PROJECT MANUAL FOR:

THEATER AV SYSTEMS REPLACEMENT

NORTH CENTRAL HIGH SCHOOL

Bid #23-2526

SPOKANE PUBLIC SCHOOLS
Spokane, Washington

March 10, 2026

TABLE OF CONTENTS

Theater AV Systems Replacement – North Central High School

DIVISION 0 - BIDDING AND CONTRACT REQUIREMENTS

Advertisement for Bids
Instructions to Bidders
Bid Form
Debarment / EEO Form
Responsible Bidder Determination Form
Asbestos Abatement Contractor Standard
Agreement Between Spokane Public Schools and Contractor – Public Works Contract
Washington State Prevailing Wages for Spokane County
Monthly Subcontractors List and Certifications

DIVISION 1 - GENERAL CONDITIONS

Section 01010 – Summary of Work
Section 01025 – Schedule Of Values and Applications For Payment
Section 01026 – Change Order Procedures
Section 01040 – Project Coordination
Section 01045 – Cutting and Patching
Section 01060 – Asbestos Safety Requirements
Section 01090 – Definitions and Standards
Section 01100 – Mobilization
Section 01200 – Project Controls
Section 01300 – Submittals
Section 01310 – Construction Schedule
Section 01400 – Quality Controls
Section 01500 – Temporary Facilities
Section 01560 – Environmental Controls
Section 01600 – Material and Equipment
Section 01700 – Project Closeout
Section 01740 – Warranties and Bonds

DIVISION 27 - COMMUNICATIONS

Section 274100 – Common Work Results for Audiovisual Systems
Section 274120 – Theater Audiovisual Systems
Section 274125 – Back of House Spaces - Audiovisual Systems

APPENDIX

Drawings:

Auditorium Audiovisual Systems Renovations – North Central High School

AV0-0 AV Cover Sheet
AV0-1 Projector Mounting Details
AV1-B AV Systems Ground Floor Plan
AV2-B AV Systems Ground Floor RCP
AV3-B AV Infrastructure Ground Level Floor Plan
AV4-B AV Infrastructure Ground Level Floor RCP
AV5-0 AV Conduit Riser
AV6-0 AV Schedules
AV7-0 AV Sections & Elevations
AV8-0 AV Details
AV8-1 AV Details
AV9-0 AV Schematics – Video Systems
AV9-1 AV Schematics – Audio Systems

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Spokane Public Schools
excellence for everyone

March 10, 2026

ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Purchasing Services Department of Spokane Public Schools at 200 N. Bernard St., Spokane, WA, 99201, for the following Public Works project:

Bid No. 23-2526
Theater AV Systems Replacement – North Central High School
until 2:00:00 p.m. PST, Tuesday, April 14, 2026.

Base bids will be received until 2:00:00 p.m. Bids received after the above times will not be considered.

Interested firms may obtain a copy of the bid documents on the district website at www.spokaneschools.org/Page/1035. The bid documents outline the information necessary to understand this selection process and the documentation required for submitting bids.

There will be a NON-MANDATORY Pre-Bid Walk-Through Conference on April 7, 2026 at 10:00 AM. The conference will be held at North Central High School – Public Office, 1600 N. Howard St., Spokane, WA 99205. The particulars of the project, schedules, and the elements of the contract will be discussed. The District will accept Bids from firms that did not attend the non-mandatory pre-proposal conference.

Questions should be addressed to Tim Ryan, Electrical Design Engineer, Spokane Public Schools, 2815 E. Garland Avenue, Spokane, WA 99207-5889, (509) 354-7175, via e-mail (timrya@spokaneschools.org).

Spokane Public Schools encourages the participation of Minority Owned and Women Owned Business Enterprises in this Invitation to Bid.

Individuals with disabilities who may need special accommodations to participate in the public bid opening meeting should contact Michael Pflieger, Purchasing Services, at michaelpf@spokaneschools.org no later than three days before the scheduled date of the meeting so that arrangements for the modifications can be made.

Each bid must be accompanied by a certified check, cashier's check, or bid bond with a State Licensed Surety, in an amount not less than five (5%) percent of the total bid, made payable to Spokane Public Schools. This surety shall be forfeited in the event of failure by the successful bidder to sign a contract or to furnish the necessary one hundred (100%) percent Performance and Payment Bond. The owner reserves the right to reject any or all bids and to waive any informalities or irregularities in the bids received.

BY ORDER OF THE BOARD OF DIRECTORS
SPOKANE PUBLIC SCHOOLS

Dr. Adam Swinyard, Secretary

To be advertised in the Spokesman Review – March 30 and April 6, 2026

INSTRUCTIONS TO BIDDERS

Theater AV Systems Replacement – North Central High School

1.01 DEFINITIONS

A. All definitions set forth in the Contract for Construction or in other Contract Documents are applicable to the Bidding Documents.

B. "**Addenda**" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications or corrections. The contents of Addenda are issued in no particular order and therefore should be carefully and completely reviewed. Addenda relating to administrative matters, such as, for example, the date or time of meetings or bid receipt, may be issued in writing by fax, mail or other delivery.

C. An "**Alternate Bid**" (or "**Alternate**") is an amount stated in the Bid to be added to or deducted from the amount of the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, if accepted by the Owner.

D. "**Award**" means the formal decision by the Owner notifying a Bidder with the lowest responsive Bid of the Owner's acceptance of the Bid and intent to enter into a contract with the Bidder. A contract is only formed upon execution of the contract, and not simply by Award.

E. The "**Award Requirements**" include the following statutory requirements as a condition precedent to Award. The lowest responsive Bidder shall:

(1) have a certificate of registration in compliance with RCW 18.27;

(2) have a current state unified business identifier number;

(3) if applicable, have industrial insurance coverage for the Bidder's employees working in Washington as required in Title 51 RCW;

(4) have an employment security department number as required in Title 50 RCW;

(5) have a state excise tax registration number as required in Title 82 RCW;

(6) not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations);

(7) have received training on the requirements related to public works and prevailing wages under chapters 39.04 and 39.12 RCW, or be exempt from such training requirements if the Bidder has completed three or more public works projects and has had a valid business license in Washington for three or more years; and

(8) within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.

Further, under revised RCW 39.04.350, if the Bidder has a history of receiving monetary penalties for not achieving the apprentice utilization requirements pursuant to RCW 39.04.320, or is habitual in utilizing the good faith effort exception process, the bidder must submit an apprenticeship utilization plan within ten business days immediately following the Owner's notice to proceed.

F. The "**Base Bid**" is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which work may be added or from which work may be deleted for sums stated in Alternate Bids.

G. A "**Bid**" is a complete and properly signed proposal to do the Work or designated portion thereof, submitted in accordance with the Bidding Documents, for the sums therein stipulated.

H. A "**Bidder**" is a person or entity who submits a Bid for a prime contract with the Owner for the Work described in the Contract Documents.

I. The "**Bidding Documents**" include the Advertisement or Invitation to Bid, Instructions to Bidders, the bid form, any other sample bidding and contract forms, the Bid Bond, and the proposed Contract Documents, including any Addenda issued prior to receipt of bids.

J. The "**Contract Documents**" for the Work consist of the Agreement Between Owner and Contractor, the General Conditions of the Contract (as well as any Supplemental, Special or other Conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

K. The "**Owner**" is Spokane Public Schools.

L. A "**Sub-bidder**" is a person or entity who submits a bid to a Bidder for materials, equipment or labor for a portion of the Work.

M. A "**Unit Price**" is an amount stated in the Bid as a price per unit of measurement for materials, equipment or services as described in the Bidding Documents or in the proposed Contract Documents.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

A. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.

B. PRE-BID MEETING. The Bidder has attended any pre-bid meeting(s) required by the Bidding Documents.

C. POSSIBLE SELF-PERFORMED WORK REQUIREMENT. The Bidder will perform *with its own forces* at least that percentage (if any) of the Work required by the Bidding Documents or the Contract Documents.

D. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, without exception.

E. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents (including, without limitation, any liquidated damages and insurance provisions), and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed and has correlated its observations with the requirements of the Contract Documents and it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof, including but not limited to those conditions and matters affecting: transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to and at all times during the performance of the Work. The failure of the Bidder fully to acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.

F. PROJECT MANUAL. The Bidder has checked its copies of any Project Manual issued with the Table of Contents bound therein to ensure the Project Manual is complete.

G. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications for any other contracts to be awarded separately from, but in connection with, the Work being bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the contract being bid upon.

H. LICENSE REQUIREMENTS. Bidders and their proposed Subcontractors shall be registered and shall hold such licenses as may be required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.

I. NO EXCEPTIONS. Bids must be based upon the materials, systems and equipment described and required by the Bidding Documents, and terms and conditions in the Contract Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

1. **Deposit.** Bidders may obtain complete sets of the Bidding Documents from the issuing office and other locations designated in the Advertisement or Invitation to Bid in the number and for the deposit sum, if any, stated. The deposit will be refunded to Bidders who submit a bona fide Bid and return the Bidding Documents in good condition within ten days after receipt of Bids.

   The cost of replacement of any missing or damaged documents will be deducted from the deposit. A Bidder awarded the Contract may retain the Bidding Documents, and its deposit will be refunded.

2. **Sub-bidders.** Bidding Documents will not be issued directly to Sub-bidders or others unless specifically offered in the Advertisement or Invitation to Bid.

3. **Complete sets.** Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for utilizing established plan holder identification processes to obtain updated bid information; the Owner assumes no responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.

4. **Conditions.** The Owner and/or any Architect or Engineer make copies of the Bidding Documents available on the above terms only for the purpose of obtaining Bids on the Work and do not confer a license or grant permission for any other use.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. **Format.** The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the

various building trades, any work by separate contractors, or any Work required for separate facilities in or phases of the Project.

2. **Notify Owner.** Bidders and Sub-bidders shall promptly notify the Owner of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions. All Bidders and Sub-bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Owner any objections (in writing) no later than ten (10) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

3. **Written request.** Bidders and Sub-bidders requiring clarification or interpretation of the Bidding Documents shall make a written request which shall reach the Owner at least three days prior to the date for receipt of Bids.

4. **Addenda.** Any interpretation, correction or change of the Bidding Documents will be made by written Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

5. **Singular references.** Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.

6. **Utilities and runs.** The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. **Standard.** The materials, products, procedures and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality that must be met by any proposed substitution.

2. **Substitution procedure.** No substitution will be considered prior to receipt of Bids unless the Owner receives a written request for approval on a complete substitution request form at least five days prior to the date for receipt of Bids. Each such request shall include the name of the material or equipment proposed to be replaced and a complete description of the proposed substitute, including drawings, cuts, performance and test data, warranty information, and any other information necessary for an evaluation. A statement setting forth any changes in other materials, equipment or other Work that incorporation of the substitute would require shall be included. The

proposer has the burden to prove the merit of the proposed substitute. By proposing the substitution, the Bidder represents that it has personally investigated the proposed material or product and determined that it is equal or better in all respects to that specified, that the same or better warranty will be provided for the substitution, that complete cost data, including all direct and indirect costs of any kind, has been presented, that the Contract Time will not be increased, and that it will coordinate the installation of the substitute if accepted and make all associated changes in the Work. The Owner's decision to approve or disapprove a proposed substitution shall be final. Written requests for approval shall constitute a guarantee by the Bidder that the articles or materials are, in all respects, including warranty and installation, equal or superior to those specified, unless otherwise noted. To the extent the proposed substitution will require additional services by the Architect or its consultants after Bid award, the Bidder, if successful, will be required to pay for these services at their customary hourly rates.

3. **Addendum.** If the Owner approves a proposed substitution prior to receipt of Bids, the approval will be set forth in a written Addendum. Bidders shall not rely upon approvals made in any other manner.

4. **Post-bid substitutions.** After the Contract has been executed, the Owner may consider a written request for the substitution of material or products in place of those specified in the Contract Documents only under exceptional circumstances as specified therein.

D. ADDENDA

1. **Written.** All Addenda will be written. They will be mailed, emailed, faxed, posted electronically, and/or delivered to those the Owner knows to have received a complete set of Bidding Documents.

2. **Copies.** Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.

3. **Verification and acknowledgment of receipt.** Prior to bidding, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. **Form.** Bids shall be submitted on forms identical to the form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.

2. **Entries on the bid form.** All blanks on the Bid form shall be filled in by typewriter or manually in ink.

3. **Words and figures.** Where so indicated by the makeup of the Bid form, sums shall be expressed in both words and figures; in case of discrepancy between the two, and regardless of any statement to the contrary on the Bid form, the amount written in figures shall govern and the words shall be used to determine any ambiguities in the figures. Portions of the Bid form may require the addition of component bids to a total or the identification of component amounts within a total. In case of discrepancy between component amounts listed and their sum(s), the component amounts listed shall govern.

4. **Initial changes.** Any interlineation, alteration or erasure must be initialed by an authorized representative of the Bidder.

5. **Alternates and Unit Prices.** All requested Alternates and unit prices should be bid. The Owner reserves the right, but is not obligated, to reject any Bid on which all requested Alternates or unit prices are not bid. If no change in the Base Bid is required for an Alternate, enter "*No Change.*" If there is no entry, it will be presumed that the Bidder has made no offer to accomplish the Alternate. If it is not otherwise clear from the Bid or nature of the Alternate, it will be presumed that the amount listed for an Alternate is an add rather than a deduct.

6. **No conditions.** The Bidder shall make no conditions or stipulations on the bid form nor qualify its Bid in any other manner.

7. **Identity of Bidder.** The Bidder shall include in the specified location on the bid form the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation (include state of incorporation), or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder.

8. **Bid amounts do <u>not</u> include sales tax.** The Bid shall include in the sum stated all taxes imposed by law, EXCEPT STATE AND LOCAL SALES TAX ON THE CONTRACT SUM.

9. **Bid breakdown.** The Bid form may contain, for the Owner's accounting purposes only, a breakdown of some or all of the components included in the Base Bid.

10. **Certification Statement.**

(a) To ensure that the Owner does not enter into a contract with a debarred or suspended company or individual, each respondent shall include a certification statement with the bid proposal. By signing the certification statement, included as part of the Bid form, the Bidder certifies that neither it nor any of its principals have been proposed for debarment, debarred, or

suspended by a Federal or State agency. It is the responsibility of each Bidder to sign the certification statement and submit it with its proposal.

(b) The Owner may contact the Federal or State agency for confirmation of the respondent's status to debarment or suspension.

11. **Statement Regarding Equal Employment Opportunity.**

The Bid form includes a statement regarding equal employment opportunity. The Bidder shall complete this statement and include this information with its Bid.

12. **Verification of Compliance: Bidder Responsibility**

At the time of bid submittal, a bidder shall submit with their bid, a signed statement of Bidder Responsibility Compliance, included as part of the Bid form.

B. POSSIBLE LISTING OF SUBCONTRACTORS

1. **Procedure.** On certain projects of the Owner, the Bid form includes a requirement that certain Subcontractors must be listed, and the list submitted to the Owner. In these circumstances, the Bidder must name the Subcontractor with whom the Bidder, if awarded the Contract, will subcontract ***directly*** (i.e., not lower-tier Subcontractors) for performance of the work of:

(a) HVAC (heating, ventilation and air conditioning),

(b) plumbing as described in RCW 18.106,

(c) electrical work as described in RCW 19.28,

(d) structural steel installation,

(e) rebar installation,

(f) asbestos abatement work, and

(g) any other categories of Work listed on the Subcontractor listing form.

NAMING OF ASBESTOS ABATEMENT SUBCONTRACTOR. To be considered for asbestos abatement work the subcontractor performing the asbestos work must meet the following standards:

(a) Completion of the qualification statement (attached to these documents) submitted within 48 hours (2 business days) after the bid.

(b) An asbestos subcontractor having received two serious, willful violations issued by SRCAA or OSHA in the past three years of bid date would result in probation. In order for this subcontractor to be a responsible bidder and perform the work, the subcontractor would be responsible for hiring at their own expense a qualified company that oversees asbestos abatement work. This company shall be on the school district's approved list of consultants.

(c) A subcontractor having received three serious, willful violations issued by SRCAA or OSHA in the past three years of the bid date is prohibited from bidding or performing work for Spokane Public Schools until such time as their record meets the standards of "probation" above.

(d) A serious or willful violation is one that carries a monetary fine of $1000 and over or resulted in the potential exposure to workers or occupants.

(e) If a disqualified asbestos subcontractor is listed on a bid, the contractor shall, at their own expense, substitute a qualified asbestos subcontractor to do the work of this contract.

TIMING: The listing of HVAC, plumbing, and electrical subcontractors shall occur within one hour of the published bid submittal time. The listing of structural steel installation and rebar installation subcontractors shall occur within forty-eight hours of the published bid submittal time. The listing of any other categories of Work listed on the Subcontractor listing form(s) shall occur as indicated on such forms or as otherwise described in the bidding documents.

SELF-PERFORMANCE. If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.

IF NO SUBCONTRACTORS: If there is no work to be performed by a HVAC, plumbing, electrical, structural steel installation, rebar installation, or other subcontractor category identified on the Bid form(s), the Bidder should insert "None" or "N/A" on the Bid form. If a category is left blank, that shall indicate that the Bidder believes that there is no Work to be performed by that trade.

MULTIPLE ENTRIES. The Bidder shall not list more than one entity for a particular category of Work identified, unless a Subcontractor varies with an Alternate Bid, in which case the Bidder shall identify the Subcontractor to be used for the Alternate and the affected portion of the Work and otherwise make its Bid clear as to which subcontractor shall be utilized depending upon the selection of alternates.

MULTIPLE SUBMITTAL TIMES. In the event the Bidding Documents call for a second submittal time for receipt of alternate bids, and no additional Subcontractors are listed with such alternate bids, the Owner will consider that there is no change in the Subcontractors from those listed with the base Bid.

FAILURE TO SUBMIT. In accordance with RCW 39.30.060, failure of a Bidder to submit the names of such proposed heating, ventilation and air conditioning, plumbing, electrical, structural steel installation, and rebar installation Subcontractors or to name itself to perform such Work or the naming of two or more Subcontractors to perform the same Work in the time periods described above shall render the Bidder's Bid nonresponsive and, therefore, void.

REQUIREMENT TO SUBCONTRACT. The Bidder, if awarded the Contract, will subcontract with the listed Subcontractor for performance of the portion of the Work designated on the Form of Proposal, subject to the provisions of the Contract for Construction and RCW 39.30.060.

2. **Replacement.** If a listed Subcontractor is unable to comply with any qualification or bondability requirements of the Bidding Documents, or other requirements of the Contract Documents (such as a finding of Subcontractor non-responsibility), the Owner may require the Bidder to replace the Subcontractor with a Subcontractor acceptable to the Owner at no change in the Contract Sum or Contract Time.

3. **Subcontractor Standards.** Subcontractors shall meet contractual and technical qualifications standards, and provide specialized certification, licensing, and/or performance bonding where specified.

C. BID SECURITY

1. **Purpose and procedure.** Each Bid shall be accompanied by a bid security equal to five percent (5%) of the Base Bid. The bid security constitutes a pledge that the Bidder will enter into the Contract with the Owner in the form provided, in a timely manner, and on the terms stated in its Bid and will furnish in a timely manner the payment and performance bonds, certificates of insurance, Contractor's Construction Schedule, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. By submitting its Bid and bid security, the Bidder agrees that any forfeiture is a reasonable prediction at the time of Bid submittal of future damages to the Owner.

2. **Form.** The bid security shall be in the form of a certified or bank cashier's check payable to the Owner or a bid bond acceptable to the Owner and executed by a bonding company licensed in the State of Washington on a Public Works Bond or equivalent form.

3. **Retaining bid security.** The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until the earliest of either (a) the Contract has been executed, and payment and performance bonds have been furnished, or (b) the specified time has elapsed so that Bids may be withdrawn, or (c) all Bids have been rejected.

4. **Return of Bid Security.** Within 45 days after the Bid Date, the Owner will release or return bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all unforfeited bid securities will be returned.

D. SUBMISSION OF BIDS

1. **Procedure.** The Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope identified with the Project name, Bid number, the Bidder's name and address and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "*SEALED BID ENCLOSED*" on the face thereof.

2. **Deposit.** Bids shall be deposited at the designated location prior to the time and date for receipt of Bids indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the time and date for receipt of Bids may be opened, retained unopened, or returned (open or unopened), all at the discretion of the Owner.

3. **Responsibility.** The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.

4. **Form.** Oral, telephonic, electronic, email, fax or telegraphic Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. **After receipt time.** A Bid may not be modified, withdrawn or canceled by the Bidder during a 45-day period following the time and date designated for the receipt of Bids, and each Bidder so agrees in submitting its Bid.

2. **Before receipt time.** Prior to the time and date designated for receipt of Bids, any Bid submitted may be modified or withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing over the signature of the Bidder or by telegram or fax; if by telegram or fax, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids, and the notice shall be worded so as not to reveal the amount of the original Bid.

3. **Resubmittal.** Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.

4. **Bid security with resubmission.** Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. NOTICE

1. Notice or a request from a Bidder under these Instructions to Bidders must be in writing over the signature of the Bidder and delivered in person or by mail, express delivery, telegram or fax. If the notice is by telegram or fax, written confirmation over the signature of the Bidder must be mailed and postmarked on or before the date and time set for the notice.

1.05 CONSIDERATION OF BIDS

A. OPENING OF BIDS: Unless stated otherwise in the Advertisement or Invitation to Bid or Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and Alternate Bids, if any, will be made available to Bidders and other interested parties.

B. REJECTION OF BIDS: The Owner shall have the right but not the obligation to reject any or all Bids for any reason or for no reason, to reject a Bid not accompanied by required bid security or by other material or data required by the Bidding Documents, or to reject a Bid which is in any way incomplete or irregular.

C. ACCEPTANCE OF BID (AWARD)

1. **Owner.** The Owner intends (but is not bound) to award a Contract to the lowest responsible and responsive Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Owner has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid(s) which, in its judgment, is in its own best interests.

2. **Alternates.** The Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in Article 1.09, and to determine the low Bidder on the basis of the sum of the Base Bid and the Alternates accepted. The Owner retains the right to accept Alternate Bid items at the price bid within 45 days after the Agreement is executed.

3. **Requirements for Award**: **Bidder Responsibility.** Before award of a Public Works Contract, a bidder must meet the Award Requirements and the following responsibility criteria to be considered a responsible bidder and qualified to be awarded a public works project.

A. The ability, capacity, and skill to perform the Contract;

B. The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
C. Whether the Bidder can perform the Contract within the time specified;
D. The previous and existing compliance by the Bidder with laws relating to the Contract;
E. The quality of performance of previous contracts, including demonstration of successful completion of similar projects of equal or greater size, scope and value in the last three (3) years;
F. The designated Project Manager shall have a minimum of three (3) years of successful experience in project management and scheduling of projects of similar scope and complexity;
G. The designated Superintendent shall have a minimum of five (5) years of successful supervision of projects of similar scope and complexity;
H. Any other qualifications required by the Contract Documents or Bidding Documents; and
I. Such other information as may be secured having a bearing on the decision to award the contract.

4. At the time of bid submittal, a bidder will submit with their bid, a signed statement in accordance with RCW 9A.72.085 verifying under penalty of perjury that the bidder is in compliance with the bidder responsibility criteria requirement of subsection (3) (G) of this section.

D. BID PROTEST PROCEDURES

1. **Procedure.** A Bidder protesting for any reason the Bidding Documents, a bidding procedure, the Owner's objection to the Bidder or a person or entity proposed by the Bidder, including but not limited to a finding of non-responsibility, the rejection of a Bid, the award of the Contract or any other aspect arising from or relating in any way to the bidding or award or lack thereof shall cause a written protest to be filed with and received by the Owner within two (2) business days of the event giving rise to the protest and, in any event, no later than two (2) business days after the date upon which bids are opened. (Intermediate Saturdays, Sundays and legal holidays are not counted.) The written protest shall include the name of the protesting Bidder, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, and the specific relief requested. The written protest shall be delivered to:

   Purchasing Services Department
   ATTN: Michael Pflieger
   Spokane Public Schools
   200 N. Bernard
   Spokane, WA 99201

2. **Consideration.** Upon receipt of the written protest, the Owner will consider the protest. The Owner may, within three (3) business days of the Owner's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Owner, the Superintendent of the

Owner or designee will review the issues and promptly furnish a final and binding written decision to the protesting Bidder and any other affected Bidder(s) within six business days of the Owner's receipt of the protest. (If more than one protest is filed, the Owner's decision will be provided within six (6) business days of the Owner's receipt of the last protest.) If no reply is received from the Owner during the six-business-day period, the protest shall be deemed rejected.

3. **Waiver.** Failure to comply with these protest procedures will render a protest waived.

4. **Condition precedent.** Timely and proper compliance with and exhaustion of these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. INFORMATION FROM APPARENT LOW BIDDER

1. **Submittal.** Within five (5) days of the Owner's request, the apparent low Bidder shall submit to the Owner:

(a) a properly executed Contractor's Qualification Statement on the form provided (if requested);

(b) a letter or form from the Bidder's insurance company stating that the insurance required by the Contract Documents will become effective upon execution of the Contract;

(c) a letter or form from the Bidder's surety stating that the bond(s) required by the Contract Documents will become effective upon execution of the Contract;

(d) a detailed breakdown of the Bid in a form acceptable to the Owner;

(e) the names of the persons or entities (including a designation of the Work to be performed with the Contractor's own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work; and

(f) the proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.

Failure to provide any of the above information in a timely manner may constitute an event of breach permitting forfeiture of the Bid security.

2. **Responsibility.** The Bidder will be required to establish to the satisfaction of the Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. The responsibility of the Bidder may be judged in part by the responsibility of these proposed entities. In addition to any other criteria stated within these Instructions to Bidders, the following will be considered:

    - The ability, capacity, and skill to perform the contract;
    - The character, integrity, reputation, judgment, experience, and efficiency of the Bidder;
    - Whether the Bidder can perform the contract within the time specified;
    - The quality of performance of previous contracts;
    - The previous and existing compliance by the Bidder with laws relating to the contract; and
    - Such other information as may be secured having a bearing on the decision to award the contract.

3. **Subcontractors.** The responsibility of the Bidder may be judged in part by the responsibility of its Subcontractors. Bidders must verify responsibility criteria for each first-tier Subcontractor. A Subcontractor of any tier that hires other Subcontractors must verify responsibility criteria for each of its lower-tier Subcontractors. Verification shall include that each Subcontractor, at the time of subcontract execution, is Responsible and possesses an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.

4. **Request to Modify Criteria**. No later than ten (10) days prior to the Bid Date, a potential Bidder may request in writing that the Owner modify the responsibility criteria listed in these Instructions to Bidders. The Owner will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the criteria, the Owner will issue an Addendum identifying the new criteria.

5. **Objection.** Prior to the award of the Contract, the Owner will notify the Bidder in writing if the Owner, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. If the Owner has reasonable objection to a proposed person or entity, the Bidder may, at Bidder's option, (1) withdraw the Bid, (2) submit an acceptable substitute person or entity with no change in the established Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by the substitution, or (3) appeal by filing a protest in accordance with paragraph 1.05(D). In the event of withdrawal, bid security will not be forfeited.

4. **Change.** Persons and entities proposed by the Bidder and to whom the Owner has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner.

B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Owner as under consideration for award of a Contract shall also provide a properly executed Contractor's Qualification Statement, if so requested by the Owner.

C. BIDDING MISTAKES: The Owner will not be obligated to consider notice of claimed bidding mistakes received more than three (3) business days after the bid opening. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from bidding on the Project if a subsequent call for bids is made for the Project.

1.07 PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND

A. BOND REQUIREMENTS: Within ten (10) days after the issuance of the Notice of Intent to Award, and prior to the date of execution of the Contract, the Bidder shall furnish evidence satisfactory to the Owner of its ability to obtain statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. The cost of such bond shall be included in the Base Bid.

B. TIME OF DELIVERY AND FORM OF BONDS: The Bidder shall deliver the required bonds to the Owner within ten (10) days after the date of execution of the Contract and prior to commencing operations at the site.

1.08 FORM OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

A. FORM TO BE USED: The Agreement for the Work will be written on the form(s) contained in the Bidding Documents, including any Supplemental or Special Conditions, and the other Contract Documents included with the Project Manual. In the event no form is enclosed, an AIA Document A101, "Standard Form of Agreement Between Owner and Contractor, where the basis of payment is a Stipulated Sum," along with revised AIA Document A201, General Conditions, both as revised, modified and supplemented by the Owner, will be used.

B. CONFLICTS: In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

1.09 CONTRACT DOCUMENTS

This paragraph contains descriptions of some but not all of the provisions of the Contract Documents. Bidders should review in detail the Contract Documents themselves and not rely upon these brief descriptions as complete, inclusive or accurate.

