

**SOUTH WINDSOR BOARD OF EDUCATION
1737 MAIN STREET
SOUTH WINDSOR, CONNECTICUT**

SPECIFICATIONS

FOR

Bid No. 1920-004

**SOUTH WINDSOR HIGH SCHOOL
AUDITORIUM SAFETY INSPECTION REPAIRS**

BIDS WILL BE RECEIVED UNTIL:

Tuesday, September 10, 2019

AT

11:00 A.M.

Ms. Chris Chemerka Director of Finance & Operations

Mr. Patrick T. Hankard Director of Facility Operations

SOUTH WINDSOR PUBLIC SCHOOLS
Bid #: 1920-004

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Attached document:

**Sapsis Rigging Inc.-South Windsor High School
Auditorium Safety Inspection Report**

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION I **INVITATION TO BID**

SOUTH WINDSOR HIGH SCHOOL AUDITORIUM SAFETY INSPECTION REPAIRS

1. Specifications for the Bid No. 1920-004, SWHS-Auditorium Safety Inspection Repairs may be obtained on the South Windsor Public Schools' website, <http://www.southwindsorschools.org> under "Central Office," "Business Services," "Bids and RFPs".
2. **A mandatory pre-bid walk through will be conducted on Thursday September 5, 2019 at 2:00 P.M.** Bidders should meet at South Windsor High School, 161 Nevers Rd, SW. **Bids will not be accepted from any firm that does not attend.**
3. Sealed bids will be received at the Office of the Director of Facility Operations, 1737 Main Street, SW, Rm. 100 until **11:00 a.m. on September 10, 2019**. Bids will be publicly opened and read aloud.
4. The South Windsor Board of Education reserves the right to waive any informalities in Bids; to reject any or all bids; or to accept the one that in their judgement will be for the best interest of the South Windsor Board of Education.

Patrick T. Hankard
Director of Facility Operations
South Windsor Board of Education
1737 Main Street
South Windsor, CT 06074
phankard@swindsor.k12.ct.us

SOUTH WINDSOR PUBLIC SCHOOLS

Bid #: 1920-004

SECTION II **SUBMISSION OF BIDS**

1. Bids must be submitted on forms supplied in this bid document.
2. Time and date for submission is contained within this document. Bids received after the specified time and date of bid opening given shall not be considered. Bid envelopes must clearly indicate the bid number as well as the date and time of the bid opening. Name and address of the Bidder should appear in the upper left hand corner of the envelope.
3. Incomplete bids may result in the rejection of the bid. An original and one copy of the proposal schedule shall be submitted to the BOE. All bids must be signed by a person duly authorized to sign bids on behalf of the bidder. Unsigned bids shall be rejected. Errors, alterations or corrections on both the original and copy of the proposal schedule to be returned must be initialed by the person signing the bid proposal.
4. Conditional bids are subject to rejection in whole or in part. A conditional bid is defined as one which limits, modifies, expands or supplements any of the terms and conditions and/or specifications of the invitation to bid.
5. The BOE is exempt from excise, transportation and sales taxes imposed by the Federal Government and/or State. Such taxes must not be included in bid prices.
6. In the event of a discrepancy between the unit price and the extension, the unit price shall govern.
7. By its submission the Bidder represents that the bid is not made in connection with any other Bidder submitting a bid for the same commodity or service and is in all respects fair and without collusion or fraud.
8. All bids will be opened and read publicly; and upon award are subject to public inspection.
9. **References: Include the name, title, and contact information of the authorized owner's representative for at least three recent projects of similar size, scale, and timeframe.**
10. Interested parties are encouraged to submit supporting documentation that is pertinent to the thorough evaluation of the bid.
11. The lump sum price for this Project shall include all materials, equipment, labor, supervision, overhead items, profit, protection and precautions and all other incidental costs necessary for construction. Lead Time to prepare shop drawing submittals. Lead Time from date of receipt of approved shop drawing submittals to shipping date.

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION III **AWARD OF CONTRACT**

1. The owner reserves the right to award the contract to the bidder offering the best value in the interest of the Owner but not necessarily award the contract to the bidder submitting the lowest bid.
2. The Owner reserves the right to reject any or all bids and to waive defects or informalities in any bid if it is deemed to be in the best interests of the Owner to do so. The Owner also reserves the right to select or reject in part or in total any and/or all the supplemental bid items and not necessarily in the order in which they appear in the proposal form.
3. The intent of this Project is to have a completed, finished, working Project whether or not any particular wording or direction is inadvertently omitted or not clearly stated.
4. Any and all reference to trade names, types, styles, models or catalogs are intended to be descriptive only and not restrictive. The intention is to indicate to bidders the type and quality of the articles and/or materials that will be satisfactory. Bids received on other makes or models with reference to other catalogs will be considered. The bidder is to clearly state in his bid exactly what he intends to furnish, and to furnish with his bid a cut or illustration or other descriptive matter which will clearly indicated and give specification as to the product he proposes to furnish. Where a bid is offered on an item other than the trade standard used in the specification, the item should be identified on the bid form by entering the i) make, ii) trade name, and iii) model number. Samples are to be submitted, if requested, at the bidder's expense. It is understood that any substitutes which might be offered are guaranteed by the bidder to be of equal or better quality than is requested in the bid. It shall be further understood that during original, as well as subsequent shipments, spot checks will be performed to insure that the items received are in fact the items offered in the bid. Should items/materials prove to be different in any way, the bidder agrees to the return of the items and agrees to supply the correct items (per bid specifications) at bidder's expense
5. All supplies and workmanship shall be subject to inspection and test after arrival at destination. In case articles are found to be defective, or otherwise not in conformity with the specification or requirements, the Board shall have the right to reject such articles, and shall incur no cost whatsoever for a reject article(s).

