



ARCHITECTURE. INSPIRED.

DATE: 04/20/2026

JOB #: 25220.00



# PROJECT MANUAL

## Procurement Documents

### TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 W. Main Street  
McConnelsville, Ohio 43756

PREPARED FOR:

### Village of McConnelsville

9 W. Main Street  
McConnelsville, Ohio 43756

300 Marconi Boulevard  
Columbus, Ohio 43215

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# **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PREPURCHASE**

15 W. Main Street  
McConnelsville, Ohio 43756

PREPARED FOR:

**Village of McConnelsville**

9 W. Main Street  
McConnelsville, Ohio 43756

**DOCUMENT 00 01 10**  
**TABLE OF CONTENTS**

**DIVISION 00 PROCUREMENT AND CONTRACTING REQUIREMENTS**

**Introductory Information**

00 01 10 Table of Contents

**Procurement Requirements**

00 11 16 Invitation to Bid  
00 21 13 Instructions to Bidders  
00 41 63 Bid Form

**Contracting Requirements**

00 45 19 Non-Collusion Affidavit  
00 73 23 Conditions of Purchase

**DIVISION 01 GENERAL REQUIREMENTS**

01 11 00 Summary of Work  
01 30 00 Administrative Requirements  
01 33 00 Submittal Procedures  
01 40 00 Quality Requirements  
01 60 00 Product Requirements  
01 77 00 Closeout Procedures  
01 78 00 Closeout Submittals

**DIVISION 02 EXISTING CONDITIONS**

Not Used

**DIVISION 03 CONCRETE**

Not Used

**DIVISION 04 MASONRY**

Not Used

**DIVISION 05 METALS**

Not Used

**DIVISION 06 WOOD, PLASTICS, AND COMPOSITES**

Not Used

**DIVISION 07 THERMAL AND MOISTURE PROTECTION**

Not Used

**DIVISION 08 OPENINGS**

Not Used

**DIVISION 09 FINISHES**

Not Used

**DIVISION 10 SPECIALTIES**

Not Used

**DIVISION 11 EQUIPMENT**

11 61 00 Theater and Stage Equipment

**DIVISION 12 FURNISHINGS**

Not Used

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

**DIVISION 13 SPECIAL CONSTRUCTION**

Not Used

**DIVISION 14 CONVEYING EQUIPMENT**

Not Used

**DIVISIONS 20=50**

Not Used

**END OF SECTION**

## TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 West Main Street  
McConnelsville, OH 43756

### INVITATION TO BID

Pre-Purchase of Stage Equipment (Curtains, Rigging & Related Systems)

Twin Cities Opera House Stage Equipment Pre-Purchase

McConnelsville, Morgan County, Ohio

#### 1. Invitation

Morgan County, Ohio (“Owner”), as grantee for the Twin Cities Opera House Stage Equipment Pre-Purchase, invites sealed bids from qualified theatrical equipment vendors for the supply and delivery of new stage equipment (curtains, rigging, and related systems) to an Owner-designated location. Installation will be performed at a later date but is included in this prepurchase contract.

#### AMLER Funding and Compliance

This procurement is funded in whole or in part by the Abandoned Mine Land Economic Revitalization (AMLER) Program administered by the Office of Surface Mining Reclamation and Enforcement (OSMRE) and the Ohio Department of Natural Resources, Division of Mineral Resources Management (ODNR-DMRM). The project must demonstrate economic and community development outcomes in conjunction with AML reclamation priorities under SMCRA §403(a). [2](<https://www.osmre.gov/resources/grants-resources>)[1](<https://dam.assets.ohio.gov/image/upload/odnr/mrm/amlr/amlr-grant-instructions-info-2025.pdf>)

#### 2. Scope (Summary)

The complete scope of fabrication, delivery, installation, testing, and commissioning of theatrical stage equipment is defined in Section 01 11 00 – Summary of Work. The work shall consist of the furnishing, fabrication, delivery, and subsequent installation of theatrical and stage systems and associated components for the project. This scope includes project coordination, preparation of shop drawings, product data, certifications, packaging, labeling, storage coordination, and protection of materials until installation. Installation, integration, testing, commissioning, and final system demonstration shall be performed at a later phase of construction as directed, but are included within the Contractor’s contractual responsibilities.

#### 3. Bid Documents & Availability

Bid Documents (this ITB, Instructions to Bidders, Bid Form, and Technical Specifications) will be available on:

Date: April 27, 2026

Access: [www.morganohio.com](http://www.morganohio.com)

Fee (if any): No cost

## TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 West Main Street  
McConnelsville, OH 43756

### 4. Bid Submission

Electronic bid labeled “Twin Cities Opera House – Stage Equipment Pre-Purchase –” must be received by:

Date: May 26, 2026 Time: 10:00 a.m. local time

Delivery Address:

Electronic bids may be submitted to: [shannon.wells@morgancountyohio.gov](mailto:shannon.wells@morgancountyohio.gov)

Late bids will not be accepted.

Bid Validity: Bids shall remain firm and open for acceptance for a period of sixty (60) calendar days following the date of bid opening. Withdrawal of a bid during this period, except as permitted by Ohio law, may result in disqualification from future procurements.

### 5. Public Bid Opening

Bids will be publicly opened and read aloud at the Morgan County Board of Commissioners meeting:

Location: Commissioners’ Hearing Room

Bids will be received and opened publicly in accordance with Ohio requirements for competitive procurement; award will be made to the lowest responsive and responsible Bidder consistent with AMLER guidance and ODNR program administration. [3](<https://www.pa.gov/agencies/dep/programs-and-services/mining/abandoned-mine-reclamation/abandoned-mine-land-economic-revitalization-amler-program>)[4](<https://dep.wv.gov/dlr/aml/Pages/AML-Pilot-Program.aspx>)

### 6. Procurement Type and Award

This is a supply and install, pre-purchase procurement. The Owner intends to issue a Purchase Order (or purchase agreement) to the lowest responsive and responsible Bidder, considering price, conformance, delivery, qualifications, and grant compliance. The Owner may reject any or all bids, waive informalities, and accept the bid deemed in the public interest.

### 7. Grant & Regulatory Compliance

The successful Bidder must comply with all applicable grant terms, audit requirements, debarment/eligibility certifications, non-collusion, Buy America/Buy Ohio (if applicable), and Ohio public records requirements.

### 8. Prevailing Wage / Davis-Bacon

Davis-Bacon federal prevailing wage requirements do not apply to AMLER-funded contracts where OSMRE is not a direct party; state prevailing wage may apply to any future installation under separate contract.

[5](<https://ohiodnr.gov/wps/portal/gov/odnr/discover-and-learn/safety-conservation/about-ODNR/mineral-resources-management/reclamation-restoration/amler-grant-program>)

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

9. Questions & Addenda

Submit questions in writing to:

Contact: Ms. Kalpa Baghasingh Email: [kbaghasingh@schooleycaldwell.com](mailto:kbaghasingh@schooleycaldwell.com)

Deadline for Questions: 05/19/2026 at 12:00 p.m.

Addenda will be issued in writing only and posted/distributed as set forth in the Instructions to Bidders.

10. Owner: Morgan County, Ohio

Grantee for the Twin Cities Opera House Stage Equipment Pre-purchase

Address: 155 E. Main Street, McConnelsville, OH 43756,

Phone: 740-962-1322

By: Shannon Wells

Date of Advertisement: April 27, 2026; May 4, 2026

## **INSTRUCTIONS TO BIDDERS**

Pre-Purchase of Stage Equipment (Curtains, Rigging & Related Systems)

Twin Cities Opera House Stage Equipment Pre-Purchase

### 1. Defined Terms

“Owner” means Morgan County, Ohio. “Bidder” means a firm submitting a bid. “Bid Documents” include the Invitation to Bid, these Instructions, the Bid Form (with attachments), Technical Specifications (including drawings if any), and Addenda.

### 2. Procurement Intent; Fabrication and Installation

The Owner intends to award a contract and issue a Purchase Order (PO) to the successful Bidder for **the** fabrication, delivery, and installation of the specified stage equipment in accordance with the Bid Documents. The successful Bidder shall be fully responsible for coordination, supervision, and execution of the installation work as part of their scope. No separate installation contractor is anticipated.

### 3. Bid Submission; Time & Place

Submit one (1) executed original of the Bid Form with all required attachments clearly labeled “Bid – Stage Equipment Pre-Purchase – Twin Cities Opera House,” delivered to:

Email address in the Invitation to Bid. Late bids will not be opened or considered.

### 4. Bid Opening

Bids will be publicly opened and read aloud at the time and place stated in the ITB. Bid tabulations may be made available after review.

### 5. Examination of Documents; Site/Delivery Conditions

Bidders shall examine the Bid Documents and inform themselves of all conditions affecting manufacture, packaging, shipping, delivery, and interim storage. Submission of a bid constitutes a representation that Bidder has done so and has included all costs necessary to deliver compliant goods.

### 6. Questions; Addenda; Substitutions

Questions must be submitted in writing to the Contact in the ITB by the stated deadline. Only written addenda modify the Bid Documents. Proposed substitutions must be submitted as Requests for Substitution no later than 10 calendar days before bid due date, with complete technical data demonstrating equality or superiority. Approved substitutions will be issued via addendum.

### 7. Bid Form; Required Attachments

Bids must be submitted on the provided Bid Form without alteration except as noted.

#### 8. Withdrawal, Modification

Bids may be modified or withdrawn by written request received before the bid deadline. No bid may be withdrawn for [60] calendar days after bid opening, unless permitted by Ohio law.

#### 9. Evaluation; Responsiveness and Responsibility

The Owner will evaluate bids for responsiveness to the Bid Documents and responsibility of the Bidder, including experience with theatrical equipment of comparable complexity, manufacturer qualifications, delivery schedule, and grant compliance. Award will be made to the lowest responsive and responsible Bidder, or all bids may be rejected.

