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STAGE CC 300 Ra Highlan	INSULTANT	Tagescol	ess Boo3 nsultants.com
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PLAN - MOTORIZED RIGGING AND GRID HANGERS

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STAGE CO	Aritan Ave, 2nd Flr	732.333.6 stagesco	es
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USERS MUST:

EXISTING

CATWALK PIPE GRID

1.5" I.D. (1.9" O.D.) -SCHEDULE 40 STL PIPE

TRUSS BATTEN

FORGED CLEVIS

PIPE CLAMP



RIGGING SYSTEM INFORMATION SUNY PURCHASE SOUND STAGE INSTALLATION DATE: MONTH, YEAR FIRM NAME CITY, STATE RIGGING INSTALLER: SUPPORT PHONE NUMBER JOB REFERENCE NUMBER: JOB NUMBER FIRM NAME CITY, STATE ARCHITECT: STRUCTURAL ENGINEER: FIRM NAME CITY, STATE THEATRE CONSULTANT: STAGES CONSULTANTS HIGHLAND PARK, NJ WIRE ROPE LIFT CABLES: ### INCH 7x19 STRAND AIRCRAFT CABLE SAFE WORKING LOAD: ### LBS. PER CABLE BREAKING STRENGTH: #,### LBS. RIGGING LOADS: SAFETY FIRST!

8¹/₂"



PURCHASE STATE UNIVERSITY OF NEW YORK 735 ANDERSON HILL RD PURCHASE, NY 10577-1400		
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300 Ra Highlar	Arritan Ave, 2nd Flr nd Park, NJ 08904 732.333.6 stagesco	ES 8003 nsultants.com
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NOTES:

1. THIS DIAGRAM SHOWS THE LAYOUT AND INTERCONNECTION OF THE COMPONENTS IN THE RIGGING ELECTRICAL SYSTEMS TO CONVEY DESIGN INTENT ONLY. FINAL WIRE QUANTITIES, TYPES, AND TOPOLOGY SHALL BE DETERMINED BY THE RIGGING MANUFACTURER.



SECTION 116133

RIGGING SYSTEMS AND DRAPERIES

PART 1 – GENERAL

- 1.1 GENERAL CONDITIONS
 - A. THE GENERAL CONDITIONS OF THE CONTRACT DOCUMENTS SHALL APPLY TO THE WORK IN THIS SECTION.
- 1.2 WORK INCLUDED
 - A. THE WORK OF THIS SECTION INCLUDES ALL LABOR, MATERIALS, EQUIPMENT AND SERVICES NECESSARY TO COMPLETE THE STAGE RIGGING AND DRAPERIES INSTALLATION, AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:
 - 1. MOTORIZED PIPE GRIDS
 - 2. ADDITIONAL SUPPORT STRUCTURES AS REQUIRED TO MEET THE INTENT OF THE CONTRACT DOCUMENTS
 - 3. TRACKED, WALKALONG STUDIO CURTAINS
 - CONTROL DEVICES FOR MOTORIZED RIGGING.
 - 5. STATIONARY PIPE GRID (ALTERNATE #1)
- 1.3 RELATED WORK
 - A. RELATED WORK WHICH IS NOT PART OF THE WORK IN THIS SECTION INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING:
 - 1. SUPPORT STEEL
 - 2. FINISHES
 - 3. POWER FEEDS AND ELECTRICAL WORK FOR MOTORIZED RIGGING, INCLUDING CONDUIT AND WIRE BETWEEN CONTROL COMPONENTS, AND TERMINATIONS.
 - 4. STAGE LIGHTING SYSTEM, INCLUDING JUNCTION BOXES AND MULTICONDUCTOR CABLES.
 - 5. MECHANICAL SYSTEM.
 - 6. FIRE PROTECTION SYSTEM.
- 1.4 DEFINITIONS
 - A. FURNISH SUPPLY EQUIPMENT TO THE PROJECT FOR USE OR INSTALLATION BY OTHERS.
 - B. INSTALL INSTALL EQUIPMENT PROVIDED TO THE PROJECT BY OTHERS.
 - C. PROVIDE SUPPLY AND INSTALL EQUIPMENT
- 1.5 QUALITY ASSURANCE
 - A. ALL EQUIPMENT SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH THE APPLICABLE STANDARDS OF THE FOLLOWING ORGANIZATIONS:
 - 1. AMERICAN IRON AND STEEL INSTITUTE (AISI).
 - 2. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI).
 - 3. AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
 - 4. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).
 - 5. AMERICAN WELDING SOCIETY (AWS).
 - 6. ENTERTAINMENT SERVICES AND TECHNOLOGY ASSOCIATION (ESTA).
 - 7. INDUSTRIAL FASTENERS INSTITUTE (IFI).
 - 8. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO).
 - 9. NATIONAL ASSOCIATION OF CHAIN MANUFACTURERS (NACM).
 - 10. NATIONAL FIRE PROTECTION INSTITUTE (NFPA).
 - 11. SOCIETY OF AUTOMOTIVE ENGINEERS (SAE).
 - 12. AMERICAN GEAR MANUFACTURERS ASSOCIATION (AGMA).
 - 13. NATIONAL ELECTRICAL CODE (NEC).

14. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA).

- B. MINIMUM DESIGN FACTOR FOR LIFTED LOADS: 8:1. DESIGN FACTOR SHALL INCLUDE THE EFFECTS OF STATIC LOADS, DYNAMIC IMPACT LOADS AND REDUCTIONS FOR END TERMINATIONS AND BENDING RATIOS.
- C. MINIMUM DESIGN FACTOR FOR STATIC LOADS: 6:1. DESIGN FACTOR SHALL INCLUDE THE EFFECTS OF STATIC LOADS AND REDUCTIONS FOR END TERMINATIONS AND BENDING RATIOS.
- D. MAXIMUM FLEET ANGLE: 1-1/2 DEGREES.
- E. CABLE BENDING RATIO FOR MANUALLY OPERATED SYSTEMS SHALL BE AT LEAST 30 TIMES THE DIAMETER OF THE CABLE. MOTORIZED SYSTEMS SHALL COMPLY WITH THE WIRE ROPE MANUFACTURER'S MINIMUM RECOMMENDED BENDING RATIO.
- F. WIRE ROPE CLIPS SHALL BE DROP-FORGED.
- G. FASTENERS TYPICALLY SHALL HAVE A MINIMUM SAE J429 GRADE 5 OR ISO R898 CLASS 8.8 RATING. BOLTS IN TENSION SHALL HAVE NUTS OF EQUIVALENT RATING. FASTENERS SHALL BE SELF-LOCKING OR SECURED BY ALTERNATE MEANS TO PREVENT LOOSENING.
- H. SHACKLES AND TURNBUCKLE JAWS SHALL HAVE SCREW PINS, MOUSED WITH PLASTIC TIE-WRAP AFTER INSTALLATION.
- I. HELICALLY GROOVED DRUMS SHALL ACCEPT THE WIRE ROPE IN A SINGLE LAYER, PLUS 3 DEAD WRAPS. DRUM CONSTRUCTION SHALL BE ALL-WELDED. LIFTING LINES SHALL ENTER THE DRUM THROUGH THE TUBING WALL AT A 45 DEGREE ANGLE, AND SHALL BE RETAINED BY A COPPER NICOPRESS STOP SLEEVE.
- J. OVERSPEED BRAKES SHALL REQUIRE NEITHER ELECTRICITY NOR EXTERNAL PRESSURE FOR OPERATION. THE BRAKE SHALL BE FACTORY SET TO AUTOMATICALLY APPLY ITSELF AT 125 PERCENT OF THE MAXIMUM RATED WINCH SPEED LOCATE THE BRAKE EITHER ON THE LOW SPEED OUTPUT SHAFT OF THE REDUCER, OR DIRECTLY TO THE LIFTING LINE DRUM.
- K. ROTARY LIMIT CHAIN SPROCKETS SHALL BE PINNED TO PREVENT SLIPPING AND SIZED FOR MAXIMUM USABLE ROTATION OF THE SWITCH CAMS.
- L. LIMIT SWITCH CHAINS AND ENCODER BELTS LOCATED IN TRAFFICKED AREAS SHALL BE FULLY GUARDED.