A. RETAINAGE: The Contract Documents specify the statutory retainage requirements of RCW 60.28 for this Project.

B. CONTRACT TIME: The Contract Documents specify the Contract Time. Timely completion of this Project is essential to the Owner.

C. PREVAILING WAGES: The Contract Documents contain requirements regarding the payment of prevailing wages pursuant to RCW 39.12.

D. WRITTEN CLAIMS AND NOTICE: The Contract Documents contain a number of provisions that require the Contractor to provide notice and to make and support Claims in writing within a specified time in order to maintain the claim.

E. CHANGES IN CONTRACT SUM: The Contract Documents contain provisions specifying requirements for and pricing of changes in the Contract Sum.

F. CONTRACTOR REGISTRATION: Pursuant to RCW 39.06, the Bidder shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27.

G. POSSIBLE COMMISSIONING OF CRITICAL SYSTEMS: Certain systems may be designated in the Contract Documents as "Critical Systems." If so, after the Contractor notifies the Owner no later than 30 days prior to the Date of Substantial Completion that the Critical Systems are up and running and ready for normal operation, the Owner will schedule a pre-commissioning inspection of these systems. When the Critical Systems are complete, the Owner will establish the Date of Commissioning.

1.10 GUARANTEED LINE ITEM PRICING

A. Because of the nature of available and future funding for technology, the term of the contract and the line item pricing shall be guaranteed three (3) years minimum from the date of bid award. As more funds become available, an expanded version of this defined project may be applied to some or all of the buildings in the District. Pricing after the three (3) year period shall be adjusted to the same rate of change of the Washington State Prevailing Wage Rate Schedule over that 3 year period to the end of the 6 year bond period (December 31, 2021). **This applies to the Bid Form and all supplemental line item pricing forms**.

B. Accordingly, Spokane Public Schools reserves the right to add or delete items at each location. **The line item pricing forms are required to be submitted with**

each bidder's response. Bidder responses that do not include completed line item pricing sheets will not be considered.

1.11 POSSIBLE TRENCH EXCAVATION SAFETY PROVISIONS

A. To ensure that the Bidder agrees to comply with relevant trenching safety requirements of RCW 39.04.180 and RCW 49.17, the Base Bid may include the cost of any required trenching. The Bidder shall enter in the blank provided on the Bid form the dollar amount the Bidder has included in its Base Bid for any work requiring trenching that will exceed a depth of four feet. If trench excavation safety provisions do not pertain to the Project, the Bidder should enter "N.A." or "Not Applicable" in the blank on the bid form.

1.12 OTHER REQUIREMENTS

A. ACCESS TO PREMISES. Any prospective Bidders or Subcontractors who wish to enter the premises must first notify the school principal or Plant Department and make known their presence.

B. PRE-BID CONFERENCE. A non-mandatory pre-bid walk-through will be held at 10:00 a.m. on Tuesday, April 7, 2026, meeting at the North Central Public Office, 1600 N. Howard St, Spokane, WA. The purpose of the walk-though will be to discuss the project scope, schedules and observe existing conditions. **Attendance at the conference is NOT mandatory but recommended.**

C. DATE OF COMMENCEMENT. Following submittal of documents required in these "Instructions To Bidders" and "Agreement Between Spokane Public Schools and Contractor Public Works Contract", the Date of Commencement is expected to be on or about April 27, 2026 with on-site work to commence no earlier than June 17, 2026.

D. DATE OF SUBSTANTIAL COMPLETION. The Work shall be Substantially Completed to the Owner's satisfaction on or before August 14, 2026.

E. SCHEDULE OF WORK

Work shall start when the Contractor receives a formal "Notice to Proceed", shall proceed with promptness and dispatch, and shall conform to Section 01010, "Summary of Work."

F. SEQUENCE OF WORK, BUILDING-TO-BUILDING

Prior to receiving the Notice to Proceed on the project, the successful vendor must present a management plan and time line describing the process for completion of punch list items, as-built drawings and test results for each site. The management plan must be delineated and staffed to the satisfaction of the owner. Punch list items must be completed within 5 working days after the substantial completion notice for that site. As-built drawings and test results documentation must be completed within 10 working days after substantial completion notice for that site.

G. REQUIREMENTS FOR "AFTER-HOURS" OR "SWING-SHIFT" WORK

1. During the school year, all work must occur after school, generally commencing at 3:00 p.m. to 4:00 p.m. and ending approximately 7 to 8 hours thereafter. School officials will provide access to the work and lock-up at the end of each day's shift. All work must be cleaned up at the end of each shift, leaving each building in a clean, usable condition, ready for the next day of school.

2. During the summer break period, conventional day-time hours may be adopted for all work. Daily clean-up is still required during this period so as not to conflict with major summer cleaning efforts by custodial staff.

3. During winter break and spring break, conventional day-time hours may be adopted for all work – to be verified with the head custodian for that site location. Daily clean-up is still required during this period so as not to conflict with any cleaning efforts by custodial staff.

4. Except for the summer break period noted above, all work shall be conducted on a "swing-shift" schedule.

H. LIQUIDATED DAMAGES. If the Contractor fails to achieve Substantial Completion of all the Work on or before August 14, 2026, then the Contractor agrees, as part of consideration for awarding the Contract, to pay the Owner the amount of 500 dollars ($500.00) for each calendar day beyond each of those dates as liquidated damages. If the Contractor fails to achieve Final Completion of all the Work within the Contract Time on or before September 1, 2026, then the Contractor agrees as part of consideration for awarding the Contract, to pay the Owner the amount of one hundred dollars ($100.00) for each calendar day beyond the Contract Time that Date as liquidated damages.

I. L & I FEES. The State of Washington requires payment of fees for approval of "Statement of Intent to Pay Prevailing Wages" forms and "Affidavit of Wages Paid" forms. Payment of such fees is the responsibility of the Contractor.

J. PLAN CHECK AND OTHER FEES. The Owner will prepay the plan check fee and building permit. The plan check fee and building permit should not be included in the amount Bid. The Contractor shall pay all fees, permits, etc. as specified in the General Conditions.

END OF SECTION

BID FORM

Theater AV Systems Replacement – North Central High School

The undersigned hereby submits the following Bid to:

Purchasing Services Department
ATTN: Michael Pflieger
Spokane Public Schools
200 N. Bernard
Spokane, WA 99201

A. CONTRACT

The undersigned, if notified of the acceptance of this Bid within thirty (30) days of the time set for the opening of Bids, agrees to execute a Contract for the Work, for a compensation of the sum(s) stated below and to give bonds as required by the Contract Documents and Washington statutes.

The Agreement Between Spokane Public Schools and Contractor – Public Works Contract, has been modified and made the FORM OF AGREEMENT for this contract. The form is bound herein after this section.

B. BID GUARANTEE

The undersigned further agrees that the certified check or Bid bond, payable to the Owner and accompanying this Bid, is the measure of liquidated damages which the Owner will sustain by failure of the undersigned to execute and deliver the above-named agreement and bonds within ten (10) days of written notification of the award of the Contract. Should the undersigned fail to enter into the Contract, the certified check, cashier's check, or Bid bond shall be forfeited as liquidated damages. If this Bid is not accepted by the Owner within thirty (30) days after the time set for the opening of Bids, or if the undersigned executes and delivers said bonds, the check or Bid bond shall be returned.

C. ADDENDA

Receipt of Addenda numbered _____ is hereby acknowledged.

(Fill in number of each addendum received)

D. BID

1. BASE BID

Having carefully examined the Bidding Documents and Instruction To Bidders as well as premises and conditions affecting the Work, the undersigned proposes to furnish all labor and materials and to perform all Work required by and in strict accordance with the above-named documents for a fixed amount in the sum of the following amount, NOT INCLUDING SALES TAX:

_____

_____ Dollars $_____

(*Please print dollar amount in words in space above)* *(Dollar amount in numerals)*

2. SALES TAX AND PERMITS

The retail sales tax shall not be included in the Bid sums; the Owner will pay such taxes proportionally with each periodic payment. All City of Spokane plan check and building permit fees have been paid by the owner and shall not be included in the Bid. (See SPECIAL CONDITIONS of the CONTRACT section following the GENERAL CONDITIONS of the CONTRACT for CONSTRUCTION for detailed requirements. All other necessary fees and taxes shall be paid by the Contractor and included in the Bid.)

3. OVERHEAD AND PROFIT

All of the above Bid prices (and alternate bid or unit cost prices) include overhead and profit.

4. TIME OF COMPLETION/LIQUIDATED DAMAGES

The Undersigned agrees if awarded the Contract, to complete the entire project as stipulated in the Contract Documents. The Undersigned further agrees that the Owner may retain from the compensation otherwise due, liquidated damages costs incurred by the owner, for each calendar day expiring beyond a time fixed for completion that the work remains not substantially completed. This sum is not to be construed in any sense as penalty, but as agreed liquidated damages which the Owner shall sustain in the case of failure of the Undersigned to complete the work at the time stipulated. For dates of completion and liquidated damages amount, see SECTION entitled "INSTRUCTIONS TO BIDDERS".

5. VERIFICATION

The undersigned hereby verifies under penalty of perjury, in accordance with RCW 9A.72.085, that Bidder is in compliance with the responsible bidder criteria requirement of subsection (1)(g) of RCW 39.04.350. Specifically, within the three-year period immediately preceding the date of the bid solicitation for this Project, Bidder has not been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by

a court of limited or general jurisdiction that Bidder has willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW. The undersigned certifies (or declares) under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

E. BIDDER

Bidder's Firm Name	Contractor's Tax ID Number
Signed	Contractor's Registration Number
Address	Date and place
City, State, Zip Code	
Telephone	
Email	

END OF SECTION

DEBARMENT / EEO FORM

Theater AV Systems Replacement – North Central High School

A. **STATEMENT REGARDING EQUAL EMPLOYMENT OPPORTUNITY**

We hereby certify that we have made a conscientious effort to comply with federal, state and local equal employment opportunity requirements in bidding this project and we will make the same efforts in fulfilling the requirements if awarded the Contract. We further designate:

Name_____

Title_____

Telephone Number_____

as the person who has been charged with the responsibility for securing compliance with and reporting progress on affirmative efforts.

B. **CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

In submitting the bid to do the work as outlined in the Contract Specifications, we hereby certify that we have not been suspended or in any way are excluded from Federal procurement actions by any Federal agency. We fully understand that, if information contrary to this certification subsequently becomes available, such evidence may be grounds for non-award or nullification of the Contract.

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, Participant's responsibilities.

Signed _____

Title _____

Firm _____

Address _____

City & State _____

Date _____

END OF SECTION

RESPONSIBLE BIDDER DETERMINATION FORM

Theater AV Systems Replacement – North Central High School

The following questionnaire must be completed in full, signed by an authorized agent of the Bidder, and submitted with Bid. Failure to submit this form is grounds for rejection of Bid. Attach additional sheets as necessary to fully provide required information.

LICENSING AND CERTIFICATION

Licensing: The contractor shall, at the time of the bid, be licensed by the State or local jurisdiction as an electrical contractor in the Limited, Intermediate, or Unlimited classification.

CONTRACTOR: _____

Home
Office: _____

Contractor's License
Number _____

Bond Registration Number _____

Bidder is a(n): ____ Individual ____ Partnership ____ Corporation

List other business names used by Bidder during past five years if different than listed above:

_____

_____

Address of the office that will provide service:

_____

Length of time Bidder has been engaged in work of this type and scope:

_____

Length of time Bidder has conducted business in the Greater Spokane Area:

_____

Has the Bidder, or any representative or partner thereof, failed to complete any contract?
____ No ____ Yes If yes, provide details:

_____

_____

Has the Bidder ever had any performance bonds called as a result of its work?

____ No ____ Yes If yes, provide project name(s), contracting party(s), bond amount(s)

_____

Has the Bidder ever had been found guilty of any violation of State or Federal Employment Laws?
____ No ____ Yes If yes, provide details:

_____

_____

Has the Bidder ever filed for Chapter Eleven or other bankruptcy? ___ No ____ Yes
If yes, provide details:

_____

_____

Have any adverse legal judgments been rendered against the Bidder in the past five years?
____ No ____ Yes If yes, provide details:

_____

_____

Has the Bidder filed any claims with Washington State Workman's Compensation or other insurance company for accidents resulting in fatal injury or dismemberment to any of this employees in the past five years?
____ No ____ Yes If yes, provide dates, type(s) of injury, agency(s) receiving claim:

_____

_____

Provide location of Bidder's main parts support warehouse:

_____

_____

Provide standard labor rate for service work performed on a time and materials basis:

_____

_____

TECHNICIANS

Provide number of trained technicians that your serving office currently has on full-time payroll?

_____

Provide the number of total clients which are the responsibility of the service technicians indicated above:_____

Provide list of technicians currently certified for the type of work requested:

Technician Name	Type of Certification	Certifying Organization	Date Certified

The undersigned represents and warrants under penalties of perjury that the foregoing information is true and accurate to the best of their knowledge. The undersigned herby authorizes the Owner or their Consultant to verify all information contained herein.

Signature of

Bidder: _____

Title: _____

Date: _____

PROJECT REFERENCES:

Provide list of project references for projects of similar type and scope, completed within the past five years. Each reference should include organization name, contact name, address, telephone number, and a description of project. If needed, use the identical form on additional sheets of paper, continuing to number the references.

Name and Address	Contact Name and Telephone Number	Project Type, Contract Amount	Date
(EXAMPLE)			
ABC Co.	John Smith	Re-Construct Library	
Spokane, WA	(509) 555-5555	$150,000.00	5/25/19

1. _____

_____

2. _____

_____

3. _____

_____

The undersigned represents and warrants under penalties of perjury that the foregoing information is true and accurate to the best of their knowledge. The undersigned herby authorizes the Owner or their Consultant to verify all information contained herein.

Signature of

Bidder:

_____

Title:

_____

Date:

_____

END OF SECTION

ASBESTOS ABATEMENT CONTRACTOR STANDARD

Theater AV Systems Replacement – North Central High School

The abatement contractor is required to submit the following information to the school district 72 hours prior to the bid opening (excluding holidays and weekends). Failure to disclose accurate or complete information may result in disqualification or probation.

Abatement Contractor name _____

Company address _____

_____

Contractor License number _____

Contact name and phone number_____

List 3 previous jobs and references (include history of job size, contact name and phone number):

1._____

_____

2._____

_____

3._____

_____

Asbestos abatement done under other company names in the last 5 years:_____

_____

Has your company received violations pertaining to incomplete paperwork regarding asbestos abatement? If so please list violations: _____

_____

Does your company have unpaid workers' compensation claims?

_____

_____

List all violations (including those pending) for Washington, Idaho, Montana and Oregon:

_____

_____

_____

AGREEMENT
BETWEEN
SPOKANE PUBLIC SCHOOLS
AND CONTRACTOR
PUBLIC WORKS CONTRACT

This AGREEMENT is made as of the _____ day of _____, 2026, between:

The "School District":	Spokane Public Schools, District No. 81 200 N. Bernard St Spokane, Washington 99201 Attn: Travis Schulhouser, Executive Director of Facilities and Planning
and the "Contractor":	_____ _____ _____ Attn: _____
The name and address of the Project is:	Theater AV Systems Replacement – North Central H.S. 1600 N. Howard St. Spokane, WA 99205
The Architect/Engineer ("A/E"), if any, is:	N/A
The School District's Representative is:	Tim Ryan Spokane Public Schools, District No. 81 2815 E. Garland Ave. Spokane, Washington 99207 timrya@spokaneschools.org

The School District and Contractor agree as set forth below.

ARTICLE 1
THE WORK

1.1 The Contractor shall fully execute and complete the entire Work described in the Contract Documents.

ARTICLE 2
DATES OF COMMENCEMENT AND SUBSTANTIAL AND FINAL COMPLETION

2.1 Contractor shall proceed with the Work upon receipt of the School District's notice to proceed, expected to be on or about April 27, 2026, with on-site Work to commence no earlier than the end of the school year, June 17, 2026 (possibly earlier at June 4, 2026 per Theater staff).

2.2 The Contractor shall achieve Substantial Completion of the entire Project no later than August 14, 2026, and shall achieve Final Completion no later than thirty days thereafter, subject to adjustments of the Contract Time as provided in the Contract Documents.

2.3 Liquidated damages shall be $500 per day for each calendar day after the Contract Time that Substantial Completion of the Project is not timely attained and $500 per day for each calendar day after the Contract Time that Final Completion of the Project is not timely attained.

ARTICLE 3
CONTRACT SUM

3.1 The School District shall pay the Contractor for the Contractor's performance of the Contract the Contract Sum of _____ Dollars ($_____), subject to additions and deductions as provided in the Contract Documents. Sales tax is not included in and shall be added to the Contract Sum.

3.2 The Contract Sum is based upon and includes the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the School District: _____

3.3 Unit prices, if any, are as follows: _____

3.4 Allowances, if any, are as follows: _____

3.5 According to the School District's pre-bid estimate, this Project is estimated to cost less than one million dollars, and so the apprenticeship requirements of RCW 39.04.320 do not apply.

ARTICLE 4
PAYMENT

4.1 The School District will make payments to the Contractor as provided below and elsewhere in the Contract Documents based upon Application(s) for Payment submitted by the Contractor. The School District will make progress payments on account of the Contract Sum per Article 15. The School District will make final payment, constituting the entire unpaid balance of the Contract Sum except statutory retainage, to the Contractor when the Work has achieved Final Completion, the Agreement has been fully performed, and the School District's Board of Directors has accepted the Work. The retainage shall be paid pursuant to RCW 60.28 and the Contract Documents. A performance and payment bond is required; see Article 17.

4.2 Payments due and unpaid under the Agreement shall bear interest as specified by RCW 39.76, not to exceed the Bank of America prime rate plus 2%.

ARTICLE 5
PERMITS AND FEES

5.1 The School District will secure and pay for only those governmental permits, approvals, fees, licenses, inspections, governmental charges and inspection fees explicitly listed as the School District's responsibility in the Contract Documents. The Contractor shall prepare documents for, secure, and pay for all other necessary permits required for the Work.

5.2 The School District shall secure and pay for necessary approvals, easements, assessments and charges required for the use or occupancy of permanent structures or permanent changes in existing facilities.

ARTICLE 6
PROPERTY INSURANCE

6.1 The School District shall include this project in its existing property insurance coverage for loss or damage to the property in the course of construction. This may be a standard property policy and is not necessarily a builder's risk policy.

6.2 The Contractor shall be responsible for securing property insurance for its own equipment. This property insurance shall be on an "all-risk" or equivalent policy form and shall include, but not be limited to, coverage for fire and extended coverage, theft, vandalism, malicious mischief, collapse and windstorm. Any deductible shall be the sole responsibility of the Contractor.

6.3 Any loss insured under Section 6.1 is to be adjusted with the School District and made payable to the School District as trustee for the insureds, as their interest may appear. The Contractor shall pay each subcontractor a just share of any insurance moneys received by the Contractor, and by appropriate agreement, written where legally required for validity, shall require each subcontractor to make payments to his sub-subcontractors in similar manner.

6.4 The School District as trustee shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within five (5) days after the occurrence of loss to the School District's exercise of this power, and if such objection is made, the matter shall be decided by a court of competent jurisdiction or as the parties in interest otherwise agree. The School District as trustee shall, in that case, make settlement with the insurers in accordance with directions of the court.

ARTICLE 7
ENUMERATION OF CONTRACT DOCUMENTS

The Contract Documents are enumerated as follows, except for modifications issued after execution of this Agreement:

7.1 This executed Agreement between the School District and Contractor, including the attached General Conditions.

7.2 Any Supplementary and other Conditions of the Agreement that are in the Project Manual or Specifications, or referenced therein.

7.3 The Specifications as follows:

Section	Title	Pages

As listed in the Index of Specifications in the Project Manual.

7.4 The Drawings as follows:

Number	Title	Date

As listed in the Index of Drawings in the Project Manual.

7.5 The Addenda (if any) as follows:

Number	Date	Pages

7.6 Any other documents forming part of the Contract Documents and listed below:
Department of Labor and Industries Prevailing Wage Rates.

This Agreement entered into as of the day and year first written above.

SPOKANE PUBLIC SCHOOLS, DISTRICT NO. 81

By _____
(Signature)

_____
(Printed name and title)

CONTRACTOR

By _____
(Signature)

_____
(Printed name and title)

ARTICLE 8
THE CONTRACT DOCUMENTS

8.1 The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the Contractor. The Contract Documents are complementary, and what is required by one is as binding as if required by all. Performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the intended results.

8.2 The Contract Documents shall not be construed to create a contractual relationship of any kind between the School District and a Subcontractor of any tier, between the A/E (if any) and the Contractor, or between any persons or entities other than the School District and Contractor.

8.3 The term "Work" means the demolition, abatement, disposal, construction and services required by the Contract Documents, whether completed or partially completed, and includes all other labor, materials, equipment and services provided or to be provided by the Contractor to fulfill the Contractor's obligations. The Work may constitute the whole or a part of the Project.

8.4 The term "A/E" means the entity listed as such on the first page of this Agreement, if any. The A/E may be an architect, engineering or similar company, or consultant, and is not necessarily a licensed architect or engineer. If "None" or "N/A" is listed for the A/E, then the School District or its designated representative will perform all of the functions of the A/E described herein. The A/E is not an agent of the School District, and is not authorized to speak on behalf of or bind the School District.

8.5 The Contractor's execution of the Agreement is a representation and acknowledgement that the Contractor has visited the site and become familiar with the local conditions under which the Work is to be performed, that the Contract Sum is reasonable compensation for all the Work, and that the Contract Time is adequate for the performance of the Work. The Contractor's execution of the Agreement is a further representation and acknowledgement that the Contractor has carefully checked and verified all pertinent figures and that it has carefully examined the Contract Documents and the Project site, including any existing structures, and that it has satisfied itself as to the nature, location, character, quality and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services and other items to be furnished, and all other requirements of the Contract Documents, as well as the surface conditions and other matters that may be encountered at the Project site or affect performance of the Work or the cost or difficulty thereof.

ARTICLE 9
ADMINISTRATION OF THE AGREEMENT

9.1 The School District, with assistance from the A/E, will provide administration of the Agreement. The School District must approve in writing all changes in the Contract Sum or Time and all Change Orders, Construction Change Directives, and payments to the Contractor. The School District's Representative may perform any of the duties of the A/E described herein, at the discretion of the School District.

9.2 Other than the School District's designated representative, no representative of the School District is authorized to revoke, alter, enlarge, relax or release any requirements of the Contract Documents, nor to approve or accept any portion of the Work whether or not executed in accordance with, nor to issue instructions contrary to the Contract Documents.

9.3 The School District or the A/E may disapprove, condemn or reject work when, in its opinion, the Work does not conform to the Contract Documents. The School District or the A/E may require special inspection or testing of any Work in accordance with the provisions of the Contract Documents whether or not such Work is then fabricated, installed or completed.

9.4 The School District or the A/E may call, schedule and conduct job meetings, which the Contractor and representatives of its Subcontractors shall attend, to discuss such matters as procedures, progress, problems and scheduling.

9.5 The School District and the A/E may visit the site at intervals each considers appropriate to the stage of the Work to become generally familiar with the progress and quality of the completed Work. However, neither will be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work.

9.6 The School District may occupy the site during the course of the Work.

ARTICLE 10
THE CONTRACTOR

10.1 The Contractor shall perform, supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, personnel and procedures, for safety, and for coordinating all portions of the Work under the Agreement, unless the Contract Documents specifically provide other instructions concerning these matters. The Contractor shall be and operate as an independent contractor in the performance of the Work and shall have complete control over and responsibility for all personnel performing the Work. The Contractor is not authorized to enter into any agreements or undertakings for or on behalf of the School

District or to act as or be an agent or employee of the School District.

10.2 The Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, disposal, and other facilities and services necessary for the proper execution and completion of the Work, whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

10.3 Workers. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. The Contractor shall be responsible to the School District for the acts and omissions of the Contractor's employees, Subcontractors of any tier and their agents and employees, and other persons performing portions of the Work under a contract with the Contractor. Upon the School District's request and for any employee working on the Project, the Contractor shall provide the School District with background checks on each of its employees and of the employees of all Subcontractors of any tier. At no change to the Contract Sum or Contract Time, the School District may provide written notice requiring the Contractor to remove from the Work any employee or other person carrying out the Work that the School District considers objectionable. If the Work is being performed at a site in active school use or where there is a likelihood of contact with children, a person shall be unfit and removed from the site if he or she is a registered sex offender or has pled guilty to or has been convicted of any felony crime involving the physical injury or death of a child (RCW 9A.32 or RCW 9A.36 but not RCW 46.61--motor vehicle violation), the physical neglect of a child (RCW 9A.42), sexual offenses against a minor (RCW 9A.44), sexual exploitation of a child (RCW 9.68A), the sale or purchase of a minor child (RCW 9A.64.030), promoting prostitution of a child (RCW 9A.88), or violation of similar laws of another jurisdiction. Failure to comply with this section shall be grounds for the immediate termination of this Agreement for cause.

10.4 Warranty. The Contractor warrants that materials and equipment furnished under the Agreement will be of good quality and new, that the Work will be performed in a skillful and workmanlike manner, free from defects not inherent in the quality required or explicitly permitted, and that the Work will conform to the requirements of the Contract Documents. The School District may conclude that Work not conforming to these requirements, including substitutions or deviations from the drawings or specifications not properly approved and authorized, is defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor, improper or insufficient maintenance, improper operation, or normal wear and tear under normal usage.

10.5 Taxes and Fees. The Contractor shall pay sales, consumer, use, B & O, and other similar taxes that are legally enacted when bids are received, whether or not yet effective or merely scheduled to go into effect.

10.6 Legal Compliance. The Contractor shall comply with and give notices required by laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on performance of the Work. The Contractor shall promptly notify the School District and A/E in writing if the Contractor observes the Drawings or Specifications to be at variance with them.

10.7 Submittals. The Contractor shall review, approve and submit to the School District or A/E with reasonable promptness Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents. The Work shall be in accordance with approved submittals.

10.8 Progress Schedule. Within *seven days* of execution of this Agreement, the Contractor shall submit a preliminary schedule of the Work to the School District. Failure to do so shall constitute a material breach of the Contract and a material breach of the conditions of the bid bond. Within *thirty days* after execution of the Agreement, and before any progress payment need be made, the Contractor, after consultations with its Subcontractors, shall submit a Progress Schedule to the School District. Neither the School District nor the A/E will, however, be required to review or approve the substance or sequence of the Progress Schedule, which are the Contractor's sole responsibility. The Contractor will be responsible for planning, scheduling, managing, and reporting the progress of the Work in accordance with all of the specific methods and submittals described in the Contract Documents. The Contractor shall use the Contract Schedule to plan, coordinate, and prosecute the Work in an orderly and expeditious manner.

10.9 Clean-Up. The Contractor shall keep the premises and surrounding area free from accumulation of waste materials or rubbish caused by operations under the Agreement. Prior to completion of the Work or at the School District's request, the Contractor shall remove from and about the Project waste materials, rubbish, the Contractor's tools, construction equipment, machinery and surplus materials. If the Contractor fails to do so, the School District may do so and charge to the Contractor all costs incurred.

10.10 Access. The Contractor shall provide the School District and the A/E and their respective consultants access to the Work wherever located.

10.11 Royalties and Patents. The Contractor shall pay all royalties and license fees, shall defend suits or claims for infringement of patent rights and shall hold the School District and the A/E harmless from loss on account thereof, unless the Contract Documents require the particular infringing design, process or product of a particular manufacturer or manufacturers.

10.12 Indemnification. Subject to the following conditions and to the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the School District, the School District's Representative, and A/E and their respective agents, employees, officers, directors, consultants, successors and assigns ("Indemnified Parties") from and against all claims, damages, losses and expenses, direct and indirect, or

consequential, including but not limited to costs and attorneys' fees incurred on such claims and in proving the right to indemnification, arising out of or resulting from performance of the Work, any act or omission of the Contractor, its agents, any of its Subcontractors of any tier, and anyone directly or indirectly employed by the Contractor or Subcontractors of any tier ("Indemnitor"). The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence of the Indemnitor. The Contractor will defend, indemnify, and hold harmless the Indemnified Parties for the concurrent negligence of the Indemnitor to the extent of the Indemnitor's negligence. The Contractor agrees to being added by the School District as a party to any mediation, arbitration, or litigation with third parties in which the School District alleges indemnification or contribution from an Indemnitor. The Contractor agrees that all of its Subcontractors of any tier will, in the subcontracts, similarly stipulate; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s). To the extent a court or arbitrator strikes any portion of this indemnification provision for any reason, all remaining provisions shall retain their vitality and effect. In claims against any person or entity indemnified under this Section 10.12 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under this Section 10.12 shall not be limited by a limitation on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the School District, the A/E and their consultants only under Title 51 RCW, "Industrial Insurance." IF THE CONTRACTOR DOES NOT AGREE WITH THIS WAIVER, IT MUST PROVIDE A WRITTEN NOTICE TO THE SCHOOL DISTRICT PRIOR TO THE DATE FOR THE RECEIPT OF BIDS, OR THE CONTRACTOR WILL BE DEEMED TO HAVE NEGOTIATED AND WAIVED THIS IMMUNITY. The provisions of this Section shall survive the expiration or termination of this Agreement.