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION IV **SPECIFICATIONS**

1.01 GENERAL

- A. The South Windsor Public Schools is seeking proposals from qualified auditorium rigging repair contractors to correct identified rigging deficiencies in the South Windsor High School auditorium located at 161 Nevers Road in South Windsor, CT.
- B. The intent of this Request for Proposal is to seek a lump sum price to provide proper repairs to deficiencies identified in Sapsis Rigging Inc.'s-South Windsor High School Auditorium Safety Inspection Report. All repairs must be inspected and approved for final acceptance.
- C. The project will be funded by the South Windsor Publics Schools.
- D. All repairs are intended to meet manufacturer specifications, National Building, Fire and Safety Codes, OSHA Regulations, recognized standards from independent testing organizations, and ANSI Standards.
- E. Included in the proposal shall be the following scope of work:
 - 1. Added fire extinguishers, with highly visible signage.
 - 2. Added work light, per OSHA 1926.56(a), in areas identified in the Safety Inspection report.
 - 3. Additional fall protection systems as noted in the Safety Inspection report.
 - 4. Correct all of the fire safety curtain deficiencies noted in the Safety Inspection report.
 - 5. Correct all of the fire stage rigging deficiencies noted in the Safety Inspection report.
 - 6. Correct front of house (FOH) acoustic cloud support deficiencies as noted in the Safety Inspection report.
 - 7. Correct auditorium speaker supports and connections as identified in the Safety Inspection report.
 - 8. Provide truss and chain hoist repairs as noted in the Safety Inspection report.
- F. Provide before and after photos at all repair locations as part of the final approval requirements.
- G. Work will occur during the fall of 2019 and shall be completed by November 1, 2019.

SOUTH WINDSOR PUBLIC SCHOOLS

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1.02 PRE-BID CONFERENCE

- A. A mandatory pre-bid conference will be held at the site on September 5, 2019 @ 2:00 pm. in order to acquaint all potential bidders with project site, typical site conditions and to field technical and administrative questions. Bids will not be accepted from any contractors who are not present at the pre-bid conference or who have not received the Contract Documents by that time.

ADMENDMENTS

- B. South Windsor Public Schools will post any addenda on their website, <http://www.southwindsorschools.org> under "Central Office," "Business Services," "Bids and RFPs". **Each respondent is responsible for checking the websites to determine if the South Windsor Public Schools has issued any addenda and, if so, to complete its response in accordance with the RFP as modified by the addenda.**

1.03 SUBMISSION OF PROPOSALS

- A. Proposals shall include the following information:
- Total lump sum cost of materials, labor, overhead and profit (Tax exempt)
 - Lead Time to mobilize
 - Acknowledgement of receipt of any and all addenda.
- B. Sealed bids clearly marked, "Auditorium Safety Inspection Repairs/South Windsor High School" in triplicate, shall be received by September 10, 2019 @ 11:00 a.m. at:

South Windsor Public Schools
1737 Main Street.
South Windsor, CT 06074
Attention: Patrick Hankard
Director of Building Maintenance

There will be a public bid opening at 11:00 am at 1737 Main Street South Windsor Room 100. Bidders are welcome to attend the bid opening.

SOUTH WINDSOR PUBLIC SCHOOLS

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1.04 ACCEPTANCE OF PROPOSALS

The South Windsor Public Schools reserves the right to accept or reject any or all proposals in the best interest of South Windsor Public Schools and the Town of South Windsor.

1.05 RELATED DOCUMENTS

- A. General Conditions, Terms and Conditions and any other documents provided by South Windsor Public Schools at the time of documents issuance are a part of the Request for Proposal and shall apply to all equipment, materials or work specified or relating to this project.
- B. Where items of the General Conditions or other documents are repeated herein or in other Sections of the Specifications, it is merely intended to qualify or to call particular attention to them. It is not intended that any other parts of those General Conditions or other documents shall be assumed to be omitted if not repeated herein.
- C. In the event of a discrepancy in the reports between specifications, building codes, OSHA regulations and ANSI standards, the most stringent requirements shall be met, and a professional rigging inspector, the Owner and/or Engineer shall confirm such decision.
- D. The following documents shall be included as a part of this RFP:
 - Sapsis Rigging Inc.'s South Windsor High School Auditorium Safety Inspection Report

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION V **ADDITIONAL CONDITIONS**

The execution of a contract binds the vendor to all applicable State labor laws and regulations. All such standards, laws and regulations shall be binding to the same extent as if they were copied at length herein.