- M. GEARMOTOR SERVICE FACTORS AN CONFORM TO AGMA RECOMMENDA FACTOR SHALL BE 1.0 FOR CONTINU GEARING SERVICE FACTOR SHALL SERVICE FACTOR OF 1.3.
- N. FIXED SPEED MOTORS SHALL HAVE **"SOFT" STOPPING AND STARTING C** LOAD CAPACITY AND SPEED OF THE
- O. SHAFTING SHALL BE KEYED AND DE ORDER TO PROPERLY TRANSMIT A ALLOWANCE FOR IMPACT.
- CHAIN TRANSMISSION SHALL BE MA Ρ. MEET ANSI STANDARDS AND SAFEL INCLUDING IMPACT, APPLIED BY TH THE STRENGTH OF THE CHAIN CON STRENGTH OF THE CHAIN. PROVIDE TIGHTENING THE CHAINS.
- Q. THIS SPECIFICATION SETS FORTH OPERATIONAL CRITERIA, AND MININ WORKMANSHIP. IT IS THE SOLE RE DESIGN, ENGINEER, FURNISH AND SYSTEM IN COMPLIANCE WITH THE DOCUMENTS.
- 1.6 SUBMITTALS
 - A. SUBMIT THE FOLLOWING WITH THE
 - 1. BILL OF MATERIALS, WITH PAR STANDARD NUMBERS AND/OR
 - 2. SPECIFIED MANUFACTURER'S PRODUCTS CALLED OUT IN TH
 - 3. STATEMENT THAT THE MANUE PROVISIONS.
 - 4. PROJECTED TIMETABLE LISTIN THE FOLLOWING ACTIVITIES:
 - a. SHOP DRAWING PREPAR
 - b. FABRICATION
 - c. SHIPPING TO SITE
 - d. SYSTEM COMMISSIONING e. AS BUILT DRAWING PREF

B. SHOP DRAWINGS

- 1. SUBMIT SHOP DRAWINGS FOR BE UNIFORM. SUBMITTALS OF BOUND.
- 2. SHOP DRAWINGS SHALL BE ST LICENSED IN THE STATE OF NE
- 3. SHOP DRAWINGS SHALL INCL a. TITLE SHEET LISTING AL
- b. SCALE PLANS AND ELEV
- c. ALL INFORMATION NECE FEATURES, APPEARANC INSTALLATION, AND USE PHASES OF OPERATION.
- d. COUNTRY OF ORIGIN FOR
- 4. FABRICATION SHALL NOT COM CONSULTANT AND THE ARCHI DRAWINGS ARE IN COMPLIANC CONTRACT DOCUMENTS.
- 5. SHOP DRAWINGS SHALL BE RE

C. MANUALS

REQUIRED.

- 1. PROVIDE AN OPERATIONS AND OWNER AT TIME OF OWNER T
 - a. CONTRACTOR CONTACT
- b. MANUFACTURER CONTAC
- c. SYSTEM DESCRIPTION
- d. OPERATION INSTRUCTIO
- e. MAINTENANCE INSTRUCT
- EQUIPMENT DESIGN PARA
- h. REPLACEMENT PARTS SO
- CATALOG CUTS FOR ALL
- 2. PROVIDE THE ABOVE DOCUME FORMAT, SUCH AS PDF OR OTH USB STORAGE DRIVES.
- D. AS-BUILT DRAWINGS
 - WITHIN ONE MONTH OF SYSTE AS-BUILT DRAWINGS. THE AS-E
 - a. FINAL SHOP DRAWINGS.
 - b. FINAL BILL OF MATERIAL 2. PROVIDE THE AS-BUILT DRAWI
 - FORMAT, SUCH AS PDF OR OTH USB STORAGE DRIVES.
- 1.7 WARRANTY
 - A. THE MANUFACTURER SHALL WARR
 - 1. PART ONE ACCORDING TO TH GENERAL CONDITIONS