10.13 Prevailing Wages.

10.13.1 Pursuant to RCW 39.12, no worker, laborer, or mechanic employed in the performance of any part of this Agreement shall be paid less than the "prevailing rate of wage" (in effect as of the date that bids are due) as determined by the Industrial Statistician of the Department of Labor and Industries, ESAC Division, PO Box 44540, Olympia WA 98504-4540, Telephone (360) 902-5335. The schedule of the prevailing wage rates for the locality or localities where this Work will be performed is attached and made a part of this Agreement by reference as though fully set forth herein; if not attached, then the applicable prevailing wages are determined as of the Bid Date for the county in which the Project is located and are available at http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp. A copy is available for viewing at the School District's office, and a hard copy will be mailed upon request. To the extent that there is any discrepancy between the attached or provided schedule of prevailing wage rates and the published rates as are applicable under WAC 296-127-011, or if no schedule is attached, then the applicable published rates shall apply at no increase to the Contract Sum. The Contractor shall provide the respective Subcontractors with a schedule of the applicable prevailing wage rates. The Industrial Statistician will answer questions relating to prevailing wage data upon request.

10.13.2 Pursuant to RCW 39.12.060, in case any dispute arises as to what are the prevailing rates of wages for work of a similar nature, and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the director of the Department of Labor and Industries, whose decision therein shall be final and conclusive and binding on all parties involved in the dispute.

10.13.3 The Contractor shall defend, indemnify and hold the School District harmless, including attorneys' fees, from any violation or alleged violation of RCW 39.12 ("Prevailing Wages on Public Works") and RCW 51 ("Industrial Insurance"), including without limitation RCW 51.12.050, by the Contractor, any Subcontractor of any tier, or any person performing Work on behalf of the Contractor or any Subcontractor of any tier.

10.14 The Contractor shall comply with all applicable provisions of RCW 49.28.

10.15 Pursuant to RCW 49.70 and WAC 296-307-560 et seq., the Contractor shall provide the School District copies of and have available at the Project Site a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of Contractor or any Subcontractor at the Project Site.

10.16 The Contractor shall maintain and preserve for at least three years from the date of final payment books, ledgers, records, documents, estimates, bidding documents, correspondence, logs, schedules, electronic data and other evidence relating or pertaining to the costs incurred by the Contractor in connection with or related to the Agreement and/or performance of the Contract ("records") to such extent and in such detail as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges and other amounts of whatever nature for which reimbursement or payment is or may be claimed under the Contract. The Contractor agrees to make available at all reasonable times at the office of the Contractor all such records for inspection, audit and reproduction (including electronic reproduction) by the School District and its representatives. These requirements shall be applicable to each Subcontractor of any tier and included in each Subcontract and purchase order issued with respect to the Work. The Contractor agrees, on behalf of itself, its representatives, and Subcontractors of any tier and their representatives, that any rights under RCW 42.56 will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier or any of their representatives shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the School District. Because of the importance of the access of such records to the School District in the case of a Claim, if the Contractor or any

Subcontractor fails to fully comply with the requirements of this section with regard to any Claim, such Claim shall be deemed to be waived.

ARTICLE 11
SUBCONTRACTORS

11.1 A "Subcontractor" is a person or entity that has a direct contract with the Contractor to perform a portion of the Work at the site or to supply materials or equipment. A "Subcontractor of any tier" includes Subcontractors as well as all direct and lower level sub-subcontractors and suppliers.

11.2 As soon as practicable after award of the Agreement, the Contractor shall confirm in writing to the School District the names of the Subcontractors for each portion of the Work. The Contractor shall not contract with any Subcontractor to whom the School District has made reasonable and timely objection or which is different from the one listed in conjunction with the bid. Contracts between the Contractor and Subcontractors shall (1) require each Subcontractor to be bound to the Contractor by the terms of the Contract Documents to the extent of the Work to be performed by the Subcontractor and to assume toward the Contractor all the obligations and responsibilities which the Contractor, by the Contract Documents, assumes toward the School District, and (2) allow to the Subcontractor the benefit of all rights, remedies and redress afforded to the Contractor by these Contract Documents.

11.3 The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors). The Contractor shall furnish to the School District such releases of liens and Claims and other documents as the School District may request from time to time to evidence such payment (and discharge). The School District may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are so furnished. The Contractor shall defend, indemnify, and hold harmless the School District from any liens, including all expenses and attorneys' fees. Nothing in the Contract Documents shall create any obligation on the part of School District or A/E to pay or to see to the payment of any moneys due any Subcontractor of any tier or other person or entity, except as may otherwise be required by laws and regulations.

ARTICLE 12
CONSTRUCTION BY SCHOOL DISTRICT OR BY SEPARATE CONTRACTORS

12.1 The School District reserves the right to perform construction or operations related to the Project with the School District's own forces and to award separate contracts in connection with other portions of the Project or other construction or operations on the site under conditions of the contract identical or substantially similar to those of the Contract Documents. The Contractor has the responsibility to coordinate its Work with such separate contractors and the School District's own forces.

12.2 The Contractor shall afford the School District and separate contractors reasonable opportunity for the introduction and storage of their materials and equipment and performance of their activities, and shall connect and coordinate the Contractor's construction and operations as required by the Contract Documents.

ARTICLE 13
CHANGES IN THE WORK

13.1 The School District, without invalidating the Agreement, may order changes in the Work consisting of additions, deletions or modifications ("Changes"), and the Contract Sum and Contract Time will be adjusted accordingly. Changes in the Work, the Contract Sum and/or the Contract Time shall be authorized only by written Change Order signed by the School District, the A/E and the Contractor or by written Construction Change Directive signed by the School District and the A/E.

13.1.1 Change Orders. A Change Order is a written instrument signed by the School District and the Contractor stating their agreement upon a change in the Work; the itemized amount of the adjustment in the Contract Sum, if any; and the extent of the adjustment in the Contract Time, if any.

13.1.2 Construction Change Directives. A Construction Change Directive is a written order prepared and signed by the School District and the A/E that directs a change in the Work and states a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. It shall be used in the absence of total agreement on the terms of a Change Order. The Contractor shall promptly proceed with the change in the Work described in the Construction Change Directive. As soon as possible, and within *seven days* of receipt, the Contractor shall advise the School District in writing of the Contractor's agreement or disagreement with the cost or the method, if any, provided in the Construction Change Directive for determining the proposed adjustment in the Contract Sum or Contract Time.

13.2 If the parties cannot agree on the cost or credit to the School District from a Change in the Work, the Contractor shall keep and present, in such form as the School District may prescribe, an itemized accounting together with supporting data. The total cost of any Change or Claim shall be limited to the reasonable value of the following:

13.2.1 Direct labor costs: The effective W.D.O.L. & I. prevailing hourly wage for the laborers, journeymen, and foremen performing and/or directly supervising the Changed Work on the site. The premium portion of overtime wages may not be included unless pre-approved in writing by the School District. The hourly cost shall be based upon basic wages and mandatory fringe benefits and workers' insurances.

13.2.2 Direct material costs: An itemization of the quantity of materials necessary to perform the Change in the Work and the net cost therefor.

13.2.3 Construction equipment usage costs: An itemization of the actual length of time construction equipment appropriate for the Work will be used solely on the Change in the Work at the Site times the lower of the actual rental receipt or applicable current state, NECA, EquipmentWatch, or MCA rental cost. Actual, reasonable mobilization costs are permitted if the equipment is brought to the Site solely for the Change in the Work. The rate for equipment necessarily standing by for future use on the Work shall be 50% of the rate established above.

13.2.4 Cost of any change in insurance or bond premium. Upon request, the Contractor shall provide the School District with supporting documentation.

13.2.5 Subcontractor costs: Payments the Contractor makes to Subcontractors for Changed Work performed by Subcontractors of any tier. The cost of Work for Subcontractors of any tier shall be determined in the same manner as prescribed in this Section 13.2.

13.2.6 Fee: The allowance for all combined overhead, profit, and other costs, including all office, home office, extended and site overhead (including project manager, project engineer, superintendent and general foreman time), and all delay and including impact costs of any kind, added to the total cost to the School District of any Change Order or any Claim for additional work or extra payment of any kind on this Project shall be strictly limited to the following schedule:

.1 For the Contractor, for any materials or work performed by the Contractor's own forces, 12% of the cost.

.2 For the Contractor, for materials or work performed by its Subcontractor, 7% of the amount due the Subcontractor.

.3 For each Subcontractor (including lower tier subcontractor involved), for any materials or work performed by its own forces, 12% of the cost.

.4 For each Subcontractor, for materials or work performed by its subcontractors of any lower tier, 6% of the amount due the sub-subcontractor.

.5 The cost to which the Fee is to be applied shall be determined in accordance with Section 13.2.1-4.

13.3 Dispute Resolution. All claims, disputes and other matters in question of the Contractor, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof ("Claims"), except Claims which have been waived under the terms of the Contract Documents, shall be decided exclusively by the following dispute resolution procedure. The Contractor shall diligently carry on the Work and maintain the progress schedule during the dispute resolution procedure, including any litigation proceedings, unless the parties mutually agree in writing otherwise.

13.3.1 Notice of Claim. The Contractor shall submit notice of all Claims to the School District in writing within *seven days* of the event giving rise to them and shall include a clear description of the event and its probable effect. Failure to comply with these requirements shall constitute waiver of the Claim.

13.3.2 Claim Submission. Within *fourteen days* of the Notice of Claim, the Contractor shall provide the School District in writing with a Claim, which shall include a clear description of the Claim, any and all changes in cost and in time to which the Contractor and its Subcontractors of any tier may be entitled under this Agreement for the Claim, and data supporting the Claim. The Claim of a Subcontractor may be brought only through the Contractor and only after the Contractor notifies the School District in writing that the Contractor has reviewed and agrees with the Claim. No act, omission, or knowledge, actual or constructive, of the School District shall in any way be deemed to be a waiver of the requirement for a timely written Claim unless the School District provides the Contractor with an explicit, unequivocal written waiver.

13.3.3 Informal Resolution. The School District will make a determination of the Claim. If no determination is made within two weeks of submission of the Claim, the Claim shall be deemed rejected. If the Contractor disagrees with the School District's determination and wishes to pursue the Claim further, the Contractor must, within *fourteen days* of receipt of the determination, provide the School District with a written request that a representative of the Contractor and the School District meet, confer, and attempt to resolve the Claim. This meeting will then take place at a mutually convenient time within *thirty days* of the request, unless the School District elects to proceed directly to mediation.

13.3.4 Mediation. The Contractor may bring no litigation against the School District unless the Claim is first subject to non-binding mediation under the Construction Mediation Rules of the American Arbitration Association ("AAA"). The Contractor is responsible for initiating the mediation process. This requirement cannot be waived except by an explicit written waiver signed by the School District and the Contractor. To initiate the mediation process, the Contractor shall submit a written mediation request to the School District within *thirty days* of the meeting undertaken in Section 13.3.3. If the parties are unable to agree to a mediator within *thirty days* after the School District's receipt of the written request for mediation, either party may submit a request for mediation to the AAA. An officer of the Contractor and the Superintendent or designee of the School District, both having full authority to settle the Claim (subject only to ratification by the School District's Board of Directors), must attend the mediation session. To the extent there are other parties in interest, such as Subcontractors, their representatives, with full authority to settle the Claim, shall also attend the mediation session. Unless the School District and Contractor mutually agree in writing otherwise, all unresolved Claims in the Project shall be considered at a single mediation session which shall occur prior to Final Acceptance by the School District.

13.3.5 Litigation. The Contractor may bring no litigation on Claims unless such Claims have been properly raised and considered in the dispute resolution procedures of Sections 13.3.1 through 13.3.4 above. All unresolved Claims of the Contractor shall be waived and released unless the Contractor has strictly complied with the time limits of the Contract Documents, and litigation is served and filed within the earlier of (a) *120 days* after the Date of Substantial Completion designated in writing by the School District or (b) *60 days* after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by the School District and the Contractor. The pendency of a mediation (calculated as the period from the written request for mediation through the day following the mediation proceeding) shall toll these filing requirements.

13.4 Notice and Claims. All notices and Claims shall be made in writing as required by the Agreement.

13.4.1 Any notice of a Claim of the Contractor against the School District and any Claim of the Contractor, whether under the Agreement or otherwise, must be made pursuant to and in strict accordance with the applicable provisions of the Contract Documents. Failure to comply with these requirements shall constitute waiver of the Claim. No act, omission, or knowledge, actual or constructive, of the School District or the A/E shall in any way be deemed to be a waiver of the requirement for timely written notice and a timely written Claim unless the School District and the Contractor sign an explicit, unequivocal written waiver approved by the School District's Board of Directors.

13.4.2 The fact that the School District and the Contractor may continue to discuss or negotiate a Claim that is or may have been defective or untimely under the Contract shall not constitute waiver of the provisions of the Contract Documents unless the School District and Contractor sign an explicit, unequivocal written waiver approved by the School District's board of directors.

13.4.3 The Contractor expressly acknowledges and agrees that the Contractor's failure to timely submit required notices or timely submit Claims has a substantial impact upon and prejudices the School District, including but not limited to the inability to fully investigate or verify the Claim, mitigate damages, choose alternative options, adjust the budget, delete or modify the impacted Work, and/or monitor time, cost and quantities. For these and other reasons, the parties stipulate that the School District is prejudiced by the Contractor's failure to timely submit notices or Claims as required by the Contract Documents.

13.5 Claims for Concealed or Unknown Conditions. If conditions unknown to the Contractor are encountered at the site which are (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or (2) unknown physical conditions of an unusual nature, which differ materially from those ordinarily found and generally recognized as inherent in activities of the character provided for in the Contract Documents, then the Contractor shall give written notice to the School District promptly before conditions are disturbed and in no event later than *seven days* after the first observance on the conditions. The Contractor shall make any Claim arising from such condition in accordance with the dispute resolution procedure in Section 13.3.

13.6 Claims for Consequential Damages. The Contractor and School District waive Claims against each other for consequential damages arising out of or relating to this Agreement. This mutual waiver includes without limitation:

.1 damages incurred by the School District for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and

.2 damages incurred by the Contractor for principal and home office overhead and expenses including without limitation the compensation of personnel stationed there, for losses of financing, business and reputation, for losses on other projects, for loss of profit, and for interest or financing costs.

This mutual waiver is applicable to all consequential damages of any cause, including without limitation due to either party's termination in accordance with Article 20. Nothing contained in this Section 13.6 shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents.

13.7 The Contractor (including Subcontractors of any tier) shall not in any event be entitled to damages arising out of actual or alleged loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant underrun; trade stacking; reassignment of workers; concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended overhead; profit upon damages for delay; impact damages; or similar damages.

ARTICLE 14
TIME

14.1 If, through no fault of the Contractor or a Subcontractor of any tier, the Work is delayed at any time in progress of the Work by changes ordered in the Work, by unanticipated general labor disputes, fire, unusual delay in deliveries, abnormal adverse weather conditions not reasonably anticipatable, unavoidable casualties, delays caused by the School District or its separate contractors, or any causes beyond the Contractor's control and for which it and its subcontractors of any tier are not responsible, or by other causes which may justify delay, then the Contract Time shall be extended by Change Order to the extent the critical path is affected. The Contractor (including Subcontractors) shall be entitled to damages for delay, the total limited to the liquidated rate of Section 2.3, only where the School District's own actions or inactions were the actual, substantial cause of the delay and where the Contractor could not

have reasonably avoided the delay by the exercise of due diligence. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

14.2 THE TIMELY COMPLETION OF THIS PROJECT IS ESSENTIAL TO THE SCHOOL DISTRICT. The School District will incur serious and substantial damages if Substantial Completion of the Work does not occur within the Contract Time; however, it would be difficult if not impossible to determine the amount of such damages. Consequently, the Agreement includes provisions for liquidated damages. The School District's right to liquidated damages is not affected by partial completion, occupancy, or beneficial occupancy.

ARTICLE 15
PAYMENTS AND COMPLETION

15.1 Progress Payments. Payments shall be made as provided in Articles 3 and 4 of this Agreement. If Progress payments are specified, they will be made monthly for Work duly approved and performed during the calendar month preceding the application according to the following procedure.

15.1.1 Draft Application. Within the first three days of each month, the Contractor shall submit to the A/E a report on the current progress of the Work as compared to the Contractor's CPM Construction Schedule, an updated Construction Schedule, and a draft, itemized application for payment for Work performed during the prior calendar month on a State of Washington Application for Payment on Contract form approved by the School District. This shall not constitute a payment request. The Contractor, the A/E and the School District shall meet within the next ten days and confer regarding the current progress of the Work and the amount of payment to which the Contractor is entitled. The A/E or the School District may request the Contractor to provide data substantiating the Contractor's right to payment as the School District or the A/E may require, such as copies of requisitions from Subcontractors of any tier, lien releases, and certified payroll records, and reflecting retainage as provided elsewhere in the Contract Documents. The Contractor shall not be entitled to make a payment request, nor is any payment due the Contractor, until such data is furnished.

15.1.2 Payment Request. After the Contractor and the School District have met and conferred regarding the draft application, and the Contractor has furnished all data requested, the Contractor may submit by the 10th of the month a payment request in the agreed-upon amount, in the form of a notarized, itemized Application for Payment for Work performed during the prior calendar month on a form supplied or approved by School District. Among other things, the Application shall state that prevailing wages have been paid in accordance with the prefiled statement(s) of intent to pay prevailing wages on file with the School District and that all payments due Subcontractors from the School District's prior payments have been made. The submission of this Application constitutes a certification that the Work is current on the Progress Schedule, unless otherwise noted on the Application. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may, also by the 10th of the month, submit to the School District a separate written payment request specifying the exact additional amount due, the category in the Schedule of Values in which the payment is due, the specific Work for which the additional amount is due, and why the additional payment is due.

15.1.3 Payments to Subcontractors. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor. If, after making a request for payment but before paying a Subcontractor for its performance covered by the payment request, the Contractor discovers that part or all of the payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor for unsatisfactory performance or other reasons, the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the School District written notice of the remedial actions that must be taken as soon as practicable after determining the cause for the withholding but before the due date for the Subcontractor payment, and pay the Subcontractor within *eight working days* after the Subcontractor satisfactorily completes the remedial action identified in the notice.

15.2 Prevailing Wages. Pursuant to RCW 39.12, the Contractor will not receive any payment until the Contractor and all Subcontractors have submitted a "Statement of Intent to Pay Prevailing Wage" to the School District. The statement must have the approval of the Industrial Statistician of the Department of Labor and Industries before it is submitted to the School District. The Contractor and the respective Subcontractors shall pay all fees required by the Department of Labor and Industries, including fees for the approval of the "Statement of Intent to Pay Prevailing Wages." Approved copies of the "Statement of Intent to Pay Prevailing Wages" must be posted where workers can easily read them.

15.3 Progress payments. The School District shall make progress payments within 30 days of its receipt of the approved payment request.

15.4 Withheld Payments. Payments may be withheld on account of (1) defective Work not remedied, (2) claims filed by third parties, (3) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment, (4) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Sum, (5) damage to the School District or another contractor, (6) reasonable evidence that the Work will not be completed within the Contract Time and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay, (7) failure to carry out the Work in accordance with the Contract Documents, or (8) liquidated damages. When the School District intends to withhold all or part of a payment for unsatisfactory performance, the School District will provide the Contractor, within *eight working days* after the School District's receipt of the Application for Payment, written notification of the reasons that all or part of

the payment is being withheld and what remedial actions the Contractor must take to receive the withheld amount.

15.5 Substantial Completion.

15.5.1 When the Contractor believes that the entire Work is Substantially Complete, it shall notify the School District and A/E in writing. When the School District agrees, it will issue a Certificate of Substantial Completion. Substantial Completion is the stage in the progress of the Work when the construction is sufficiently complete, in accordance with the Contract Documents, so the School District can fully utilize the Work (or the designated portion thereof) for the use for which it is intended. All Work other than incidental corrective or punchlist work and final cleaning shall have been completed. The Work is not Substantially Complete if all systems and parts affected by the Work are not usable, if an occupancy permit (temporary or final) has not been issued, or if utilities affected by the Work are not connected and operating normally. The fact that the School District may use or occupy the Work or designated portion thereof does not indicate that the Work is Substantially Complete, nor does such occupation toll or change any liquidated damages due the School District.

15.5.2 Immediately before partial or complete occupancy, the School District will schedule an inspection tour of the area to be occupied. A representative of the School District, A/E and Contractor will jointly tour the area and record items still remaining to be finished and/or corrected. The Contractor shall supply and install any items missed by the inspection but required or necessary for Final Completion as a part of the Contract Sum, notwithstanding their not being recorded during the inspection tour.

15.6 Final Payment. Pursuant to RCW 60.28, completion of the Contract Work shall occur after the Contractor has notified the School District and the A/E that the Work has been concluded and the Contractor submits the items listed below to the School District, any required final occupancy permit has been issued, and the School District Board formally accepts the Project ("Final Acceptance"). Final Payment shall not become due until after Final Acceptance. Before Final Acceptance, the Contractor must have submitted the following to the School District:

.1 An affidavit that all payrolls, Subcontractors, bills for materials and equipment, and other indebtedness connected with the Work for which the School District or its property might in any way be responsible or encumbered, have been paid or otherwise satisfied,

.2 consent of surety to final payment,

.3 a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least *30 days'* prior written notice has been given to the School District,

.4 a written statement that the Contractor knows of no substantial reason why the insurance will not be renewable to cover the period required by the Contract Documents,

.5 other data establishing payment or satisfaction of or protection (satisfactory to the School District) against all obligations, such as receipts, releases and waivers of liens arising out of the Agreement, satisfactorily demonstrating to the School District that the claims of Subcontractors, material suppliers, and laborers who have filed claims have been paid,

.6 pursuant to RCW 39.12.040, an "Affidavit of Wages Paid" from the Contractor and from each Subcontractor certified by the Industrial Statistician of the Department of Labor and Industries, with fees paid by the Contractor or Subcontractor,

.7 a certified statement that the Contractor has closed all necessary permits or otherwise met the requirements of all governing jurisdictions related to this Project (including, without limitation, city/county building departments, health districts and utility districts; attach a copy of each of these closed or signed-off permits),

.8 all warranties, guarantees, certificates, spare parts, specified excess material, and other documents or items required by the Contract Documents, and

.9 a hard copy of as-built drawings and specifications, delivered in a clear, clean and legible condition.

If any Subcontractor of any tier refuses to furnish a release or waiver required by the School District, the School District may retain in the fund, account, or escrow funds such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount. If any such lien remains unsatisfied after all payments are made, the Contractor shall refund to the School District all moneys that the latter may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

Retainage shall be paid pursuant to RCW 60.28 and after the Contractor has properly submitted certificates from the Department of Revenue, the Department of Labor and Industries and, pursuant to RCW 50.24, a certificate from the Department of Employment Security.

15.7 Waivers.

15.7.1 Final Payment by School District. The making of final payment shall constitute a waiver of claims by the School District except those arising from (1) liens, claims, security interests, or encumbrances arising out of the Agreement and unsettled; (2) failure of the Work to comply with the requirements of the Contract Documents; or (3) terms of warranties required by the Contract Documents or law.

15.7.2 Final Payment to Contractor. Acceptance of final payment by the Contractor shall constitute a waiver of Claims except those previously made in writing and identified in writing as unsettled on the final Application for Payment.

15.7.3 Change Orders. The execution of a Change Order shall constitute a waiver of Claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order. If the Contractor adds to a Change Order or any other document a reservation of rights that has not been initialed by the School District, all the amounts previously agreed shall be considered disputed and not yet payable unless the costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to and initialed by the School District. If the School District makes payment for a Change Order or an Application for Payment that contains a reservation of rights not initialed by the School District to indicate agreement with the reservation, and if the Contractor negotiates the check for such payment or otherwise accepts the payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

15.8 Retainage.

15.8.1 Progress Payments. If progress payments are to be made to the Contractor:

.1 Pursuant to RCW 60.28, the School District will reserve 5% retainage from the moneys the Contractor earns on estimates during the progress of the Work, to be retained as a trust fund for the protection and payment of the claims of any person arising under the Agreement and the state with respect to taxes imposed pursuant to Title 82 RCW which may be due from the Contractor.

.2 The moneys reserved may, at the option of the Contractor, be (1) retained in a fund by the School District until *45 days* following Final Acceptance; or (2) deposited by the School District in an interest-bearing account in a bank, mutual savings bank, or savings and loan association, not subject to withdrawal until *45 days* following Final Acceptance, with interest to the Contractor; or (3) placed in escrow with a bank or trust company until *45 days* following the Final Acceptance, by the School District's joint check to the bank or trust company and the Contractor, to be converted into bonds and securities chosen by the Contractor, approved by the School District, and held in escrow, with interest on the bonds and securities paid to the Contractor as it accrues.

.3 Contractor may retain payment of not more than 5% from the moneys earned by any Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds.

15.9 Warranty of Title. The Contractor warrants and guarantees that title to Work, materials and equipment covered by an Application for Payment, whether incorporated in the Project or not, will pass to the School District no later than the time of payment free and clear of liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials or other items in connection with the performance of the Work (including, but not limited to, any Subcontractors). The Contractor shall furnish to the School District such releases of claims and other documents as may be requested by the School District from time to time to evidence such payment (and discharge). The School District may, at its option, withhold payment, in whole or in part, to the Contractor until such documents are so furnished. The Contractor shall indemnify and hold harmless the School District from any liens, including all expenses and attorneys' fees.

ARTICLE 16
PROTECTION OF PERSONS AND PROPERTY

16.1 The Contractor shall have the right to control and shall be solely responsible for, and neither the School District nor its Representative nor the A/E shall have responsibility for, all aspects of safety, including initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Agreement. The Contractor shall take reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to (1) employees on the Work and other persons who may be affected thereby; (2) the Work and materials and equipment to be incorporated therein; and (3) other property at the site or adjacent thereto. The Contractor shall maintain the Work site and perform the Work in a manner that meets statutory and common-law requirements for the provision of a safe place to work. This requirement shall apply continuously and not be limited to working hours.

16.2 The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons and property and their protection from damage, injury, or loss. The Contractor shall promptly remedy damage and loss to property at the site caused in whole or in part by the Contractor, a Subcontractor of any tier, or anyone directly or indirectly employed by any of them, or by anyone for whose acts they may be liable and for which the Contractor is responsible, except for damage or loss attributable to acts or omissions of the School District or A/E or by anyone for whose acts either of them may be liable, and not attributable to the fault or negligence of the Contractor or a Subcontractor of any tier. The foregoing obligations of the Contractor are in addition to the Contractor's obligations under Section 10.12.

16.3 The Contractor shall not be required to perform without consent any Work relating to asbestos or polychlorinated biphenyl ("PCB") unless specifically required by the Contract Documents.

16.4 The Contractor shall bear the risk of any loss, damage or destruction of its own property, including without limitation its tools, trailers and equipment, whether rented or owned, to the extent that they will not be incorporated in the

Work. Any insurance provided by the School District will not cover any such loss, damage or destruction.

16.5 If the scope of the Work requires the Contractor to perform Work relating to hazardous materials, the Contractor shall be responsible to take all reasonable precautions to prevent foreseeable bodily injury or death resulting from such materials or substances, and to dispose of such materials as required by the Contract Documents and all applicable state and federal laws and regulations. The Contractor shall defend, indemnify, and hold harmless the School District, its consultants, the A/E, and their respective agents, employees, consultants, successors and assigns from and against any and all claims to the extent of the Contractor's failure to abide by such Contract Documents and all applicable state and federal laws and regulations.