Each contractor shall be subject to, and shall comply with, the following requirements, included herein by reference, to insure, through affirmative action, that qualified employees and applicants for employment are not discriminated against because of race, religious creed, national origin, age, sex, marital status, sexual orientation or disability.

Said requirements shall include compliance with all applicable, federal, state, and local statutes, ordinances, and regulations relating to discrimination in employment. It shall be the responsibility of the contractor to be familiar with and knowledgeable about the above.

The apparent successful contractor may be required to undergo a pre-award compliance review for the purpose of ascertaining whether, in the opinion of the Board, the contractor is willing and/or capable of complying with the above.

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION VI
PROPOSAL FORM

DATE _____

**SOUTH WINDSOR BOARD OF EDUCATION
1737 MAIN STREET
SOUTH WINDSOR, CT 06074**

Pursuant to and in compliance with your "Advertisement" for bids and "Instructions to Bidders"; relating thereto, the undersigned,

(Name of Bidder)

Having carefully examined the premises, and complete specifications together with all addenda issued and received prior to scheduled closing time for receipt of bids hereby offers and agrees as follows:

To provide all materials, labor and equipment necessary in accordance with the attached specifications.

Bidders shall not include Federal Excise Taxes nor State of Connecticut Sales Taxes for which South Windsor Public Schools are exempt.

The right is reserved to purchase either by the item or the total items indicated.

After the opening of bids, all bids will stand available for a period of sixty (60) days.

All work shall be in accordance with the attached specifications.

The Contractor is expected to furnish all labor and materials and all costs applicable will be shown as the total Bid.

SOUTH WINDSOR PUBLIC SCHOOLS
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Total Cost: \$ _____

Lead Time to mobilize _____

Addenda Receipt

Receipt of the following Addenda is hereby acknowledged:

Addendum No. _____ Date _____ Addendum No. _____ Date _____

Addendum No. _____ Date _____ Addendum No. _____ Date _____

NAME OF BIDDER: _____

AUTHORIZED SIGNATURE: _____

CONTACT PERSON: _____

ADDRESS: _____

CITY & STATE: _____

PHONE: _____

E-Mail: _____

All Bid Envelopes must be sealed and marked with Bid Title, Opening Date, and Time.

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SECTION VII **CERTIFICATE OF INSURANCE**

The Contractor shall carry insurance under which the South Windsor Board of Education shall be named as an additional insured for the whole duration of this work, including the maintenance period provided herein, with an insurance company or companies licensed to write such insurance in Connecticut, against the following risks in not less than the amounts as here indicated:

A. STATUTORY WORKMEN'S COMPENSATION INSURANCE:

With Coverage B, Employer's Liability, Limit of at least \$100,000.00.

The Contractor shall maintain, for the duration of the Contract and for the protection, of all employees engaged there under, workmen's compensation as required by the Labor Laws of the States, and all Municipal and Federal Liability Laws.

B. COMPREHENSIVE GENERAL LIABILITY INSURANCE

Including completed operations, and coverage for the explosion, collapse, and underground hazards, with at least the following limits:

BODILY INJURY AND PROPERTY DAMAGE COMBINED SINGLE LIMIT

\$1,000,000 Each Occurrence

\$2,000,000 Aggregate

C. COMPREHENSIVE AUTOMOBILE LIABILITY INSURANCE:

With at least the following limits including non-ownership and hired car coverage as well as owned vehicle:

BODILY INJURY AND PROPERTY DAMAGE COMBINED SINGLE LIMIT

\$1,000,000.00

\$1,000,000.00 Aggregate

SECTION VII **CERTIFICATE OF INSURANCE (Continued)**

D. UMBRELLA/EXCESS COVERAGE

Minimum \$2,000,000 Each Occurrence and Aggregate

SOUTH WINDSOR PUBLIC SCHOOLS

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E. OWNER'S PROTECTIVE LIABILITY INSURANCE:

The Contractor shall procure, pay for, and maintain Owner's Protective Liability Insurance in the following limits, naming the Owner and the Engineer as Named Insured's and furnishing the Owner with a copy of the Policy:

BODILY INJURY

\$ 500,000 Each Person
\$1,000,000 Each Accident

PROPERTY DAMAGE

\$100,000 Each Accident
\$500,000 Aggregate

It is further understood and agreed that any liability of the South Windsor Board of Education, or its agents concerning any and all work and material necessary is covered within policy limits set forth in this certificate. Certificates of Insurance of this Agreement to assume aforementioned liability of Owners shall be filed with Owner and be subject to his approval, prior to commencement of any work.

The above liabilities shall include not only all damages that may result to any person or property by reason of operations and/or construction, but also during the maintenance period as defined elsewhere in the Contract, where condition of construction is a factor.

The insurance policy or policies shall be delivered to the Board, for the Board to examine and rule on acceptability of the policies and of any endorsements. All premiums or other insurance carrier' charges for such policies shall be paid by the Contractor.