- PROCEDURES AND SCHE COMPONENTS
- LOADS AND DUTY CYCLE
- PARTS AND SUBASSEMB

ND LOAD CLASSIFICATIONS SHALL ATIONS. THE MINIMUM SERVICE UOUS OPERATION AND THE MINIMUM BE 1.0 WITH A MINIMUM MECHANICAL	 PART TWO - ADDITIONALLY, FOR TWO YEARS FROM ACCEPTANCE OF THE SYSTEMS, PROVIDE SERVICES DETAILED BELOW: a. PROVIDE FOR THE OWNER'S OPERATING STAFF A TECHNICAL AND OPERATIONAL ASSISTANCE HOTLINE ADVICE SERVICE AT 	 2.6 SHEAVES A. SHEAVES FOR MANUAL SETS SHALL BE MADE FROM HIGH STRENGTH NYLON RESIN OR REINFORCED POLYMER COMPOSITE. 	PURCHASE COLLEGE
E HIGH INERTIA FANS OR ELECTRONIC CHARACTERISTICS AS DICTATED BY THE E WINCH.	NO ADDITIONAL COST FOR THE DURATION OF THE WARRANTY PERIOD. SUCH ADVICE TO BE AVAILABLE DURING NORMAL WORKING HOURS AND ON EVENINGS AND WEEKENDS.	 B. SHEAVE GROOVES SHALL CONFORM TO CABLE AND ROPE MANUFACTURERS' STANDARDS FOR GROOVE SHAPE AND TOLERANCE. C. SHEAVES SHALL HAVE PRECISION BALL BEARINGS. BEARINGS SHALL BE DATED FOR THE MAXIMUM STATIC AND DYNAMIC LOADS AT 200 FEET DED 	STATE UNIVERSITY OF NEW YORK 735 ANDERSON HILL RD
ESIGNED TO MEET ANSI STANDARDS IN PPLIED LOADS AND TORQUES WITH	b. PROVIDE ALL REQUIRED MAINTENANCE OR REPLACEMENT WITHIN 30 DAYS OF NOTIFICATION BY THE OWNER, WITH THE FOLLOWING EXCEPTION: ALL REQUIRED MAINTENANCE OR REPLACEMENT WHICH AFFECTS THE SAFE OPERATION OF THE	RATED FOR THE MAXIMUM STATIC AND DYNAMIC LOADS AT 300 FEET PER MINUTE MAXIMUM RPM, PLUS MANUFACTURER'S RECOMMENDED SAFETY FACTOR. MINIMUM LIFESPAN RATING: 2000 HOURS.	PURCHASE, NY 10577-1400
ADE WITH ROLLER CHAIN SELECTED TO _Y TRANSMIT THE FULL LOAD, IE MOTOR AND THE UNBALANCED SET.	INSTALLATION SHALL BE ACCOMPLISHED WITHIN 3 DAYS.	 D. SHAFTS SHALL BE MADE OF MACHINED STEEL. E. SHEAVE HUBS SHALL BE SIZED TO PROVIDE ADEQUATE LOAD SUPPORT FOR THE BEARING ASSEMBLY. HUB BORES SHALL CONFORM TO THE TOLEDANCES OF THE READING MANUFACTURED. 	
NECTORS SHALL BE EQUAL TO THE E A MEANS OF LUBRICATING AND	2.1 ACCEPTABLE CONTRACTORS A. THE EQUIPMENT SHALL BE FURNISHED, INSTALLED, AND PROVIDED BY	F. SHEAVES SHALL ROTATE PLUMB AND TRUE WITHOUT TOUCHING THE	
MINIMUM SAFETY STANDARDS.	ONLY ONE OF THE FOLLOWING:	2.7 LOFT BLOCKS	
MUM STANDARDS FOR QUALITY IN SPONSIBILITY OF THE CONTRACTOR TO INSTALL A SAFE, FULLY FUNCTIONAL	1. I.WEISS THEATRICAL SOLUTIONS 815 FAIRVIEW AVENUE #10 FAIRVIEW, NJ 07022	A. LOFT BLOCKS SHALL BE DESIGNED AND FABRICATED TO SUPPORT A 500-POUND MINIMUM MANUFACTURER'S RECOMMENDED WORKING LOAD.	
DESIGN INTENT OF THE CONTRACT	2. J. R. CLANCY/WENGER 7041 INTERSTATE ISLAND ROAD SYRACUSE, NY 13209 315 451 3440	B. LOFT BLOCK SHEAVES SHALL BE 8 INCHES IN DIAMETER.C. SHEAVES SHALL HAVE 5/8-INCH MINIMUM DIAMETER SHAFTS.	
E BID: RTS IDENTIFIED BY COMMON INDUSTRY	3. POOK DIEMONT AND OHL, INC./ TEXAS SCENIC COMPANY 701 EAST 132ND STREET BRONX, NEW YORK, 10454	D. SIDE PLATE THICKNESS SHALL BE 12-GAUGE MINIMUM. PROVIDE PIPE SPACERS TO STIFFEN THE SIDE PLATES AND PREVENT THE WIRE ROPE FROM LEAVING THE GROOVES.	STRUCTURAL ENGINEER SZEWCZAK ASSOCIATES CONSULTING ENGINEERS
CATALOG CUT SHEETS OF ALL	718.402.2677	E. BASE ANGLES SHALL BE 1-1/2 X 1-1/2-INCH MINIMUM.	AVON PARK NORTH 200 FISHER DRIVE AVON, CT 06001
E BILL OF MATERIALS.	4. PROTECH THEATRICAL SERVICES 3431 NORTH BRUCE STREET	F. EACH LOFT BLOCK SHALL HAVE A SINGLE-LINE SHEAVE.	TEL: 860.677.4570
FACTURER AGREES TO THE WARRANTY	NORTH LAS VEGAS, NV 89030 702.639.0290	 G. LOFT BLOCKS SHALL BE LABELED WITH THE FOLLOWING INFORMATION. 1 MANUFACTURER CONTACT INFORMATION 	STAGE CONSULTANT
NG THE TIME IN WEEKS FOR EACH OF	5. SAPSIS RIGGING	2. RECOMMENDED WEIGHT LIMIT CAPACITY.	
	233 NORTH LANSDOWNE AVENUE LANSDOWNE, PA 19050	2.8 PIPE GRID HOIST	Stages
RATION	215.228.0888	A. LINE SHAFT HOISTS SHALL HAVE THE FOLLOWING FEATURES:	300 Raritan Ave. 2nd Flr 732.333.8003
	6. STARLITE 9 WHITTENDALE DRIVE	1. CAPACITY: 2500 POUNDS	Highland Park, NJ 08904 stagesconsultants.com
G	MOORESTOWN, NJ 08057 856.780.8000	2. SPEED: 20 FEET PER MINUTE	
PARATION	B. ADDITIONAL COMPANIES WISHING TO BID SHALL SUBMIT THE FOLLOWING A MINIMUM OF 5 BUSINESS DAYS BEFORE SUBMISSION OF BIDS, FOR REVIEW AND APPROVAL BY THE THEATRE CONSULTANT.	 SPRING APPLIED, ELECTRICALLY RELEASED MOTOR BRAKE RATED FOR 125% OF THE MOTOR FULL LOAD TORQUE SECONDARY MECHANICAL BRAKE (LOAD OR OVERSPEED) 	
R REVIEW. DRAWING SHEET SIZE SHALL	1. FIRM HISTORY.	5. ROTARY LIMIT SWITCH FOR HIGH AND LOW TRAVEL AND	
MORE THAN 5 DRAWINGS SHALL BE	2. A LIST OF COMPLETED INSTALLATIONS WHICH ARE COMPARABLE IN	OVERTRAVEL TRIMS.	
TAMPED BY A STRUCTURAL ENGINEER EW YORK.	SCOPE TO THE JOB DESCRIBED HERE.3. A MINIMUM OF 5 REPRESENTATIVE SHOP DRAWING SHEETS.	B. DRUMS SHALL BE 8-INCH DIAMETER, HELICALLY GROOVED FOR WIRE ROPE. DRUMS SHALL ACCEPT THE WIRE ROPE IN A SINGLE LAYER, PLUS THREE DEAD WRAPS.	
