contractor shall surface mount conduit from the boxes and stub into ceiling overhead.

**MODEL NUMBERS**

Manufacturer model numbers for products are indicated on drawings to provide a full understanding of the system functional intent. See written specifications and the project manual for additional information and requirements for substitutions and procedures.

**QUOTATION NUMBERS**

Manufacturer reference quotation numbers given for any piece of equipment or assembly have been provided for convenience in obtaining bid prices. The quotation reference number does not guarantee exact final dimensions, accessories, fit and finish, or changes that might be implemented via addendum or change orders. The successful contractor is solely responsible for verifying any product purchased for this project meets the performance requirements, finish, fit, and all other required performance factors regardless of any factory quote number issued.

**NOTE:**

It is each contractor's responsibility to receive all device shipments, equipment, deliveries, etc. for their own equipment on the job site personally. This will require each contractor to carefully coordinate drop-ship delivery dates with the manufacturers and trucking companies in order to have adequate personnel on site to inspect, unload and store all shipments. Each contractor shall be responsible to arrange for storage of all received materials on site until the appropriate time when he shall either turn them over to installing contractor or install them himself.

If the contractor chooses to allow a third party to receive shipments on his behalf, then that contractor bears sole responsibility for any missing and/or damaged parts and devices that may need to be reordered or rush freight required to maintain schedule, all at no additional cost to the owner.

Any equipment that is furnished by the receiving contractor but installed by others shall be turned over to the installing contractor as such time as it fits into their production schedule and the project's overall construction schedule.

Any large items such as racks, emergency transfer equipment, etc. shall be transported by the receiving contractor from its storage area and relocated to the general vicinity (i.e. in the room and general area) where it will be installed. At this point in time it shall be turned over to the installing contractor for installation.

DRAWN BY: GWN	
CHECKED BY: GWN	
DATE: 6/29/17	
SCALE: AS NOTED	
BY:	
DATE: 6/29/17	ISSUED FOR: BIDS
UNAUTHORIZED ALTERATION OR ADDITION TO THESE DRAWINGS IS PROHIBITED. ENGINEER OR ARCHITECT SEAL IS A REQUIREMENT FOR SECTION 1900 OF THE NEW YORK STATE STANDARD SPECIFICATIONS.	

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**SOUND SYSTEM NOTES AND SCHEDULES**  
**ERNIE DAVIS ACADEMY 2018 ADDITION & ALTERATIONS**  
 ELMIRA CITY SCHOOL DISTRICT  
 893 HOFFMAN STREET ELMIRA, NY 14905  
 ERNIE DAVIS ACADEMY SEED # 07-06-00-01-0-088-026

**TS4.1**  
 PROJECT NO: 2012-211