ARTICLE 17
INSURANCE AND BONDS

17.1 Contractor's Liability Insurance.

17.1.1 The Contractor shall purchase from and maintain during the life of this Agreement, at its own cost in a company or companies admitted to do business in the State of Washington, possessing a Best's policy holder's rating of A- or better and a financial rating of no less than VIII, and reasonably acceptable to the School District, an occurrence-based Commercial General Liability Insurance Policy which shall provide bodily injury and property damage liability on the Contractor's operations, including its Subcontractors of any tier; owned, non-owned and hired vehicles; and on work the Contractor may subcontract or sublet to others; and on the indemnity provisions of this Agreement. This insurance will name the School District, the A/E, and the School District's Representative and their employees as additional insureds per Additional Insured Owner's (Form B) for Work performed under this Agreement. The Contractor's policy shall be designated primary coverage for both defense and indemnity, and any School District policies excess. Such limits of liability insurance shall have per project general aggregate provisions and shall not be less than the following:

.1 Commercial General Liability, Bodily Injury and Property Damage Liability, including Premises and Operations, Independent Contractors, Protective Liability, Completed Operations and Products, Contractual in the amount of $1,000,000 per occurrence with a per-project general aggregate limit of at least $2,000,000;

.2 Commercial Auto Liability, Bodily Injury and Property Damage, in an amount of at least $1,000,000 Combined Single Limit;

.3 $1,000,000 for claims involving blanket contractual liability insurance (included and defined in the Commercial General Liability Insurance Policy) applicable to the Contractor's obligations under Section 10.12; and

.4 In addition, the Contractor shall maintain an umbrella policy that provides excess limits over the primary layer, in an amount not less than $5,000,000.

17.1.2 The insurance described above shall include coverage for underground, collapse and explosion exposures.

17.1.3 In addition, the Contractor shall purchase and maintain insurance for claims under workers' compensation (industrial insurance), disability benefit and other similar employee benefit acts in the State statutory amount and Employer's Liability with coverage of at least $250,000/$500,000.

17.1.4 Before commencing the Work or exposure to loss can occur, and, in any event, within *seven days* after the School District has issued its notice of intent to award contract, the Contractor shall furnish the School District with Certificates of Insurance, in duplicate, as evidence of all insurance required by the Contract Documents. All policies and certificates must be signed copies. Coverages afforded under the policies shall not be materially altered, allowed to expire or canceled without the Contractor first giving *45 days* written notice by certified mail to the School District. The Contractor shall furnish to the School District copies of any subsequently issued endorsements amending, modifying, altering, or restricting coverage of limits.

17.1.5 Coverage shall be maintained without interruption from the date of commencement of the Work until the date of Final Acceptance, except for any coverage required to be maintained after Final Acceptance. Completed operations coverage, including additional insured completed operations, shall remain in force for three years after Final Acceptance.

17.1.6 If the School District is damaged by the failure of the Contractor to maintain any of the above insurance or to so notify the School District, than the Contractor shall bear all costs properly attributable thereto. THE SCHOOL DISTRICT MAY WITHHOLD PAYMENT PENDING RECEIPT OF ALL CERTIFICATES OF INSURANCE. Failure to withhold payment shall not constitute a waiver.

17.1.7 If Contractor or its Subcontractors of any tier use or operate a drone or unmanned aircraft on or over the construction site or any other property of the School District, Contractor shall provide to School District evidence of sufficient insurance such as aircraft liability insurance to cover any damages, including bodily injury or property damage, caused by the operation and use of such drone or unmanned aircraft prior to its use on or above the construction site or any other property of the School District. If a Subcontractor of any tier is the operator of such a drone or unmanned aircraft, the evidence of such insurance shall be provided by that Subcontractor. The limit of liability shall be at least $1,000,000 each occurrence.

17.1.8 The School District's specification or approval of the insurance in this Agreement or of its amount shall not relieve or decrease the liability of the Contractor under the

Contract Documents or otherwise. Coverages are the minimum to be provided and are not limitations of liability under the Contract, indemnification, or applicable law provisions. The Contractor may, at its expense, purchase larger coverage amounts or additional insurance.

17.2 Property Insurance.

17.2.1 The requirements for property insurance are addressed in Article 6 above.

17.3 Waivers of Subrogation.

17.3.1 The School District and the Contractor waive all rights against each other and any of their subcontractors of any tier, the School District's Representative, the A/E, their consultants, separate contractors described in Article 12 (if any), and any of their respective agents and employees, for damages caused by fire or other causes of loss to the extent covered by the property insurance obtained pursuant to Articles 6 and 17.2, except such rights as they have to proceeds of such insurance held by the School District as fiduciary. The School District does not waive any subrogation rights to the extent of its property insurance on structures or portions of structures that do not comprise the Work. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

17.4 Payment and Performance Bond.

17.4.1 Pursuant to RCW 39.08, the Contractor is required to submit payment and performance bonds secured from a surety company licensed to do business in the State of Washington. The Contractor shall pay for the bonds in the full amount of the Contract Sum plus sales tax. The Contractor shall deliver evidence of its bondability to the School District within five days of bid opening. Within *seven days* of entering into the Agreement, the Contractor shall deliver two copies of the bond (including the original bond) to the School District and one copy to the A/E. THE SCHOOL DISTRICT MAY DECLINE TO ENTER INTO THE CONTRACT IF EVIDENCE OF BONDABILITY IS NOT RECEIVED, AND THE SCHOOL DISTRICT MAY WITHHOLD ITS NOTICE TO PROCEED AND/OR WITHHOLD PAYMENT TO THE CONTRACTOR UNTIL SUCH SURETY BONDS ARE RECEIVED.

ARTICLE 18
CORRECTION OF WORK

18.1 The Contractor shall promptly and within no more than *fourteen (14) days* of notice from the School District or A/E correct Work rejected or failing to conform to the requirements of the Contract Documents at any time through a period of one year from the date of Substantial Completion of the Agreement or by terms of a longer manufacturer's warranty or an applicable special warranty required by the Contract Documents. The provisions of this Article apply to Work done by Subcontractors of any tier as well as to Work done by direct employees of the Contractor.

18.2 If the Contractor fails to correct Work that is not in accordance with the requirements of the Contract Documents or fails to carry out the Work in accordance with the Contract Documents, the School District, by a written order, may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated.

18.3 Nothing contained in this Article shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the time period of one year as described above relates only to the specific obligation of the Contractor to correct the Work and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.

ARTICLE 19
MISCELLANEOUS PROVISIONS

19.1 Applicable Law and Venue. The Agreement shall be governed by the laws of the State of Washington, without regard to its choice of law provisions. The exclusive venue for any litigation regarding this Agreement shall be in the Superior Court in the county in which the Project is located.

19.2 Statutes. The Contractor shall abide by the provisions of all applicable Washington statutes. The statutes referenced in the Contract Documents are not meant to be a complete list and should not be relied upon as such.

19.3 Contractor Registration and Related Requirements. Pursuant to RCW 39.06, the Contractor shall be registered or licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27. The Contractor shall: have a current state unified business identifier number; have industrial insurance coverage for the Contractor's employees working in Washington as required in Title 51 RCW; have an employment security department number as required in Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW, and; not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).

19.4 Law Against Discrimination. Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60.

19.5 Provisions for Aged and Handicapped Persons. Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92.

19.6 Safety Standards. Contractor shall comply with pertinent provisions of Chapter 296-155 WAC, "Safety Standards for Construction Work."

19.7 Unemployment Compensation. Pursuant to RCW 50.24 in general and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Agreement or arrange for a bond acceptable to the commissioner.

19.8 Drug-Free Workplace. The Contractor and all Subcontractors shall fully comply with all applicable federal, state, and local laws and regulations regarding drug-free workplace, including the Drug-Free Workplace Act of 1988. Any person not fit for duty for any reason, including the use of alcohol, controlled substances, or drugs, shall immediately be removed from the Work.

19.9 Tobacco-Free Environment. Smoking or use of any kind of lighted pipe, cigar, cigarette or any other lighted smoking equipment, material or smokeless tobacco products is prohibited on all School District property.

19.10 Asbestos Removal. To the extent this Project involves asbestos removal, the Contractor shall comply with RCW 49.26 and any provisions of the Washington Administrative Code promulgated thereunder.

19.11 Assignment. The Contractor shall not let, assign or transfer this Agreement, or any interest in it or part of it, without the written consent of the School District.

19.12 Weapons. The Contractor and its employees, agents, and Subcontractors of any tier shall not bring onto the Project site or onto any School District property any firearm or any other type of weapon described in either RCW 9.41.280(1) or RCW 9.41.250. Any person violating this Section shall immediately be removed from the Work, and such a violation shall be grounds for a termination of this Agreement for cause at the School District's discretion.

19.13 Contaminated Properties. To the extent this Project involves the remediation of contaminated property, the Contractor shall comply with RCW 64.44 and 70.105D and any provisions of the Washington Administrative Code promulgated thereunder, including the use of authorized contractors as provided in RCW 64.44.060.

19.14 Disposal of Materials. To the extent this Project involves the remediation of contaminated property, the Contractor shall comply with all applicable requirements of RCW 70.95 and any provisions of the Washington Administrative Code promulgated thereunder.

ARTICLE 20
TERMINATION OF THE CONTRACT

20.1 Termination for Cause by Contractor. If the School District fails to make payment for a period of *60 days* through no fault of the Contractor, the Contractor may, upon *seven additional days'* written notice to the School District, terminate the Agreement and recover from the School District payment for all Work properly executed and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including Fees applicable thereto.

20.2 Termination for Cause by School District. The School District may, upon *seven days'* written notice to the Contractor, terminate (without prejudice to any right or remedy of the School District) the whole or any portion of the Work for cause, including but not limited to the following circumstances:

.1 the Contractor fails to prosecute the Work or any portion thereof with sufficient diligence to ensure the completion of the Work within the Contract Time;

.2 the Contractor is in material default of or materially breaches any provisions of this Agreement;

.3 the Contractor is adjudged bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed on account of its insolvency;

.4 the Contractor fails to supply a sufficient number of properly skilled workers or proper materials;

.5 the Contractor fails to make prompt payment to Subcontractors or for materials or labor;

.6 the Contractor materially disregards laws, ordinances, rules, regulations or orders of any public authority having jurisdiction; or

.7 the Contractor fails to comply with the provisions of RCW 28A.400.330 by permitting a worker on the Project having contact with children who has been convicted of or pled guilty to a felony crime involving children as described in Section 10.3.

20.3 Termination for Convenience by School District. The School District may, at any time upon *seven days'* written notice to the Contractor, terminate (without prejudice to any right or remedy of the School District) the whole or any portion of the Work for the convenience of the School District. The School District shall be liable to Contractor only for those costs reimbursable to Contractor in accordance with the following.

.1 The amount due under Articles 4 and 15 of this Agreement for the performance of the Work actually and properly performed; and

.2 Other pre-approved costs, consistent with Section 13.2, necessary and reasonably incurred in connection with the termination of Work.

The total sum to be paid to the Contractor under this Section 20.3 shall not exceed the Contract Sum as reduced by the amount of payments otherwise made.

20.4 Effects of Termination.

20.4.1 Unless the School District directs otherwise, after receipt of a Notice of Termination from the School District pursuant to Sections 20.2 or 20.3, the Contractor shall promptly:

.1 stop Work under the Agreement on the date and as specified in the Notice of Termination;

.2 place no further orders or subcontracts for materials, equipment, services or facilities, except as may be necessary for completion of any portion of the Work that is not terminated;

.3 procure cancellation of all orders and subcontracts, upon terms acceptable to the School District, to the extent that they relate to the performance of Work terminated;

.4 assign to the School District all of the right, title and interest of the Contractor under all orders and subcontracts, in which case the School District shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;

.5 with the School District's approval, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts not assigned to the School District;

.6 transfer title and deliver to the entity or entities designated by the School District the fabricated or unfabricated parts, Work in process, partially completed supplies and equipment, materials, parts, tools, dies, jigs and other fixtures, completed Work, supplies and other material produced as part of, or acquired in connection with the performance of, the Work terminated, and the completed or partially completed plans, drawings, information and other property related to the Work;

.7 use its best efforts to sell any property of the types referred to in Section 20.4.1.6. The Contractor may acquire any such property under the conditions prescribed by and at a price or prices approved by the School District, and the proceeds of any such transfer or disposition may be applied in reduction of any payments to be made by the School District to the Contractor;

.8 take such action as may be necessary or as directed by the School District to preserve and protect the Work and property related to this Project in the possession of the Contractor in which the School District has an interest; and

.9 continue performance only to the extent not terminated.

20.4.2 In arriving at any amount due the Contractor after termination, the following deductions shall be made:

.1 all unliquidated advance or other prior payments on account made to the Contractor applicable to the terminated portion of the Agreement;

.2 any claim which the School District may have against the Contractor;

.3 an amount necessary to protect the School District against outstanding or potential liens or claims; and

.4 the agreed price for or the proceeds of sale of any materials, supplies or other things acquired by the Contractor or sold, pursuant to the provisions of Section 20.4.1.7, and not otherwise recovered by or credited to the School District.

20.4.3 If (and only if) the termination pursuant to Section 20.3 is partial, the Contractor may file a Claim for an equitable adjustment of the price or prices specified in the Agreement relating to the continued portion of the Agreement. The Contractor must assert any Claim for an equitable adjustment under this subsection within *twenty-one days* from the effective date of the Termination.

20.4.4 The Contractor shall refund to the School District any amounts the School District paid to the Contractor in excess of costs reimbursable under Section 20.3.

20.4.5 The damages and relief from termination by the School District specifically provided in Article 20 shall be the Contractor's sole entitlement in the event of termination.

End of Section

PROJECT MANUAL INDEX

WASHINGTON STATE PREVAILING WAGES FOR SPOKANE COUNTY

Theater AV Systems Replacement – North Central High School

Disclaimer: Contractor will be responsible for accessing the Department of Labor website to verify the published rate schedule and coordinate schedule with Benefit Code Key.

The State of Washington prevailing wage rates are applicable for this public works project located in Spokane County. Bidders are responsible to verify and use the most recent prevailing wage rates. The "Effective Date" for this project is the Bid Proposal due date. The applicable prevailing wage rates may be found on the Department of Labor and Industries website located at:

https://lni.wa.gov/licensing-permits/public-works-projects/prevailing-wage-rates

A. Contractor will be responsible for meeting the requirements of RCW 39.12.

B. Contractor shall be responsible for all fees and submission of all Intent, Affidavit and other forms to the Department of Labor and Industries associated with meeting requirements of RCW 39.12.
   1. Intent forms must be filed prior to the start of work, or as soon as possible thereafter.
   2. Intent and Affidavit forms (approved and certified by the Department of Labor and Industries) must be submitted to the Owner in order to receive payment.
   3. The Monthly Subcontractor's List (attached herein) must be submitted along with the Contractor's monthly billings to the Owner in order to receive payment.

C. The Director of the Department of Labor & Industries shall arbitrate all disputes of the prevailing wage rates.

END OF SECTION

MONTHLY SUBCONTRACTORS LIST AND CERTIFICATIONS

Theater AV Systems Replacement – North Central High School

Contractor's Name and Address:	Project Name: Project No.:	
Billing Period Through	Invoice Date:	Invoice Number:

Instructions: **List all subcontractors, including all subcontractors of any tier, who performed work on the project site for this billing period.**

List All Subcontractors of Any Tier:		
Subcontractor Name:	Second Tier Subcontractor Name:	Third Tier and Lower Subcontractor Name:

Certifications:

1) I have listed all of the subcontractors who performed work on the project site during the current billing period noted above (regardless of whether my application for payment includes a payment request for their work).

2) Prevailing wages for this project have been paid in accordance with the pre-filed statement or statements of intent to pay prevailing wages, approved by the Industrial Statistician of the Department of Labor and Industries, which are on file with Spokane Public Schools.

3) I have paid all of my subcontractors and material suppliers for the invoice covering the previous billing period (this amount less retainage) (not applicable if this is the first billing period).

I certify under penalty of perjury under the laws of the State of Washington that all of the above information and certification statements are true and correct.

Authorized Signature of Contractor:	Printed Name: Printed Title:	Date Signed:
Fill out this form and submit it with your invoice, and as part of your Application for Payment		Agency Project Manager Initials:

END OF SECTION

PART I - GENERAL

1.01 DESCRIPTION OF WORK

A. The Scope of Work shall be as stated in Section 274100 of these Specifications.

1.02 EMERGENCY INCIDENT RESPONSE

All Contractors shall implicitly follow instructions by "Early Responder" personnel, including SPS site Administrators, Police, Fire, Emergency Medical Technicians, and SPS Safety/Security Officers. All alarms, drills, notifications, and directives given by any Early Responder or Administrative personnel must be responded to immediately, whether it is a real or practice situation. All Contractors shall immediately stop work, clear egress routes and evacuate to an "Area of Refuge" where directed. During school "Lock Downs", Contractors shall not be permitted to either leave or enter the facility until directed otherwise.

1.03 PERSONAL IDENTIFICATION

All contractors, sub-contractors, and/or vendor personnel shall be provided with a company identification card. At a minimum, this identification card shall display the name of the company, the name of the employee represented, and photograph of the individual for whom the card has been issued. The contractor's, sub-contractor's, and/or vendors employees shall prominently display such ID cards at all times while on Spokane District Property. Such identification cards shall be obtained through the School District for a nominal fee of $5.00 per card. For further information, or to make arrangements to obtain such photo ID cards, contact Spokane School District Property Security Services at 354-7345. Badge expiration date shall be 60 days after the project completion date. Contractor shall call security services and make an appointment prior to their arrival.

1.04 PRE-QUOTE AND ON-SITE IDENTIFICATION PROCEDURES

A. All contractors who wish to visit the site before submitting a quote shall schedule an appointment with the Spokane Public Schools Project Manager identified on the cover of these specifications. Contractors shall not be allowed access to the site without a prior scheduled appointment.

B. Prior to the start of construction, the contractor and all of his sub-contractors shall submit a list to the Owner of all individuals who will be performing work at the site through the duration of this project.

C. All Contractors and their employs on the project site shall be required to wear at all times a District photo ID badge, as described in section 1.03 of this specification section. Access to the site is prohibited to all individuals not displaying a District badge.

1.05 SCOPE OF WORK

A. The Scope of Work shall be as stated in Section 274100 of these Specifications.

1.06 SCHEDULE OF WORK

A. Project Duration:

Construction Start: June 17, 2026

Construction Completion: August 14, 2026

1.07 CONTRACTS AND PERMITS

A. The General Conditions and Contract Requirements are applicable to this work.

B. Contractor shall be responsible for obtaining and paying for all permits if required for this project. Furnish the Owner's representative a copy of the permit prior to the first request for payment.

C. Contractor is responsible for notifying local jurisdictional authorities for inspections as required per the current adopted model building codes and ordinances.

1.08 LIQUIDATED DAMAGES

A. Liquidated Damages shall be as stipulated in the Instructions to Bidders.

1.09 CODES AND STANDARDS

All local, municipal and state laws, rules, and regulations governing or relating to any portion of this work are hereby incorporated into and made a part of these specifications.

1.10 WARRANTY REQUIREMENTS

A. All work shall be done in a manner such that it does not void any manufacturer's warranties.

B. Contractor shall guarantee his installation for (1) year from the date of acceptance by the Owner for each respective site.

C. Hardware and software warranty periods for each piece of equipment shall be as provided by the manufacturer.

1.11 OWNER OCCUPANCY

A. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations. Modification and/or interface with existing utilities to be coordinated with the Owner.

B. Schedule the Work to accommodate these requirements. Provide an activity plan or schedule to adequately define sequence, duration and interface requirements which may affect daily operations.

C. Use by Owner prior to project acceptance does not relieve Contractor of his responsibility to maintain all insurance and bonds required of Contractor under the contract until project is

completed and accepted by Owner.

1.12 CONTRACTOR'S USE OF PREMISES

A. Contractors shall have use of the immediate property for the execution of the work. Contractor will have access to water and power as required for the work. Use of these utilities shall have a minimal impact and/or interruption to the daily operations of the facility.

B. The Contractor is granted use of the restroom facilities at the work sites; however, the Contractor will be responsible for cleaning up after themselves and their employees after use of these facilities.

1.13 UTILITIES

A. Known existing utilities are shown in the plans at their approximate locations. The Contractor shall take care to protect such existing utility appurtenances during his operation. Should other systems not shown on the plans be encountered, the Owner shall be immediately notified. **It shall be the Contractor's responsibility to provide private utility locate services anywhere on the interior of the site that is not the local purveyor's or local utility provider's responsibility.**

B. Contractor shall notify the Owner a minimum of one (1) week prior to any intended utility interruptions.

1.14 FIELD CONDITIONS, CONSTRUCTION PROCEDURES AND COMMUNICATION

Requests For Information (RFI):

The Contract Documents are complementary. Before starting each portion of the work, the Contractor shall carefully study and compare the various Drawings and other Contract documents relative to that portion of the work. Contractor shall be responsible for verification of existing site conditions, installation standards and construction conditions. Field verify all necessary dimensions. Errors, Discrepancies or omissions discovered by the Contractor between existing conditions and the construction documents shall be reported promptly to the attention of the Owner and the Architect/Engineer as a Request For Information in such form as the Owner and the Architect/Engineer may require. Work performed without the approval of the Owner and the Architect/Engineer or work performed that is knowingly installed in a non-approved Owner standard may be rejected and shall be removed and re-constructed to the satisfaction of the Owner at the Contractor's expense. The Contractor's quoted price shall cover all materials and work necessary to provide the completed project.

1.15 WORKMANSHIP

Conform to accepted trade practices, industry standards, stipulated specifications and adopted model building codes, whichever is more stringent.

1.16 SALVAGE

The Owner may desire to salvage certain items which are to be dismantled, excavated and removed during the course of construction. Prior to removal of any existing items from the site of work, the Contractor shall ascertain from the Architect/Architect/ Engineer whether or not a particular item is to be salvaged. Items to be salvaged shall be stockpiled on the site by the Contractor in a location as directed by the Owner. All other items of equipment shall be disposed of off site by the Contractor at his own expense.

1.17 PROTECTION

General: Appropriate first aid facilities and supplies shall be kept and maintained by the Contractor at the site of the work. Conform to OSHA and WISHA Safety and Health Standards for Construction.

A. All dangerous equipment shall be secured and made safe at the completion of each day's work.
B. The Contractor shall be responsible to protect buildings and grounds from damage.
C. Comply with standards and code requirements for erection of structurally adequate temporary barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.
D. Provide First Aid supplies. Comply with governing regulations.
E. Where required at specific sites, provide hand-carried, portable UL-rated, 10 lb. Class "ABC" fire extinguishers.

1.18 HOT WORK

A. Before initiating any hot work, the contractor shall complete a Hot Work Permit and post at the site until completion of the Work. Contractor shall deliver the permit to the Head Custodian at the site after the Work is completed. Hot work includes, but is not limited to, brazing, cutting, grinding, soldering, welding, and torch applied roofing.
B. Hot Work Permits are available from the owner, and shall be submitted each time any applicable work is done. Contractor shall complete all parts of the permit, and follow all the requirements listed on the permit.

C. Contractor shall be liable for any damages resulting from hot work if he fails to submit a Hot Work Permit and follow the requirements listed on the permit.

1.19 ASBESTOS

If asbestos has been identified, it will be shown in supplemental documents attached within the Appendix. Contractor shall take proper precautions and adhere to required work practices and AHERA, WISHA and OSHA regulations, when drilling or cutting through materials containing asbestos. Manuals indicating asbestos containing materials reside at each site and at the Spokane Public Schools Facility Services Building. Provide incidental demolition, as required. Reference appropriate specifications attached herein if asbestos abatement is required.

END OF SECTION 01010

PART I - GENERAL

1.01 GENERAL

This Section includes procedures for the preparation and submittal of Schedule of Values and Applications for Payment in accordance with the General Conditions.

1.02 RELATED SECTIONS

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

A. General Conditions.

B. Change Order Procedures, Section 01026

B. Submittals, Section 01300.

C. Construction Schedule, Section 01310.

D. Project Closeout, Section 01700.

1.03 PRIOR TO FIRST PROGRESS PAYMENT

A. Submit and receive approval for the construction schedule.

B. Submit approved "Intent to Pay Prevailing Wages Form", proof of Insurance and Performance Bonds prior to commencing the work.

C. Submit and receive approval of Schedule of Values".

1.04 SUBMITTAL PROCEDURES

A. Submit three (3) copies each of the Schedule of Values and Application for Payment.

B. Submit an updated progress schedule with each Application for Payment.

C. Submit under a Transmittal Letter.

D. Submit (3) copies each of proof of release of liens as stipulated in the General Conditions.

1.05 SUBSTANTIATING DATA

A. When Owner or Architect requires substantiating information, submit data justifying dollar amounts in question.

B. Provide one (1) copy of data with cover letter for each copy of the submittal. Show Application number and date, and line item by number and description.

1.06 SCHEDULE OF VALUES

A. Submit typed schedule on AIA Form G703 – Application and Certificate for Payment Continuation Sheet or on Contractor's standard form or electronic media printout as

approved by Owner.

B. Submit Schedule of Values in duplicate within 15 days after date established in the Notice to Proceed.

C. Format: List all major work activities indicated on the project schedule. Where appropriate, separate construction sequences, trades and phases recognized in CSI divisions. Identify site mobilization, bonds and insurance.

D. Revise schedule to list approved Change Orders with each Application for Payment.

E. Identify "Separately Funded Work" and amounts separately.

F. List separate line items for General, Mechanical and Electrical equipment closeout (which includes operation and maintenance manuals) and include the dollar amount for each portion of the project.

G. For each unit of work where payment requests will be made on account of materials or equipment purchased, fabricated, delivered but not yet installed; show "separate line items" for "order and receive" and "installation" of that unit of work.

H. Show line items of indirect costs, and margins of actual costs, only to the extent that such items will be individually listed in payment requests. In general, establish each item in the schedule of values (and in payment requests) to be complete with its total expenses and proportionate share of general overhead and profit margin.

I. Except as otherwise required, major cost items, which are not directly cost of actual work-in-place, such as distinct temporary facilities, may be either shown as line items in schedule of values or distributed as general overhead expense, at Contractor's option.

J. Make sum of total scheduled costs equal to Contract Sum, do not include State sales tax.

1.07 APPLICATIONS FOR PAYMENT

A. Submit three (3) copies of each application on AIA Form G702 – Application and Certificate for Payment.

B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment.

C. Payment Period: one (1) month.

D. Include Intent to Pay Prevailing Wages Form as required by Owner.

E. Proof of Payment as required by Owner.

G. Certified Payroll.

1.08 APPLICATION FOR FINAL PAYMENT

A. Submit three (3) copies of the final application for payment on AIA Form G702 – Application and Certificate for Payment identifying total adjusted Contract Sum, previous payments and sum remaining due.

B. Include Intent to Pay Prevailing Wages Form as required by Owner.

C. Include Affidavits of Wages Paid Form as required by Owner.

D. Submit proof of release of all liens as stipulated in the General Conditions.

END OF SECTION 01025

PART I - GENERAL

1.01 GENERAL

This Section includes procedures for the preparation and submittal of Change Orders in accordance with the General Conditions.

1.02 RELATED SECTIONS

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

A. General Conditions.

B. Schedule of Values and Applications for Payment, Section 01025.

B. Submittals, Section 01300.

C. Construction Schedule, Section 01310.

D. Project Closeout, Section 01700.

1.03 SUBMITTAL PROCEDURES

A. Submit name of the individual authorized to receive change documents, and be responsible for informing others in Contractor's employ or Subcontractors of changes to the Work.

B. Submit (3) copies each of change order form, AIA G701, Change Order.

1.04 DOCUMENTATION OF CHANGE IN CONTRACT SUM AND CONTRACT TIME

A. Maintain detailed records of Work done on a time and material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs of changes in the Work.

B. Document each quotation for a change in cost or time with sufficient data to allow evaluation of the quotation.

C. On request, provide additional data to support computations:

1. Quantities of products, labor, and equipment.
2. Taxes, insurance and bonds.
3. Overhead and Profit.
4. Justification for any change in Contract Time.
5. Credit for deletions from Contract, similarly documented.

D. Support each claim for additional costs, and for work done on a time and material basis, with additional information:

1. Origin and date of claim.

2. Dates and times work was performed, and by whom.
3. Time records and wage rates paid.
4. Invoices and receipts for products, equipment, and subcontracts, similarly documented.

1.05 CHANGE PROCEDURES

A. The Owner will advise of minor changes in the Work not involving an adjustment to the Contract Sum or Contract Time as work associated with the completion of the original Contract.

B. The Owner, Owner's representative, or Owner's consultant may issue a proposal request which may include a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit an estimate within ten (10) days.

C. The Contractor may propose a change by submitting a request for change to the Owner, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other Contractors. Document any requested substitutions in accordance with Section 01600.

1.06 CONSTRUCTION CHANGE DIRECTIVE

A. Owner may issue a document, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.

B. The document will describe changes in the Work, and will designate method of determining any change in the Contract Sum or Contract Time.