UDE:	4. IF REQUESTED, A CURRENT CERTIFIED FINANCIAL STATEMENT SHOWING SUFFICIENT FINANCIAL BASE FOR THE SIZE OF JOB	C. MAINTENANCE AND SETUP CONTROLS SHALL BE PROVIDED.	
L SHEETS IN THE SUBMITTAL.	DESCRIBED HERE.	2.9 CABLE MANAGEMENT	
ATIONS. SSARY TO EXPLAIN FULLY THE DESIGN	2.2 FINISHES A. METAL PARTS SHALL BE FREE FROM RUST, SCALE, DIRT, AND WELDING	 A. PROVIDE PLASTIC OR WOODEN TUBS TO COLLECT AND DEPLOY STAGE LIGHTING POWER AND CONTROL CABLE AS THE GRIDS RAISE AND LOWER PAINT THE ASSEMBLY BLACK 	
E, FUNCTION, FABRICATION, OF SYSTEM COMPONENTS IN ALL	SPATTER. ALL WELDMENTS OR OTHER METAL COMPONENTS SHALL RECEIVE A COAT OF CORROSION RESISTANT PRIMER PRIOR TO FINISH COATING AND COMPONENT ASSEMBLY.	2.10 MOTORIZED RIGGING CONTROLS	2. ISSUE FOR BID 06/18/2018 1. ISSUE FOR BUDGETING 06/04/2018
R EQUIPMENT /MENCE UNTIL THE THEATRE	B. FINISH COAT SHALL BE FLAT ALKYD ENAMEL. COLOR SHALL BE BLACK, EXCEPT WHERE NOTED OTHERWISE IN THE CONTRACT DOCUMENTS.	MOTOR CONTROL CABINET AND SHALL INCLUDE THE FOLLOWING FEATURES:	NO. REVISION/ISSUE DATE
ITECT DETERMINE THAT THE SHOP CE WITH THE DESIGN INTENT OF THE	2.3 LIFTING LINES	1. KEY OPERATED POWER SWITCH.	SEAL
EVISED AND RESUBMITTED AS	 A. LIFTING LINES SHALL BE OF SUFFICIENT DIAMETER AND APPROPRIATE CLASSIFICATION TO SUIT THE SYSTEM OPERATIONAL REQUIREMENTS. MINIMUM STANDARD FOR OVERHEAD LIFTING: 7X19 IWRC 	2. HOLD-TO-OPERATE UP AND DOWN OPERATION PUSHBUTTONS WITH INDICATOR LIGHTS THAT ILLUMINATE WHEN A BUTTON IS PRESSED AND THE MOTOR HAS REACHED ITS CORRESPONDING LIMIT.	
	B. DO NOT USE ANY DAMAGED OR PERMANENTLY DEFORMED WIRE ROPE.	3. DEDICATED E-STOP BUTTON	
D MAINTENANCE MANUAL TO THE RAINING. THE MANUAL SHALL INCLUDE:	C. USE CONTINUOUS LINES FROM THE SAME SPOOL, FREE OF KNOTS, SPLICES OR INTERMEDIATE FASTENERS UNLESS SPECIFICALLY CALLED FOR ELSEWHERE IN THE CONTRACT DOCUMENTS.	2.11 SIGNAGE A. PROVIDE "RIGGING INFORMATION" SIGNS, AS ILLUSTRATED IN THE	
INFORMATION	2.4 PIPE GRID TERMINATIONS	B. PROTECT THE ABOVE SIGNS WITH 1/8-INCH-THICK TRANSPARENT PLASTIC	
CT INFORMATION	A. LIFTING LINE TERMINATIONS AT THE MOTORIZED PIPE GRIDS SHALL CONSIST OF A THIMBLE, A COPPER NICOPRESS FITTING, A JAW/JAW TURNBUCKLE, AND A PIPE CLAMP. MOUSE TURNBUCKLES WITH PLASTIC	SHEETS SCREWED TO THE WALL. 2.12 STAGE DRAPERY SCHEDULE	
NS, INCLUDING SAFETY MEASURES	TIE WRAP. WIRE MOUSING IS NOT ACCEPTABLE.	A. STUDIO DRAPERY SCHEDULE IS AS FOLLOWS:	RENOVATION
TIONS, INCLUDING RECOMMENDED EDULES FOR INSPECTING SYSTEM	B. SECURE THE LOOSE ENDS OF THE WIRE ROPE TO THE STANDING PORTION OF THE LINES WITH PLASTIC TIE WRAP.	DESCRIPTION QUANTITY HEIGHT WIDTH BLACKOUT 4 22'-0" 30'-0"	MUSIC SOUND STAGE
RAMETERS INCLUDING SAFE WORKING	C. SECURE THE LOOSE ENDS OF THE WIRE ROPE TO THE STANDING PORTION OF THE LINES WITH PLASTIC TIE WRAP.	CYC 1 22'-0" 50'-0" GREEN SCREEN 1 22'-0" 50'-0"	RIGGING
LY LISTS	D. PROVIDE PIPE GRID HANGERS FOR STATIONARY PIPE GRID AS SHOWN ON THE DRAWINGS. DESIGN THE HANGER ASSEMBLIES FOR THE DEAD LOAD	2.13 FABRICS	DATE: 06/18/2018
OURCE INFORMATION	OF THE PIPE GRID, PLUS A MINIMUM LIVE LOAD OF 30 LBS. PER LINEAR FOOT TO MAXIMUM ANTICIPATED TOTAL LIVE LOADS AS NOTED:	A. BLACKOUT DRAPES: 24 OUNCE, 100% TREVIRA CS POLYESTER,	PROJECT NO: SU-062018
PURCHASED EQUIPMENT	1. STATIONARY PIPE GRID MAXIMUM ANTICIPATED LIVE LOAD IS 5000	INHERENTLY FLAME RETARDANT VELOUR, KM FABRICS' "CHARISMA", OR APPROVED EQUAL. COLOR: BLACK.	DRAWN BY: SEM
ENTS IN PRINTABLE ELECTRONIC	POUNDS.	B. MUSLIN CYCLORAMA: 100 PERCENT COTTON, .7 OUNCE PER SQUARE	SCALE: AS NOTED
HER UNIVERSAL FORMAT FILES, ON	2.5 PIPE GRID	C GREEN SCREEN: 62" WIDE INHERENTLY FLAME RETARDANT ROSE BRAND	
	STANDARD WEIGHT (SCHEDULE 40) PIPE CONNECTED WITH CLAMPS.	POLY PRO, OR APPROVED EQUAL. COLOR: CHROMA KEY GREEN.	DRAWING TITLE
EM ACCEPTANCE, PROVIDE COMPLETE BUILT DRAWINGS SHALL INCLUDE:	B. CLAMPS SHALL BE JR CLANCY "CROSS GRID CONNECTORS", OR APPROVED SUBSTITUTE. PROVIDE A CLAMP AT EVERY PIPE INTERSECTION.	D. FABRICS SHALL BE FLAME TREATED IN A MANNER APPROVED BY THE APPROPRIATE LOCAL AGENCY, WHERE APPLICABLE. A NOTARIZED AFFIDAVIT SHALL ACCOMPANY THE DRAPERIES ATTESTING THAT ALL	THEATRE RIGGING SPECIFICATIONS
S.	C. PIPE SPLICES SHALL BE MADE WITH AN 18-INCH-LONG, 1-9/16-INCH DIAMETER DOM TURE WITH A MINIMUM WALL THICKNESS OF 2/16 INCH		
INGS IN PRINTABLE ELECTRONIC	WELD ONE END OF THE SPLICE TUBE. FASTEN THE OTHER END WITH TWO	INCORPORATED IN ANY PART OF ANY DRAPERY.	
HER UNIVERSAL FORMAT FILES, ON	D. PAINT THE PIPE GRID AND HANGER ASSEMBLIES BLACK	F. FABRICS OF 1 COLOR SHALL BE FROM 1 DYE LOT.	
		G. VELOUR NAP SHALL RUN IN A CONSISTENT DIRECTION. NAP SHALL RUN UP FOR BLACK VELOUR MASKING PIECES.	
ANT THE EQUIPMENT AS FOLLOWS:			
HE GUARANTEE PROVISIONS IN THE			TR2.01