#### 10. Taxes; Exempt Status

The Owner is tax-exempt. Do not include Ohio sales tax. An exemption certificate will be provided upon request.

#### 11-. Schedule; Liquidated Damages [Optional]

Bidder shall state the guaranteed delivery lead time in weeks ARO on the Bid Form. If liquidated damages are desired, insert: "Time is of the essence. Liquidated damages of \$[\_\_\_\_]/day apply for late delivery, capped at [\_\_\_\_]% of PO value."

#### 12. Warranty; Commencement

Provide manufacturer's standard warranties per Section 11 61 00 against defects in materials and workmanship. \*\*Unless otherwise stated, warranty commencement shall be the earlier of\*\* (a) installation/beneficial use under the future project, or (b) [180] days after delivery to the Owner's designated location, whichever occurs first. If alternate warranty start is required, state it on the Bid Form.

#### 13. Insurance; Certificates

Provide evidence of commercial general liability and product liability insurance of not less than \$1,000,000 per occurrence and \$2,000,000 aggregate, and transit insurance covering goods until delivery and acceptance. Additional insured and certificate holder language will be specified at award.

#### 14. Payment Terms

Payment will be made per the executed PO, net 30 days from receipt of conforming invoice and Owner acceptance of delivered goods. Partial invoicing for stored or undelivered goods is not permitted unless expressly approved in writing.

#### 15. Public Records

Bids are public records to the extent permitted by Ohio law. Mark proprietary information as "CONFIDENTIAL—TRADE SECRET" and provide a redacted version; however, final determinations will be made in accordance with law.

#### 16. Reservation of Rights

The Owner may reject any or all bids, waive informalities, and accept the bid in the Owner's best interest. Clerical or mathematical errors may be corrected as permitted by law.

#### 17. Contract Form

Following award, the Owner intends to issue a Purchase Order incorporating the Bid Documents and the successful Bidder's accepted proposal. The Owner may also issue supplemental terms or a purchase agreement consistent with these Instructions.

END OF INSTRUCTIONS TO BIDDERS

**BID FORM**

Twin Cities Opera House - Stage Equipment Pre-Purchase

TO: Morgan County, Ohio ("Owner")

FROM: \_\_\_\_\_ ("Bidder")

Address: \_\_\_\_\_

City/State/ZIP: \_\_\_\_\_

Contact Name/Title: \_\_\_\_\_

Email/Phone: \_\_\_\_\_

Manufacturer(s) Proposed: \_\_\_\_\_

1. Acknowledgments

The undersigned Bidder acknowledges receipt of the Bid Documents and the following addenda:

Addendum Nos.: \_\_\_\_\_

2. Base Bid – Procurement, Fabrication and Installation (FOB Destination, Morgan County, OH)

**For** fabricating all specified stage equipment, including shop drawings and O&M data, and for furnishing, packaging, and delivery of said equipment, all in full conformity with the Bid Documents. Equipment may be stored by the fabricator until such time that the Owner authorizes delivery or installation. Installation of the equipment shall be performed by the fabricator and shall occur at a later date upon written authorization by the Owner under the terms and schedule established at that time.

BASE BID (Lump Sum): \$ \_\_\_\_\_ (in figures)

BASE BID (Lump Sum): \_\_\_\_\_ (in words)

3. Delivery Schedule

Delivery of the stage equipment shall occur at a time determined by the Owner when the equipment is ready to be installed in the construction project, upon written authorization by the Owner.

Guaranteed delivery lead time after receipt of Purchase Order and submittal approvals:

\_\_\_\_\_ calendar days for submittals from PO date.

Proposed delivery window dates: \_\_\_\_\_ to \_\_\_\_\_.

4. Warranty

Bidder commits to a warranty period provisions of Section 11 61 00 –Theater and Stage Equipment. Warranty commencement is as defined in the Instructions to Bidders (Section 15). If Bidder proposes a different commencement, state here:

As specified  Different—describe: \_\_\_\_\_

5. Required Attachments (check boxes)

Non-Collusion Affidavit

Exceptions/Clarifications (list on separate page)

6. Exceptions/Clarifications

Bidder takes the following exceptions or clarifications (attach additional pages if needed). If none, write “None”:

\_\_\_\_\_  
\_\_\_\_\_

7. Agreement to Hold Bid Price; Execution

Bidder agrees that this bid shall remain valid and may not be withdrawn for sixty (60) calendar days following the public opening, except as permitted by Ohio law. If awarded, Bidder agrees to execute documents as required by the Owner and honor the delivery schedule herein.

8. Signature

Legal Name of Bidder: \_\_\_\_\_

By (Authorized Signatory): \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_ FEIN: \_\_\_\_\_

(SEAL if a corporation)

END OF BID FORM

**NON-COLLUSION AFFIDAVIT**

Project: Twin Cities Opera House - Stage Equipment Pre-Purchase

McConnelsville, Morgan County, Ohio

Bidder: \_\_\_\_\_

Address: \_\_\_\_\_

City / State / ZIP: \_\_\_\_\_

The undersigned affirms, certifies, and declares under penalty of perjury that:

The Bid submitted by the Bidder has been arrived at independently and has been submitted without collusion, communication, consultation, agreement, or arrangement with any other bidder or potential bidder for the purpose of restricting competition.

Neither the Bidder nor any officer, employee, agent, or affiliate of the Bidder has knowingly disclosed the contents of the Bid, directly or indirectly, to any other bidder or potential bidder prior to the public opening of bids.

No attempt has been made by the Bidder or any person associated with the Bidder to suppress or eliminate competition for the award of this procurement by intimidation, coercion, or fraud.

The Bidder has not paid, offered to pay, or agreed to pay, directly or indirectly, any person, firm, or organization any money, contribution, fee, or consideration of any kind for the purpose of influencing or controlling the procurement process or the award of a contract or purchase order.

The Bidder understands that any false statement or misrepresentation made in this Affidavit may result in rejection of the Bid, cancellation of any resulting contract or purchase order, forfeiture of bid security, and/or any other remedies provided by law.

Certification

I certify that I am duly authorized to execute this Non-Collusion Affidavit on behalf of the Bidder and that the statements made herein are true and correct to the best of my knowledge, information, and belief.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date: \_\_\_\_\_

Notary Acknowledgment (If Required)

State of Ohio

County of \_\_\_\_\_

Subscribed and sworn before me on this \_\_\_\_ day of \_\_\_\_\_, 2026.

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

END OF NON-COLLUSION AFFIDAVIT

## **CONDITIONS OF PURCHASE**

Furnishing, Fabrication, Delivery, and Installation of Stage Equipment

Twin Cities Opera House – Stage Equipment Pre-Purchase

McConnelsville, Morgan County, Ohio

These Conditions of Purchase (“Conditions”) are incorporated into and made part of the Purchase Order (“PO”) issued by Morgan County, Ohio (“Owner”) for the furnishing, fabrication, delivery, and installation of theatrical stage equipment and associated components (“Equipment”). In the event of a conflict between these Conditions and the Supplier’s documents, these Conditions shall govern.

### **1. Scope of Contract**

Supplier shall furnish, fabricate, manufacture, package, deliver, install, test, and place into service all theatrical stage equipment and associated components as a complete and fully operational system, in strict accordance with the Bid Documents and the accepted Bid Form. Installation of all Equipment is expressly included in the Scope of Contract and shall be provided by the Supplier without exception, unless otherwise expressly stated in writing in the Bid Documents.

The Scope of Contract includes, without limitation:

- Fabrication and manufacture of equipment
- Delivery, unloading, handling, staging, rigging, and protection
- Complete installation of all equipment, including anchoring, mounting, alignment, and connection to building systems where applicable
- All labor, supervision, tools, equipment, and incidentals required for installation
- Field measurements, coordination, and layout
- Testing, adjustment, commissioning, and operational verification

All work shall be performed as a complete, coordinated system ready for intended use. No portion of the Work shall be considered complete, and no Equipment shall be considered delivered, until all Equipment has been fully installed, tested, and accepted by the Owner.

### **2. Contract Documents**

The Contract consists of the following documents, listed in order of precedence:

1. The executed Purchase Order
2. These Conditions of Purchase
3. The Bid Documents, including specifications, drawings, and addenda
4. The Supplier’s accepted Bid Form

### 3. Price and Taxes

The PO price is firm and includes all labor, materials, fabrication, equipment, transportation, installation, supervision, overhead, and profit necessary to complete the Work.

Owner is tax-exempt. Ohio sales tax shall not be included. Exemption documentation will be provided upon request.

### 4. Delivery, Installation, Title, and Risk of Loss

“Delivery” means arrival at the Project site, unloading, staging, full installation of equipment, testing, and acceptance of the Equipment.

Delivery and installation shall be FOB Project Site, McConnelsville, Morgan County, Ohio.

Title and risk of loss remain with Supplier until the Equipment has been fully installed, tested, and accepted by the Owner.

Supplier shall coordinate delivery and installation schedules with the Owner and Construction Manager and shall provide not less than ten (10) business days’ advance notice prior to shipment.

### 5. Site Conditions and Protection

Supplier shall be responsible for verifying field conditions prior to fabrication and installation.

Supplier shall protect finished work, adjacent construction, and existing conditions from damage caused by its operations and shall repair or replace damaged work at its expense.

### 6. Schedule

Time is of the essence. Supplier shall perform the Work in accordance with the schedule stated in the accepted Bid Form and as coordinated with the overall project construction schedule.

Supplier shall promptly notify Owner of any anticipated delays and shall propose reasonable mitigation measures. No schedule extensions shall be valid unless approved in writing by the Owner.

### 7. Warranty

Supplier warrants that the Equipment and installation shall be new, free from defects in material and workmanship, and in full compliance with the Contract Documents.

Durations and requirements of all warranties shall be **as specified in Section 11 61 00** of the Contract Documents.