Failure to provide the required insurance and certificates may, at the option of the Board of Education, be held to be a willful violation of the Contract and subject to the provisions of Contract paragraph "Abandonment of Work".

SOUTH WINDSOR PUBLIC SCHOOLS

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SECTION VII
CERTIFICATE OF INSURANCE (Continued)

The Contractor agrees to indemnify and to hold the Board of Education and its employees as well as the Town of South Windsor and its employees harmless and defend in any and all liability of every nature and description which may be suffered through Bodily Injuries, including death of any persons, or damage to any property arising out of or in any manner connected with the operations to be performed under this Contract, whether or not due in whole or in part of any act, omission, or by reason of negligence of the Contractor, his agents, employees, his Subcontractors or employees or equipment of the South Windsor Board of Education and/or the Town of South Windsor.

All Policies shall be maintained for the duration of the contract.

In the event of any change in or cancellation of any one or more of said policies, the

Insurance Company will give not less than fifteen (15) days written notice to party to whom this Certificate is issued of such cancellation or change.

The above Insurance requirements shall also apply to all Subcontractors, and the Contractor shall not allow any Subcontractor to commence work until the Subcontractor' insurance has been so obtained and approved.

DATED THIS _____ DAY OF _____ 20 _____

(INSURING AGENT)

BY _____
(AUTHORIZED AGENT)

SECTION VIII
INDEMNITY

The contractor named below, to the fullest extent permitted by law, shall indemnify and hold harmless the South Windsor Public Schools and all of its agents and employees from and against any and all claims, damages, losses, costs and expenses (including attorneys' fees, consequential damages punitive damages and damages arising out of strict liability in tort) arising out of or resulting from the Contractors performance or failure to perform its work including, but not limited to, any claim, damage, loss or expense which is (a) attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property including the loss of use resulting there from, and (b) caused in whole or in part by any negligent or intentional act or omission of the Subcontractor or anyone directly or indirectly employed by him or anyone for whose acts he may be liable, regardless of whether it is caused in part by a party indemnified here under.

Signature:

Title:

Contractor:

Date:

SOUTH WINDSOR PUBLIC SCHOOLS
Bid #: 1920-004

SECTION IX
AFFIRMATIVE ACTION

SOUTH WINDSOR PUBLIC SCHOOLS
1737 Main Street
South Windsor, CT 06074

TO: All Contractors

FROM: Chris M. Chemerka, Director of Finance & Operations

SUBJECT: Affirmative Action

The South Windsor Public Schools is an Equal Opportunity Employer. The Board of Education has made it a matter of policy that it will not transact business with firms, which are not in compliance with all Federal and State Statutes and Executive Orders pertaining to non-discrimination. A copy of the Board of Education Affirmative Action Statement is printed on the bottom of this letter.

In order to have your firm listed on our acceptable vendor's list and thereby be eligible for consideration as a source for goods and services, please complete and return the following Statement of Policy with your bid response.

STATEMENT OF POLICY

It is the employment policy of _____ that there will be no discrimination against anyone on the basis of race, color, religion, age, sex, marital status, sexual orientation, national origin, ancestry, disability, pregnancy, genetic information, or gender identity or expression in making employment decisions (including decisions related to hiring, assignment, compensation, promotion, demotion, disciplinary action and termination.)

In addition, this form is in full compliance with the letter and intent of the various Equal Employment Opportunities and Civil Rights Statutes noted above.

Date

Telephone #

Fax #

Signed (Name/Title of Company Officer)

Street Address

City/State



Safety Inspection Report

Auditorium

South Windsor High School

161 Nevers Road

South Windsor, CT 06074

3883 Ridge Avenue
Philadelphia, PA 19132

800-727-7471

www.sapsis-rigging.com

Requested By:	Steve Hamelin
Inspection Date:	August 17, 2018
Inspector:	Christopher Harris

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Statement of Purpose

Rigging inspections are conducted by Sapsis Rigging, Inc. to help make performance spaces a safer place to work, perform and visit.

We conduct our inspections using the following criteria:

- Manufacturer specifications.
- National Building, Fire and Safety Codes.
- OSHA Regulations.
- Recognized standards from independent testing organizations.
- ANSI
- Common sense.

A professional rigging inspection should be conducted on an annual basis. To further reduce the likelihood of accidents, these inspections should be part of a well-documented, ongoing maintenance program incorporating all areas of the performance facility.

Structural Report

As a service to the client, Sapsis Rigging, Inc. will visually inspect, where possible, the support structure of the stage area. However, Sapsis Rigging, Inc. shall not be held responsible for any/all structural members in the facility. If, in the inspector's opinion, a problem exists, or if the client has any questions or concerns regarding any support member in the facility, we strongly recommend that a structural engineer be retained to make the necessary tests and calculations.

General Description

This is a proscenium theater. The onstage rigging systems consist of:

- A straight lift fire safety curtain on a single purchase, aluminum channel track guided, counterweight line set.
- Seventeen (17) double purchase, J-track guided, counterweight line sets.
- A fly gallery.
- A loading gallery.