3.4 PROTECTION OF EQUIPMENT

- 2.13 FABRICS
 - A. BLACKOUT DRAPES: 24 OUNCE, 100% TREVIRA CS POLYESTER, INHERENTLY FLAME RETARDANT VELOUR, KM FABRICS' "CHARISMA", OR APPROVED EQUAL. COLOR: BLACK.
 - B. MUSLIN CYCLORAMA: 100 PERCENT COTTON, .7 OUNCE PER SQUARE FOOT, SEAMLESS FABRIC. COLOR: BLEACHED WHITE.

 - C. GREEN SCREEN: 62" WIDE, INHERENTLY FLAME RETARDANT, ROSE BRAND POLY PRO, OR APPROVED EQUAL. COLOR: CHROMA KEY GREEN.
 - D. FABRICS SHALL BE FLAME TREATED IN A MANNER APPROVED BY THE APPROPRIATE LOCAL AGENCY, WHERE APPLICABLE. A NOTARIZED AFFIDAVIT SHALL ACCOMPANY THE DRAPERIES ATTESTING THAT ALL FABRICS HAVE BEEN FLAME TREATED IN THE APPROVED MANNER.
 - E. NO PIECED HORIZONTAL OR SPLIT WIDTHS OF FABRIC SHALL BE INCORPORATED IN ANY PART OF ANY DRAPERY.
 - F. FABRICS OF 1 COLOR SHALL BE FROM 1 DYE LOT.
 - G. VELOUR NAP SHALL RUN IN A CONSISTENT DIRECTION. NAP SHALL RUN UP FOR BLACK VELOUR MASKING PIECES.
- 2.14 DRAPERY FABRICATION
- A. ALL DRAPERIES ARE SEWN FLAT AND ARE UNLINED.
- REINFORCE THE TOP OF EACH PIECE WITH POLYESTER WEBBING WEIGHING A MINIMUM OF 2.8 OUNCES PER YARD, AND DOUBLE STITCHED AT THE TOP. PROVIDE MACHINE-SET BLACK ANODIZED NO. 3 GROMMETS ON 1-FOOT CENTERS.
- C. PROVIDE EACH TRACKED PIECE WITH OBLONG SPRING, CARABINER TYPE SNAPS.
- HEM THE BOTTOMS WITH A 6-INCH-DEEP DOUBLE TURNED HEM WITH A D. SEPARATE CANVAS CHAIN POCKET APPROXIMATELY 3 INCHES ABOVE THE BOTTOM OF THE FACE FABRIC. PROVIDE NO. 8 ZINC COATED CHAIN.
- SEW BACK THE FACE FABRIC OF EACH PIECE 4 INCHES ON BOTH SIDES. THE SIDES OF EACH DRAPERY PIECE SHALL HANG PLUMB WITHIN 2 INCHES.
- LABEL EACH PIECE AT BOTH BOTTOM CORNERS WITH THE DIMENSIONS OF THE PIECE, THE MANUFACTURER, AND THE DATE OF MANUFACTURE.

2.15 TRAVELER TRACK

- A. VARIABLE ACOUSTIC TRACK IS MANUAL, "WALK-ALONG" STYLE AND SHALL BE H&H SPECIALTIES MODEL 501WB TRACK, OR APPROVED EQUAL COLOR: BLACK
- PROVIDE CARRIERS ON 1-FOOT CENTERS, TRACK, SPLICE CLAMPS, AND END STOPS AS REQUIRED.
- C. MASTER AND SINGLE CARRIERS SHALL HAVE URETHANE-TIRED, BALL BEARING WHEELS. CARRIERS SHALL HAVE SWIVEL EYES AND TRIM CHAINS, AND RUBBER BUMPERS.
- D. PROVIDE MEANS OF ATTACHING THE TRACK TO THE UNISTRUT SUPPORT STRUCTURE.