C. Contractor shall not execute the change in Work without written approval by the Owner.

1.07 STIPULATED SUM CHANGE ORDER

A. Based on a Proposal Request and Contractor's maximum price quotation, or Contractor's request for a Change Order as approved by the Owner.

1.08 UNIT PRICE CHANGE ORDER

A. For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis.

B. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Construction Change Directive.

C. Changes in Contract Sum or Contract Time will be computed as specified for Time and Material Change Order.

1.09 TIME AND MATERIAL CHANGE ORDER

A. Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.

B. Owner shall determine the change in Contract Sum and Contract Time as provided in the Contract Documents.

C. Maintain detailed records of work done on a Time and Material basis.

D. Provide full information required for the evaluation of proposed changes, and to substantiate costs for changes in the work.

1.10 EXECUTION OF CHANGE ORDERS

Contractor shall issue a Change Order Proposal for Owner approval and signature prior to the commencement of any Change Order Directive.

1.11 CORRELATION OF DOCUMENTS

A. Promptly revise the Schedule of Values and Applications for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

B. Promptly revise progress schedules to reflect any change in the Contract Time, revise sub-schedules to adjust time for other items of work affected by the change, and resubmit.

C. Promptly enter changes in Project Record Documents.

1.12 COST ALLOWANCES

A. A maximum allowance for overhead and profit combined, may be added to additive change orders by the Contractor and shall not exceed the following schedule:

1. For the General Contractor, 15% of the cost for any materials or work performed by his own forces.

2. For the General Contractor, for materials or work performed by its subcontractor, 8% of the amount due to the Subcontractor.

3. No markup will be allowed for small tools, shop burden, labor burden, or freight.

END OF SECTION 01026

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and supervisory requirements necessary for Project coordination including, but not necessarily limited to:

A. Coordination.

B. Administrative and supervisory personnel.

C. General installation provisions.

D. Cleaning and protection.

1.02 COORDINATION

Coordination: Coordinate construction activities included under various Sections of these Specifications to assure efficient and orderly installation of each part of the Work. Coordinate construction operations included under different Sections of the Specifications that are dependent upon each other for proper installation, connection, and operation.

A. Where installation of one part of the Work is dependent on installation of other components, either before or after its own installation, schedule construction activities in the sequence required to obtain the best results.

B. Where availability of space is limited, coordinate installation of different components to assure maximum accessibility for required maintenance, service and repair.

C. Make adequate provisions to accommodate items scheduled for later installation.

D. Where necessary, prepare memoranda for distribution to each party involved outlining special procedures required for coordination. Include such items as required notices, reports, and attendance at meetings.

E. Prepare similar memoranda for the Owner and separate Contractors where coordination of their Work is required.

1.03 ADMINISTRATIVE PROCEDURES

Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

A. Testing and Inspections.

B. Installation and removal of temporary facilities.

C. Delivery and processing of submittal.

1.04 POSTINGS

Staff Names: Within 15 days of Notice to Proceed, post a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers.

A. Post copies of the list in the Project meeting room, the temporary field office, and each temporary telephone.

1.05 GENERAL INSTALLATION PROVISIONS

A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which Work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.

B. Manufacturers instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.

C. Inspect materials or equipment immediately upon delivery and again prior to installation Reject items not complying with the specifications or approved submittal.

D. Provide attachment and Connection devices and methods necessary for securing Work. Secure Work true to line and level. Allow for expansion and building movement.

E. Visual Effects: Provide uniform joint widths in exposed Work. Arrange joints in exposed Work to obtain the best visual effect. Refer questionable choices to the Architect/ Engineer for final decision.

F. Recheck measurements and dimensions, before starting each installation.

G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.

H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.

I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect/ Engineer for final decision.

1.06 CLEANING AND PROTECTION

A. During handling and installation, clean and protect construction in progress and adjoining

materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

B. Clean and maintain completed construction as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

1.07 LIMITING EXPOSURES:

Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where applicable, such exposures include, but are not limited to, the following:

A. Excessively high or low temperatures.
B. Excessively high or low humidity.
C. Air contamination or pollution.
D. Water or ice.
E. Solvents.
F. Chemicals.
G. Light.
H. Puncture.
I. Abrasion.
J. Heavy traffic.
K. Soiling, staining and corrosion.
L. Combustion.
M. Electrical current.
N. Unusual wear or other misuse.
O. Misalignment.
P. Excessive weathering.
Q. Unprotected storage.
R. Improper shipping or handling.
S. Theft and vandalism.

END OF SECTION 01040

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and procedural requirements for cutting and patching.

1.02 RELATED WORK

Coordinate related work specified in other parts of the Specifications, including but not limited to the following:

A. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.03 SUBMITTALS

Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:

A. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.

B. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.

C. List products to be used and firms or entities that will perform Work.

D. Indicate dates when cutting and patching is to be performed.

E. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.

F. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.

G. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.04 QUALITY ASSURANCE

A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.

1. Obtain approval of the cutting and patching proposal before cutting and patching the

following structural elements.

a. Foundation Construction

b. Retaining walls

c. Structural Concrete

d. Beams, Joists and Trusses.

e. Load Bearing walls and partitions.

B. Requirements for Mechanical and Electrical Work: Refer to Division 15 and division 16 for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

C. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.

1. Obtain approval of cutting and patching proposal before cutting and patching the following operating elements or safety related systems.

a. Shoring, bracing and sheeting

b. Electrical and Alarm Systems

c. Data and Communication Systems

d. Plumbing Systems

e. Energy Management Systems (EMS)

D. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Owner's opinion, reduce the building aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace Work cut and patched in a visually unsatisfactory manner.

1. If possible, retain the original installer or fabricator to cut and patch exposed Work, or engage another recognized, experienced and specialized firm.

PART II - PRODUCTS

2.01 GENERAL

Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART III - EXECUTION

3.01 INSPECTION

A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.

B. Before proceeding, meet at the site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.

C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the existing building.

3.03 PERFORMANCE

A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.

1. In general, where cutting is required, use hand or small power tools designed for sawing or grinding, not hammering or chopping. Cut holes and slots neatly to size required with minimum disturbance to adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished

side into concealed surfaces.

3. Cut through asphalt and concrete using a cutting machine such as a carborundum saw or diamond core drill.

4. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

5. Comply with the requirements of applicable Sections of Division 2.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken areas containing the patch, to adjacent abutting surfaces,; after the patched area has received primer and second coat.

3.04 CLEANING

Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty, and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

3.05 LIMITING ASBESTOS EXPOSURE:

Asbestos Containing Building Materials (ACBM's) may be encountered during cutting procedures. Contact the Owner's Project Manager prior to starting work. Owner will provide a "Good Faith Survey" to ascertain and provide direction for protective procedures for abatement activities. Contractor shall be responsible for implementing these procedures for the protection of their employees, building occupants, and the general public around the Work site. Contractor will adhere to all training requirements for their employees as stated in Federal, State and local directives.

END OF SECTION 01045

PART I - GENERAL

1.01 GENERAL

This section establishes the requirements necessary to ensure compliance with asbestos safety regulations while working in Spokane Public School District facilities.

1.02 RELATED DOCUMENTS

A. EPA 40CFR Part 763, Sub part E – AHERA Regulations for Schools

B. OSHA 29CFR 1926.1101

C. WISHA Standard 296-65 WAC

D. WISHA Standard 296-62-077 WAC

1.03 WORKER QUALIFICATIONS

A. The contractor shall provide Department of Labor and Industries Asbestos Class III trained workers for any work required to be completed in the tunnels or crawl spaces, or for the performance of any task that will disturb asbestos containing materials within School District facilities.

B. Class III training may be obtained from several certified asbestos training providers in the Spokane area. The Spokane Public School District can provide a partial list of certified training providers, and additional training providers can be found in the yellow pages of the local telephone book under Asbestos Consulting.

C. The training consultant shall be certified to provide Class III Training. The Class III training shall cover how to work around asbestos containing materials, and how to perform maintenance work on and around asbestos containing building materials. Class III training does not cover full asbestos abatement. Due to the specific nature of our tunnels and crawl spaces the consultant shall provide training in the following areas:

1. How to safely enter and work in the tunnels without stepping on or otherwise causing damage to the pipes that have asbestos insulation wraps.

2. How to exit the tunnels and remove suits and respirators using approved decontamination procedures.

3. The School District is particularly concerned that the rooms above the tunnel accesses do not become contaminated with asbestos fibers and asbestos containing soil.

4. The Class III training shall cover proper techniques for drilling through asbestos containing materials on the floor, ceiling, roofs or walls for the purpose of making attachments or routing pipes or conduit.

D. Representatives of the Spokane Public School District are available to coordinate with the training provider regarding course material. They will also be available to assist the contractor with designating appropriate set-up areas, answering asbestos questions, and reviewing the asbestos management plan available at each school.

PART II - PRODUCTS

2.01 RESPIRATORS

Select respirators from those approved by the Department of Labor, or the National Institute of Safety and Health (NIOSH).

A. Single-use, disposable, or quarter face masks or respirators are not allowed.

B. Provide half-face or full-face type respirators, as required, with nose cup or other anti-fogging device.

C. Respirators shall be equipped with HEPA type filters.

2.02 PROTECTIVE CLOTHING

Provide personnel entering tunnels or crawl spaces, or otherwise exposed to airborne concentrations of asbestos fibers with disposable, protective, whole body clothing, head coverings, gloves and foot covering.

A. A single-piece suit is preferred.

PART III - EXECUTION

3.01 PERSONNEL

All contractor personnel on this project who will be entering a tunnel or crawlspace and/or to perform any task that will, or potentially could, disturb Asbestos Containing Material (ACM), shall:

A. Be a Class III trained worker

B. Wear personal protective clothing

C. Wear appropriate respiratory protection

3.02 ACCESS

Entrance and egress to tunnels and crawlspaces shall be made at openings in boiler rooms, custodial rooms, or other non-public or non-student spaces.

3.03 DISPOSAL

Asbestos containing waste materials shall be legally disposed. Removal of disposal bags shall be via the least public route, or shall be done during non-school hours.

3.04 APPEARANCE

Workers shall never be in asbestos protective clothing or wearing their respirators when they are in view of staff, students or the public.

PART IV - SUBMITTALS

4.01 CERTIFICATION

Copies of the Class III training attendance records or certificates for each qualified worker shall be required as a submittal before work begins.

4.02 DISPOSAL RECEIPTS

Copies of the waste disposal receipts shall be submitted to the School District as verification of proper disposal of asbestos contaminated waste.

END OF SECTION 01060

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative requirements for compliance with governing regulations, codes and standards.

A. Requirements include obtaining permits, licenses, inspections, releases and similar documentation, as well as payments, statements and similar requirements associated with regulations, codes and standards.

B. Refer to General Conditions for requirements for compliance with governing regulations.

1.02 DEFINITIONS

General: Definitions contained in this Article are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

A. Indicated refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in Specifications, and similar requirements in Contract Documents. Where terms such as "shown," "noted," "scheduled," and "specified" are used, it is to help locate the reference; no limitation on location is intended except as specifically noted.

B. Directed: Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean "directed by the Architect/ Engineer," "requested by the "Architect/ Engineer," and similar phrases. However, no implied meaning shall be interpreted to extend the Architect/ Engineer's responsibility into the Contractor's area of construction supervision.

C. Approve: The term "approved," where used in conjunction with the Architect/ Engineer's action on the Contractor's submittal, applications, and requests, is limited to the responsibilities and duties of the Architect/ Engineer. Such approval shall not release the Contractor from responsibility to fulfill Contract Document requirements, unless otherwise provided in the Contract Documents.

D. Regulation: The term "Regulations" includes laws, statutes, ordinances and lawful orders issued by authorities having jurisdiction, as well as rules, conventions and agreements within the construction industry that control performance of the Work, whether they are lawfully imposed by authorities having jurisdiction or not.

E. Furnish: The term "furnish" is used to mean "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

F. Install: The term "install" is used to describe operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting cleaning and similar operations."

G. Provide: The term "provide" means "to furnish and install, complete and ready for the intended use.

H. Installer: An installer" is an entity engaged by the Contractor, either as an employee, subcontractor or sub-subcontractor for performance of a particular construction activity, including installation, erection, application and similar operations. Installers are required to be experienced in the operations they are engaged to perform.

1. The term "experienced," when used with the term "Installer" means having a minimum of 5 previous Projects similar in the and scope to this Project, and familiar with the precautions required, and has complied with requirements of the authority having jurisdiction.

I. Project Site is the space available to the Contractor for performance of the Work, either exclusively or in conjunction with others performing other construction as part of the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

J. Testing Laboratories: A “testing laboratory” is an independent entity engaged to perform specific inspections or tests, either at the Project Site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

1.03 SPECIFICATION FORMAT AND CONTENT EXPLANATION

This Article is provided to help the user of these Specifications understand the format, language, implied requirements, and similar conventions. None of the explanations shall be interpreted to modify the substance of Contract requirements.

A. Specification Format: These Specifications are organized into Divisions, Sections or Trade Headings based on the Construction Specifications Institute's 16-Division format and numbering system. This organization conforms generally to recognized construction industry practice.

B. Specification Content: This Specification has been produced employing conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:

1. Language used in the Specifications and other Contract Documents is the abbreviated type. Implied words and meanings will be appropriately interpreted. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and where the full context of the Contract Documents so indicates.
2. Imperative Language is used generally in the Specifications. Requirements expressed imperatively are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities which must be fulfilled indirectly by the Contractor, or by others when so noted.

C. Assignment of Specialists: The Specification requires that certain specific construction activities shall be performed by specialists who are recognized experts in the operations to be performed. The specialists must be engaged for those activities, and the assignments are requirements over which the Contractor has no choice or option. Nevertheless, the ultimate responsibility for fulfilling Contract requirements remains with the Contractor.

1. This requirement should not be interpreted to conflict with enforcement of building codes and similar regulations governing the work. It is also not intended to interfere with local trade union jurisdictional settlements and similar conventions.

D. Trades: Use of titles such as "carpentry" is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.

1.04 INDUSTRY STANDARDS

Applicability of Standards: Except where Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into Contract Documents. Such standards are made a part of the Contract Documents by reference. Individual Sections indicate which codes and standards the Contractor must keep available at the Project Site for reference.

A. Publication Dates: Where compliance with an industry standard is required, comply with standard in effect as of date of Contract Documents.

B. Conflicting Requirements: Where compliance with two or more standards is specified, and they establish different or conflicting requirements for minimum quantities or quality levels, the most stringent requirement will be enforced, unless the Contract Documents indicate

otherwise. Refer requirements that are different, but apparently equal, and uncertainties as to which quality level is more stringent to the Architect/ Engineer for a decision before proceeding.

C. Minimum Quantities or Quality Levels: In every instance the quantity or quality level shown or specified shall be the minimum to be provided or performed. The actual installation may comply exactly, within specified tolerances, with the minimum quantity or quality specified, or it may exceed that minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum values, as noted, or appropriate for the context of the requirements. Refer instances of uncertainty to the Architect/ Engineer for decision before proceeding.

D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entities' construction activity. Copies of applicable standards are not bound with the Contract Documents. Where copies of standards are needed for performance of a required construction activity, the Contractor shall obtain copies directly from the publication source.

E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. The following acronyms or abbreviations as referenced in Contract Documents are defined to mean the associated names. Names and addresses are subject to change, and are believed to be, but are not assured to be, accurate and up-to-date as of date of Contract Documents:

1. AA — Aluminum Association
   900 19th St., Suite 300; Washington, DC 20006
   (202)862-5100
2. AABC — Associated Air Balance Council
   1518 K Street NW, Suite 503; Washington, DC 20005
   (202)737-0202
3. AAN — American Association of Nurserymen
   1250 Eye Street NW, Suite 500; Washington DC 20005
   (202)789-2900
4. AASHTO — American Association of State Highway & Transportation Officials
   444 N. Capital St., Suite 500; Washington, DC 20005

(202)624-5800

5. ACI — American Concrete Institute
P.O. Box 19150; Detroit, MI 48219
(313)532-2600

6. AGA — American Gas Association
1515 Wilson Blvd.; Arlington, VA 22209
(703)841-8400

7. AHA — American Hardboard Association
520 N. Hicks Rd.; Palatine IL 60067
(312)943-8800

8. Al — Asphalt Institute
Asphalt Inst. Bldg.; College Park MD 20740
(301)227-4258

9. AISC — American Institute of Steel Construction
400 N. Michigan Ave.; 8th Flr; Chicago IL 60611
(312)670-2400

10. AITC — American Institute of Timber Construction
333 W. Hampden Ave.; Englewood Co 80110
(303)761-3212

11. ANSI — American National Standards Institute
1430 Broadway; New York, NY 10018
(212)354-3300

12. APA — American Plywood Association
P.O. Box 11700; Tacoma, WA 98411
(206)565-6600

13. ARMA — Asphalt Roofing Manufacturers Association
6288 Montrose Road,; Rockville, MD 20852
(301)231-9050

14. ASC — Adhesive and Sealant Council
1500 Wilson Blvd,; Suite 515; Arlington, VA 22209
(703)841-1112

15. ASHRAE American Society of Heating, Refrigerating and Air Conditioning Architect/ Engineers
1791 Tulie Circle, NE; Atlanta, GA 30329
(404)636-8400

16. ASME American Society of Mechanical Architect/ Engineer
345 East 47th St.; New York, NY 10017
(212)705-7722

17. ASPE American Society of Plumbing Architect/ Engineers
3617 Thousand Oaks Blvd.,Suite 210; Westlake, CA 91362
(805)495-7120

18. ASSE American Society of Sanitary Architect/ Engineering
P.O. Box 40362; Bay Village, OH 44140;
(216)835-3040

19. ASTM American Society of Testing and Materials
1916 Race St; Philadelphia, PA 19103;
(215)299-5400

20. AWI Architectural Woodwork Institute
2310 S. Walter Reed Dr.; Arlington, VA 22206;
(703)671-9100

21. AWPA American Wood Preservers' Association
P.O. Box 5283; Springfield, VA 21666
(703)339-6660

22. AWWA American Water Works Association
6666 W. Quincy Ave.; Denver, CO 80235
(303)794-7711

23. BHMA Builders' Hardware Manufacturers Association
60 East 42nd St., Room 511; New York, NY 10165
(212)682-8142

24. CAGI Compressed Air and Gas Institute
c/o Thomas Associates, Inc.
1230 Keith Building; Cleveland, OH 44115

(216)241-7333

25. CISPI Cast Iron Soil Pipe Institute
1499 Chain Bridge Rd.; Suite 203; McLean, VA 22101
(703)827-9177

26. CRI Carpet and Rug Institute
Box 2048; Dalton, GA 30720
(404)278-3176

27. CRSI Concrete Reinforcing Steel Institute
933 Plum Grove Road; Schaumburg, IL 60195
(312)490-1700

28. DHI Door and Hardware Institute
7711 Old Springhouse Rd.; McLean, VA 22102
(703)556-3990

29. GA Gypsum Association
1603 Orrington Ave.; Evanston, IL 60201
(312)491-1744

30. GCC Insulating Glass Certification Council
Route 11; Industrial Park; Cortland, NY 13045
(607)753-6711

31. NAPA National Asphalt Pavement Association
Calvert Building, Suite 620; 6811 Kenilworth Ave.;
Riverdale, MD 20737
(301)779-4880

32. NEC National Electrical Code (by NFPA)

33. NKCA National Kitchen Cabinet Association
P.O. Box 6830; Falls Church, VA 22046
(703)237-7580

34. NPA National Particle Board Association
18928 Premier court, Gaithersburg, MD 20879
(301)670-0604

35. NPCA National Paint and Coatings Association

1500 Rhode Island Avenue, N.W.; Washington, DC 20005
(202)462-6272

36. PDI — Plumbing and Drainage Institute
(c/o Austin O. Roche,Jr.)
5342 Boulevard Pl.; Indianapolis, IN 46208
(317)251-5298

37. RFCI — Resilient Floor Covering Institute
966 Hungerford Drive; Suite 12-B; Rockville, MD 20805
(301)340-8580

38. SMACNA — Sheet Metal & Air Conditioning Contractors National Association
P.O. Box 70; Merrifield, VA 22116
(703)790-9890

39. TPI — Truss Plate Institute
583 D'Onotrio Drive, Suite 200; Madison, Wl 53719
(608)833-5900

40. UL — Underwriters Laboratories
333 Pingsten Rd..; Northbrook, IL 60062
(312)272-8800

41. CLIB — West Coast Lumber Inspection Bureau
P.O. Box 23145; Portland, OR 97223
(503)639-0651

42. WRI — Wire Reinforcement Institute
8361 A Greensboro Drive; McLean, VA 22102
(703)790-9790

43. WWPA — Western Wood Products Association
1500 Yeon Bldg.; Portland, OR 97204
(503)224-3930

44. W.W.P.A. — Woven Wire Products Association
2515 N. Nordica Ave.; Chicago, IL 60635
(312)637-1359

F. Federal Government Agencies: Names and titles of federal government standard or

Specification producing agencies are frequently abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard or Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the Contract Documents.

1. DOT Department of Transportation
   400 Seventh Street NW; Washington, DC 20590
   (202)426-4000
2. EPA Environmental Protection Agency
   401 M Street SW, Washington, DC 20460
   (202)829-3535
3. FS Federal Specification
   (General Services Administration)
   Specifications Unit (WFSIS); 7th and D Streets SW;
   Washington, DC 20406; (202)472-2205 or 472-2140

1.05 PERMITS. LICENSES. AND CERTIFICATES

For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases. jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

END OF SECTION 01090

PART I - GENERAL

1.01 DEFINITION AND SCOPE

A. Mobilization shall include the obtaining of all permits, insurance and bonds, moving onto the site of all material and equipment, furnishing and erecting temporary buildings and other temporary construction facilities, furnishing and erecting all temporary and permanent fencing; final clean-up and finishing of all construction-related activities to moving off site upon project completion (demobilization); all as required for the proper performance and completion of the work. Mobilization for this work shall include, but is not necessarily limited to, the following principal items:

1. Obtaining all required bonds, insurance, permits and licenses.
2. Submittal of all required subcontractor insurance certificates and bonds.
3. Pre-construction conference and submittal of construction schedule.
4. Arranging for and erection of Contractor's work and storage yard.
5. Providing a field office trailer for the Contractor, including furnishings, utility services and telephone.
6. Installing temporary construction power and wiring.
7. Providing on-site sanitary facilities as specified
8. Moving on to the site of all Contractor’s material and equipment required for the first month of work.
9. Having the Contractor's superintendent at the job site full time.
10. Posting all OSHA/WISHA required notices and establishing of safety programs.
11. Posting of all required posters, notices and wage rates (if required).
12. Documentation of placing order for major equipment.
13. Providing shoring and protection of existing structures, utilities, and facilities as may-be required during the course of the work.

1.02 PAYMENT FOR MOBILIZATION

A No payment for mobilization, or any part thereof, will be approved under the Contract until all mobilization items listed above have been completed as specified.

B. Payment for Mobilization and Demobilization

1. Mobilization consists of preconstruction expenses and the costs of preparatory work and operations performed by the Contractor which occur before 10% of the total original contract amount is earned from other bid items. Items which are not to be

included in the item of Mobilization include, but are not limited to:

a. Any portion of the work covered by the specific bid item or incidental work which is to be included in a bid item(s);

b. Profit, interest on borrowed money, overhead, or management costs.

END OF SECTION 01100

PART I - GENERAL

1.01 SUMMARY

A. Requirements for meetings, lines of communications, schedule and payments.

1.02 ORDER OF PRECEDENCE OF CONTRACT DOCUMENTS

A. In resolving conflicts resulting from conflicts, errors, ambiguities or discrepancies in any of the Contract Documents, the order of precedence shall be as follows:

1. Agreement
2. Specifications
3. Drawings

B. Within the Specifications, the order of precedence is as follows:

1. Addenda
2. Supplemental General Conditions
3. Instructions to Bidders
4. Quotation and Contract Requirements
5. Division 1, General Conditions
6. Division 2-16, Technical Specifications
7. Referenced Standard Specifications

C. With reference to the Drawings, the order of precedence is as follows:

1. Figures govern over scaled dimensions
2. Detail drawings govern over general drawings
3. Change order drawings govern over contract drawings
4. Contract drawings govern over standard drawings
5. Contract drawings govern over shop drawings

1.03 PROJECT MEETINGS

A. Pre-construction meeting

Meet at Owner's office within two weeks prior to start of work. Attendees to include Owner and Contractor. Agenda shall include discussions of:

1. Mobilization considerations,
2. Administrative procedures,
3. Review of schedule and submittals and
4. Any start-up and coordination items to be addressed.

B. Weekly Progress Meetings

Meet at the work site at least once each week. Attendees to include owner and Contractor's Project Supervisor. Agenda shall include:

1. Review of schedule
2. Discussion of current work activities
3. Discussion of work activities for next week and
4. Review of technical aspects, material deliveries and coordination of activities.

C. Pre-Installation Meetings

Meet at the site prior to the installation of all complex building systems and components requiring special scheduling and safety procedures.

1. Review the schedule for the coordination activities with other trades.
2. Discuss special installation procedures and safety considerations.

D. Close-Out Meeting

Meet at Owner's office on or before contract completion date. Attendees to include Owner and Contractors Project Supervisor. Agenda shall include:

1. Status of punch list work and submittals and
2. Review of requirements for final close-out and payment

1.04 SCHEDULE OF WORK

A. Schedule of work shall be in sufficient detail to show the start and completion dates for activity.

B. The schedule shall be reviewed and updated each week.

1.05 WORK HOURS

A. Custodial Hours:

Elementary Schools:

Monday and Wednesday – 5:30 am to 6:30 pm

Tuesday, Thursday and Friday – 5:30 am to 10:15 pm

Middle Schools:

Monday through Friday – 5:30 am to 10:15 pm

High Schools:

Monday through Friday – 5:30 am to 11:00 pm

B. Unless otherwise noted, all work can take place during the hours of 7:00 a.m. to 4:00 p.m. School officials will provide access to the work and lock-up at the end of each day's shift. All work must be cleaned up at the end of each shift, leaving each building in a

clean, usable condition, ready for the next day of school. Custodial coverage is required when the Contractor is in the facility.

C. Exceptions would be any work that is exceptionally noisy or dirty, setting the exhaust fan and makeup air unit on the roof, or any special activities scheduled during the day in the classroom or building performed in limited access areas such as mechanical rooms or custodial closets.

D. During the summer break period, conventional day-time hours may be adopted for all work. Typically, the contactor is able to work based on the hours listed below on the interior of the building. Summer break Contractor working hours (custodial coverage – to be confirmed with site's head custodian):

Monday – Friday	7:00 am to 3:00 pm
Or	
Four Tens	6:00 am to 4:00 pm

E. The contractor may wish to arrange additional custodial coverage as discussed below. Daily clean-up is still required during this period so as not to conflict with major summer cleaning efforts by custodial staff.

F. During winter break, spring break and holidays conventional day-time hours may be adopted for all work – to be verified with the head custodian for that site location. Typically, the contactor is able to work based on the hours listed below on the interior of the building.

Monday – Friday	7:00 am to 3:00 pm
Or	
Four Tens	6:00 am to 4:00 pm

G. Exterior work may occur during the school day and weekends as long as the work does not interfere with the educational process or impede access of students or staff to the site and facilities. Custodial coverage is not required for exterior work hours.

H. School District Holidays which the Contractor will not be able to work are the following:
Veteran's Day
Thanksgiving Holiday (2 days observed)
Christmas Holiday (2 days observed)

New Years Holiday (2 days observed)
Martin Luther King Junior Day
President's Day
Memorial Day
Independence Day
Labor Day

I. Days which are non/student and curricular planning days (not district employee holidays) have custodial coverage limited from 7:00 a.m. to 3:00 p.m.

J. Contractor shall confirm all schedules and working hours with the Principal and Head Custodian. Contractor shall be responsible for coordinating with the school's principal and custodian of special events (i.e. carnival event, open house, etc.) which may impact the Contractor's ability to perform project work. In some cases it may not be possible for the Contractor to work that evening.

K. **Requests for extended work hours shall be made 48 hours in advance to the Project Manager. Custodial staff will be notified and must be on site prior to any extended work hours. The Contractor shall be responsible for covering Custodial Rates for extended work hours (typically in the form of a deductive change order to the Project). Rates shall be per the Custodial Contracts with the School District.**

1.06 LINES OF COMMUNICATION

A. A direct line of daily communication shall be maintained between the Owner's representative and the Contractor's Project Supervisor.