The locking rail is located stage right at the fly gallery. The loft blocks for the rigging system are underhung from the loft steel. There is no grid.

The front-of-house riggings systems consist of:

- A catwalk lighting position.
- A lighting truss on two (2) chain hoists.
- Two (2) wall mounted speaker clusters.

The theater is used for school functions and productions as well as outside rentals.

Note: References in this report to E1.22-2016 and E1.4-1-2016 refer to the current ANSI Standards for Fire Safety Curtain Systems and Manual Counterweight Rigging Systems respectively.

As this theater does not have a grid, access to the loft blocks and the roof steel was not possible during this inspection. Consequently, all observations of the loft blocks and steel were made from the stage floor and loading gallery.

1. Fire Safety

- 1.1. There are no fire extinguishers onstage. There should be fire extinguishers located on both sides of the stage mounted on permanent positions with high visibility signs placed over them to make them easy to locate in the event of an emergency.

- 1.2. Flame retardancy certificates for the stage curtains were not available at the time of this inspection. There are labels on the curtains however that denote construction using inherently flame-retardant fabrics.



2. General Building Safety

- 2.1. The following locations need more work light. OSHA 1926.56(a) requires a minimum of 5 foot-candles of light for these areas.
- 2.1.1. The backstage (wing) areas.
 - 2.1.2. At the loading gallery.



3. Fall Protection Safety

3.1. Personal fall protection systems are needed in the following locations.

3.1.1. At the loading gallery.



3.1.2. At the FOH catwalk.

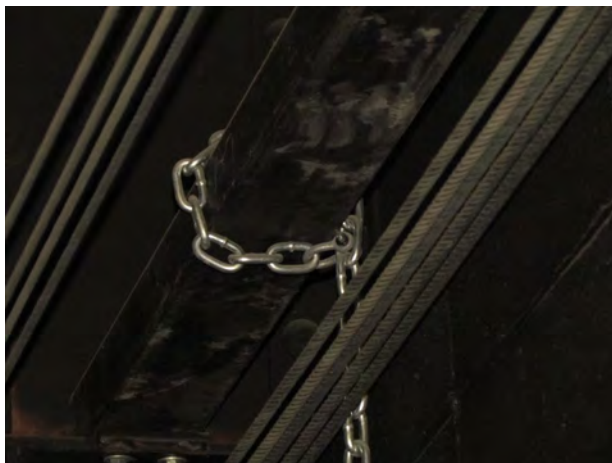


4. Structural

- 4.1. There were no obvious problems noted during this inspection. A licensed professional engineer should address any questions concerning structural members in this facility.

5. Fire Safety Curtain

- 5.1. The fire safety curtain failed the emergency drop-test. The curtain failed to descend when the overweight arbor was released. When the purchase line was pulled to free the curtain, it descended too quickly and bounced hard on the stage floor.
- 5.2. There is no arresting device in this fire curtain system. E1.22-2009 sec 11.10 and 11.11 requires that the fire curtain be governed during the curtain's entire travel or the last 2.44 m (8 feet) of descent should require a *minimum* of 5 seconds. This can be accomplished by a dashpot, a mechanical brake or a similar device.
- 5.3. The spreader plates in the counterweight arbor are being used incorrectly. There should be a spreader plate inserted between every 2 vertical feet of counterweight.
- 5.4. The stay chains have the following problems:
- 5.4.1. The stay chains wrap the auxiliary support steel. Wrapping the steel with chain in this manner places a side load on individual chain links. The chain is not designed for this condition. The chains should terminate to load rated beam or hanging clamps.



- 5.4.2. All screw pin anchor shackles require a pin safety wire to prevent them from loosening.



- 5.5. The hex nuts on the wire rope clips at the lift line batten terminations should be checked and tightened to the proper torque as required by the manufacturer. The torque setting for 3/8" diameter wire rope clips is 35 ft. pounds.