All warranties shall be issued in the Owner’s name and shall apply to both the Equipment and the installation.

Warranty obligations shall commence in accordance with Section 11 61 00 and shall survive final payment and acceptance.

Warranty obligations shall survive final payment and acceptance.

## **8. Inspection and Acceptance**

Owner may inspect the Work at any time during fabrication and installation and upon completion.

Defective or non-conforming Equipment or installation may be rejected and shall be repaired or replaced at Supplier's expense without extension of the Contract Time unless approved in writing.

## **9. Insurance**

Supplier shall maintain, at its expense, insurance satisfactory to the Owner, including:

- Commercial General Liability insurance, including products and completed operations, with limits not less than \$1,000,000 per occurrence and \$2,000,000 aggregate
- Workers' Compensation insurance in accordance with Ohio law
- Employer's Liability insurance
- Automobile Liability insurance covering vehicles used in performance of the Work
- Transit and installation insurance covering the full replacement value of the Equipment until final acceptance

Certificates of Insurance shall be provided prior to commencement of Work.

## **10. Assignment and Coordination**

Owner may assign the PO or portions thereof to the Construction Manager or General Contractor responsible for the overall project.

Supplier shall cooperate and coordinate with the Owner, Architect, theatre consultant, Construction Manager, and other trades to ensure proper integration of the Equipment into the Project.

## **11. Compliance With Laws and Safety**

Supplier shall comply with all applicable federal, state, and local laws, regulations, and codes, including OSHA and safety requirements for on-site work.

Supplier shall be responsible for the safety of its employees and subcontractors while performing Work on the Project site.

## **12. Debarment and Non-Collusion**

Supplier certifies that it is not debarred or suspended and that the Work was procured without collusion. False certification shall be grounds for termination.

## **13. Payment**

Payment shall be made in accordance with the terms stated in the PO, based on satisfactory completion of Work and Owner's acceptance, subject to availability of grant funds.

Final payment shall not relieve Supplier of warranty or indemnification obligations.

**14. Termination for Convenience**

Owner may terminate the PO, in whole or in part, for convenience. Supplier shall be paid for Work satisfactorily performed and accepted prior to termination, plus documented, reasonable costs incurred solely due to termination, excluding anticipated profit on unperformed Work.

**15. Indemnification**

Supplier shall indemnify and hold harmless the Owner, its officials, employees, and agents from and against claims, damages, losses, and expenses arising out of or resulting from the furnishing, fabrication, delivery, or installation of the Equipment, except to the extent caused by the Owner's sole negligence.

**16. Governing Law**

This PO shall be governed by the laws of the State of Ohio. Venue shall lie in a court of competent jurisdiction in Ohio.

**17. Entire Agreement**

These Conditions, together with the PO and incorporated documents, constitute the entire agreement between the parties. Modifications must be in writing and signed by the Owner.

END OF CONDITIONS OF PURCHASE

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

**SECTION 01 11 00**

**SUMMARY OF WORK – STAGE EQUIPMENT**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. The Work under this Section includes the furnishing, fabrication, manufacture, delivery, installation, testing, commissioning, and placing into service of complete theatrical and stage equipment systems for the Twin Cities Opera House, as described herein and in the referenced Technical Specifications.
- B. The Work includes all labor, materials, equipment, supervision, engineering, shop preparation, coordination, and incidentals required to provide fully installed, operational, and code-compliant theatrical systems, including all associated components, accessories, and appurtenances necessary for a complete and functional installation.
- C. Equipment and systems included under this Section consist of, but are not limited to:
  - 1. Stage rigging systems, including dead-hung steel pipe battens, motorized line-shaft hoists, headblocks, loft blocks, tension blocks, counterweight or motorized components as applicable, load-rated hardware, and associated structural attachments.
  - 2. Curtain track systems for front curtains, travelers, side legs, borders, and related soft goods.
  - 3. Motorized curtain draw machines and control components.
  - 4. Custom rigging control panels, interlocks, power supplies, limit devices, labeling, and signage.
  - 5. Complete stage drapery systems, including front curtains, traveler curtains, valances, side legs, and borders, fully fabricated, flame-retardant, properly weighted, reinforced, installed, and adjusted.
  - 6. Projection screen systems and associated accessories as specified.
  - 7. All associated cabling, chains, clamps, trims, safeties, terminations, and connection hardware required for proper operation and compliance.
- D. The Contractor shall provide complete, coordinated theatrical systems, fully installed, tested, adjusted, demonstrated, and ready for Owner use at the time of Substantial Completion.

**1.02 CONTRACTOR RESPONSIBILITY**

- A. The Supplier/Fabricator (hereafter “Contractor”) shall act as the single responsible party for all theatrical stage equipment covered by this Section.
- B. The Contractor’s responsibilities include, but are not limited to:
  - 1. Detailed engineering and coordination with architectural, structural, mechanical, electrical, and fire protection systems.
  - 2. Preparation and submission of shop drawings, calculations, product data, samples, certifications, and record documentation.
  - 3. Fabrication and manufacture of equipment in accordance with approved submittals.
  - 4. Delivery, handling, staging, and protection of materials.
  - 5. Complete field installation, anchorage, assembly, alignment, and adjustment of all equipment.
  - 6. Electrical and control connections where specified or required for operability.
  - 7. Field testing, functional testing, load testing, and safety verification.
  - 8. Final commissioning, system demonstration, and Owner training.
- C. Work shall be coordinated so that all theatrical equipment operates as a complete, integrated system.

**1.03 COORDINATION**

- A. Coordinate Work with Owner, Architect, and other Contractors to ensure proper sequencing, clearances, power requirements, structural support, and system integration.
- B. Provide timely responses and clarifications required to resolve conflicts and ensure a successful installation.

## **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

### **1.04 SUBMITTALS**

- A. Prepare the following submittals in accordance with Section 01 33 00 – Submittal Procedures:
- B. Action Submittals:
  - 1. Shop drawings, rigging layouts, line-set schedules, load calculations, block and headframe details.
  - 2. Control schematics, wiring diagrams, and control bills of materials.
  - 3. Drapery fabric samples, flame resistance certifications, and fabrication details.
- C. Informational Submittals:
  - 1. Product data, finish schedules, and manufacturer certifications.
  - 2. Factory and field test reports.
  - 3. O&M manuals and warranty documentation.

### **1.05 QUALITY ASSURANCE**

- A. Contractor Qualifications: Minimum of three (3) successfully completed theatrical rigging and drapery installations of similar size and complexity within the past five (5) years.
- B. All rigging components shall be load rated and labeled in accordance with applicable codes and standards.

### **1.06 DELIVERY, INSTALLATION, AND ACCEPTANCE**

- A. Deliver materials in a coordinated manner to support continuous installation.
- B. Install all equipment strictly in accordance with approved submittals and manufacturer instructions.
- C. Acceptance shall occur only after:
  - 1. Completion of installation.
  - 2. Satisfactory testing and commissioning.
  - 3. Demonstration of full system functionality.
  - 4. Submission of complete closeout documentation.

## **PART 2 – PRODUCTS**

### **2.01 GENERAL**

- A. The Contractor shall provide all products, components, assemblies, accessories, and materials necessary to furnish complete theatrical and stage equipment systems as described in this Section and the referenced Technical Specifications.
- B. Products furnished under this Section shall be:
  - 1. New, unused, and of current manufacture.
  - 2. Specifically designed and rated for theatrical and entertainment applications.
  - 3. Suitable for the intended duty cycles, loads, and operating conditions.
  - 4. Fully compatible with associated systems and other installed equipment.

### **2.02 MANUFACTURERS**

- A. Acceptable manufacturers and performance requirements are specified in Division 11 Technical Specifications applicable to theatrical and stage equipment.
- B. Where a specific manufacturer or product is named, substitutions shall be considered only by written approval through formal addendum or approved substitution procedures.
- C. Contractor shall be an authorized manufacturer, fabricator, or dealer for all specified equipment and shall provide written evidence of authorization upon request.

### **2.03 MATERIALS AND PERFORMANCE REQUIREMENTS**

- A. Rigging Systems and Hardware:

## TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 West Main Street  
McConnelsville, OH 43756

1. All rigging components shall be rated, labeled, and manufactured in accordance with applicable codes and industry standards.
  2. Safety factors, load ratings, and deflection criteria shall comply with the Technical Specifications.
  3. Steel components shall be properly finished for corrosion resistance in an interior theater environment.
- B. Controls and Powered Equipment:
1. Motorized hoists, curtain machines, and controls shall be designed for theatrical service.
  2. Control systems shall include all required interlocks, limit devices, emergency stops, labeling, and documentation.
  3. Provide controls fully wired, labeled, and ready for operation.
- C. Drapery and Soft Goods:
1. Fabrics shall be inherently flame-retardant (IFR) or treated as specified, with current certifications.
  2. Drapery shall be fully fabricated, reinforced, weighted, and finished for proper appearance and operation.
  3. Provide cleaning and maintenance instructions with final documentation.

### 2.04 SHOP FABRICATION

- A. All fabrication shall be based on approved shop drawings and coordinated field dimensions.
- B. Factory assembly shall be maximized to reduce field labor and installation risk.
- C. Components shall be clearly labeled to correspond with installation drawings and schedules.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Verify existing conditions, dimensions, structural supports, access, and utilities prior to fabrication and installation.
- B. Report discrepancies or conflicts that would affect proper installation or operation before proceeding.

### 3.02 INSTALLATION

- A. Install all theatrical and stage equipment in strict accordance with:
  1. Approved shop drawings.
  2. Manufacturer's written instructions.
  3. Applicable codes, standards, and safety requirements.
- B. Installation includes, but is not limited to:
  1. Rigging layout, anchorage, alignment, trimming, leveling, and adjustment.
  2. Installation of all rigging hardware, battens, tracks, drapery, and accessories.
  3. Electrical and control connections required for operation of motorized equipment.
  4. Final configuration to achieve specified trims, speeds, loads, and performance.
- C. Coordinate installation with other trades to avoid conflicts and ensure proper sequencing.