B. Each work site shall have a person-in-charge at anytime work is being performed.

1.07 PROGRESS PAYMENTS

Five percent of the current billing amount shall be withheld from each pay request for retainage.

A. Initial Progress Payment

Owner's approval of the initial pay request shall be based on completion or receipt of the following:

1. Owner's receipt of:
   a. Certificate of Insurance
   b. Performance Bond
   c. Statement of Intent to Pay Prevailing Wages approved by the Department of Labor and Industries and
2. Satisfactory processing of submittals required by Section 01300, Paragraph 1.03.

3. Attendance of Pre-Construction meeting,
4. Satisfactory completion of portion of work for which billing is submitted.

B. Subsequent progress payments shall be approved by the Owner for portions of work completed up to 90% of contract price contingent upon:
1. Attendance of Weekly Progress Meetings,
2. Adherence to Approved Schedule of Work and
3. Satisfactory compliance with the project specifications.

C. Final progress payment shall be approved by the Owner upon completion of:
1. Satisfactory completion of the scope of work including punch list items.
2. Execution of Change Orders if required.

D. Payment of retainage shall be in accordance with Division 0, Quotation and Contract Requirements.

END OF SECTION 01200

PART I - GENERAL

1.01 GENERAL

A. Wherever submittals are required from the Contractor by the Contract Documents all such submittals shall be submitted to the Architect/ Engineer in accordance with the requirements of this section.

B. Each submittal shall be transmitted on Contractor's standard letterhead form. This includes but is not limited to Administrative submittals, Contractor submittals, Project Close-out submittals, Applications for Payment, Construction Management processes and Requests for Information and all such transmitted documents. Transmittal shall include, Project Name, Purchase Order Number, and Date.

C. If alternate major equipment items require any modification or deviation from the Plans, the Contractor agrees to prepare and submit detailed drawings to the Architect/ Engineer showing all modifications in structures, piping, electrical, mechanical or other work required to adapt the Plans to the alternate equipment. The Contractor further understands that the Architect/ Engineer will review said detailed drawings of modifications and either approve them or indicate thereon changes necessary to comply with the project requirements Detailed drawings which are not approved will be revised and then resubmitted to the Architect/ Engineer. Any deduct and add amounts are "installed" prices and take into consideration and include any cost of the design or construction changes that may be required as a result of using the alternate equipment. See also Section 01600, Materials and Equipment, 1.06 Substitutions.

1.02 SUBMITTAL PROCEDURES

A. Coordination: Coordinate preparation and processing of submittal with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittal and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittal for related elements of the Work so processing will not be delayed by the need to review submittal concurrently for coordination.

3. Coordinate and consolidate Submittals to include complete assemblies and systems. Partial or incomplete Submittals will not be reviewed until complete Submittal is

received.

B. Deviations on Submittals: Identify deviations from Contract Documents, conforming to industry standards or standard shop practices by drawing cloud or other identify in marking around deviation and noting change. Identify Product or system limitations which may be detrimental to successful performance of completed Work.

D. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittal, including time for re-submittal. Allow (10) days for review.

E. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block. Sequentially number the transmittal forms. Re-submittals shall have the original number with an alphabetical suffix. Identify each copy of submittal with number.

1. Include the following information on the label for processing and recording action taken.

   Project name.

   Date.

   Name and address of Contractor.

   Name and address of subcontractor or supplier.

   Pertinent Drawing sheet, detail number and specification Section number.

2. Apply Contractor's stamp, signed or initialed certifying that review, verification of products required, all dimensions and field verified dimensions, shop drawing dimensions, adjacent construction work, and coordination of information, is in accordance with the requirements of the Work and the Contract Documents.

   a. Compliance with specified characteristics is the Contractor's responsibility. Approval of submittals does not release the Contractor from the requirements of a proper installation, compliance with applicable codes or coordination of the work.

3. Provide space for Contractor and Architect/Engineer review stamps.

F. Distribution: Following response to initial submittal, print and distribute copies to the Architect/ Engineer, subcontractors, and other concerned parties required to comply with submittal dates indicated. Post copies in the field office.

G. When revisions are made, distribute to the same parties and post in the same locations.

Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.

1.03 ADMINISTRATIVE SUBMITTAL

Refer to General Conditions and other Contract Documents for requirements for administrative submittal. Such submittal shall include, but are not limited to:

A. Permits.

B. Applications for payment.

C. Performance and payment bonds.

D. Insurance certificates.

E. Inspection and test reports are included in Section 01400 Quality Control.

1.04 CONTRACTOR'S SUBMITTALS

Submittals to be in accordance with the following, but not limited to:

A. General Conditions.

B. Construction Schedule.

C. Weekly Progress Reports.

D. Contractor's Price Breakdown "Schedule Of Values".

E. Outline of construction sequence of the work, as specified, and as construction requirements become more evident. Relate outline to construction schedule and contractor price breakdown. Submit document for review prior to commencing work at the site.

1.05 SUBMITTALS/SHOP DRAWINGS

A. Wherever called for in these Specifications or on the Drawings, or where required by the Architect/ Engineer, the Contractor shall furnish to the Architect/ Engineer for review, three (3) copies of each submittal. The term "submittal" as used herein shall be understood to include detail design calculations, shop drawings, fabrication and installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets, samples and similar items. Where required, each submittal shall contain a photocopy of the governing technical section. Any deviation from the governing technical section shall be noted and referenced to the appropriate paragraph of the section. Unless otherwise required, said submittals shall be submitted to the Architect/ Engineer at a time sufficiently early to allow review of same by the Architect/ Engineer and to accommodate the rate of construction progress required under the Contract.

B. All shop drawings or other submittals shall be accompanied by the Contractor's standard

submittal transmittal form as approved by the Architect/ Engineer. Any submittal not accompanied by such a form, or where all applicable items on the form are not completed, will be returned for re-submittal. The Contractor may authorize a material or equipment supplier to contact the Architect/ Engineer directly with regard to questions pertaining to submittals, however, ultimate responsibility for the accuracy and completeness of the information contained in the submittal shall remain with the Contractor.

C. Normally, a separate transmittal form shall be used for each specific item or class of material or equipment for which a submittal is required. Transmittal of a submittal of various items using a single transmittal form will be permitted only when the items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of the group or package as a whole. A multiple-page submittal shall be collated into sets, and each set shall be stapled or bound, as appropriate, prior to transmittal to the Architect/ Engineer.

D. Except as may otherwise be provided herein, the Architect/ Engineer will return prints of each submittal to the Contractor with his comments noted thereon, within fifteen (15) working days following their receipt by the Architect/ Engineer. It is considered reasonable that the Contractor shall make a complete and acceptable submittal to the Architect/ Engineer by the second submission of a submittal item The Owner reserves the right to withhold monies due the Contractor to cover additional costs of the Architect/ Engineer's review beyond the second submission.

E. If two (2) copies of a submittal are returned to the Contractor marked "NO EXCEPTIONS TAKEN," formal revision and re-submission of said submittal will not be required. Owner will retain (1) copy.

F. If two (2) copies of a submittal are returned to the Contractor marked "MAKE CORRECTIONS NOTED, "formal revision and resubmission of said submittal will not be required. However, all corrections must be made or noted prior to fabrication. Owner will retain (1) copy.

G. If one (1) copy of the submittal is returned to the Contractor marked "REVISE AND RESUBMIT," the Contractor shall revise said submittal and shall resubmit three (3) copies of said revised submittal to the Architect/ Engineer.

H. If one (1) copy of the submittal is returned to the Contractor marked "REJECTED," the Contractor shall revise said submittal and shall resubmit three (3) copies of said revised

submittal to the Architect/ Engineer.

I. If one (l) copy of the submittal is returned to the Contractor marked "SUBMIT SPECIFIED ITEM," the Contractor shall make another complete submittal of three (3) copies of the item required by the Specifications.

J. Fabrication of an item shall not be commenced before the Architect/ Engineer has reviewed the pertinent submittals and returned copies to the Contractor marked either "NO EXCEPTIONS TAKEN," or "MAKE CORRECTIONS NOTED," unless allowed otherwise by the Architect/ Engineer. Revisions indicated on submittals shall be considered as changes necessary to meet the requirements of the Contract Drawings and Specifications and shall not be taken as the basis of claims for extra work.

K. All Contractor submittals shall be carefully reviewed by an authorized representative of the Contractor prior to submission to the Architect/ Engineer. Each submittal shall be dated, signed and certified by the Contractor as being correct and in strict conformance with the Contract Drawings and the Specifications, unless approved otherwise by the Architect/ Engineer. Any variation from the specifications, if any, and a written explanation of the need for a change shall be noted on the submittal. Any non-certified submittals may be returned to the Contractor without action taken by the Architect/ Engineer, and any delays caused thereby shall be the total responsibility of the Contractor.

L. The Architect/ Engineer's review of Contractor submittals shall not relieve the Contractor of the responsibility for the correctness of details and dimensions. The Contractor shall assume all responsibility and risk for any misfits due to any errors
in Contractor-submitted submittals. Any fabrications or other work performed in advance of the receipt of approved submittals shall be entirely at the Contractor's risk and expense. The Contractor shall be responsible for the dimensions and the design of adequate connections and details.

M. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8 - ½" x11" but no larger than 24" x 36".

1.06 CONTRACTOR'S SCHEDULES

A. Contractor's construction schedule shall be prepared and submitted to the Architect/ Engineer in accordance with the provisions of Section 01310.

1.07 SUBMITTAL OF PROPOSED EQUIVALENT PRODUCTS

A. All materials, processes or equipment which are to be listed and provided shall comply with the General Conditions.

1.08 SAMPLES

A. Unless otherwise specified, whenever in the Specifications samples are required, the Contractor shall submit not less than one (1) sample of each such item or material to the Architect/ Engineer for approval at no additional cost to the Owner.

B Samples, as required herein, shall be submitted for approval a minimum of fifteen (15) working days prior to ordering such material for delivery to the job site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the work.

C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and Manufacturer's names for identification and submittal to the Architect/ Engineer for approval. Upon receiving approval of the Architect/ Engineer, one (1) set of the samples will be stamped and dated by the Architect/ Engineer and returned to the Contractor, one (1) set will be retained by the Architect/ Engineer, and one (1) set of samples shall remain at the job site until completion of the work.

D. Unless otherwise specified, all colors and textures of specified items will be selected by the Owner from the Manufacturer's standard colors and standard product lines.

1.09 SPECIAL JOB-SITE SUBMITTALS

A. Hazardous Chemical Inventory:

1. In order to comply with the State of Washington's Hazard Communication Standard (Chapter 296-62-054 through 05427 WAC), the Owner requires the contractor to provide a complete inventory of all potentially hazardous chemicals which the Contractor (including sub-contractors) will bring into or produce at the work site. This inventory shall be submitted to the Owner and Architect/Engineer no later than three days prior to the chemicals arrival to the site. Specific information for each chemical, in the form of Material Safety Data Sheets (MSDS), and the personal protective equipment required for working with the materials (respirators, special clothing, etc.) shall be included in the submittal.

2. The Contractor shall revise this information as necessary (i.e. when new chemicals are brought onto or produced at the worksite), with updates forwarded to the Owner and Architect/Engineer. A complete and accurate copy of this information shall be

immediately available at the Contractor's worksite office for reference by Owner representatives and the Contractor's employees during the Contractor's working hours.

3. Submit MSDS information for all chemicals or hazardous materials. All chemicals and hazardous materials shall meet NIOSH Permissible Exposure Levels (P.E.L.) and OSHA Time Weighted Average (T.W.A.). All MSDS information shall be submitted in bound three ring binders and tabulated by specification section. A copy of all MSDS information shall be kept on the job site.

1.10 TECHNICAL MANUALS

A. The Contractor shall furnish to the Architect/ Engineer three (3) identical sets of technical manuals when required. Each set shall consist of one or more volumes, each of which shall be bound in a standard size, 3-ring. looseleaf, vinyl plastic hard cover binder suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches Manuals shall be furnished to the Architect/ Engineer within thirty (30) days of delivery of each item of equipment to the construction site, unless required otherwise by the Architect/ Engineer.

B The technical manuals shall include the following for each item of mechanical and electrical equipment:

1. Complete operating instructions, including location of controls, special tools or other equipment required, related instrumentation, and other equipment needed for operation.
2. Lubrication schedules, including a list of acceptable lubricants from at least three (3) different major manufacturers whose products are locally available.
3. Preventive maintenance procedures and schedules.
4. Parts lists, by generic title and identification number, complete with exploded views of each assembly, including the weights of individual components weighing over one hundred (100) pounds.
5. Disassembly and reassembly instructions.
6. Name and location of nearest supplier and spare pans warehouse.
7. Recommended troubleshooting and startup procedures.
8. Reproducible prints of the as-built diagrams, schematics, and installation drawings required under the electrical and instrumentation portions of these Specifications.

1.11 SPARE PARTS LISTS

A. The Contractor shall furnish to the Architect/ Engineer three (3) identical sets of spare parts information for all mechanical, electrical and instrumentation equipment when required. The spare parts list shall include the current list price of each spare part. The spare parts list shall be limited to those spare pans which each Manufacturer recommends be maintained by the Owner in inventory at the plant site. Each Manufacturer or supplier shall indicate the name, address and telephone number of its nearest outlet of spare pans to facilitate the Owner in ordering. The Contractor shall cross-reference all spare pans lists to the equipment numbers designated in the Specifications or on the Drawings. The spare parts lists shall be bound in standard size, 3-ring, looseleaf, vinyl plastic hard cover binders suitable for bookshelf storage. Binder ring size shall not exceed 2.5 inches.

1.12 RECORD DRAWINGS

A. The Contractor shall keep and maintain, at the job site, one (1) record set of Specifications, Addenda, Change Orders, modifications, full-size Contract Drawings and Shop Drawings. On these he shall mark all project conditions, locations, configurations, and any other changes or deviations which may vary from the details represented on the original Contract Drawings, including buried or concealed construction and utility features which are revealed during the course of construction. Special attention shall be given to recording the horizontal and vertical location of all buried utilities that differ from the locations indicated, or which were not indicated on the Contract Drawings. Said Record Drawings shall be supplemented by any detailed sketches as necessary or directed to indicate, fully, the work as actually constructed. These master Record Drawings of the Contractor's representation of as-built conditions, including all revisions made necessary by addenda, change orders, and the like, shall be maintained up-to-date during the progress of the work.

B. In the case of those drawings which depict the detail requirement for equipment to be assembled and wired in the factory, such as motor control centers and the like, the Record Drawings shall be updated by indicating those portions which are superseded by final Shop Drawings, and by including appropriate reference information describing the Shop Drawings by Manufacturer, drawing and revision numbers.

C. Record Drawings shall be accessible to the Architect/ Engineer at all times during the construction period and shall be delivered to the Architect/ Engineer upon completion of the work.

D. Requests for partial payments will not be approved if the Record Drawings are not kept

current, and not until the completed Record Drawings, showing all variations between the work as actually constructed and as originally shown on the Contract Drawings or other Contract Documents, have been inspected by the Architect/ Engineer.

E. Final payment will not be approved until the Contractor-prepared Record Drawings have been delivered to the Architect/ Engineer. Said up-to-date Record Drawings may be in the form of a set of prints with carefully plotted information overlaid in pencil.

F. Upon completion of the work and prior to final acceptance, the Record Drawings shall be turned over to the Architect/ Engineer for transmittal to the Owner. See specification Section 01700, “Project Closeout” for submittal requirements.

1.13 SUPERINTENDENT’S RESUME

A. If requested by the Architect/ Engineer and/or Owner, and prior to execution of the Agreement, the Contractor shall submit to the Architect/ Engineer the experience resume of the person who will be designated Construction Superintendent While this person shall serve at the pleasure of the Contractor, he shall be replaced on this project at the option of the Owner(s) upon five (5) days written notice.

1.14 PERMITS. LICENSES. AND CERTIFICATES

For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases. jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence and records established in conjunction with compliance with standards and regulations bearing upon performance of the work.

END OF SECTION 01300

PART I - GENERAL

1.01 SCOPE OF WORK

A. This section specifies reports and schedules when required by the Owner's Representative for planning and monitoring the progress of the work.

1.02 SUBMITTAL PROCEDURES

A. Preliminary Schedule: Within ten (10) calendar days after receiving the Notice of Award, the Contractor shall furnish to the Architect/Engineer a preliminary schedule for the work showing his general plan for orderly completion of the work and showing in detail his planned mobilization of materials and equipment, sequence of early operations, and timing of procurement of materials and equipment. The Contractor shall assist the Architect/Engineer in reviewing and evaluating such schedule.

B. Detailed Schedule: Within fifteen (15) calendar days after receiving the Notice to Proceed, the Contractor shall furnish to the Architect/Engineer a detailed schedule for orderly completion of the work showing his planned sequences of operations and the dates for commencement and completion of all important features of the work.

1. The schedule shall be comprehensive, covering both activities at the site of the work and off-site activities such as design, procurement and fabrication. The schedule shall show the time allowed for testing and other required procedures prior to the work being put into operation. The schedule shall be orderly and realistic, and shall be revised as necessary to meet this requirement. The Contractor shall promptly advise the Architect/Engineer of any occurrence requiring substantial revision of the schedule and shall furnish a revised schedule within ten (10) calendar days after receipt.

2. The detailed schedule and each revision thereof shall be subject to approval by the Architect/Engineer for conformity with the requirements of this section. The Contractor shall assist the Architect/Engineer in reviewing and evaluating each schedule furnished. Disapproved schedules will be returned to the Contractor, shall be revised by him to correct the defects noted, and shall be re-submitted to the Architect/Engineer within ten (10) calendar days after receipt.

C. The Architect/Engineer may require the Contractor to modify any portions of the work schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall

be deemed to be behind schedule.

D. The Contractor shall submit three (3) copies of each schedule required.

1.03 SCHEDULE MONITORING

A. Not later than the fifth day of each calendar month, the Contractor shall provide a copy of the construction schedule with notes thereon indicating the percentage of completion of each subdivision of the work on the last day of the previous month and the deviations from the schedule. Contract time extensions shall be incorporated into updated schedules, reflecting their effect at the time they occur.

1.04 CHANGE ORDERS

A. Upon approval of a change order, the approved change shall be reflected in the next submittal by the Contractor.

1.05 SPECIFIC ACTIVITY REQUIREMENTS

A. General Categories: The construction schedule shall, as a minimum, be divided into the following general categories or similar items as approved by the Architect/Engineer:

1. Mobilization
2. Demolition
3. Electrical/Security
4. Clean-up and Demobilization

B. Winter Work: All work shall continue through the winter unless allowed otherwise by the Contract Documents. Work that cannot be completed shall be completed in the spring on a schedule approved by the Owner.

C. Construction Schedule: The construction schedule shall include for removing equipment or structures from operation.

END OF SECTION 01310

PART I - GENERAL

1.01 SITE INVESTIGATION AND CONTROL

A. The Contractor shall verify all dimensions in the field and shall check field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the work due to his failure to comply with this requirement.

B. The Contractor shall inspect related and appurtenant work and shall report in writing to the Architect/ Engineer any conditions which will prevent proper completion of the work. Failure to report any such conditions shall constitute acceptance of all site conditions, and any required removal, repair replacement caused by unsuitable conditions shall be performed by the Contractor at his expense.

1.02 INSPECTION OF THE WORK

A. The work shall be conducted under the general observation of the Architect/ Engineer and shall be subject to inspection by representatives of the Architect/ Engineer acting on behalf of the Owner to insure strict compliance with the requirements of the Contract Documents. Such inspection may include mill, plant, shop or field inspection, as required. The Architect/ Engineer shall be permitted access to all parts of the work, including plants where materials and equipment are manufactured or fabricated. The Contractor shall at all times provide access to the work by representatives of any government agencies.

B. The presence of the Architect/ Engineer or any inspector(s), however, shall not relieve the Contractor of the responsibility for the proper execution of the work in accordance with all requirements of the Contract Documents. Compliance is a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the Architect/ Engineer or any inspector(s).

C. All materials and articles furnished by the Contractor shall be subject to rigid inspection, and no materials or articles shall be used in the work until they have been inspected and accepted by the Architect/ Engineer or his authorized representative. No work shall be backfilled, buried, cast in concrete, hidden or otherwise covered until it has been inspected by the Architect/ Engineer or his authorized representative. Any work so covered in the absence of inspection shall be subject to uncovering. Where un-inspected work cannot be uncovered, such as in concrete cast over reinforcing steel, all such work shall be subject to demolition, removal and reconstruction under proper inspection, and no additional payment or time for completion will be allowed therefore.

1.03 TIME OF INSPECTION AND TESTS

A. Samples and test specimens required under these Specifications shall be furnished and prepared for testing in ample time for the completion of the necessary tests and analyses before said articles or materials are to be used. The Contractor shall furnish and prepare all required test specimens at his own expense. Except for compaction testing, performance of all required tests will be borne by the Contractor at no cost to the Owner.

B. Whenever the Contractor is ready to backfill, bury, cast in concrete, hide or otherwise cover any work under the Contract, he shall notify the Architect/ Engineer not less than 24 hours in advance to request inspection before beginning any such work of covering. Failure of the Contractor to notify the Architect/ Engineer at least 24 in advance of any such inspections shall be reasonable cause for the Architect/ Engineer to order a sufficient delay in the Contractor's schedule to allow time for such inspections and any remedial or corrective work required; and all costs of such delays, including its effect upon other portions of the work, shall be borne by the Contractor.

1.04 SAMPLING AND TESTING

A. When not otherwise specified, all sampling and testing shall be in accordance with the methods prescribed in the current standards of the ASTM, as applicable to the class and nature of the article or materials considered; however, the Owner reserves the right to use any generally-accepted system of inspection which, in the opinion of the Architect/ Engineer, will insure the Owner that the quality of the workmanship is in full accord with the Specifications.

B. Any waiver of any specific testing or other quality assurance measures, whether or not such waiver is accompanied by a guarantee of substantial performance as a relief from the specified testing or other quality assurance requirements as originally specified, and whether or not such guarantee is accompanied by a Performance Bond to assure execution of any necessary corrective or remedial work, shall not be construed as a waiver of any technical or qualitative requirements of the Specifications.

C. Notwithstanding the existence of such waiver, the Architect/ Engineer shall reserve the right to make independent investigations and test as specified in Paragraph 1.04 D, following; and upon failure of any portion of the work to meet any of the qualitative requirements of the Specifications, shall be reasonable cause for the Architect/ Engineer to require the removal or correction and reconstruction of any such work.

D. In addition to any other inspection or quality assurance provisions that may be specified, the Architect/ Engineer shall have the right to independently select, test and analyze, at the expense of the Owner, additional test specimens of any or all of the materials to be used. Results of such tests and analyses shall be considered along with the tests or analyses made by the Contractor to determine compliance with the applicable specifications for the materials so tested or analyzed; provided that wherever any portion of the work is discovered, as a result of such independent testing or investigation by the Architect/ Engineer, which fails to meet the requirements of the Specifications, all costs of such independent inspection and investigation, and all costs of removal, correction, and reconstruction or repair of any such work shall be borne by the Contractor.

1.05 RIGHT OF REJECTION

A. The Architect/ Engineer, acting for the Owner, shall have the right, at all times and places to reject any articles or materials to be furnished hereunder which, in any respect, fail to meet the requirements of these Specification, regardless of whether the defects in such articles or materials are detected at the point of manufacture or after completion of the work at the site. If the Architect/ Engineer or inspector, through an oversight or otherwise, has accepted materials or work which are defective or which are contrary to the Specifications, such as material, no matter in what stage or condition of manufacture, delivery or erection, may be rejected by the Architect/ Engineer for the Owner.

B. The Contractor shall promptly remove rejected articles or materials form the site of the work after notification of rejection.

C. All costs of removal and replacement of rejected articles or materials as specified herein shall be borne by the Contractor.

END OF SECTION 01400

PART I - GENERAL

1.01 CONTRACTOR'S PARTS AND EQUIPMENT

A. General: It shall be the contractor's responsibility to provide parts and equipment that is adequate for the performance of the work under this Contract with in the time specified, at the Contractor's expense. All parts and equipment shall be kept in satisfactory operating condition, shall be capable of safely and efficiently performing the required work, and shall be subject to inspection and approval by the Architect/ Engineer at any time within the duration of the Contract. All work hereunder shall conform to the applicable requirements of the WISHA and OSHA Standards for Construction.

B. Separate Contracts: Whenever portions of the work hereunder are let under separate contracts, all of the provisions of this section shall apply to each such prime contractor, including requirements for separate field offices and communications facilities.

C. Construction Lighting: All work conducted at night or under conditions of deficient daylight shall be suitably lighted to insure proper work and to afford adequate facilities for inspection and safe working conditions.

D. Construction Wiring: All wiring for temporary electric light and power shall be installed and maintained in first-class manner, and shall be securely fastened in place. All electrical facilities shall conform to the requirements of the WISHA and OSHA Safety and Health Standards for Construction.

E. Separation of Circuits: Unless otherwise permitted by the Architect/ Engineer, circuits separate from lighting circuits shall be used for all power purposes.

F. Fire Protection: The construction and all other parts of the work shall be connected with the Contractor's water supply system and shall be adequately protected against damage by fire Hose connections and hose, water casks, chemical equipment, or other sufficient means shall be provided for fighting fires in the temporary structures and other portions of the work, and responsible persons shall be designated and instructed in the operation of such fire apparatus so as to prevent or minimize the hazard of fire. The Contractor's fire protection program shall conform to the requirements of the WISHA and OSHA Standards for Construction.

G. Heating Units: Provide temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel being consumed.

H. Temporary Offices: Provide prefabricated or mobile units or similar job-built construction with lockable entrances, operable windows and serviceable finishes. Provide heated units on foundations adequate for normal loading.

I. Temporary Toilet Units: Provide self-contained single occupant toilet units of the chemical, aerated recirculation, or combustion type, properly vented and fully enclosed with a glass fiber reinforced polyester shell or similar nonabsorbent material. Toilets shall conform to the requirements of the WISHA and OSHA Standards For Construction.

J. First Aid supplies: Comply with governing regulations.

K. Fire Extinguishers: Provide hand-carried, portable UL-rated, class "ABC" fire extinguishers for temporary offices.

1.02 UTILITIES

A. General

1. Engage the appropriate local utility company to install temporary service or connect to existing service. Where the company provides only part of the service, provide the remainder with matching, compatible materials and equipment; comply with the company's recommendations.
2. Arrange with the company and existing users for a time when service can be interrupted, where necessary, to make connections for temporary services.
3. Provide adequate capacity at each stage of construction. Prior to temporary utility availability, provide trucked-in services.

B. Water Supply: Water for construction and testing purposes will be supplied to the Contractor at no cost from the existing potable water systems as necessary during the course of the work to the extent it is available from the existing water supply at the site. The Contractor shall install a backflow preventor at the connection to the existing system, if required. The Contractor shall not waste water.

C. Removal of Water Connections: Before final acceptance of the work on the project, all temporary connections and piping installed by the Contractor shall be entirely removed, and all affected improvements shall be restored to their original condition, or better, to the satisfaction of the Architect/ Engineer and Owner.

D. Power: The Contractor shall purchase from the local utility all necessary power required for his operation under this Contract, and shall provide and maintain all temporary power lines required to perform the work in a safe and satisfactory manner.

E. Approval of Electrical Connections: All temporary connections for electricity shall be subject to approval of the Architect/ Engineer and Owner, and shall be removed in like manner at the Contractor's expense prior to final acceptance of the work.

F. Telephone Services: The Contractor shall provide and maintain at all times during the progress of the work, at his own expense, not less than one (1) telephone in good working order, at his own field construction office. Each such telephone shall be connected to an established exchange for toll service and with all other telephones utilized by the Contractor.

G. Telephone Use: The Contractor shall permit the Architect/ Engineer, the Owner, or their authorized representatives or employees free and unlimited use of said telephone facilities for all calls that do not involve published toll charges. Calls originated by the Architect/ Engineer, the Owner, their authorized representatives or employees which involve toll or message unit charges shall be billed to the Owner by the Contractor at the rates charged him by the telephone company.

1.03 SAFETY

A. General: Appropriate first aid facilities and supplies shall be kept and maintained by the Contractor at the site of the work. All persons within the construction area shall be required to wear protective helmets. In addition, all employees of the Contractor and his subcontractors shall be provided with, and required to use, personal protective and life saving equipment as set forth in the WISHA and OSHA Safety and Health Standards for Construction.

1.04 INSTALLATION GENERAL

A. Use qualified personnel for installation of temporary facilities. Locate facilities where they will serve the Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required.

B. Provide each facility ready for use when needed to avoid delay. Maintain and modify as required. Do not remove until facilities are no longer needed, or are replaced by authorized use of completed permanent facilities.