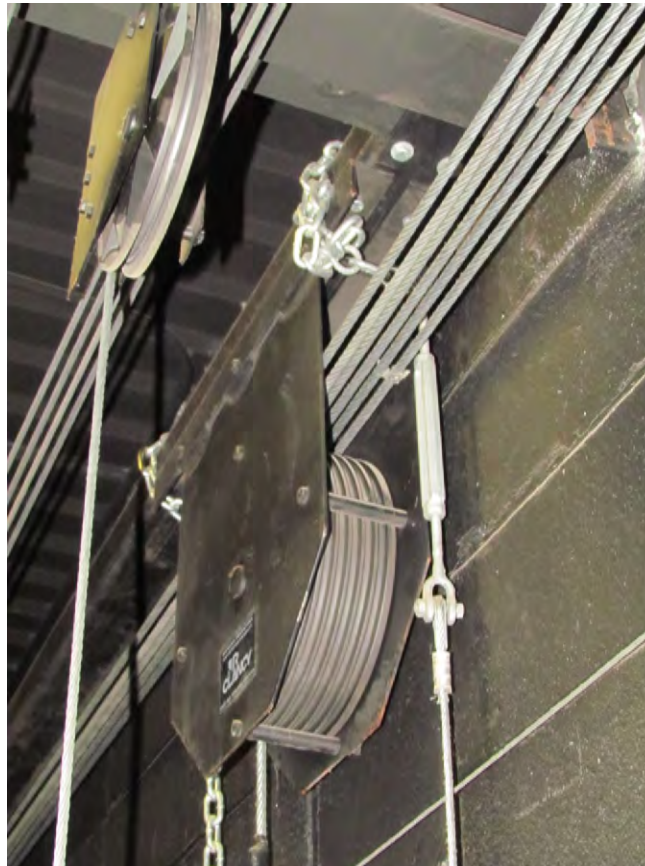


- 5.6. The turnbuckles at the lift line batten terminations, as well as those used to tension the fire curtain wire guides, have standard hex nuts installed on the jaw end bolts that can loosen and fall off the bolt. The standard hex nuts should be replaced with a locking nut such as a nylon insert nut, or the bolt should be replaced with one that accepts a cotter pin to prevent the standard hex nut from dislodging.



5.7. The fire curtain wire guides have the following problems:

- 5.7.1. The support chains for the wire guides wrap the auxiliary support steel. Wrapping the steel with chain in this manner places a side load on individual chain links. The chain is not designed for this condition. The chains should terminate to load rated beam or hanging clamps.



- 5.7.2. The turnbuckles used to tension the curtain wire guides require a safety wire to prevent them from loosening.

- 5.7.3. There is only one wire rope clip at the wire guide terminations at the stage floor. Manufacturer specifications require at least 2 properly spaced wire rope clips on all terminations.



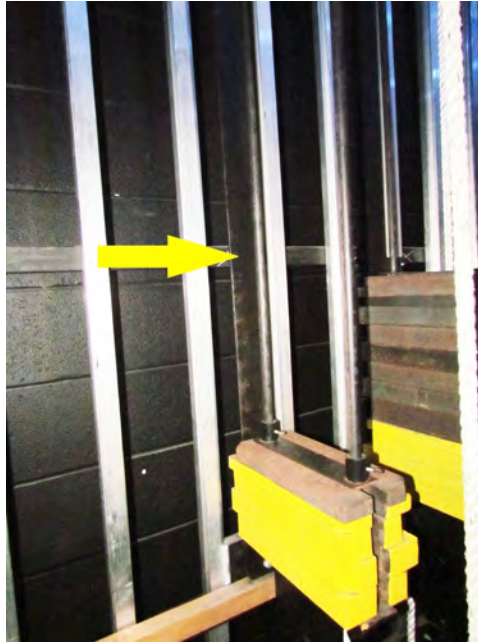
Please Note: E1.22-2016 section 12.3 requires the fire curtain system to be tested at least once every 30 performances but not less than once every 3 months. E1.22-2016 section 12.1 requires log books be kept for the fire safety curtain. **See Inspection Logs section of this report.**

6. Stage Rigging - Manual Counterweight Line Sets

- 6.1. The rope locks require adjustment. The locking mechanism should engage the rope and support a load of approximately 50 pounds without damage to the rope.
- 6.2. The counterweight arbors have the following problems:
- 6.2.1. There are not enough spreader plates in the arbors. **E1.4-1 2016 sec 3.7.7.3 (d)** calls for a spreader plate for every 2 vertical feet of counterweight.

6.2.2. The spreader plates are being used incorrectly. There should be a spreader plate inserted between every 2 vertical feet of counterweight.

6.2.3. The back-spline plates of the arbors should be labeled or marked every 2 vertical feet per E1.4-1 2016 sec 6.7 to aid in placement of the spreader plates when loading counterweight.



6.2.4. A number of the thumbscrews in the counterweight locking collars on the arbor rods are loose. These thumbscrews should always be tight.



- 6.3. The loading gallery rail needs to be line set numbered so that it matches the locking rail. This will prevent confusion when loading/unloading the arbors.



- 6.4. The trim chains have the following problems:

- 6.4.1. The trim chains utilize 2 Ø passing link chain. This type of chain is not rated for overhead lifting and, per E4.1-1-2016 A 3.3.4.1, should be replaced with a 1/4" Grade 30 proof coil or better chain.



- 6.4.2. Cotter pin shackles are used to terminate the trim chains. These shackles are not recommended as they can shift and become side loaded which would place the force solely on the cotter pin. A screw pin anchor shackle with a pin safety wire is preferable for use in this situation.