### 3.03 FIELD QUALITY CONTROL

- A. Provide all field testing required to verify safe and proper operation, including:
  1. Functional testing of rigging and drapery systems.
  2. Operational testing of all motorized equipment and controls.
  3. Load testing where specified or required.
- B. Correct deficiencies and retest until satisfactory performance is achieved.

### 3.04 COMMISSIONING AND SYSTEM DEMONSTRATION

- A. After installation and testing, place all theatrical systems into full operational service.

## **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

- B. Demonstrate operation of all systems to the Owner and Theatre Consultant, including normal operation, safety features, and emergency procedures.
- C. Provide on-site training for Owner's designated personnel.

### **3.05 PROTECTION AND CLEANING**

- A. Protect installed equipment from damage during remainder of construction.
- B. Remove debris, packaging, and temporary protection prior to Owner acceptance.

### **3.06 CLOSEOUT**

- A. Submit complete closeout documentation, including:
  - 1. Record (as-built) drawings.
  - 2. Final approved shop drawings.
  - 3. O&M manuals.
  - 4. Certifications, inspection reports, and warranties.
- B. Owner acceptance shall occur only after:
  - 1. All systems are fully installed and operational.
  - 2. Testing and demonstrations are complete.
  - 3. Closeout documentation has been approved.

**END OF SECTION 01 11 00**

**ISECTION 01 30 00**  
**ADMINISTRATIVE REQUIREMENTS**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. This Section establishes administrative and contractual procedures applicable to all phases of the Work described in the Contract Documents, including procurement, fabrication, delivery, installation, and commissioning phases.
- B. This Section governs communications, document control, contract modifications, records, invoicing, and compliance. It does not define technical scope, execution methods, sequencing, or performance requirements.
- C. Related Sections:
  - 1. 01 11 00 – Summary of Work
  - 2. 01 33 00 – Submittal Procedures
  - 3. 01 77 00 – Closeout Procedures
  - 4. 01 78 00 – Closeout Submittals
  - 5. Conditions of Purchase / Contract Agreement

**1.02 ADMINISTRATIVE INTENT**

- A. The Work includes multiple phases as defined in the Scope of Work and the Contract Documents. Administrative requirements in this Section apply uniformly across all phases unless expressly stated otherwise.
- B. Nothing in this Section is intended to expand, restrict, or reinterpret the Scope of Work, technical requirements, execution responsibilities, or sequencing obligations defined elsewhere in the Contract Documents.

**1.03 DEFINITIONS**

- A. Owner: Morgan County, Ohio, or its authorized representative.
- B. Contractor: The entity under contract to perform the Work.
- C. Acceptance: Owner's written confirmation that submitted documentation or completed work meets contractual administrative requirements for payment or record purposes.

**1.04 RESPONSIBLE PARTIES AND COMMUNICATIONS**

- A. Owner's Representative (Contract Administration):
  - 1. Name/Title: Shannon Wells
  - 2. Email: [Shannon.wells@morgancountyohio.gov](mailto:Shannon.wells@morgancountyohio.gov)
- B. Architect:
  - 1. Firm: Schooley Caldwell Associates
  - 2. Contact: Ms. Kalpa Baghasingh
  - 3. Email: [kbaghasingh@schooleycaldwell.com](mailto:kbaghasingh@schooleycaldwell.com)
- C. All contractual communications, notices, RFIs, submittals, and requests for modifications shall be submitted in writing to the Owner's Representative and Architect. Technical correspondence requiring review shall be copied to the Architect.
- D. The Contractor shall designate one (1) authorized representative empowered to act on behalf of the Contractor in all administrative and contractual matters.

## **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

### **1.05 DOCUMENT INTERPRETATION**

- A. Administrative procedures shall not be interpreted to alter technical scope, performance requirements, or contractual obligations established elsewhere.

### **1.06 ADDENDA AND CONTRACT MODIFICATIONS**

- A. Prior to award, only written addenda issued by the Owner modify the solicitation documents.
- B. After award, modifications to the Contract shall be made only by written amendment executed by the Owner.
- C. Verbal directions or informal correspondence do not authorize changes.

### **1.07 REQUESTS FOR INFORMATION (RFIS)**

- A. RFIs shall be used to request clarification of the Contract Documents where administrative or interpretive issues arise.
- B. RFIs shall not direct or authorize changes to scope, schedule, or cost.
- C. Responses shall be issued in writing and shall be binding only when issued by the Owner or incorporated into a formal contract modification.

### **1.08 SUBSTITUTIONS**

- A. Substitution requests shall be administered in accordance with the Contract Documents.
- B. Approved substitutions, if any, shall be authorized only through a written contract amendment.

### **1.09 CONTRACT RECORDS AND RETENTION**

- A. The Contractor shall maintain complete and accurate contract records, including submittals, correspondence, certifications, delivery documentation, testing reports, and invoices, for not less than five (5) years after final payment.

### **1.10 AMLER FUNDING – ADMINISTRATIVE COMPLIANCE**

- A. All administrative, documentation, and audit requirements applicable to AMLER-funded work shall be complied with for all phases of the Work.
- B. The Contractor shall provide certifications, affidavits, and access to records as required to support compliance and audit activities.

### **1.11 INVOICING AND PAYMENTS**

- A. Invoices shall be submitted in accordance with the Contract and shall reference applicable contract numbers, approved documentation, and Acceptance milestones.
- B. Payment eligibility shall be determined in accordance with the Contract Documents.
- C. Partial or progress payments shall be permitted only where expressly authorized.

### **1.12 PUBLIC RECORDS AND CONFIDENTIALITY**

- A. Contract documents and submissions may be subject to public records laws.
- B. Proprietary or trade secret information shall be clearly identified and accompanied by a redacted version, subject to applicable law.

## **PART 2 – PRODUCTS**

Not Used

## **PART 3 – EXECUTION**

Not Used

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**  
15 West Main Street  
McConnelsville, OH 43756

**END OF SECTION 01 30 00**

**SECTION 01 33 00**  
**SUBMITTAL PROCEDURES**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. Section includes requirements for preparation, format, review, and tracking of submittals for the supply-only pre-purchase of theatrical stage equipment.
- B. Related Sections:
  - 1. 01 11 00 – Summary of Work (Pre-Purchase).
  - 2. 01 30 00 – Administrative Requirements.
  - 3. 01 40 00 – Quality Requirements.
  - 4. 01 60 00 – Product Requirements.
  - 5. 01 77 00 – Closeout Procedures (Pre-Purchase).
  - 6. Technical Specifications for curtains, rigging, battens, and controls.

**1.02 ADMINISTRATIVE INTENT**

- A. Obtain submittal approvals prior to fabrication. No fabrication or shipment shall occur until submittals are “Approved” or “Approved as Noted” with noted conditions resolved in writing.

**1.03 DEFINITIONS**

- A. “Action Submittals”: Require Architect/Theatre Consultant review and action.
- B. “Informational Submittals”: Required for record; no action stamp required.
- C. “Deviation”: Any departure from the Bid Documents or prior approvals.

**1.04 SUBMITTAL SCHEDULE**

- A. Within ten (10) business days of Purchase Order (PO) award, submit a consolidated Submittal Schedule identifying each submittal, planned dates, and dependencies. Update as required.

**1.05 FORMAT AND DELIVERY**

- A. Electronic PDF, text-searchable, 300 dpi minimum. Combine related items into a single bookmarked PDF per submittal package.
- B. File Naming: “TCOH\_[Discipline]\_[Item]\_[SubmittalNo]\_R[Rev].pdf”.
- C. Transmittal: Include project name, PO number, spec references, and a clear statement of action requested.

**1.06 REVIEW TIME**

- A. Allow fifteen (15) business days per review cycle unless otherwise approved in writing. Complex submissions may require additional time.

**1.07 COORDINATION**

- A. Coordinate submittals with one another to avoid conflicts and to match fabrication sequence and delivery priorities (e.g., long-lead rigging steel before drapery color approvals).

**1.08 SUBMITTAL CONTENT – ACTION SUBMITTALS**

- A. Rigging Shop Drawings:
  - 1. Line set schedule, loads (dead/variable), safety factors.
  - 2. Head blocks, loft blocks, arbors, guides; hardware schedules.

## TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 West Main Street  
McConnelsville, OH 43756

3. Battens: diameter, material, wall thickness, lengths, splice details.
  4. Control components (if specified): device list, wiring tails, terminations.
- B. Calculations:
1. Load calculations sealed by a qualified engineer where required by the Technical Specifications.
- C. Draperies:
1. Fabric data sheets, weave/weight, seam and finishing details.
  2. Cut color samples and hand samples; IFR certifications for each fabric.
- D. Fire Curtain (if specified):
1. Assembly details, release/control scheme, fabric certification, edge/hem details, and hardware.
- E. Packaging & Labeling Plan:
1. Crate/pallet counts; estimated weights and dimensions; labeling scheme; handling orientation.
- F. Delivery & Unloading Plan:
1. Proposed carrier, truck type, special handling equipment, coordination notes for Owner's storage facility.

### 1.09 SUBMITTAL CONTENT – INFORMATIONAL SUBMITTALS

- A. Product Data: Manufacturer's literature for all components; finish schedules.
- B. Certificates:
1. Manufacturer authorization (if Supplier is dealer/distributor).
  2. Flame resistance/IFR certificates for drapery fabrics.
  3. Compliance statements required by the Bid Documents (e.g., Buy America/Build America (BABA) if applicable).
- C. Quality Documentation: Factory QA procedures relevant to the equipment.
- D. Insurance Certificates: CGL/products and cargo/transit coverage naming Owner as certificate holder.