C. Provide weatherproof, grounded electric power service and distribution system of sufficient size, capacity, and power characteristics during construction period. Include meters, transformers, overload protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

D. Install and operate temporary lighting that will fulfill security and protection requirements, without operating the entire system, and will provide adequate illumination for construction operations and traffic conditions.

E. At each telephone, post a list of important and emergency telephone numbers.

F. Locate field offices, storage sheds, sanitary facilities and other temporary construction and support facilities for easy access.

G. Maintain temporary construction and support facilities until near Substantial Completion. Remove prior to Substantial Completion. Personnel remaining after Substantial Completion will be permitted to use permanent facilities, under conditions acceptable to the Owner.

H. Provide temporary heat required by construction activities, for curing or drying of completed installations or protection of installed construction from adverse effects of low temperatures or high humidity. Select safe equipment that will not have a harmful effect on completed installations or elements being installed. Coordinate ventilation requirements to produce the ambient condition required and minimize consumption of energy.

I. Provide insulated, weather tight temporary offices of sufficient size to accommodate required office personnel at the Project site. Keep the office clean and orderly for use for small meetings.

J. Install self-contained toilet units. Shield toilets to ensure privacy. Use of pit-type privies will not be permitted.

K. Provide containerized tap-dispenser bottled-water type drinking water units.

L. Provide temporary enclosure for protection of construction in progress and completed, from exposure, foul weather, other construction operations and similar activities.

1.05 BARRICADES WARNING SIGNS AND LIGHT

Comply with standards and code requirements for erection of structurally adequate temporary barricades. Paint with appropriate colors, graphics and warning signs to inform personnel and the public of the hazard being protected against. Where appropriate and needed provide lighting, including flashing red or amber lights.

1.06 SUPERVISION

Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste abuse.

1.07 MAINTENANCE

Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.

1.08 TERMINATION AND REMOVAL

A. Unless the Architect/ Engineer requires that it be maintained longer, remove each temporary facility when the need has ended, or when replaced by authorized use of a permanent facility, or no later than Substantial Completion.

B. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged work, clean exposed surfaces and replace construction that cannot be satisfactorily repaired.

C. Materials and facilities that constitute temporary facilities are property of the contractor. At Substantial Completion, clean and renovate permanent facilities that have been used during the construction periods.

D. Replace significantly worn parts and parts that have been subject to unusual operating conditions. Replace lamps that are burned out or noticeably dimmed by substantial hours of use.

END OF SECTION 01500

PART I - GENERAL

1.01 EXPLOSIVES AND BLASTING

A. The use of explosives shall not be allowed.

1.02 DUST ABATEMENT

A. The Contractor shall furnish all labor, equipment and means required and shall carry out effective measures wherever and as often as necessary to prevent his operation from producing dust. The Contractor shall be responsible for any damage resulting from any dust originating from his operations. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Architect/ Engineer.

1.03 RUBBISH CONTROL

A. During the progress of the work, the Contractor shall keep the site of the work and other areas used by him in a neat clean condition, and free from any accumulation of rubbish. The Contractor shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. He shall also keep his haul roads free from dirt, rubbish and unnecessary obstructions resulting from his operations. Equipment and material storage shall be confined to areas approved by the Owner. Disposal of all rubbish and surplus materials shall be off the site of construction, at the Contractor's expense, all in accordance with all applicable safety laws, and to the particular requirements of the WISHA and OSHA Safety and Health Standards for Construction.

1.04 SANITATION

A. The Contractor shall establish a regular collection of all sanitary and organic wastes. All wastes and refuse from sanitary facilities provided by the Contractor, or organic material wastes from any other source related to the Contractor's operations, shall be disposed of away from the site in a manner satisfactory to the Architect/ Engineer and in accordance with all laws and regulations pertaining thereto. Disposal of all such wastes shall be at the Contractor's expense. Comply with requirements of NFPA 241 for removal of combustible waste material and debris. Enforce requirements strictly. Do not hold materials more than seven (7) days during normal weather or three (3) days when the temperature is expected to rise above 80 degrees F (27 degrees C). Handle hazardous, dangerous, or unsanitary waste

materials separately from other waste by containerizing properly. Dispose of material in a lawful manner.

1.05 CHEMICALS

A. All chemicals used during project construction or furnished for project operation, whether disinfectant, polymer, reactant or of other classifications, shall show approval of the U.S. Environmental Protection Agency and maintain Safety Data Sheets (SDS) for all materials contained on site and turned over to Owner. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer

B. See Specification Section 01300, Submittals for procedures for the use of chemicals or hazardous materials at the job site.

END OF SECTION 01560

PART I - GENERAL

1.01 GENERAL

A. This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.

B. The Contractor's Schedule of Submittal IS included under Section 01300, "Submittal."

C. Standards: Refer to Section "Definitions and Standards" for applicability of industry standards to products specified.

1.02 DEFINITIONS

A. Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents, such as "specialties," "systems," "structure," "finishes," "accessories," and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.

B. "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term “product" includes the terms "material," "equipment," "system," and terms of similar intent.

C. "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature, that is current as of the date of the Contract Documents.

D. “Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.

E. “Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

1.03 QUALITY ASSURANCE

A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.

B. Compatibility of Options: When the Contractor is given the option of selecting between two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.04 PRODUCT DELIVERY. STORAGE. AND HANDLING

A. Deliver, store and handle products in accordance with the manufacturer's recommendations using means and methods that will prevent damage, deterioration and loss, including theft.

B. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.

C. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.

D. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.

E. Inspect products upon delivery to ensure compliance with the Contract Documents, and to ensure that products are undamaged and properly protected.

F. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.

G. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within ranges required by manufacturer's instructions.

1.05 PRODUCT SELECTION

A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation. Products shall be new and free from defects. Products and materials delivered to the job site shall meet the specifications of previously approved submittal.

1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.

B. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other projects.

C. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous Project experience. Procedures governing product selection include the following:

1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted without Architect/Engineer approval.

2. Where products or manufacturers are specified by name, accompanied by the term

"or" equal," or "or approved equal" comply with Section 1.06, "Substitutions" to obtain approval for use of an unnamed product.

3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, listing exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated. General overall performance of a product is implied where the product is specified for a specific application.

H. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.

I. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.

J. Visual Selection: Where specified product requirements include the phrase "...as selected from manufacturer's standard colors, patterns, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Owner will select the color, pattern and texture from the product line selected.

1.06 SUBSTITUTIONS

A. Section 17900, General Provisions for Integrated Security Systems, specifies time restrictions for submitting requests for substitutions during the quote period to requirements specified in this section.

B. Substitutions after the quote, including during construction, may be considered per Instructions to Respondents and the following:

1. When a product becomes unavailable through no fault of the Contractor, or

2. When the delivery of the specified product will adversely impact the Construction Schedule even if ordered with all possible haste.

C. Document each request with complete data substantiating compliance of proposed Substitution with the Contract Documents.

D. A request constitutes a representation that the Contractor:

1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
2. Will provide the same warranty for the Substitutions as for the specified products.
3. Will coordinate installation and make changes to other Work which may be required for the Work to be completed with no additional cost to the Owner.
4. Waive claims for additional costs or time extension which may subsequently become apparent.
5. Will reimburse the Owner for review or design services associated with re-approval by authorities.

E. Substitutions will not be considered when they are indicated or implied on shop drawings or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

F. Substitution Submittal Procedure:

1. Submit three (3) copies of request for Substitution for consideration on the Substitution Request Form included at the end of this section. Limit each request to one (1) proposed substitution.
2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
3. The Architect/Engineer will notify the Contractor of a decision to accept or reject request, based on the Owner's approval by returning one (1) copy of the request form if a self addressed, stamped envelope was submitted with the substitution request.

1.07 INSTALLATION OF PRODUCTS

A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other Work.

B, Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION 01600

PART I - GENERAL

1.01 GENERAL

This Section specifies administrative and procedural requirements for Project Closeout.

A. See General Conditions for project Closeout requirements.

1.02 PRELIMINARY PROCEDURES

Before requesting inspection for certification of Substantial completion, complete the following (list exceptions in the request):

1. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
2. Release from all parties who are entitled to claims against the subject project, property or improvement pursuant to the provisions of law.
3. Advise Owner of pending insurance changeover requirements.
4. Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
5. Obtain and submit releases enabling the Owner unrestricted use of the Work and access to services and utilities; include occupancy permits, operating certificates and similar releases.
6. Submit record drawings, maintenance manuals, and similar final record information.
7. Make final change-over of permanent locks and transmit keys to the Owner. Advise the Owner's personnel of change-over in security provisions.
8. Complete start-up testing of systems, and instruction of the Owner's operating and maintenance personnel. Discontinue or change over and remove temporary facilities from the site, along with construction tools, mock-ups, and similar elements.
9. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

1.03 INSPECTION PROCEDURES

See General Conditions and Division 1 for final inspection requirements.

1.04 FINAL INSPECTION - ACCEPTANCE

See General Conditions for inspection procedures.

1.05 SETTLEMENT

A. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.

B. Submit an updated final statement, accounting for final additional changes to the Contract Sum.

C. Submit a certified copy of the Architect/ Engineer's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect/ Engineer.

1.06 RECORD DOCUMENT SUBMITTAL

A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Owner's reference during normal working hours.

B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date.

1. Prepare and submit the original and two (2) copies of record drawings at settlement.

1.07 MAINTENANCE MANUALS (Operation and Maintenance Manuals "O&M's")

Organize operating and maintenance data into suitable sets of manageable size. Bind properly indexed data in individual binders. Mark appropriate identification on front of each binder. Submit two (2) copies of maintenance manuals for the Owner.

1.08 FINAL CLEANING

Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturers instructions.

A. Complete the following cleaning operations before requesting inspection for Final Certificate.

1. Remove labels that are not permanent labels.
2. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
3. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean.
4. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light

fixtures and lamps.

5. Clean the site, including landscape development areas, of rubbish, litter and foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.

1.09 REMOVAL OF PROTECTION

Remove temporary protection and facilities installed for protection of the Work during construction.

1.10 COMPLIANCE

Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.

A. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.

1.11 MAINTENANCE AND GUARANTEE

A. The Contractor shall comply with the guarantee requirements contained in the General Conditions with regard to repairs or replacements.

B. Replacement of Work, where it has settled below the required finish elevations, work that has fallen out of plumb, work that has lost adhesion or fasteners, work that has become discolored, deflected or disfigured shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the Contractor which becomes necessary by reason of such settlement shall likewise be considered as a part of such required repair work unless the Contractor shall have obtained a statement in writing from the affected private owner or public agency releasing the Owner from further responsibility in connection with such repair or resurfacing.

C. The Contractor shall make all repairs and replacements promptly upon receipt of written order from the Owner. If the Contractor fails to make such repairs or replacement promptly, the Owner reserves the right to do the work, and the Contractor and his surety shall be liable to the Owner for the cost thereof.

D. The Contractor shall warrant all work for a period of one (1) year or as specified in all appropriate specification sections and the General Conditions of the Contract Documents.

1.12 BOND

A. The Contractor shall provide a Bond to guarantee performance of the provisions contained in Paragraph 1.11 above and the General Conditions.

1.13 IN-SERVICE TRAINING

A. The Contractor must train Owner maintenance personnel in the operation and maintenance of the Integrated Security System. Coordination must be maintained with systems designers for developing the hours of instruction and scope of material to be covered. Training of Owner personnel must not begin until the Owner has approved the final submittal copy of the Operation and Maintenance Manual.

B. Schedule Submittal: The proposed scope of training and materials and instruction schedule must be submitted for review and approval. Mutually agreeable dates for training must be arranged with the Owner maintenance personnel, but the training must be completed before final acceptance of the facility.

END OF SECTION 01700

PART I - GENERAL

1.01 GENERAL

A. This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.

B. Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.

C. General closeout requirements are included in Section 01700 "Project Closeout."

1.02 DISCLAIMERS AND LIMITATIONS

Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.03 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting warranted Work that has failed, remove and replace other Work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted Work.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or re-building, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Submit written warranties to the Owner prior to the date of Settlement.

END OF SECTION 01740

SECTION 274100 – COMMON WORK RESULTS FOR AUDIOVISUAL SYSTEMS

PART 1 - GENERAL INFORMATION

1.1 SCOPE OF WORK – GENERAL

A. This project encompasses the replacement of all existing and addition of new audiovisual systems within the Theater and associated Back-of-House spaces at North Central High School in Spokane, Washington, under the Spokane Public Schools district.

1. The building and spaces within the Scope of Work were constructed in 1980 and most installed systems are from that era, with incremental upgrades performed in the late 1990s and early 2000s.
2. The theatrical lighting and rigging systems were replaced approximately 2022-23 and all Work shall preserve and protect these systems from damage or malfunction. This previous work included all lighting, dimmer, lighting controls, onstage motorized rigging. The stage does not have a fly tower, and an existing barrier ceiling limits the ability to fly-in/out draperies and scenery.
3. The Scope contained herein will make use of new box and pathway infrastructure, which will be procured by the District under a separate Job Order Contract (JOC).

B. The Scope of Work includes the removal of all existing audiovisual systems, including all existing:

1. Wall panels, connectivity and analog cabling.
2. Existing loudspeakers, amplification, processing, mixing hardware, patching.
3. Loose and portable front-of-house analog mixing hardware and outboard gear.
4. Wireless microphone systems and ALS systems.
5. Existing equipment rack and associated hardware.
6. Turning over to Owner of all existing hardware for reuse or disposal by the Owner.

C. The Scope of Work excludes the following, which will be provided under separate Job Order Contracts (JOCs) by SPS:

1. All new surface and in-wall boxes, specialty enclosures and pathways, as noted on the drawings, requiring conduit, or cutting/patching/painting of plaster, drywall or room finishes.
2. All new power receptacles and circuiting.
3. Surface raceway systems, covers, fittings and related floor cutting and patching to provide connectivity at the pit and stage apron.
4. Structural engineering verification of and designation of hang/mounting points for new large venue projector, and loudspeaker systems above the stage apron in the house.
5. Modification of the Control Booth architecture, including removal of existing windows, including glazing, mullions, and modification of wall structures to enlarge openings and trim/finishing of openings – to allow live audio mixing from within the Control Booth.

D. Spaces in Scope

1. Locations within the scope of this RFP include the following spaces as outlined in Related Work Sections:

a. Theater – A 524 seat proscenium theater without a fly loft, with a forestage apron leading into a shall orchestra pit. The stage sits at the same level as the first flow of house seating, which provides ADA accessibility to the stage from the building corridors. Ancillary spaces to the Theater include:

i. Control Room – An existing space at the rear of the house that provides technical crew a location for mixing and lighting control, as well as housing the AV headend

rack.

a) The Control Room currently has small windows for viewing of the stage by lighting and sound operators, of which only one window is operable in a small 12” section, limiting the ability to mix live sound from the assigned position.

b) The Consultant has recommended the District, as part of the JOC contract work, remove the windows, glazing and mullions, and enlarge the current openings as much as physical possible to allow the ability to mix audio with minimal interference from the wall, as well as support better situational awareness for technical crew running shows from the Control Booth.

ii. Followspot Platform – Adjacent to the Control Booth, at stage right, at the last rows of seating. The Consultant has also designated this location, as well as the symmetrical location at the rear stage left of the house to function as videography locations, with appropriate connectivity to support this use.

iii. Stage – A 23’-6”’ x 60’ wide stage from the plaster line, with a motorized rigging system with drapery tracks and electric linesets, with adjacent stage manager’s position and technical systems occupying a large portion of the stage right wing.

a) The stage right wing proscenium wall houses a lighting control panel, which will also be a location for a new AV touchpanel control.

b. Back of House Areas include the following:

i. Women’s and Men’s Dressing Rooms, 12, 14 and 16 – With Production intercom, and situational awareness audio and video feeds.

ii. Drama Classroom 024A – With Production intercom, and situational awareness audio and video feeds, as well as Ethercon tie lines for use in remote production situations – such as off-stage pit band performance.

c. Other Front of House (FoH) Scope includes:

i. Lobby speaker feeds – of which the exact types and locations of overflow audio speakers are TBD with the Owner.

ii. Video streams from the House H.264/65 camera output to be fed to the campus network, for playback on classroom or user devices.

d. Portable Equipment – Loose “pool” of equipment for shared use in the facility, including items such as audio/video break-out boxes, ALS receivers, streaming encoder/decoder devices, Dante appliances and microphones.

1.2 RELATED DOCUMENTS

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

B. Equipment Schedules, as referenced in the drawings.

C. Related Sections under this Section, describing the audiovisual systems to be installed in each space-type, including details for function, operation, and programming.

1. 27 41 20 – Theater Audiovisual Systems

2. 27 41 25 – Back of House Spaces Audiovisual Systems

1.3 QUALIFICATIONS OF BIDDERS

A. The Bidder shall be a firm with at least ten years of experience in the design, engineering, fabrication, assembly, and installation of audiovisual systems of similar magnitude and quality as

specified for the subject job and shall submit documentation to this effect with the bid return.

B. Each bidder shall have at least one project manager or engineering staff employee on this project possessing a certificate, from AVIXA (CTS-D) or another recognized organization or institution providing formal training in audiovisual systems design or engineering. Proof of this shall be supplied with bid.

C. Each bidder shall have at least one supervisory employee on this project possessing a certificate, from AVIXA (CTS-I) or another recognized organization or institution providing formal training in audiovisual systems installation and commissioning. Proof of this shall be supplied with bid.

D. All employees of the contractor to install this system must be competent technicians who are experienced in the installation and interconnection of professional audiovisual systems (AVIXA CTS and relevant manufacturer certifications (i.e. – Q-Sys Level 2, Control & UCI, Quantum).

E. All lead engineering and project management is to be handled by a qualified, full-time employee of the audiovisual contractor. No outsourcing or sub-contracting of this phase will be accepted. Engineering may be conducted in concert with a selected loudspeaker systems manufacturer, who may provide supplementary systems evaluation, modelling, design, or systems engineering to supplement the Contractor, under the supervision of the Contractor's project manager or engineer.

F. Each bidder shall maintain an adequately equipped and staffed service department and shall regularly provide service for systems similar to this design. This shall include an office staffed with personnel at all times, Monday through Friday, between the hours of 8:30 AM and 5:30 PM Eastern Time (adjusted to daylight or savings time – per that time of the year). Answering services, cellular telephones, pager numbers and call forwarding systems are helpful but do not meet nor comply with the intent of this specification.

G. The bidder shall include with their proposal a schedule of support, including response times for on- site service, from the time a service-call is placed by the Owner, to the time service personnel will be on-site to address the Owner's service need.

H. The bidder shall note whether phone or on-site responses will be provided directly by on-staff personnel or if they will be relying upon a 3rd-party which will be sub-contracted to supply such service(s). The bidder shall provide the name and location of such a 3rd party within their response.

I. Each bidder shall be currently authorized by the manufacturer of the major components of the system to sell their products and initiate warranty service on the same items. Major components of the system shall include, but not be limited to, data/video projectors and displays; video distribution, processing and switching equipment; audio distribution and processing equipment; power amplifiers, speakers, etc. Proof of this may be requested during the bidding process. Proof of franchise shall be in the form of a letter from the appropriate manufacturer addressed to the Owner's Representative stating that the contractor is currently authorized to sell their products. Letters from the sales representative (rep) shall not be accepted as proof.

1.4 DEFINITIONS OF TERMS

A. The term "Owner" shall refer to Spokane Public Schools, of Spokane Washington (also referred to by "SPS" or "The District").

B. The term "Architect" shall refer to the designated facilities representative of SPS or assigned Subcontractor to the District.

C. The term "Consultant" shall refer to ABD Engineering & Design of Portland, Oregon, working under Contract with PLA Designs, Inc. of Hillsboro, Oregon.

D. The term "Bidder" shall refer to a firm submitting a RFP response to this specification and the Governing Documents provided as part of this RFP.

E. The term “Contractor” or “Integrator” shall refer to the Systems Contractor/Integrator who has been awarded the contract for the subject job and who has responsibility for performance of the work specified herein.

F. The acronym “NIC” shall refer to material and work which is “Not in Contract” and for which the Contractor is not responsible except as otherwise detailed herein.

G. The term “OFE” shall refer to “Owner Furnished Equipment”, which will be provided by the Owner. The Contractor shall be responsible for removing this equipment from the Owner’s premises as appropriate and re-installing and integrating this equipment in good working order as detailed herein.

H. The term “shall” is mandatory; the term “will” is informative; the term “should” is Advisory.

I. The term “Work” describes all construction type processes. Including but not limited to, labor, equipment, materials and services specified herein.

J. The term “Furnish” means to purchase and deliver to the project onsite location, with every necessary accessory and support, all as part of the Work. Purchasing shall include payment of all sales taxes and other surcharges as may be required to assure that purchased items are free of all liens, claims, or encumbrances.

K. “Install” – To perform every operation necessary to establish secure mounting and correct operation at the proper location in the project, all as part of the Work.

L. The term “provide” means furnish and install.

M. The term “commissioning” refers to the process by which equipment or systems (which are installed, complete or near completion) are tested to verify if they function according to their design objectives or specifications.

N. The term “Project” is the installation of Audiovisual Systems in the facility or facilities described within this specification.

O. The term “Drawings” refers to Audiovisual systems drawings and any details, risers, etc. associated with the work.

P. Certain words or phrases as used in the Drawings or Specifications for the Work may have multiple meanings such as those specified in codes or other industry standards. The words or phrases mentioned below shall be understood to have the following specified meanings with regard to the audiovisual systems described herein:

1. “Circuit” – Any design of circuitry.
2. “Circuitry” – Any type of Work which consists of wires/cables, raceways, specialty wiring method assemblies complete with associated junction boxes, pull boxes, outlet boxes, joints, couplings,-splices, and connections except where limited to a lesser meaning by specific description.
3. “Concealed” (as applied to circuitry) – Covered completely by building materials, except for penetrations (by boxes and fittings) to a level flush with the surface as necessitated by functional or specified accessibility requirements.
4. “EC” – Electrical Contractor, in the context of either a sub-contractor to the Bidder or an independent Contractor.
5. “Exposed” (as applied to circuitry) – Not covered in any way by building materials.
6. “Normal Work Conditions” – Locations within building confines that are not damp, wet, or hazardous and that are not used for air handling.
7. “Patch Panel” – A System of terminal blocks, patch cords, and backboards that facilitate administration of cross-connecting cables.
8. “Raceway” – Any pipe, duct, extended enclosure, or conduit (as specified for a particular System) which is used to contain wires, and which is of such nature as to require that the wires be installed by a “pulling in” procedure.
9. “Riser” – Shall refer to the portion of the installation that transmits between building floors (or

between Audio Visual Systems rooms), also referred to as “Backbone Cabling.”

10. “Audio Visual Closet” – The enclosed area or room specifically designated for the routing, termination, and/or cross connecting of audiovisual systems cable (i.e. riser cable) to other Audio- Visual Systems cable and/or equipment.
11. “AV Systems Control Room” and/or “AV Systems Headend” – The enclosed area or room specifically designated for the routing, termination, and/or cross connecting of audiovisual System cable (i.e. riser cable) to other Audio-Visual System cable, and/or equipment, and racks.
12. “AV System(s)” – Audio Visual System(s), includes all components contained herein that work in conjunction to create and completely integrated and fully functioning system as described within the Drawings and Specifications.
13. “Audio Visual Systems Wiring” – see “Circuitry.”
14. “Audio Visual Systems Work” – See “Work.”
15. “Standard” (as applied to wiring devices) – Not of a separately designated individual type.
16. “System” – See “AV Systems.”
17. “Wiring” – see “Circuitry.”
18. “AVC” – Audio Visual Systems Contractor.
19. Where the term “Conduit” is used without specific reference to type, it shall be understood to mean “raceway.”

1.5 INFORMATION TO BE SUBMITTED WITH BID RETURN

A. Upon close of Bidding, Bidder to provide as part of their submittal - within 5 days of request, the following breakdown of submitted Costs for evaluation:

1. Equipment Costs

   a. The bid return shall include detailed lists of all equipment to be supplied. Each piece of equipment shall be individually priced and carried over for multiples to a total. Equipment that is contained in lots or groupings, such as wiring, connectors, or loose general hardware shall be provided in a lump-sum lot and noted as “lot” and noted appropriately in the proposal.

2. Non-Equipment Costs

   a. Non-equipment costs shall be furnished separately with the equipment costs. These non-equipment costs shall be detailed for each of the following categories:

      i. **Engineering**: Including all required designs, drawings, run sheets, instruction manuals, etc.

      ii. **Pre-installation**: Including all fabrication, modification, assembly, rack wiring, etc., performed on the Contractor’s premises.

      iii. **Installation**: Including all on-site installation and wiring, coordination and supervision, , etc. performed on the Owner’s premises.

      iv. **Commissioning**: Including all final measurements and testing, performance verification, systems tuning and adjustments, and documentation of said measurements and testing, along with a final report summarizing the results of the commissioning. Include costs for on-site checkout/inspective by the Owner and Consultant, as well as costs for Owner Training sessions, as outlined further in this specification document.

      v. **General and Administrative**: Including all ‘G & A’ expenses, shipping, insurance, and guarantees.

      vi. **Taxes (if applicable)**.

3. Subcontractor Costs: Shall be provided for each subcontractor to be used by the Bidder, broken down by the same general order as items ‘A’ and ‘B’ above.

B. Upon close of Bidding, Bidder to provide as part of their submittal - within 5 days of request, the following General Information to include:

1. The number of years in business.
2. Resumes of key personnel. Resumes must reflect skills relating to audio, video & display systems, systems and hardware rigging, teleconferencing (audio and video), integrated control systems, software platforms, programming, project management, etc.
3. Locations of all currently staffed and operational offices complete with the number of technical support personnel in each office.
4. Project References (minimum of three (3) projects of similar size and scope)
    a. These should include:
        i. End user contact name, with current title and position, telephone number and e-mail address.
        ii. Functional description of the project.
        iii. Project scope and approximate dollar amount (single projects should be equivalent to the size of this project, not accumulative work of a single client).
        iv. Timeline of project and final completion date.
        v. **All projects identified must be verifiable and have been completed within the last three years (36 months)**.
5. List of products for which the firm is a direct dealer, including the duration of the dealership and the extent of any factory training. This list should include, but not be limited to:
    a. Large screen display systems, both projection and display-type, including but not limited to direct-view indoor/outdoor LED, LCD/LED/OLED, DLP/DMD and LCoS.
    b. Specialized display systems (as applicable).
    c. Video networked/IP switching/routing, scaling, conversion, and distribution systems.
    d. Distributed loudspeaker systems.
    e. Large-venue loudspeaker systems, such as long-throw and line-array systems, and high-power amplifiers and amplification.
    f. Computer processor-controlled audio systems including but not limited to audio digital signal processors and IP distribution systems.
    g. Integrated control systems.
    h. Video and Audio Broadcast systems – production & transport.
    i. IT and IP networking equipment as used in audiovisual systems implementations/installations.
6. List of technical products that the firm has installed and serviced but are not a direct dealer for.
7. Schedule of Implementation
    a. It is the responsibility of the bidder to verify the project schedule and confirm via their bid return that they will comply with the project schedule and deliver a complete audiovisual system within the specified time frame.
    b. Bidders may indicate their acceptance of the project schedule by submitting a scheduling plan with the bid return, indicating the various pertinent terminal dates after award of contract for completion of design, pre-installation work, on-site installation work, and testing and acceptance on a “per phase” basis.
    c. At a minimum the schedule should include the following information:

i. Number of days required for submission of engineering documents from receipt of notice to proceed.

ii. Days to complete the project from receipt of approved documents. This information should be broken down to indicate benchmark dates of other trades and days to completion of tasks associated with those benchmarks, including benchmarks for:

a) Acoustical measurements, space and systems modelling and analysis work.

b) Product submittals.

c) Engineered system submittals, including interconnection and schematic diagrams, wire pull and run sheets, etc...

d) Shop drawings, including structural steel, rigging, footing or concrete work, etc.

e) Submittals for software/programming.

f) Systems tuning and commissioning.

g) Closeout submittals.

h) Closeout walkthroughs.

i) Owner training.

d. If provided, the Bidder shall review attached cover documents and schedule for additional information.

8. Alternate Equipment

a. All bids shall be submitted on the basis of the specified equipment as outlined in the Appendix 'A' sections of this specification. The Bidder may propose alternate equipment, or equipment they feel meets the intent of "equal" or "equivalent" as described below in paragraph 9. However, all such proposals shall be submitted separately and will be identified as "alternates" with equipment costs shown separate and apart from the costs of the equipment "as specified".

b. Proposals for alternate equipment will receive careful and equitable consideration if the differences do not depart from the overall intent of the design and operation of the system, are in the best interests of the Owner, and are equal in durability and usability.

c. All such proposals for alternate equipment shall be accompanied by full technical information, "cuts" and specifications for the equipment so proposed. The Bidder shall identify the substantive differences between the alternate and the specified equipment.