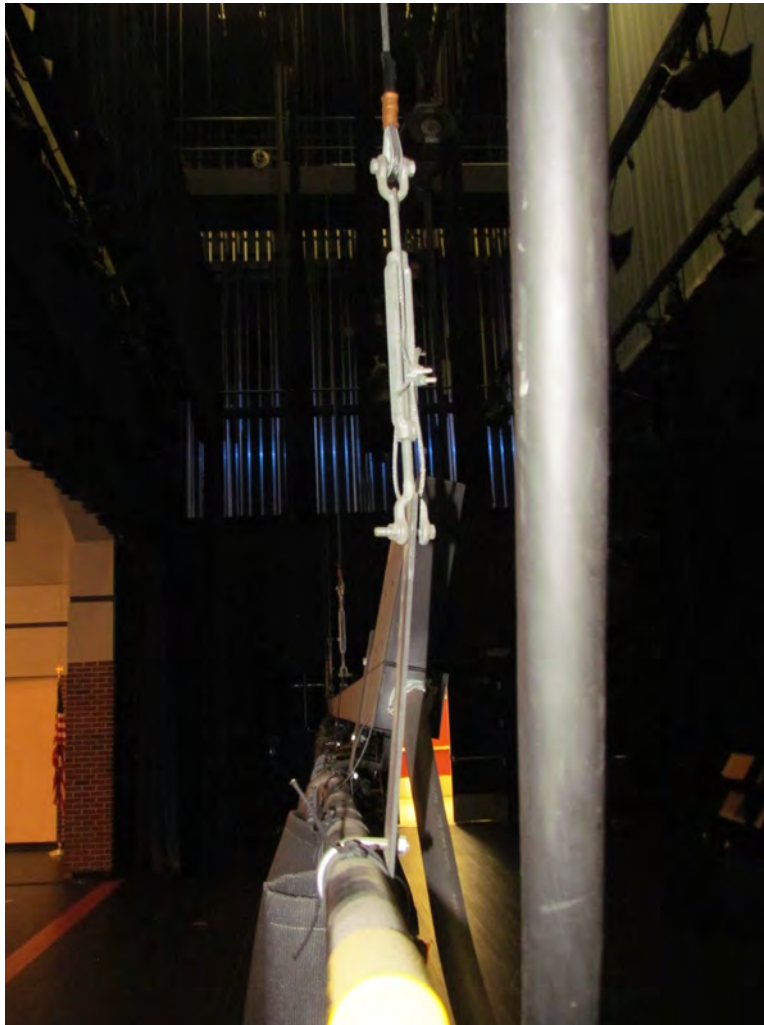


- 6.4.3. The safety bolts are too short and are pinching the chain creating a pre-load condition. Per E1.4-1-2016 sections 3.3.4.1 and 3.3.4.1.1, a properly installed trim chain, using 1/4" grade-30 proof coil chain and a load rated 1/4" anchor shackle, does not require a safety bolt.
- 6.5. The turnbuckles at the lift line terminations to the plugging strip hangers of the electric's battens have standard hex nuts installed on the jaw end bolts that can loosen and fall off the bolt. As in line item 5.6, the standard hex nuts should be replaced with a locking nut such as a nylon insert nut, or the bolt should be replaced with one that accepts a cotter pin to prevent the standard hex nut from dislodging.



6.6. The battens have the following problems:

- 6.6.1. The pipe battens are mounted to the opposite side of the plugging strip hangers from the raceways. This is causing the plugging strip hangers to not hang plumb and placing a twisting force on the supporting turnbuckles. Placing the pipe battens on the same side of the hangers as the raceways should help balance the load.



- 6.6.2. The pipe extensions used on several battens are held in place with gaff tape and the sleeves are undersized. Please note that gaff tape is not rated rigging equipment. The pipe sleeve should be the correct size and the joint should be bolted.



7. FOH Acoustic Clouds

- 7.1. The support cables wrap the steel joists of the roof structure. Wrapping wire rope around the sharp edges of the steel in this manner damages the wire rope and lowers its load capacity. The support cables should terminate to a load rated beam or hanging clamp.

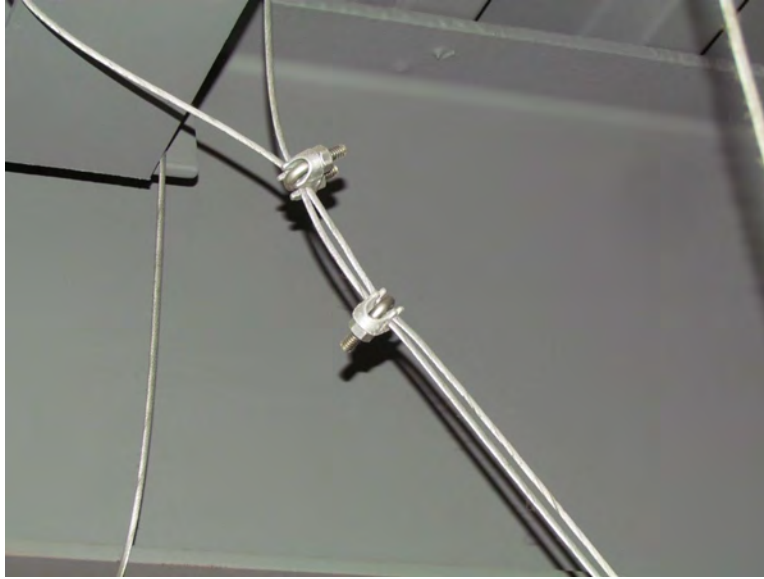


- 7.2. The support cables also terminate to C-clamp style beam clamps at the building steel. These cast clamps are not designed to support significant overhead loads. They can also loosen and become dislodged. A load rated beam clamp or custom hanging clamp would be preferable in this situation. [See previous photo.](#)
- 7.3. There are no thimbles in the support cable termination eyes. Thimbles are required to prevent damage to the wire rope caused by the sharp bend of the eye.