### 1.10 ACTION STAMPS / RESPONSES

- A. "Approved": Proceed with fabrication and procurement.
- B. "Approved as Noted": Proceed, provided notations are incorporated in the record set; re-submit affected pages when directed.
- C. "Revise and Resubmit": Do not fabricate; correct and resubmit.
- D. "Rejected": Not acceptable; correct and resubmit.

### 1.11 DEVIATIONS

- A. Identify deviations prominently in both the transmittal and on affected sheets with clouds/bubbles and a deviation index. Unidentified deviations may be rejected without review.

### 1.12 RECORD SET

- A. Maintain a current, dated record of all approved submittals and revisions. Provide the final "Approved" record set as part of closeout (PDF).

### 1.13 SUBSTITUTIONS

- A. Refer to 01 30 00 for procedures and timing. No substitutions after award without written PO amendment.

## PART 2 – PRODUCTS

Not Used

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

**PART 3 – EXECUTION**

Not Used

**END OF SECTION**

**SECTION 01 40 00**  
**QUALITY REQUIREMENTS**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. This Section sets minimum quality standards and documentation for the supply-only pre-purchase of theatrical stage equipment, including: manufacturer and supplier qualifications, certifications, tolerances, factory quality control, labels/traceability, handling/packaging quality, and nonconformance correction.
- B. Related Sections:
  - 1. 01 11 00 – Summary of Work (Pre-Purchase – Stage Equipment).
  - 2. 01 30 00 – Administrative Requirements.
  - 3. 01 33 00 – Submittal Procedures.
  - 4. 01 60 00 – Product Requirements.
  - 5. 01 77 00 – Closeout Procedures (Pre-Purchase).
  - 6. 01 78 00 – Closeout Submittals.
  - 7. Technical Specifications for draperies, rigging, battens, and controls.

**1.02 QUALITY OBJECTIVES**

- A. Provide Equipment that is:
  - 1. New, free of defects, fully compliant with specifications and approved submittals.
  - 2. Engineered and rated for theatrical use with appropriate safety factors.
  - 3. Properly packaged and labeled for safe transport and extended indoor storage.
- B. Ensure documentation necessary for AMLER compliance, audit readiness, and future installation is complete and accurate at delivery.

**1.03 RESPONSIBILITIES**

- A. Supplier is solely responsible for quality of furnished Equipment, including compliance by manufacturers, mills, and sub-suppliers.
- B. Review by Owner/Architect/Theatre Consultant does not relieve Supplier of responsibility for compliance.

**1.04 COORDINATION WITH TECHNICAL REVIEWS**

- A. Provide all quality-related submittals (certifications, IFR data, load calculations, material specs, origin documentation) alongside shop drawings so reviews can occur concurrently.
- B. Do not fabricate until action “Approved” or “Approved as Noted” is issued per 01 33 00.

**1.05 REGULATORY / REFERENCE STANDARDS**

- A. Conform to applicable codes and standards referenced in the Technical Specifications, including (as applicable): IBC, NFPA, OSHA, ANSI E1 series, and manufacturer standards for rigging components and flame resistance.
- B. Provide latest available certificates that match the actual products delivered.

**1.06 QUALIFICATIONS**

- A. Supplier (Prime Vendor):
  - 1. Minimum [5] years continuous experience supplying theatrical rigging and drapery systems of similar scope and complexity.
  - 2. Authorized by proposed manufacturers to sell and support specified products (submit manufacturer authorization).
- B. Manufacturers:

## TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE

15 West Main Street  
McConnelsville, OH 43756

1. Minimum [5] years documented production of specified products with published technical data and warranty support.

C. Engineering:

1. Provide rigging load calculations prepared by a qualified engineer experienced in theatrical systems; sealing is required only where specified in Division 11 or by state/local rule.

### 1.07 SUBMITTALS (QUALITY-RELATED)

A. Certifications:

1. Flame resistance/IFR certifications for each drapery fabric (identify fabric lot where available) and care/retreatment instructions.
2. Certificates of Conformance (CoC) for rigging hardware, wire rope, battens, and assemblies indicating ratings and safety factors per spec.
3. Manufacturer authorizations for Supplier (dealer/distributor).

B. Load Calculations and Data:

1. Line set schedule with dead/variable loads; head/loft block load paths; arbor capacities; counterweight calculations; batten dead load.
2. Provide factors of safety per spec and note any assumptions requiring field verification during the future construction phase.

C. Traceability:

1. Provide component schedule cross-referencing each item to crate/pallet IDs and the master packing list.

D. QA / Factory:

1. Provide a brief description of the manufacturer's QA program (incoming inspection, in-process checks, final inspection/testing relevant to these products).

### 1.08 MOCK-UPS / SAMPLES (AS SPECIFIED)

A. Drapery Color/Hand Samples:

1. Submit color chips and small hand samples for confirmation; provide larger "strike-offs" or sample hems if requested for finish and stitch verification.

B. No physical rigging mock-ups are required for this pre-purchase unless specifically called out in Division 11.

### 1.09 DELIVERY QUALITY AND STORAGE READINESS

A. Packaging/Crating:

1. Provide robust crating/palletization suitable for forklift/pallet-jack handling and up to [12] months of indoor storage.
2. Protect fabric from creasing, puncture, and moisture; provide desiccants as recommended by the manufacturer.

B. Labeling:

1. Each crate/pallet shall display Project name, PO number, crate number/total (e.g., "Crate 3 of 12"), gross weight, center of gravity (if not symmetrical), storage orientation, and handling cautions.
2. Interior carton labels shall identify item codes that match the shop drawings and packing list.

C. Documentation with Shipment:

1. Packing list per crate; master shipment index; handling/storage instructions tied to materials supplied.

## **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

### **1.10 MEASUREMENT / TOLERANCES (MINIMUMS – SEE TECHNICAL SECTIONS FOR SPECIFICS)**

- A. Battens: Diameter and wall thickness per spec; straightness tolerance suitable for theatrical use; splice couplers per manufacturer limits.
- B. Blocks/Sheaves: Groove profile matched to rope/line; runout and bearing tolerances per manufacturer standards; rated load and safety factor per spec.
- C. Wire Rope/Lines: Diameter tolerances per applicable standards; certification of construction and minimum breaking strength.
- D. Draperies: Cut/finish dimensions within tolerances stated in Division 11; seams straight and uniform; hems and grommets per submittal.

### **1.11 INSPECTIONS**

- A. Factory: Supplier to perform standard manufacturer final inspections; third-party inspection is not required unless specified elsewhere.
- B. Delivery: Joint inspection at time of delivery for counts, labeling, and visible damage (see 01 77 00).
- C. Concealed Defects: Notify Supplier within ten (10) business days for remedy without cost to Owner.

### **1.12 NONCONFORMING PRODUCTS**

- A. Identify, segregate, and promptly propose corrective action for any nonconformances (repair, replacement, or credit), including revised delivery date.
- B. Replace damaged or nonconforming items at Supplier cost, including freight both ways, unless Owner approves repair in place.

### **1.13 RECORDS / AUDIT (AMLER)**

- A. Maintain quality records (certifications, CoCs, MTRs if applicable, QA checklists) and make available to Owner or auditors upon reasonable notice for at least five (5) years after final payment.

## **PART 2 – PRODUCTS**

### **2.01 GENERAL QUALITY OF MATERIALS**

- A. Provide new, first-quality materials from the approved manufacturers listed in Division 11; no seconds, shop samples, or refurbished components.

### **2.02 RIGGING COMPONENTS – MINIMUM QUALITY CRITERIA**

- A. Hardware and assemblies rated for theatrical use with documented working load limits (WLL) and safety factors as specified.
- B. Bearings, shafts, and sheaves appropriate to line type and diameter; guards as required by manufacturer.
- C. Battens straight, clean, and free of deformation; splices compliant with manufacturer recommendations.

### **2.03 FABRICS (DRAPERIES)**

- A. Provide inherently flame-retardant (IFR) or treated fabrics as specified with current flame resistance certifications; label rolls/bolts with fabric identification and lot numbers where available.
- B. Finishing: Seams, hems, and grommets consistent with approved samples; edge treatments per submittal.

### **2.04 CONTROLS / ACCESSORIES (IF SPECIFIED)**

- A. Provide control components, junction boxes, tail wiring, and labeling to match approved submittals; include schematics for future installer.

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

**PART 3 – EXECUTION**

NOT USED

**END OF SECTION 01 40 00**

**SECTION 01 77 00**  
**CLOSEOUT PROCEDURES**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. Section includes requirements for delivery inspection, acceptance, corrective actions, final documentation, administrative closeout, and installation responsibilities related to closeout for this contract.
- B. Installation requirements included herein apply only to Contractor-performed installation and are conditions of Final Acceptance and Final Payment.
- C. Related Sections:
  - 1. 01 11 00 – Summary of Work.
  - 2. 01 30 00 – Administrative Requirements.
  - 3. 01 33 00 – Submittal Procedures.
  - 4. 01 78 00 – Closeout Submittals.
  - 5. Conditions of Purchase (PO Attachment).

**1.02 ACCEPTANCE PROCESS**

- A. Joint Inspection at Delivery:
  - 1. Count crates/pallets; verify labeling; check for visible damage.
  - 2. Note discrepancies on the delivery ticket with signatures of carrier and Owner receiver.
- B. Concealed Damage:
  - 1. If discovered within ten (10) business days, Owner will notify Supplier; Supplier shall replace/repair at no cost and advise on claim preservation.
- C. Acceptance:
  - 1. Owner will issue written Acceptance of conforming deliveries. Items not accepted shall be corrected or replaced at Supplier's cost.