PART 3 – EXECUTION

3.1 COORDINATION

- A. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS, SPECIFICATIONS, AND FIELD CONDITIONS WHICH AFFECT THE WORK IN THIS SECTION. NOTIFY THE ARCHITECT WHENEVER FIELD MEASUREMENTS, ANALYSIS OF THE DRAWINGS AND SPECIFICATIONS, OR PROGRESS OF OTHER TRADES INDICATES THAT THE WORK IN THIS SECTION CANNOT BE COMPLETED AS SPECIFIED OR AS SCHEDULED.
- WITHIN 6 WEEKS OF THE AWARD OF CONTRACT, AND PRIOR TO THE PREPARATION OF SHOP DRAWINGS. THE STAGE RIGGING CONTRACTOR SHALL SUBMIT A WRITTEN REVIEW OF RELATED WORK AS IT APPEARS ON THE CONTRACT DOCUMENTS. THE REVIEW SHALL IDENTIFY ERRORS, OMISSIONS OR OBSTRUCTIONS RELATED TO THE INSTALLATION AND OPERATION OF THE EQUIPMENT IN THIS SECTION. THE SOLE INTENT OF THIS WRITTEN REVIEW IS TO IDENTIFY POTENTIAL PROBLEMS AS SOON AS POSSIBLE. IT IS UNDERSTOOD THAT SOME ERRORS, OMISSIONS OR OBSTRUCTIONS MAY NOT BE EVIDENT UNTIL THE RIGGING CONTRACTOR PREPARES SHOP DRAWINGS.
- 3.2 JOB CONDITIONS
 - A. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS. THE CONTRACTOR SHALL ALSO BE FAMILIAR WITH THE WORK OF ADJOINING TRADES AND COORDINATE WITH THEIR WORK.
 - B. THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE EQUIPMENT FITTING THE INTENDED SPACES WITHOUT INTERFERENCE.
- 3.3 INSTALLATION
 - A. ONLY TRAINED PERSONNEL SHALL INSTALL THE EQUIPMENT IN THIS SECTION.
 - PROVIDE SCAFFOLDING AND PLATFORMS AS REQUIRED FOR INSTALLATION.
 - WIRE ROPES SHALL BE ALIGNED AND MULED SO AS NOT TO TOUCH ANYTHING EXCEPT THEIR SHEAVE GROOVES AND TERMINATIONS.
 - D. TURNBUCKLES SHALL BE MOUSED WITH PLASTIC TIE WRAP AFTER ADJUSTMENT. WIRE MOUSING IS NOT ACCEPTABLE.
 - SHACKLE SCREW PINS SHALL BE MOUSED WITH PLASTIC TIE WRAP. WIRE MOUSING IS NOT ACCEPTABLE.
 - WIRE ROPE CLIPS SHALL BE SPACED AND BOLTS SHALL BE TIGHTENED TO THE MANUFACTURER'S RECOMMENDED TORQUE.
 - G. ATTACH NICOPRESS SLEEVES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. CHECK THE CRIMPS WITH THE MANUFACTURER'S GO/NO-GO GAUGE. CHECK THE ADJUSTMENT OF THE NICOPRESS TOOL AFTER EVERY 50 CRIMPS. MAXIMIZE THE NUMBER OF IN-SHOP NICOPRESS ATTACHMENTS.
 - H. USE LOCK WASHERS WITH ALL PIPE CLAMPS.
 - SECURE ALL LOOSE EQUIPMENT, TOOLS AND DEBRIS FROM FALLING FROM THE GRIDIRON AND GALLERIES DURING ALL PHASES OF THE INSTALLATION.
 - AT THE END OF EACH DAY DURING THE INSTALLATION PERIOD, REMOVE ALL REFUSE AND SCRAP MATERIALS TO COLLECTION POINTS SPECIFIED BY THE OWNER UPON COMPLETION OF THE INSTALLATION, LEAVE ALL AREAS BROOM CLEAN.
 - K. LOCATE ALL LOOSE SYSTEM PARTS AS DIRECTED BY THE OWNER.

A. PROTECT THE EQUIPMENT IN THIS SECTION FROM DAMAGE AND DETERIORATION, INCLUDING RUST, DURING ALL PHASES OF THE WORK, FROM THE TIME OF MANUFACTURE TO INSTALLATION.

- RUST

3.5 CLEANING AND REPAIR

- AS FIREPROOFING.

3.6 OPERATION OF EQUIPMENT

- **OPERATION OF THE EQUIPMENT**
- 3.7 DRAPERY INSTALLATION
 - ACCEPTANCE.
- 3.8 COMMISSIONING AND PUNCHLISTING
 - OF EACH SYSTEM SPECIFIED HERE.

3.9 TRAINING

- EQUIPMENT PROVIDED.
- 3.10 OWNER'S ACCEPTANCE
- WORK OF OTHERS.
- THE OWNER.

- PART 1 GENERAL 1.1 RELATED DOCUMENTS

1.2 SUMMARY

- FOLLOWING:
- 1. MOTORIZED PIPE GRIDS
- DRAWINGS.

B. NOTIFY THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER IN WRITING OF JOBSITE CONDITIONS THAT WOULD ADVERSELY AFFECT THE EQUIPMENT AFTER INSTALLATION. DO NOT INSTALL THE EQUIPMENT IF JOBSITE CONDITIONS BEYOND THE CONTROL OF THE RIGGING CONTRACTOR WILL RESULT IN DAMAGE OR DETERIORATION, INCLUDING

C. RUST RESULTING FROM FLAWS IN MANUFACTURING AND FINISHING SHALL BE COVERED UNDER THE WARRANTY.

A. WHEN CONSTRUCTION IS COMPLETE, RESTORE ALL SYSTEM COMPONENTS TO THEIR DELIVERED CONDITION. THIS INCLUDES DUSTING, CLEANING, AND REMOVAL OF CONSTRUCTION MATERIALS SUCH

B. REPAIR ANY WORK OR FINISHES THAT ARE DAMAGED DURING INSTALLATION BY THE CONTRACTOR FOR THE WORK IN THIS SECTION. THIS INCLUDES THE WORK IN THIS SECTION AND THE WORK OF OTHERS. WHERE THE WORK OF OTHERS IS DAMAGED, REIMBURSE THE APPROPRIATE CONTRACTOR FOR THE REPAIR.

A. PRIOR TO COMPLETION OF THE INSTALLATION AND TURNOVER TO THE OWNER, THE EQUIPMENT IN THIS SECTION SHALL BE OPERATED BY EMPLOYEES OF THE CONTRACTOR, THOSE AUTHORIZED BY THE CONTRACTOR, OR THOSE UNDER THE CONTRACTOR'S SUPERVISION.

B. THE CONTRACTOR SHALL ADVISE THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER IN WRITING OF ANY UNAUTHORIZED

A. HANG ALL DRAPERIES FOR INSPECTION AND ACCEPTANCE. THE OWNER SHALL ASSUME RESPONSIBILITY FOR SOILING AND DAMAGE AFTER

B. DO NOT HANG THE DRAPERIES IF ENVIRONMENTAL CONDITIONS IN THE BUILDING WILL BE DETRIMENTAL TO THE GOODS. NOTIFY THE ARCHITECT AND THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER IN WRITING OF ANY ADVERSE ENVIRONMENTAL CONDITIONS.

A. THE CONTRACTOR SHALL WORK WITH THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER TO ARRANGE FOR A PUNCHLISTING PERIOD FOR THE WORK IN THIS SECTION. THE PUNCHLISTING PERIOD SHALL TAKE PLACE AT LEAST 2 MONTHS BEFORE THE FIRST SCHEDULED REHEARSAL ON STAGE. PUNCHLISTING SHALL CONSIST OF A MINIMUM OF AN 8-HOUR DAY. THE BUILDING SCHEDULE SHALL BE SUCH THAT NO OTHER CONFLICTING OR OBSTRUCTING ACTIVITY IS TAKING PLACE. PUNCHLISTING SHALL INCLUDE THE OPERATION OF EVERY COMPONENT

PRIOR TO PUNCHLISTING, THE RIGGING CONTRACTOR SHALL COMMISSION THE SYSTEM AND CERTIFY THAT THE INSTALLATION IS COMPLETE AND READY FOR PUNCHLISTING BY THE THEATRE CONSULTANT. IF SUBSTANTIAL PORTIONS OF THE INSTALLATION ARE NOT COMPLETE, REQUIRING THE CONSULTANT TO MAKE ANOTHER PUNCHLIST TRIP, THE RIGGING CONTRACTOR SHALL COMPENSATE THE CONSULTANT FOR TIME SPENT AND TRAVEL EXPENSES. COMPENSATION SHALL BE AT THE CONSULTANT'S PREVAILING HOURLY AND PER DIEM RATES.