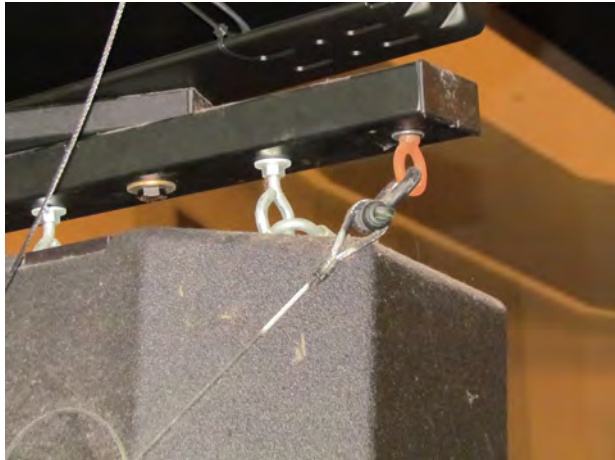
- 7.4. Malleable wire rope clips are used at the support cable terminations. Manufacturer specifications do not certify malleable wire rope clips for overhead lifting. Drop forged wire rope clips or copper compression sleeves should be used at these terminations. [Previous photos.](#)

- 7.5. The wire rope clips are installed backward in a number of locations. Backward wire rope clips damage the standing section of the lift line. All such terminations should be replaced, and the damaged sections of wire rope removed.

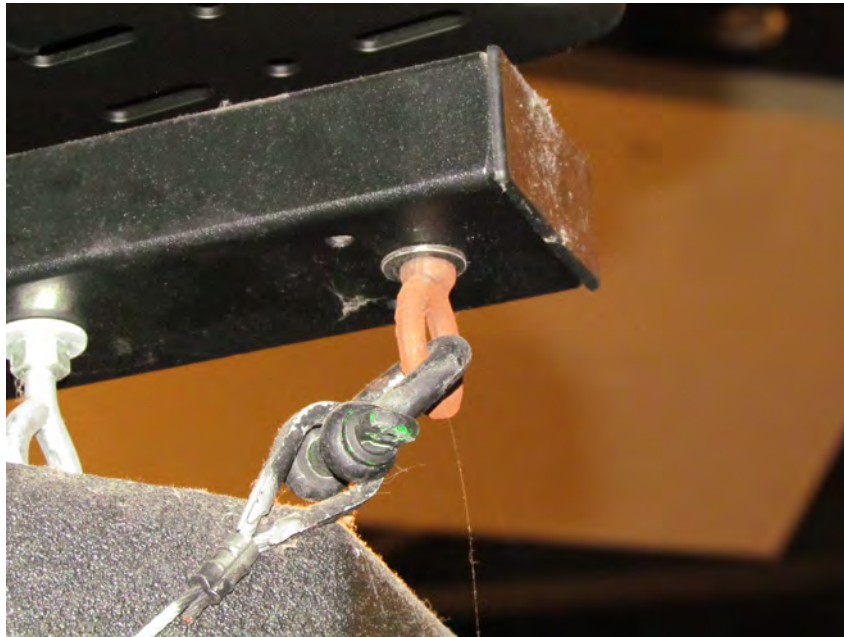


8. FOH Speakers

- 8.1. Unrated eyebolts with open eyes are used to support the speakers. Only load rated drop forged shouldered eyebolts should be used to support objects overhead.



- 8.2. All screw pin anchor shackles used to support the speakers require pin safety wires to prevent them from loosening.



9. FOH Truss and Chain Hoists

- 9.1. Maintenance and inspection records were not available for the chain hoists at the time of this inspection. Log books should be kept for this equipment to facilitate future work and satisfy OSHA requirements.



- 9.2. The chain hoists require servicing. Manufacturer specifications, industry standards and OSHA 1926.1501 (a)(6) call for annual servicing.
- 9.3. All wide adjustable beam clamps require a safety wire to prevent them from loosening.



- 9.4. All screw pin anchor shackles used in the chain hoist rigging require a pin safety wire to prevent them from loosening.



Summary

The problems in this report should be addressed as soon as possible. In addition, a fully documented maintenance plan should be put into effect. This plan, along with regular inspections, will not only help insure the safety of all that use this facility, but also prolong the life of the equipment.

End of Report

Fire Safety Curtain Testing Log

Auditorium

South Windsor High School

South Windsor, CT

E1.22-2016 section 12.3 requires the fire safety curtain to be tested at least once every 30 performances but not less than once every 3 months. E1.22-2016 section 12.1.1 requires log books to be kept for the fire safety curtain.

Date	Stage Left Test (circle one)	Stage Right Test (circle one)	SureGuard Test (if applicable)	Notes	Initials
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		
	Passed/Failed	Passed/Failed	Passed/Failed		