**1.03 INSTALLATION RESPONSIBILITIES**

- A. Installation of supplied materials, when performed by Contractor or installing subcontractor, shall comply with:
  - 1. Contract Documents.
  - 2. Approved submittals and shop drawings.
  - 3. Manufacturer's written instructions.
- B. Installation responsibilities stated herein are included as a condition of Closeout and Final Acceptance and supplement requirements of other Specification Sections.

**1.04 CORRECTIVE ACTIONS**

- A. Provide written corrective action plan within five (5) business days of notice of non-conformance, including schedule for repair/replacement and updated delivery as applicable.

**1.05 TRAINING / TECHNICAL SUPPORT (IF APPLICABLE)**

- A. Provide a one-hour remote technical walk-through on unpacking best practices, storage care, and handling for draperies and rigging components if requested by Owner.

**PART 2 – PRODUCTS**  
NOT USED

## **TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

### **PART 3 – EXECUTION**

#### **3.01 PRE-INSTALLATION VERIFICATION**

- A. Prior to installation, Contractor shall verify that:
  - 1. Materials received are consistent with accepted deliveries.
  - 2. Materials are free of damage or defects that would impair performance.
  - 3. Site conditions are suitable for installation.
- B. Contractor shall notify Owner of discrepancies or unsuitable conditions prior to installation.

#### **3.02 HANDLING, STORAGE, AND PROTECTION**

- A. Owner will provide secure, dry indoor storage.
- B. Supplier's packaging must be suitable for extended storage; provide written care instructions specific to materials supplied.
- C. For fabrics:
  - 1. Provide guidance on roll orientation.
  - 2. Stacking limits.
  - 3. Humidity range.
  - 4. Re-bagging if opened.
- D. Contractor shall comply with Supplier-provided handling and storage requirements.
- E. Materials damaged due to Contractor handling, storage, or installation shall be repaired or replaced at Contractor's cost.

#### **3.03 INSTALLATION QUALITY REQUIREMENTS**

- A. Installation shall be performed by qualified personnel experienced with similar materials and systems.
- B. Installation shall not void manufacturer warranties or certifications.
- C. Materials damaged or rendered non-conforming due to improper installation shall be corrected at Contractor's cost.

#### **3.04 CLOSEOUT REQUIREMENTS**

- A. Final Payment Prerequisites:
  - 1. Delivery completed and Accepted
  - 2. All closeout documents received (see 01 78 00).
  - 3. All deficiencies corrected.
  - 4. Final invoice submitted with Acceptance documentation and crate/pallet index.
- B. Closeout Documentation Related to Installation (Contractor):
  - 1. Written confirmation that installation complies with Contract Documents and manufacturer requirements.
  - 2. Documentation of approved deviations, if applicable.

#### **3.05 RECORDS AND AUDIT**

- A. Retain all procurement, certification, installation (Contractor), and delivery records for five (5) years after final payment.
- B. Provide access upon reasonable notice

**END OF SECTION 01 77 00**

**SECTION 01 78 00**  
**CLOSEOUT SUBMITTALS**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. Section lists documents and deliverables required for administrative closeout of this supply-only

**1.02 RELATED SECTIONS**

- A. 01 11 00 – Summary of Work (Pre-Purchase).
- B. 01 30 00 – Administrative Requirements.
- C. 01 33 00 – Submittal Procedures.
- D. 01 77 00 – Closeout Procedures (Pre-Purchase).

**1.03 SUBMISSION REQUIREMENTS**

- A. Format: Electronic PDF, text-searchable; provide one (1) hard copy set of O&M manuals if requested by Owner.
- B. Transmittal: Identify PO number, shipment references, and list of enclosures.

**PART 2 – CLOSEOUT DELIVERABLES**

**2.01 APPROVED RECORD SUBMITTALS**

- A. Final “Approved” shop drawings and calculations (PDF; native files if requested).
- B. Final line-set schedule; battens list; hardware schedules.

**2.02 OPERATION AND MAINTENANCE (O&M) MANUALS**

- A. Contents:
  - 1. Manufacturer data sheets and serial numbers (where applicable).
  - 2. Cleaning and maintenance instructions (including IFR fabric care and re-treatment guidance).
  - 3. Storage and handling instructions (including environmental ranges).
  - 4. Spare parts lists and recommended consumables.
  - 5. Warranty certificates and claim procedures.

**2.03 CERTIFICATIONS AND COMPLIANCE**

- A. Flame resistance/IFR certifications for each drapery fabric.
- B. Certificates of Conformance for rigging components and accessories.
- C. Insurance certificates (final): evidencing transit coverage through Acceptance and CGL/products per PO.
- D. Debarment/Suspension and Non-Collusion certifications (as executed with bid) – final copies for the file.

**2.04 SHIPPING & INVENTORY DOCUMENTS**

- A. Master shipment index referencing crate/pallet numbers, weights, and contents.
- B. Packing lists per crate/pallet.
- C. Delivery tickets signed at receipt; Owner’s Acceptance letter(s).

**TWIN CITY OPERA HOUSE – STAGE EQUIPMENT PRE-PURCHASE**

15 West Main Street  
McConnelsville, OH 43756

**2.05 CONTACTS AND SUPPORT**

- A. Supplier's post-award contact list for warranty and technical support, with response time commitments.

**PART 3 – EXECUTION**

**3.01 VERIFICATION**

- A. Owner will review closeout deliverables for completeness. Deficiencies shall be corrected within five (5) business days of notice.

**END OF SECTION 01 78 00**

## SECTION 11 61 00 - THEATER AND STAGE EQUIPMENT

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

#### 1.2 DEFINITIONS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

#### 1.3 SUMMARY

- A. This Section includes the fabrication and furnish/installation of the complete theatrical systems, including:
  - 1. Selective demolition of existing theater equipment
  - 2. New projection screen
  - 3. Removal and reinstallation of existing stage theatrical light fixtures and accessories
  - 4. Front curtain ensemble
  - 5. Cyclorama setting
  - 6. Drop
  - 7. Dead hung rigging
  - 8. Tracks and battens
  - 9. Curtain machine and hoists
- B. All material, equipment, and services shall be provided as specified herein and as indicated on the Contract Drawings.
- C. Fabrication, delivery, and installation in accord with these specifications and pertinent drawings; and inspection and adjustment of the completed installation.
- D. The Theatrical Equipment Contractor (TEC) for the work shall visit the site prior to bid and check and verify all dimensions to coordinate the equipment with the structure and any other trades.
- E. The Structural Steel Contractor shall furnish any auxiliary steel and incidental items to result in an installation complete in all details whether or not such incidental items are specifically enumerated herein.
- F. It is the responsibility of the TEC to design the layout of the theatrical equipment so as to provide for a properly masked stage and one which best utilizes the specified equipment.
- G. The TEC shall instruct representatives of the school in proper operation of all equipment furnished as part of his contract.

- H. For the purpose of delineating work by various Contractors, the following is a substantive list of work and by whom it is to be performed.
1. The TEC (Theatrical Equipment Contractor for this project) and EC (Electrical Contractor for this project) shall closely coordinate their work.
  2. The TEC (Theatrical Equipment Contractor for this project) and Structural Steel Contractor for this project shall closely coordinate their work.
  3. Work of providing equipment in existing Twin Cities Opera House Auditorium.
  4. TEC shall be responsible for the following:
    - a. Furnish all equipment specified in this section.
    - b. Physically install all stage equipment specified herein unless otherwise noted.
    - c. Furnish and install all curtains, tracks, curtain machines, and hoists.
    - d. Furnish and physically install projection screen as located on TEC drawing.
    - e. Furnish and install all battens including electric battens.
    - f. Furnish and install all necessary hardware and rigging for the onstage electrics.
    - g. Electrical wiring, conduit, and installation of all motorized hoists and machines.
  5. EC shall be responsible for the following:
    - a. Provide electrical installation including terminations of motorized hoists, projection screen, curtain machine, and control wiring.
    - b. Electrical Installation of all items in this section.
    - c. Provide all necessary feeds shown on drawings.
    - d. Closely coordinate with TEC all items to be installed into lighting control system to ensure compatibility.
    - e. Removal of stage lighting components and reinstallation of same.

#### 1.4 RELATED WORK NOT INCLUDED IN THIS SECTION

- A. Structural Steel including beams for hoists. Locations shall be coordinated with TEC.
- B. Structural Steel Beams – Locations of stiffening plates and stiffening beams shall be arranged by structural steel contractor so as to avoid conflict with stage equipment.
- C. Miscellaneous steel, bracing, supports, etc. shall be coordinated so as not to conflict with theatrical design.
- D. Sprinkler system – Locations of pipes and system components shall be arranged to avoid conflict with stage equipment.
- E. Rain Water Conductors shall be arranged to avoid conflict with stage equipment.
- F. HVAC system – Locations of ducts and system components shall be arranged to avoid conflict with stage equipment.
- G. Electrical system - Locations of conduits and system components shall be arranged to avoid conflict with stage equipment.

- H. Carpentry – Locations and sizes of proscenium opening trim to be coordinated as not to interfere with the operation of curtains.
- I. Electrical service.
- J. House Lights.
- K. Emergency power system.
- L. Work Lights.
- M. Firestopping.
- N. Painting.

#### 1.5 SUBMITTALS

- A. Submit under provisions of general conditions.
- B. Shop Drawings: Indicate end track and batten locations, width of platform opening, location of blocking for anchors, appurtenances and interferences, and support bracket details.
- C. Product Data: Provide profiles, shapes, acceptable load data, finishes available, drapery fabric, and colors.
- D. Manufacturer’s Installation Instructions: Indicate special anchor requirements.