A. ASSIST THE OWNER IN BECOMING FAMILIAR WITH THE COMPLETED INSTALLATION AND PERSONALLY INSTRUCT REPRESENTATIVES OF THE OWNER IN THE PROPER OPERATION AND MAINTENANCE OF ALL

A. THE OWNER WILL ACCEPT THE WORK IN THIS SECTION UPON THE SATISFACTORY COMPLETION OF ALL PUNCH LIST ITEMS.

B. PRIOR TO FINAL ACCEPTANCE, THE OWNER RESERVES THE RIGHT TO USE ANY COMPLETED PORTION OF THE WORK IN THIS SECTION AT NO ADDITIONAL COST, UNLESS SAID USE POSES A POTENTIAL HAZARD TO PERSONNEL OR RISKS DAMAGE TO THE WORK IN THIS SECTION OR THE

C. THE WARRANTY PERIOD SHALL COMMENCE UPON FINAL ACCEPTANCE BY

END OF SECTION

SECTION 266010

RIGGING SYSTEMS ELECTRICAL WORK

A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.

A. THE WORK OF THIS SECTION INCLUDES ALL LABOR, MATERIALS EQUIPMENT AND SERVICES NECESSARY TO COMPLETE THE STAGE RIGGING AND DRAPERIES INSTALLATION, AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING, BUT NOT LIMITED TO, THE

THE CONTRACTORS FOR THE ABOVE WORK WILL FURNISH THE CONTROL SYSTEM COMPONENTS. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE SYSTEM COMPONENTS, PROVIDE CONDUIT AND WIRE RUNS BETWEEN COMPONENTS, AND PERFORM ALL TERMINATIONS.

C. ELECTRICAL SERVICE FOR THE ABOVE WORK IS SHOWN ON THE E-SERIES

D. THE TR-SERIES CONTRACT DRAWINGS PROVIDE BLOCK DIAGRAMS AND EQUIPMENT LOCATIONS. THE FINAL DESIGN OF THE CONTROL SYSTEMS IS THE RESPONSIBILITY OF THE RESPECTIVE CONTRACTORS, WHO WILL SUPERVISE THE ELECTRICAL CONTRACTOR'S WORK.

- 1.3 PRACTICES AND PROCEDURES
 - A. PRACTICES AND PROCEDURES FOR THE WORK IN THIS SECTION SHALL CONFORM TO APPLICABLE SECTIONS IN THIS DIVISION.

SECTION 116123

END OF SECTION

DEMOUNTABLE PLATFORMS

PART 1 – GENERAL

- 1.1 RELATED DOCUMENTS
 - A. DRAWINGS AND GENERAL PROVISIONS OF THE CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND DIVISION 01 SPECIFICATION SECTIONS, APPLY TO THIS SECTION.
- 1.2 WORK INCLUDED
 - A. THE WORK IN THIS SECTION IS PART OF THE BASE BID AND INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT TO FURNISH AND INSTALL THE FOLLOWING:
 - 1. MOBILE CONTROL BOOTH
- 1.3 RELATED WORK
- A. RELATED WORK INCLUDES, BUT IS NOT LIMITED TO, THE FOLLOWING: 1. FINISHED SOUND STAGE FLOOR. 1.4 POST-BID SUBMITTALS
 - A. SUBMITTAL PROCEDURES SHALL BE AS DICTATED BY THE ARCHITECT
 - B. SUBMIT SHOP DRAWINGS FOR FABRICATION AND INSTALLATION. INCLUDE PLANS, DETAIL SECTIONS, AND RELATED CONDITIONS. INDICATE MATERIALS, METHODS, FINISHES, ATTACHMENTS, AND ACCESSORY ITEMS
 - C. SHOP DRAWINGS SHALL REFLECT FIELD SURVEY INFORMATION.
 - D. SUBMIT LOAD DATA FOR THE PLATFORM SYSTEM, INCLUDING SAFE WORKING LOADS, PROOF LOADS, AND ANY SPECIAL CONDITIONS RELATING TO THE USE OF THE PLATFORM SYSTEM.
 - E. UPON COMPLETION OF THE INSTALLATION, PROVIDE 1 REDUCED SET OF THE SHOP DRAWINGS IN A 3-RING BINDER FOR THE OWNER. IN ADDITION, PROVIDE ELECTRONIC COPIES OF THE SHOP DRAWINGS FOR THE OWNER, THE ARCHITECT AND THE THEATRE CONSULTANT. ELECTRONIC COPIES SHALL BE IN PDF FORMAT.
 - F. PROVIDE 1 HARD COPY OF AN INSTRUCTION AND MAINTENANCE MANUAL FOR THE OWNER. IN ADDITION, PROVIDE ELECTRONIC COPIES OF THE MANUAL FOR THE OWNER, THE ARCHITECT AND THE THEATRE CONSULTANT. ELECTRONIC COPIES SHALL BE IN PDF FORMAT. THE MANUAL SHALL INCLUDE:
 - G. SYSTEM DESCRIPTION.
 - 1. OPERATION INSTRUCTIONS, INCLUDING SAFETY MEASURES. MAINTENANCE INSTRUCTIONS, INCLUDING RECOMMENDED
 - PROCEDURES AND SCHEDULES FOR INSPECTING SYSTEM COMPONENTS.
 - 3. CATALOG CUTS FOR ALL PURCHASED EQUIPMENT
 - H. INSTRUCTION AND MAINTENANCE MANUALS SHALL BE PROVIDED AT THE TIME OF OWNER TRAINING
- 1.5 WARRANTY
 - A. WARRANT THE EQUIPMENT IN THIS CONTRACT TO BE FREE OF DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF 2 YEARS AFTER ACCEPTANCE OF THE COMPLETED INSTALLATION BY THE OWNER. DEFECTIVE WORK SHALL BE REPAIRED AND REPLACED AT NO COST TO THE OWNER. THE WARRANTY SHALL NOT COVER THE RESULTS OF NORMAL USE. NOR SHALL IT COVER DAMAGE DUE TO NEGLECT OR IMPROPER USE OF THE EQUIPMENT.
- 1.6 APPLICABLE STANDARDS
 - A. ALUMINUM ASSOCIATION:
 - 1. AA STANDARD AA-M12C22A41
 - 2. AA STANDARD AA-M12C22A42/44.
 - B. AMERICAN INSTITUTE OF STEEL CONSTRUCTION: AISC MANUAL OF STEEL CONSTRUCTION
 - C. AMERICAN PLYWOOD ASSOCIATION: US. PRODUCT STANDARD PS 1-83
 - D. AMERICAN SOCIETY FOR TESTING AND MATERIALS
 - 1. ASTM A36: STANDARD SPECIFICATION FOR STRUCTURAL STEEL.
 - ASTM A283: STANDARD SPECIFICATION FOR LOW AND INTERMEDIATE TENSILE STRENGTH CARBON STEEL PLATES.
 - ASTM A307: STANDARD SPECIFICATION FOR CARBON STEEL BOLTS AND STUDS. 60.000 PSI TENSILE STRENGTH.
 - ASTM A325: STANDARD SPECIFICATION FOR HIGH-STRENGTH BOLTS FOR STRUCTURAL STEEL JOINTS.
 - ASTM A500: STANDARD SPECIFICATION FOR COLD-FORMED WELDED AND SEAMLESS CARBON STEEL STRUCTURAL TUBING IN ROUNDS AND SHAPES.
 - ASTM A501: STANDARD SPECIFICATIONS FOR HOT-FORMED WELDED AND SEAMLESS CARBON STEEL STRUCTURAL TUBING.
 - ASTM A570: STANDARD SPECIFICATION FOR STEEL, SHEET AND STRIP, CARBON, HOT-ROLLED, STRUCTURAL QUALITY.
 - ASTM B209: STANDARD SPECIFICATION FOR ALUMINUM-ALLOY SHEET AND PLATE.
- E. AMERICAN WELDING SOCIETY (AWS):
 - 1. AWS D1.1 STRUCTURAL WELDING CODE-STEEL
 - AWS D1.3 STRUCTURAL WELDING CODE-SHEET STEEL, SECOND 2 EDITION.
- F. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA): NFPA 102: STANDARD FOR ASSEMBLY SEATING, TENTS, AND MEMBRANE STRUCTURES.