#### 1.6 QUALITY ASSURANCE

- A. Equipment specified herein shall be that of a single manufacturer and installer having a minimum of twenty (20) years documented successful experience.
- B. The Contractor must maintain and operate his own shop(s) and fabricate and assemble all components with the exception of standard hardware materials and equipment.
- C. All work done under this contract shall conform to applicable local, state, and national codes, and be performed within labor regulations.
- D. Contractor shall be licensed and registered to perform work in Ohio. Firms with out-of-state headquarters or corporations not incorporated in Ohio must submit, prior to bid, a copy of their registration to do business in Ohio as provided by the Department of the State of Ohio.
- E. Manufacturer/Contractor shall employ a Quality Program through all of their manufacturing, installation, and management systems.
- F. Where specific requirements for rigging components are more stringent and require precautions, procedures or refinements exceeding building codes or standards, such specific requirements shall supersede these codes and standards.

- G. Products and installation shall meet ANSI standards as it pertains to rigging or specification standards, whichever is more stringent. Where specific requirements for rigging components are more stringent and require precautions, procedure or refinements exceeding building codes or standards, such specific requirements shall supersede these codes and standards.

#### 1.7 PRODUCT SAFETY AND GUARANTEE

- A. The safety parameters set forth in this section of the specifications are intended to reflect safeguards and precautions related to normal use of the equipment under ideal operating and loading conditions, and to anticipate equipment misuse, human error, and misjudgment.
- B. The work shall be fully guaranteed, with exception of normal wear, for a period as defined below after final acceptance and payment. Any items showing evidence of defective materials or workmanship including installation workmanship shall be corrected or replaced within thirty (30) days after notification, and without cost to the Owner.
  - 1. Rigging equipment shall be warranted against defects in material and workmanship for a period of twenty (20) years.
  - 2. Installation shall be warranted against defects in material and workmanship for a period of one (1) year.
  - 3. Hoists shall be warranted against defects in material and installation for a period of one (1) year.
  - 4. Cable, termination hardware, and means of attachment shall be warranted against defects in material and workmanship for a period of two (2) years.
  - 5. Curtain tracks shall be warranted against defects in material and workmanship for a period of two (2) years.
  - 6. Curtains shall be warranted against defects in material and workmanship for a period of three (3) years.
  - 7. Projection screen shall be warranted against defects in material and workmanship for a period of one (1) year.

#### 1.8 SYSTEMS DEMONSTRATION

- A. The Theatrical Equipment Contractor shall instruct representatives of the Owner in proper operation of all equipment furnished as part of this contract.
- B. Instructor shall be an ETCP recognized trainer.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers shall provide products as specified. Specified part numbers are provided herein to provide potential bidders additional information and clarification. Bidders must meet or exceed specified minimum standards.

B. Substitutions:

1. See SECTION – SUBSTITUTIONS.
2. Other manufacturers must submit complete drawings, samples of load bearing components, and equipment data for this entire scope of work.
3. Strength test data indicating Recommended Working Load of equipment from an Independent Testing Laboratory shall be submitted in order for the manufacturer to be considered for substitution.
4. Letter of review and opinion of equipment equivalence shall be provided by a registered Professional Engineer licensed in Pennsylvania.

2.2 STAGE DRAPERY FABRICATION

- A. No smaller than half widths shall be used in construction of curtains.
- B. There shall be no horizontal seams unless indicated.
- C. Thread shall be glazed, left twist, #24.
- D. Stage curtains shall have knife pleats and shall be at 12" centers with heavy 3" polypropylene webbing at heading. Knife pleats shall be directional and "point" off-stage.
- E. All vertical seams shall be hidden within the fold of the pleats.
- F. Salvages shall be scissor-clipped on 24" centers to relieve puckering at vertical seams.
- G. There shall be no horizontal seams unless indicated.
- H. Headings shall be finished with grommets and S-hooks; grommets and black 5/8" polyester braid tie lines; or plain as required. Grommets shall pass through three full layers of face fabric.
- I. Grommets shall be black. No smaller than #3 toothed grommet shall be used. Plain washer grommets are not acceptable.
- J. Front curtain ensemble shall contain no less than 50 percent sewn-in fullness. "Round pleats" formed by hanging two grommets from one "S" hook is not acceptable.
- K. Valance and/or teaser shall have 3" side hems and 4" bottom hems.
- L. Front curtain shall have one-half width turn-back at on and off-stage edges in addition to specified fullness.
- M. On-stage and off-stage leading edges of front curtain shall contain 12" x 3" heavy polypropylene webbing reinforcement from the heading to 12" beneath the heading, concealed within the side hem/turn-back of the curtain.
- N. Front curtain shall have 6" bottom hems.
- O. Cyclorama setting shall contain no less than 50 percent sewn-in fullness. "Round pleats" formed by hanging two grommets from one "S" hook is not acceptable.
- P. All Traveler curtains shall have one-half width turn-back at on and off-stage edges in addition to specified fullness.
- Q. On-stage and off-stage leading edges of all traveler curtains shall contain 12" x 3" heavy polypropylene webbing reinforcement from the heading to 12" beneath the heading, concealed within the side hem/turn-back of the curtain.

- R. Traveler curtains shall have 4" bottom hems with a #8 jack chain encased in a separate pocket suspended 2" from the bottom of the curtain. The use of galvanized lead weights is not acceptable.
- S. Borders shall have 3" side hems and 4" bottom hems.
- T. Cyclorama curtains shall have 3" side hems and 4" bottom hems and shall include #8 jack chain encased in a separate pocket suspended 2" from the bottom of the curtain. The use of galvanized lead weights is not acceptable.
- U. Drops, scrims, and other flat-sewn curtain items shall have 2" side hems and 4" bottom hems. Bottom hem to contain separate concealed pipe pocket 2" from bottom of bottom hem complete with requisite tensioning pipe, PSI #PB-3/4.
- V. A separate 3" x 54" flameproof strip shall be sewn to the off-stage bottom hem of each type of curtain fabricated from a cotton fabric for the purpose of removing samples for testing. IFR fabrics shall not have a flame proof strip.
- W. Curtains shall have tags sewn to off stage side hems at eye level. Tag information shall include requisite flame resistance information, date of manufacture, fabric identification, and curtain type.
- X. As manufactured by Pittsburgh Stage, Inc.

2.3 FABRICS

- A. 24-ounce 100% polyester "Charisma" velour. Color as selected by Architect/Owner.
- B. 16-ounce 100% polyester masking cloth. Black in color.
- C. Seamless muslin. White in color.
- D. All fabrics of their various kinds and colors shall each be from one and the same dye lot. When materials of one color exceed limit of one dye lot, the balance must be identically matched with the original lot. No "run of the mill" usage of colors will be acceptable.
- E. All combustible fabrics shall be chemically flameproofed by immersion for compliance with all applicable codes. Spray method of flameproofing is unacceptable. This contractor shall furnish flameproofing certificates, giving name of flameproofing chemical used, identification of flameproofer, method of flameproofing used, and date.
- F. All polyester fabrics shall be designated as inherently flame retardant by the manufacturer.

2.4 FINISHED DIMENSIONS

- A. Dimensions are as shown on drawings. Dimensions are approximate and it shall be the responsibility of this contractor to properly mask the stage for optimum functionality. See section 2. 2 FABRICS for Material requirements.

<u>ITEM</u>	<u>QUANTITY</u>	<u>MATERIAL</u>
Valance	1	A
Front Curtain	2	A
Side Legs	8	B
Ceiling Borders	3	B
Traveler Curtains	4	B

## 2.5 CURTAIN TRACKS AND BATTENS

- A. An 8:1 safety factor shall be used in the suspension of all overhead rigging. All attachments shall be submitted for approval of the Owner/Architect/Engineer.
- B. Front Curtain Track: Silent Steel Model #280 CWANA with ball bearing carriers, as manufactured by Automatic Devices Company. RWL to be not less than 20 pounds per linear foot. Lengths to suit traveler curtains. Curtain tracks (Model 2800) shall be of 14-gauge galvanized steel construction, entirely enclosed except for slot in bottom, each half to be in one continuous piece except where splicing clamps are required. Each curtain carrier (Model 2801) shall be spaced 12" centers and shall have ball bearing wheels held to nylon body by rustproof nickel-plated rivet. Each curtain carrier shall consist of a free-moving plated swivel and sufficient trim chain to accommodate curtain snap hook. Live-end pulley (Model 2803) and Dead-end pulley (Model 2804) blocks shall be adjustable and shall be equipped with 4" diameter sleeve-bearing wheels adequately guarded. The manufacturer shall furnish two end stops for placement at each tract end and a detachable floor block (Model DFB-2) for increasing cord tension. Stretch-resistant operating cord (Model 2828) shall have synthetic center and shall be of 3/8" diameter. Aluminum tracks are not acceptable.
- C. Traveler Tracks: Silent Steel Model #280 CWANA with ball bearing carriers, as manufactured by Automatic Devices Company. RWL to be not less than 20 pounds per linear foot. Lengths to suit traveler curtains. Curtain tracks (Model 2800) shall be of 14-gauge galvanized steel construction, entirely enclosed except for slot in bottom, each half to be in one continuous piece except where splicing clamps are required. Each curtain carrier (Model 2801) shall be spaced 12" centers and shall have ball bearing wheels held to nylon body by rustproof nickel-plated rivet. Each curtain carrier shall consist of a free-moving plated swivel and sufficient trim chain to accommodate curtain snap hook. Live-end pulley (Model 2803) and Dead-end pulley (Model 2804) blocks shall be adjustable and shall be equipped with 4" diameter sleeve-bearing wheels adequately guarded. The manufacturer shall furnish two end stops for placement at each tract end and a detachable floor block (Model DFB-2) for increasing cord tension. Stretch-resistant operating cord (Model 2828) shall have synthetic center and shall be of 3/8" diameter. Aluminum tracks are not acceptable.
- D. Side Leg Track: #2800 channel complete with #2801 carriers on 12" centers and end stops as manufactured by Automatic Devices Company. Aluminum tracks are not acceptable.
- E. Drop Track: #2800 channel complete with #2801 carriers on 12" centers and end stops as manufactured by Automatic Devices Company. Aluminum tracks are not acceptable.
- F. Furnish and install one (1) ADC model #2904 Draw Machine and associated hardware to suit #280 tracks. The draw machine shall have ½ HP, 120-240 VAC, and be variable speed. The limits shall be set with the use of a rotary switch. The draw machine shall be floor mounted and installed in accordance with the drawings provided by the TEC.
- G. Tracks and components shall be from single manufacturer; using components from multiple manufacturers is expressly not permitted.

- H. Dead-Hung Battens: 1 ½" Scheduled 40 premium black pipe with 18" long 1-9/16" OD x .250" thick wall structural tubing internal splices bolted in place. Clear lacquer finish. Aluminum battens are not acceptable. Battens shall be finished with a coating of clear lacquer.
- I. Dead-hung Items: Provide battens, chains, beam clamps and supports for all dead-hung items as specified. All terminations to battens shall be made using properly sized batten clamps as specified.

## 2.6 RIGGING

### A. Terminations:

1. Cable ends shall be terminated with a thimble and zinc plated copper nicropress fitting.
2. Battens shall be suspended by 7mm (1/4") x 36" long Grade 63 Theatrical Trim Chains.
3. 1/4" drop forged galvanized screw-pin anchor shackles shall be used at trim chain terminations.
4. 5/16" Drop forged galvanized screw-pin anchor shackles shall be used at arbor terminations.
5. Anchor shackles shall be hand tightened and properly moused to prevent unscrewing.
6. Other methods shall be as approved by theatrical consultant.

B. Dead-Hung Chain Supports: Chain shall be ¼" grade 30 zinc plated weld link proof coil chain in continuous un-spliced lengths with a WLL of no less than 1,300 pounds as distributed by Pittsburgh Stage, Inc.

C. Shackles: Shackles shall be drop forged galvanized screw-pin anchor shackles. Shackles shall have a WLL of no less than 1,000 pounds at trim chains terminations and 1,500 pounds at arbor terminations. Shackle pins shall be moused with seizing wire or other approved device to positively prevent unscrewing. Shackles shall meet or exceed federal specification RR-C-271D Requirements.

D. Beam Clamps: Beam clamps shall be used at all dead hung supports connecting to structural steel beams. Beam clamps shall encompass both sides of the beam flange and shall have a minimum RWL of 750 lbs. PSI model #BC or Coffing BC series.

E. Pipe Clamps: 1 ½" Pipe clamps shall be used at all dead hung supports connecting to the pipe battens. Pipe clamps shall encompass the pipe and shall include two 3/8" grade 5 bolts and nylock nuts. Third hole at top of clamp shall receive termination hardware as required. Pipe clamp shall have rounded edges and a minimum RWL of 750 lbs. Use appropriately sized pipe clamps for the suspension of all dead-hung tracks and battens and at all track splice locations. As Distributed by Pittsburgh Stage, Inc..

F. Cable Clamps: Clamps shall be drop forged. Two clamps shall be applied to terminations of ¼" wire rope according to wire rope manufacturers' recommendations. Cable clamps shall not be used in the termination of lift lines. Appropriately sized copper swage fittings shall be used in the termination of lift line cables as specified to maintain 100% of the cable breaking strength.

G. Swage Fittings: Properly sized copper oval sleeves for cable terminations are to be as manufactured by the National Telephone Supply Company or Loos & Co, Inc. Terminations must

maintain 100 percent of the cables break strength. Apply crimps per manufacturer's instructions and recommended crimping tool. All swage fittings used shall be by one manufacturer and terminated in a uniform manner.

- H. Thimbles: Appropriately sized heavy-duty thimbles shall be used in the termination of all wire rope. Thimbles shall be installed to manufacturers' recommendations. As distributed by Pittsburgh Stage, Inc.
- I. Tape: Premium grade gaffers tape shall be used at all seizing and finishing applications applied to ends of ropes.
- J. Load Cables: ¼" preformed 7 x 19 galvanized aircraft cable. Breaking strength: 7,000 Lbs.
- K. Spans: Appropriately load rated strut channel or structural steel welded in place or attached using the manufacturers' recommended clips. Spans shall be chemically coated to prevent corrosion. Furnish and install spans as necessary for a proper installation. As distributed by Pittsburgh Stage, Inc.
- L. Bridles: Any bridles shall be in conformance with A.N.S.I. standard E1.4-2009 Part 3.
- M. Finishes: Provide all items with manufacturer's standard plating or coating to prevent corrosion unless otherwise specified.
- N. Weldments: Required weldments within equipment and in field shall conform to ANSI/AWS D1.1 Structural Welding Code and be performed by welder certified to this code.
- O. Provide three (3) motorized line-shaft hoists for theatrical rigging, each rated for a minimum working load of 500 lbs and operating at a fixed speed of approximately 18 feet per minute with up to 24 feet of batten travel. Each hoist shall incorporate a helically grooved steel drum sized to maintain proper drum-to-cable ratio, single-layer winding, and a minimum of three dead wraps. Hoists shall be driven by three-phase AC brake motors with integral holding brakes and double-reduction worm or helical-worm gear reducers, directly driving a continuous steel line shaft. Chain or belt drives are not acceptable. Hoists shall be equipped with soft starts and stops. All components shall be new and designed to meet or exceed an overall minimum safety factor of 8:1. Adjustable four-position limit switches shall provide normal and redundant over-travel protection at both extremes of travel.
- P. Provide one custom control panel.
  - 1. Control panel will have push buttons to address any of the three (3) machines individually as well as a single set of push buttons to provide simultaneous operation of all three (3) machines.
  - 2. Controls shall be housed in hinged 12 x 12 x 6 box with a custom etched face plate.
  - 3. 24 volt control of 120 volt machines.
  - 4. As manufactured by ADC and or SRS.

## 2.7 SIGNAGE AND LABELING

- A. Signs: Provide signage at operating areas that indicate recommended working load limits of rigging equipment and structural steel. Two 11" x 17" signs required. Language of sign shall be submitted and as approved by owner and shall contain: Project name, component capacities, system capacities, loading capacities and the name, address, and phone number of the primary system contractor, manufacturer, and supplier of the system equipment. Safety instructions shall be included on sign information. Signs shall be professionally made with white lettering using an uppercase Calibri font on a red background. Signs shall be cast print on red laminate. Permanently affix signs to walls upstage and downstage of locking rail and loading bridge in conspicuous locations.
- B. Certificate of Inspection: Provide certificate of rigging inspection upon completion dated and signed by an ETCP Certified Theater Technician. Install in a tamperproof sign holder as specified.
- C. Sign Holder: Steel enclosure with tempered glass locking door as distributed by McMaster Carr to house certificate of rigging inspection. Furnish and permanently affix one sign holder to house the certificate of inspection in a conspicuous area on the stage wall. McMaster Carr Part #112T61.
- D. Labeling and Marking: Label and mark all equipment per A.N.S.I. standard E1.4-2009 Part 4.

## 2.8 PROJECTION SCREEN

- A. Provide new Draper Paragon V Screen, 28 ft. wide by 20 ft. high. Provide standard 110V, 3-position switch; low-voltage modules and controls. Demolish existing framed screen.

## PART 3 - EXECUTION

### 3.1 CUTTING AND PATCHING – PREPARATION

- A. The Contractor shall do all required cutting, drilling, tapping and fitting to properly install and secure his work in place. Cutting or drilling existing structural work shall have prior approval of the Owner/Architect/Engineer.

### 3.2 INSTALLATION OF EQUIPMENT

- A. The equipment schedule, design and locations of all stage equipment are the sole responsibility of this stage equipment contractor. Install equipment in accord with manufacturers' published instructions.
- B. All other trades shall closely coordinate their work so as not to impact or conflict with the location and design of the stage equipment.

### 3.3 CLEANING

- A. During the course of this work, the Contractor shall daily remove to collection points at the job site all looser trash and scrap materials.

### 3.4 SIGNAGE AND LABELING

- A. Signs: Provide signage at operating areas that indicate recommended working load limits of dead-hung rigging equipment and loading bridge storage. Two (2) signs required. Language of sign shall be submitted and as approved by owner and shall contain: Project name, component capacities, system capacities, loading capacities and the name, address, and phone number of the primary system contractor, manufacturer, and supplier of the system equipment. Safety instructions shall be included on sign information. Signs shall be professionally made with white lettering using an uppercase Calibri font on a red background. Character height shall be 3/8". Signs shall be cast print on red laminate. Permanently affix sign to stage wall in a conspicuous location out of the house sightline.
- B. Certificate of Inspection: Provide certificate of rigging inspection upon completion dated and signed by an ETCP Certified theater technician. Install in a tamperproof sign holder as specified.
- C. Sign Holder: Steel enclosure with tempered glass locking door as distributed by McMaster Carr to house certificate of rigging inspection. Furnish and permanently affix (1) sign holder to house the certificate of inspection in a conspicuous area on the stage wall. McMaster Carr Part #112T61.
- D. Labeling and Marking: Label and mark all equipment per A.N.S.I. standard E1.4-2009 Part 4.

### 3.5 TESTING, INSPECTION, ADJUSTMENTS, AND COMMISSIONING

- A. The completed installation of all equipment properly installed, shall be tested and operated for the approval of the Owner/Architect.
- B. The completed stage equipment installation must be inspected by an ETCP Certified Theater Technician to ensure the quality and safety of the installation and a certificate of inspection installed in the tamperproof sign holder as specified.
- C. Any workmanship or materials found to be defective, improperly placed, not in strict conformity with the specifications, or defaced or injured through the action of fire or the elements, through usage by the Contractor or his employees, or from any other cause shall be removed immediately from the premises when directed by the Owner/Architect.
- D. Provide the services of the field service representative to train the owner's staff in the operation, programming, use, and maintenance of the motorized hoist. Video footage developed by the manufacturer outside the actual project site shall be made available to the owner for their use.

End of Section