PART 2 – PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS AND PRODUCTS

A. THE FOLLOWING ARE ACCEPTABLE PRODUCTS AND MANUFACTURERS:

- "SC90" SINGLE SIDED DECK STAGING CONCEPTS 8400 WYOMING AVENUE NORTH, SUITE 100 MINNEAPOLIS, MN 55445
- (763)533-2094 "ALL PURPOSE STAGE DECK" DECK STAGERIGHT CORPORATION **495 PIONEER PARKWAY** CLARE, MICHIGAN 48617 (800) 438-4499
- 3. "VERSALITE" DECK
 - WENGER CORPORATION 555 PARK DRIVE OWATONNA MINNESOTA 55060 (507) 455-4100
- B. TYPICAL PLATFORM DETAILS
- PLATFORMS SHALL SUPPORT A MINIMUM LIVE LOAD OF 150 POUNDS PER SQUARE FOOT.
- PLATFORMS SHALL HAVE INTEGRAL LOCKS FOR ATTACHING ADJACENT SECTIONS.
- PLATFORM EDGING SHALL BE EXTRUDED ALUMINUM WITH A MILLED FINISHED DESIGNED TO ACCEPT ACCESSORY COMPONENTS.
- F. SUPPORT LEGS SHALL PERMIT 2 INCH FINE-LEVELING ADJUSTMENT WITH A NON-MARRING SCREW FOOT.
- BRIDGE SUPPORTS ARE ACCEPTABLE, IF APPLICABLE TO A MANUFACTURERS' SYSTEM.
- H. FLOOR SURFACE SHALL BE TEMPERED BOARD PAINTED BLACK TO MATCH THE STAGE FLOOR, (IF PAINTED HARDBOARD FLOOR FINISH).
- PROVIDE CHAIR STOPS FOR ALL SIDES OF MOBILE UNIT.

PART 3 – EXECUTION

D.

G.

3.1 COORDINATION

A. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL DRAWINGS. SPECIFICATIONS, AND FIELD CONDITIONS WHICH AFFECT THE WORK IN THIS CONTRACT. NOTIFY THE OWNER WHENEVER FIELD MEASUREMENTS, ANALYSIS OF THE DRAWINGS AND SPECIFICATIONS, OR PROGRESS OF OTHER TRADES INDICATES THAT THE WORK IN THIS CONTRACT CANNOT BE COMPLETED AS SPECIFIED OR AS SCHEDULED.

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- THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR THE EQUIPMENT FITTING THE INTENDED SPACES WITHOUT INTERFERENCE.

3.3 PROTECTION OF EQUIPMENT

PROTECT THE EQUIPMENT IN THIS SECTION FROM DAMAGE AND DETERIORATION, INCLUDING RUST, DURING ALL PHASES OF THE WORK, FROM THE TIME OF MANUFACTURE TO INSTALLATION.

3.4 CLEANING AND REPAIR

A. REPAIR ANY WORK OR FINISHES THAT ARE DAMAGED DURING INSTALLATION BY THE CONTRACTOR FOR THE WORK IN THIS SECTION. THIS INCLUDES THE WORK IN THIS CONTRACT AND THE WORK OF OTHERS. WHERE THE WORK OF OTHERS IS DAMAGED, REIMBURSE THE APPROPRIATE CON TRACTOR FOR THE REPAIR.

3.5 COMMISSIONING AND PUNCHLISTING

- A. THE CONTRACTOR SHALL WORK WITH THE GENERAL CONTRACTOR OR CONSTRUCTION MANAGER TO ARRANGE FOR A PUNCHLISTING PERIOD FOR THE WORK IN THIS SECTION. PUNCHLISTING SHALL CONSIST OF A MINIMUM OF ONE 4-HOUR DAY. THE BUILDING SCHEDULE SHALL BE SUCH THAT NO OTHER CONFLICTING OR OBSTRUCTING ACTIVITY IS TAKING PLACE.
- DURING THE PUNCHLISTING PERIOD, THE MOBILE CONTROL UNIT SHALL BE DEPLOYED IN EACH OF ITS INTENDED POSITIONS. THE CONTRACTOR SHALL PROVIDE LABOR AS REQUIRED FOR THE SPECIFIED PUNCHLISTING.
- C. PRIOR TO PUNCHLISTING, THE CONTRACTOR SHALL COMMISSION THE SYSTEM AND CERTIFY THAT THE INSTALLATION IS COMPLETE AND READY FOR PUNCHLISTING BY THE THEATRE CONSULTANT. IF SUBSTANTIAL PORTIONS OF THE INSTALLATION ARE NOT COMPLETE, REQUIRING THE CONSULTANT TO MAKE ANOTHER PUNCHLIST TRIP, THE CONTRACTOR SHALL COMPENSATE THE CONSULTANT FOR TIME SPENT AND TRAVEL EXPENSES. COMPENSATION SHALL BE AT THE CONSULTANT'S PREVAILING HOURLY AND PER DIEM RATES.

3.6 TRAINING

B

A. DEPLOYMENT OF THE MOBILE CONTROL UNIT DESCRIBED ABOVE FOR PUNCHLISTING SHALL ALSO SERVE AS THE OWNER TRAINING SESSION

END OF SECTION

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