9. Exceptions and Proposed Modifications

a. Should the Bidder have recommendations, which will enhance the performance of the system, or reduce costs without loss of performance, such comments shall be made in the bid submission. All suggestions that are of value to the Owner will be taken into consideration in the evaluation of the bid returns. All such proposals shall be made as "alternates", with the appropriate cost modifications shown separate and apart from the costs of the system "as specified".

b. Any and all exceptions to these specifications and related drawings must be made with the bid submission. In the absence of exceptions, these specifications and related drawings shall be binding in letter and intent on the successful Bidder. It will further be assumed that the Bidder has examined the design and specifications in detail, and is prepared to take full responsibility for the performance of the complete installation as designed and specified.

10. Sub-Contract Information

a. If the Bidder proposes to sub-contract portions of the work, as provided for under which

follows, such sub-contractors shall be identified, and their responsibilities and qualifications detailed in the Bidder's bid submission. The work as performed by a sub-contractor shall be considered as part of the contractor's responsibility with that work as part of the contractor's statement. Any contract arising as a direct result of these proceedings shall be binding on the successful bidder and the terms of said contract shall be submitted with the bid return.

1.6 WARRANTY STATEMENT

A. To maintain certain manufacturer's warranties, said equipment must be installed, aligned and serviced by those installers authorized by said manufacturer to perform those duties. If the contractor is not authorized, by said manufacturer, it is t sole responsibility to make the appropriate arrangements and bear all cost and consequences thereof.

B. The Bidder shall include a statement of warranty on the entire system and on the individual pieces of equipment. The system warranty shall be for a minimum of 365 days from the date of commissioning by the Owner and Consultant (refer to 3.5 for "Commissioning Test" requirements). This warranty shall obligate the Contractor to provide all equipment, material, and labor at no charge to the Owner, during the warranty period, in the event of a system or equipment malfunction.

C. In cases where the manufacturer's warranty period is greater than twelve months, the contractor is required to honor that warranty for the full extent of the manufacturer's warranty period. This shall exclude any labor costs incurred by the contractor removing and re-installing the defective items after the system warranty expiration.

D. In cases where the manufacturer's warranty period is less than 12 months, the contractor is liable for defects in the item up to-but not exceeding-the first twelve-month period on any contractor provided items.

E. The system warranty shall include a minimum of four (4) preventative maintenance visits over the systems warranty time period, to perform operation checks of the equipment, re-measure systems performance and re-tune the system's DSP settings, equalization, dynamics, etc... for optimum performance, as well as check the projectors, screens, display and signal transport/switching/matrixing systems, network hardware, firmware and software, as well as respective mounting and rigging hardware for safety and integrity.

F. All manufacturers' equipment warranties shall be activated in the Owner's name and shall commence on the date that commissioning is completed. In the case of Contractor-modified equipment, the manufacturer's warranty is normally voided. In such cases, the Contractor shall provide the Owner with a warranty equivalent to that of the original manufacturer.

G. In the event of malfunction or failure of any audiovisual equipment provided by the AV integrator, the integrator is responsible for providing replacement of faulty equipment, or providing "loaner" equipment. In the event that "loaner" equipment is provided, said equipment shall meet or exceed the original equipment specifications until the original equipment can be replaced.

H. In Cases where the contractor is providing and installing audiovisual equipment and/or hardware to be integrated with equipment furnished by others, it shall be the responsibility of the contractor to warrant their equipment as described herein; unless said equipment shows misuse and or abuse by others during re-installation of, or connection of equipment by others.

I. Telephone Support

1. The Audiovisual Contractor shall respond via telephone within four (4) hours to any request for service. This first contact should outline the nature of the problem or functional anomaly. The AV Contractor shall make available an individual knowledgeable with the installed system, and who can address specific system issues described by the system operators.

J. On-Site Support

1. The system warranty shall be an “on-site” warranty, with a twenty-four (24) hour response time. Telephone support shall be available between normal business hours, Monday through Friday. If a 3rd-part sub-Contractor is to be used, the Bidder shall include this information, with firm name, location and primary contact information included.

1.7 PREVENTATIVE MAINTENANCE & SERVICE CONTRACT

A. In addition to the preventative maintenance described under 1.5 Warranty and other paragraphs, the Bidder shall offer a separate annual preventative maintenance contract by pricing for five (5) years on a year-to- year basis. This preventative maintenance contract shall cover all installed systems and include a minimum of three (3) visits per year, at regular intervals during the fall and winter seasons as noted above in 1.4-I, to perform operation checks of the equipment, clean filters, check drivers, to inspect and perform safety checks on rigging, lubricate moving parts as recommended by the respective manufacturers and to adjust and align rigging and loudspeaker units or arrays to maintain performance as set initially. The preventative maintenance contract is an option for the Owner to exercise immediately after expiration of the warranty period. (A per item price for the service contract shall be submitted with the bid).

B. The Bidder shall also submit separate costs for other emergency “on-call” service visits and an “in-shop” hourly rate for repair and maintenance work.

C. The costs for this service contract shall not be commingled with the costs for the systems base bid.

1.8 SUB-CONTRACT

A. If the Bidder proposes to sub-contract the installation and wiring, or other portions of the work, the Bidder shall provide direct supervision of the sub-contracted work.

B. Because of the complexity of the systems, the supervision of such sub-contracted work cannot be intermittent, but shall be continuous during the installation.

C. It is the sole responsibility of the bidder to research and provide any and all necessary sub-contracts pricing for union labor that cannot be provided from within its own organization. Information related to this must be provided with this bid return.

D. If it is the intention of the Bidder to “team” with one or more other AV Contractors, then this must be clearly identified in the bid return. The Contractor returning the bid will be considered as the prime in respect of this, and will hold full responsibility for the performance of the members of their team, including themselves and all other sub-contractors engaged in the performance of this contract.

1.9 INVESTIGATION OF CONTRACTUAL AND SCHEDULING QUESTIONS

A. It shall be the responsibility of the Bidder to investigate all potential contract, union, and scheduling questions, and to guarantee compliance with all requirements and regulations in effect on the job site. Any potential problems in this respect shall be identified in the bid return. The contractor shall comply with all local state and federal regulations.

1.10 CONTRACTOR’S GENERAL RESPONSIBILITIES

A. The Contractor shall be responsible for delivering a turnkey system to the Owner.

B. The Contractor shall furnish all equipment and materials, whether specifically mentioned herein or not, to ensure a complete and operating system. The NIC and OFE equipment and materials are specifically exempted from this requirement.

C. The Contractor shall generate all shop drawings and information for the complete installation and wiring of the system. The Contractor shall provide (or sub-contractor for) the on-site installation and wiring, and shall provide on-going supervision and coordination during the implementation phase.

D. The Contractor shall be responsible for the initial adjustment of the systems as herein prescribed

and shall provide all test equipment for the system checkout and commissioning. Contractor shall provide on-the- job training in the operation and maintenance of the systems for personnel designated by the Owner.

E. The Contractor shall coordinate and submit to all site policies and adhere to all site safety procedures put in place by the Construction Manager.

F. The Contractor shall attend all construction manager/sub-contractor coordination meetings as required by construction manager.

G. The Contractor shall perform an RF Spectrum Analysis Survey identifying all available frequencies that may be required by any wireless equipment under this specification such that appropriate frequency allocations may be identified for the purpose of purchasing corresponding transmitters and receivers. The Contractor shall be responsible for the validity of the survey and any subsequent equipment substitution that may result even if such equipment has been previously accepted by submittal.

1.11 PROJECT MANAGEMENT

A. The Contractor shall provide a Project Manager to oversee and coordinate all activities on the Project.

B. Project Manager's Duties and Responsibilities:

1. The Contractor shall provide to the Owner, as a part of the prefabrication submittal, the name of the Project Manager that will provide all duties and responsibilities as specified herein, during the term of the project.
2. The Project Manager shall maintain the ability of making all managerial decisions on behalf of the Contractor on a day-to-day basis, and shall retain the authority of accepting notices of deduction, inspection reports, payment schedules and any other project related correspondence on behalf of the owner.
3. The Project Manager shall attend project meetings as required, during which time all System related issues are discussed, scheduled, confirmed, and/or resolved.
4. The Project Manager shall be available during normal business hours (8:00 am to 5:00 pm local time) by telephone during the term of the project.
    a. After normal business hours, the Project Manager shall be available within four (4) hours (5:00 pm to 9:00 pm) by email during the term of the project for urgent matters.
    b. In the event that the Project Manager is not available within the allotted time frame, the Contractor may designate additional staff to temporarily act as the Project Manager for all correspondence with the Owner.
    c. The Contractor shall ensure that any individual temporarily assuming the duties of the Project Manager is at equal or higher level in the Contractor's managerial chain of command.
5. Upon notification by the Owner, of any project related installation issue, or issue that may contradict the Specifications as stated herein, the Project Manager shall respond to such issue, verbally and/or in writing within an eight (8) hour period.
    a. Responses to such issues as stated above shall include a clear understanding of the issue, along with a tentative plan of action, reflecting milestones and/or deadlines to resolve the issue.
    b. Where appropriate, based on the overall importance of the project issue, the Project Manager shall follow-up their initial response with a written response to the issue within 24 hours of identification of the issue.
6. Prior to the initiation of the Work, the Project Manager shall submit a schedule reflecting key milestones of the Work, including but not limited to the following:

a. Bid award.
b. Kick-off meeting
c. Plan submittal
d. Prefabrication submittal
e. Ordering, delivery, and installation of System equipment
f. Field equipment delivery
g. Project management schedule
h. Payment schedule
i. Installation completion date
j. System training
k. Delivery of As-Built documentation
l. Delivery of Operations & Maintenance Manuals
m. Commissioning
n. Acceptance of System

7. The Project Manager shall update the schedule on a weekly basis to reflect the status of each key milestone as the Work progresses.
8. As the System installation progresses, the Project Manager shall be capable of discussing any/or all of the above-mentioned items at the request of the Owner, and shall address each item, as it relates to the current status of the Work.
9. If for any reason, the contractor shall become unable to meet the milestones outlined in their project schedule, the project manager shall notify the consultant, design team, and contractors associated with related work, so as minimize delays in other project work paths.

1.12 REFERENCE TO ARCHTECT/OWNER'S GENERAL CONDITIONS

A. The Architect and/or owner's General Conditions shall be considered part of this Specification except where this Specification contains statements which are more definitive or more restrictive than those contained in the General Conditions regarding a specific item or items. This specification shall not be interpreted as waiving or overruling of any requirements expressed in the General Conditions.

1.13 APPLICABLE CODES, STANDARDS, PERMITS, AND INSPECTIONS

A. All audiovisual work shall meet or exceed the latest requirements of all National, State, City, County, Municipal and other Authorities having Jurisdiction over the audiovisual work and the project.

B. Any portion of the audiovisual work not subject to the requirements of an electrical code published by a specific authority having jurisdiction over such work shall be governed by the National Electrical Code and any and all applicable sections of the National Fire code, as published by the National Fire Protection Association.

C. Installation procedures, methods and conditions shall be in compliance with the latest requirements of the Federal Occupational Safety and Health Administration (OSHA), the Americans with Disabilities Act (ADA) and the Architectural Barriers Act (ABA).

D. The Contractor is responsible for all costs incurred to meet these codes and conditions.

E. Additional codes and requirements pertaining to the work:

1. International Building Code (IBC)
2. NFPA-72 National Fire Alarm and Signaling Code, 2013 Edition

3. International and National Electric Codes (IEC/ NEC)
4. IEC 60268-16 Third Edition 2003-05 Objective rating of speech intelligibility
5. ANSI/AVIXA
6. Sustainable Technology Environments Program
7. Underwriters Laboratories, Inc. (UL)
8. Building Industry Consulting Service International (BICSI) Telecommunications Distribution Methods Manual - latest edition.
9. ANSI/TIA/EIA-568-B - Commercial Building Telecommunications Cabling Standard
10. ANSI/TIA/EIA-569 - Commercial Building Standards for Telecommunications Pathways and Spaces
11. ANSI/TIA/EIA-606-A. Administration Standard for Commercial Telecommunications Infrastructure
12. ANSI J-STD-607-A, Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
13. EIA RS-232 Serial Communications Electrical Interface
14. EIA RS-310-C Racks, Panels and Associated Equipment
15. FCC Part 15
16. FCC Part 68
17. IEEE 802.3
18. NFPA 70 National Electrical Code, 2020 Edition
    a. Article 770 Optical Fiber Cables
    b. Article 800 Communications Circuits
    c. NFPA 75 Protection of Electronic Computer / Data Processing Equipment, 2013 Edition

1.14 CONFORMANCE WITH EXISTING SYSTEMS

A. In cases where systems and/or facilities in this scope of work are similar in nature to existing systems and/or facilities:
    1. The required hardware, system functionality and system flow shall conform to the existing systems in order to share existing resources and minimize training requirements for the end user. This includes, but is not limited to, the following:
        a. Commonality in equipment
        b. Commonality in operation
        c. Commonality in room layout

B. It is the responsibility of the Contractor to inspect the existing systems prior to beginning engineering and fabrication to ensure consistency with any and all existing systems and notify the design team of any discrepancies.

1.15 STATUS REPORTS

A. After the award of contract, the Contractor is responsible for providing weekly status reports outlining his progress on the project. These reports should include information on the work completed during the week, the work to be completed during the upcoming week and any potential scheduling issues. The following should be included in this Status Report:

B. Expected date of project submittals, including equipment cut sheets, shop drawings, control system interface designs, etc.

C. Anticipated completion date and percentage complete of in-house rack fabrication and testing, prior to shipping to the job-site.

D. Anticipated completion date and percentage complete of control system programming, prior to shipping to the job-site.

E. Schedule and percentage complete of on-site wiring and supervision.

F. Schedule and percentage complete of on-site installation.

G. Schedule and work-plan outline for owner training.

H. Schedule for systems checkout and turnover to the Owner.

1.16 RELATED WORK NOT IN CONTRACT (NIC)

A. Certain equipment and materials will be provided and installed by others. Unless otherwise indicated in these specifications, or on the related drawings, these will include the following:

1. Pathway infrastructure, structural evaluation and support and 120/208V electrical circuits and modifications will be provided as described in Part 1.1 under the District's JOCs for each Scope.
2. Enterprise IP network hardware, such as IP switches, routers, wireless access points (WAPs), enterprise servers and end-user computing devices, such as desktop PCs, tablets, smartphones, and terminal hardware will be provided by SPS Information Technology.
3. Enterprise IT infrastructure, such as horizontal and riser backbone and station copper UTP and fiber-optic cabling, terminations, patch-panels, fiber trays and patch panels. All IT infrastructure shall be coordinated and provided by SPS Information Technology group and their designated Contractors and Subcontractors.

B. Though not under the scope of this document, the Audiovisual Systems Contractor is responsible for coordination of these and any other related items required to provide and integrate a fully functional AV system as described in this specification, including accessory hardware or cabling necessary to interface to the NIC equipment.

1.17 OWNER FURNISHED EQUIPMENT

A. The Contractor shall be responsible for obtaining any new or existing OFE equipment from the Owner. Existing equipment shall be brought back to the Contractor's facility where they shall ascertain that the OFE equipment is performing at or above factory specifications.

B. If existing equipment is not operating "as-new", or is missing accessories necessary to be properly integrated with the rest of the system as intended, the Contractor shall provide a proposal, including a time line, for returning the equipment to "as-new" condition, provide the needed accessories, arrange to have the owner replace equipment, or submit a proposal for replacement or alternative equipment.

C. All designated Windows-based PC computers to be installed in rooms for use by staff will be OFE, provided and configured by SPS Information Technology.

D. The contractor shall coordinate with the SPS Information Technology for all I/O interfacing and performance requirements, including any specific hardware and software requirements, including CPU or GPU performance, RAM, input connectivity and quantities (i.e.: HDMI, Display-Port, 3.5mm audio USB 2.0/3.0 buses, etc.)

1.18 QUALITY OF MATERIALS AND EQUIPMENT

A. All materials and equipment supplied by the Contractor shall be new and shall meet or exceed the latest published specification of the manufacturer in all respects.

B. The Contractor shall supply the latest model available at the time of order placement for each piece of equipment.

C. All equipment shall be UL listed, or equivalent.

1.19 CONTRACTOR'S DOCUMENTATION

A. Pre-Construction Submittals

1. Prior to fabrication, the Contractor shall submit to the Owner's Representative, for approval, any custom designs pertaining to the systems. Contractor is to provide one (1) sets of all documentation. Drawing submittals to be delivered electronically in PDF and working format

(such as AutoCAD or Revit 2021) to ABD and the Owner, and at their option to the architect. These designs include, but are not limited to, the following:

a. Complete system construction and point to point wiring schematic drawings, including all component values, and showing complete letter and number identification of all wire and cable as well as jacks, terminals, and connectors. All connections are to be shown; details with “typical” connection diagrams are not acceptable.

b. Provide bound technical specification details (cut sheets) on all equipment required to complete this project.

c. All control system GUI design pages, both touchpanel-based and control computer based as appropriate.

d. All control system panel layouts, where applicable.

e. All panels, plates, and designation strips, including details relating terminology, engraving finish and color.

f. All custom designed structures, supports, rigging (motorized and fixed) consoles, tables, carts, support bases, and shelves.

g. Schematic drawings of all custom components, assemblies and circuitry, including wall and/or floor plates.

h. A schedule of IP networked equipment, in Excel format, which lists, for each piece of equipment with IP network interface – whether intended to be hosted to a dedicated AV network, or on the enterprise network – to be coordinated with the Owner’s IT group:

    i. Device name (as noted on the schematics), make and model number

    ii. Device serial number

    iii. Device MAC address

    iv. Static IP address request, range, or DHCP

    v. Subnet assignment or VLAN request.

    vi. Default and assigned login credentials (see Part III)

    vii. List of open port requests, to accommodate specific user or protocols.

    viii. List of switch settings or configuration necessary to accommodate specific AV related protocols such as:

        a) IEEE 802.1Qat

        b) IGMP snoop and fast-leave settings

        c) Querier assignments

i. All unusual equipment modifications.

j. Run sheets or field wiring details.

k. Patch panel assignment layout drawings.

l. Electrical distribution and modifications/expansions, including all one-line diagrams, load-calculations for existing distribution with new breakers, distribution panels, transformers, branch panels, feeders, PDUs, UPSs, and programmable sequencing switched-breaker panels and accessories.

m. Elevation Drawings of each equipment rack, both front and rear as appropriate.

n. All items of equipment, whether a stock manufactured item or custom-built item, shall be supported by complete and detailed schematic drawings and replacement parts lists. No

"black boxes" or unidentified components shall be acceptable under this specification.

o. Verification of the focal lengths of projection lenses to achieve the specified image sizes.

p. Testing procedures, passing criteria and checklists for all systems included in this specification. Testing procedures are to include (at a minimum) testing methods, materials, equipment, and documentation of results to be provided.

q. Submittals not providing testing procedures will be rejected.

r. ***Submittals that copy, in part or in entirety, the Bid Documents or Construction Documents verbatim, will be rejected.***

1.20 SUB-CONTRACT

A. No sub-contract will be permitted for the Contractor's responsibilities, as herein defined, unless specifically identified in the bid submission and approved by the Owner.

B. The Contractor shall have sole responsibility for the satisfactory implementation of each system, even though the Contractor may have sub-contracted a portion of the installation or had certain manufacturers install their own equipment.

1.21 COOPERATION WITH OTHER TRADES

A. It shall be the responsibility of the Contractor to cooperate at all times, and to the fullest extent, with all trades doing work in the building, to the end that lost time, work stoppages, interference, and inefficiencies do not occur.

B. It shall also be the responsibility of the Contractor to participate in the preparation of coordination drawings and attend coordination meetings, before and during construction, at the request of the Construction Manager. It is not anticipated that these meetings will be held more than once a week.

1.22 EQUIPMENT DELIVERY AND STORAGE

A. All equipment delivered prior to installation shall be stored by the contractor, at their place of business. Costs of all shipping, and of all unusual storage requirements, shall be borne by the Contractor. The contractor shall inform the owner seven (7) days in advance to delivery to the site. It shall be the responsibility of the Contractor to make appropriate arrangements, and to coordinate with authorized personnel at the site, for the acceptance, handling, protection, and storage of equipment so delivered.

1.23 CLEANUP AND REPAIR

A. Upon completion of work each day the Contractor shall remove all his refuse and rubbish from and about the premises, and shall leave the relevant areas and equipment clean and in an operational state. The Contractor shall be responsible for repairing any damage caused to the premises by the Contractor's installation activities, at no cost to the Owner. All repairs are to be completed by the General Contractor and will be billed to the AV Contractor.

1.24 OWNER TRAINING

A. The Contractor shall provide on-the-job training by a suitably qualified instructor, to personnel designated by the Owner, to instruct them in the operation and maintenance of the systems. In the event the Contractor does not have qualified instructors on staff for certain sophisticated equipment, the contractor will provide a manufacturer's representative for such instruction to the owner at no additional cost. All training shall take place after the systems are operational and accepted. Owner is to retain 10% of contract fee until completion of owner training. There shall be a minimum of 12 hours, over four (4) sessions of end-user training included in this specification. The cost to train owner's personnel to service the equipment shall be listed separately by item of equipment.

B. The Contractor shall facilitate availability of self-directed online training to Owner's technical staff

and IT support for network systems and software, such as:

1. Audinate Dante audio networking, including software such as Dante Controller, Dante Virtual Soundcard, Dante VIA, and if applicable – Dante Domain Manager.
2. IGMP-Snoop based encoder/decoder systems and management platforms, such as: Extron NAV, Q-Sys NV, etc…

1.25 PUBLICATION

A. No information relative to this job may be released for publication without prior written approval from the owner, Architect and Owner's Representative.

1.26 INSURANCE

A. Before commencing work, the Contractor shall procure and maintain, during the life of the contract, such comprehensive liability and property damage insurance as shall protect him and the Owner from claims for bodily injury, including death, and claims for property damage which may arise from the operations under this contract.

B. See attached documents for detail and insurance requirements.

PART 2 - PRODUCT

2.1 EQUIPMENT AND MATERIALS—GENERAL

A. All equipment and components shall be new and the manufacturer's current model.

B. All components and the system as a whole shall meet or exceed the minimum standards issued by the EIA and TIA.

C. All work and materials in conjunction with this installation shall meet or exceed the provisions of the current edition of the National Electrical Code and other applicable codes.

D. The materials, appliances, equipment, and devices shall be tested and listed by Underwriters' Laboratories, Inc. or other similar testing agency. The system shall be listed by U.L. or other testing agency, and each major component shall bear the manufacturer's name, catalog number, and U.L. or other testing agency label.

E. The Installing Contractor shall be responsible for providing a complete and fully functional system, including all necessary components, whether included in this specification or not.

F. Pricing for Alternates shall be provided on the same document as the base bid, under a separate line item for each Alternate. All costs associated with each Alternate shall be included in the price for each.

2.2 MANUFACTURERS

A. Listing of approved manufacturers for each component follows component description below and within the Appendix 'A' documents.

2.3 COMPONENTS

A. The following approved manufacturers, quantities, and model numbers shall form the basis of the system. These are minimum requirements. Installing Contractor shall verify all quantities prior to ordering and installation. Quantities are provided for reference only. Installing Contractor is still responsible to provide a complete and working system without claim for additional payment. All equivalents and alternates must be approved by the Consultant prior to system installation.

B. The Installing Contractor shall furnish all equipment and work as noted on the drawings or specifications. Contractor shall follow the specific design references and account for clear design intent. In case of a conflict between the drawings and specification, furnish the equipment and work with the greatest cost impact.

2.4 EQUIPMENT

A. Provide all equipment, including hardware devices, accessories, mounts and mounting hardware as per the Appendix 'A' Equipment List included in the drawings. Provide pricing and quantities, per manufacturer and model numbers listed.

B. Where options and accessory selections exist that are not identified in Appendix 'A', provide pricing for base-line option, with finish, color or option selection to be determined through submittal process, by Architect and Consultant.

C. Provide costs for all wiring, connectors, terminations, fasteners, labels, and miscellaneous hardware not noted by individual lines under then row so named in the Appendix 'A' section.

D. Provide costs in the spaces provided, with the Master Recap sheet to include totals for equipment, and related costs for:

1. Engineering time
2. Pre-Installation labor and services
3. Installation labor and services (on-site)
4. General and Administrative Costs
5. Total for all Scope and Work

2.5 WIRE, PLATES, SPLITTERS, BOXES

A. AV plates (see drawings for details and qty): All panels and plates are to be constructed of engraved black laminate with 1/8" steel backing or engraved black anodized aluminum unless otherwise noted. All lettering is to be white and should be easily readable.

1. Unless otherwise called for in these specifications and drawings, the following cables, or their approved equals, shall be used in these systems:

Type	Manufacturer	Non-Plenum	Plenum
RF-50 Ohm (Horizontal RG-8)	Times Microwave	LMR400	LMP400
RG-58 (50 OHM)	Belden	8262	82240
Video (SDI)	Belden	4505R	4505P
Control (4 conductor shielded)	Belden	1502R	1502P
Audio (mic/line) (balanced or unbalanced stereo)	Belden	9451/1266A	6200UH
Audio (analog production intercom – 2 channel)	Belden	1814R	9451DP
Audio (mic/line – balanced stereo)	Belden	1266A/9451D	9451DP
Audio (8 Ohm program speakers)	Belden	8473	1861A
Audio (70 Volt Speaker)	Belden	8461	1863A
Audio (NL4 Speaker tie lines)	Belden Gepco	5202FE SSS164R	6202FE SSS164P
Audio (NL2 Speaker tie lines)	Gepco	SSS122R	SSS122P
Multi-Channel Audio	Belden	8774	88778
HD-Base-T (DM) & AV-over-IP, CAT6a-F/UTP (Ethercon tie-lines)	Belden	10GX62F	10GX63F

Ethernet (control/enterprise), CAT6a UTP	Belden	10GX32F	10GX33F
2- and 4- Strand Fiber Riser Cable OS1 Single-mode Fiber	REFER TO SECTION 27 13 00 (or related structured cabling sections)		

Note: These cable types are cited to illustrate the type and quality of cable required. Unless otherwise noted, cables from other manufacturers, i.e. Canare, CommScope, Extron, Liberty, etc. will be considered if data sheets indicating equivalency are submitted to Consultant for approval prior to installation.

PART 3 - EXECUTION

3.1 INSTALLATION PRACTICES

A. General

1. Installation shall include the delivery to the installation site, unloading, setting in place, fastening to walls, floors, ceilings, counters, or other structures where required, interconnecting wiring of the system components, equipment alignment and adjustment, programming and configuration and all other work whether or not expressly required herein which is necessary to result in complete and fully operational systems.
2. Prior to ordering equipment, the contractor shall coordinate the frequencies of all wireless devices to prevent unwanted interaction between devices and rooms. This includes, but is not limited to, wireless microphones, assisted listening system devices, wireless control panels, etc.
3. All accessories, including rack mounting hardware, power supplies, etc., shall be obtained from the original equipment manufacturer. Unless otherwise noted or specified, third party accessories shall not be used.
4. All installation practices shall be in accordance with, but not limited to, these specifications and drawings. Installation shall be performed in accordance with the applicable standards, requirements, and recommendations of National, State, and Local authorities having jurisdiction.
5. If, in the opinion of the Contractor, an installation practice is desired or required, which is contrary to these specifications or drawings, a written request for modification shall be made to the Design Team. Modifications shall not commence without written approval from the Design Team.
6. During the installation, and up to the date of final acceptance, the Contractor shall be under obligation to protect his finished and unfinished work against damage and loss. In the event of such damage or loss, the damage shall be replaced or repaired at no cost to the Owner.

B. Physical Installation

1. All equipment shall be firmly secured in place unless requirements of portability dictate otherwise.
2. All equipment shall have an engraved plaque permanently affixed, denoting its function.
3. Fastenings and supports shall be adequate to support their loads with a safety factor as per AHJ. All boxes, equipment, etc., shall be secured plumb and square.
4. Projectors, lenses, and mirrors shall be solidly mounted and braced or isolated, so that there is no observable movement in the image induced by motor vibration or other mechanical operations at the intended minimum viewing distance.
5. In the installation of equipment and cable, consideration shall be given not only to operational efficiency, but also to overall aesthetic factors.
6. All overhead equipment must have security cables attached to the building structure to assist in the prevention of loss as required by building code.

C. Finishes, Trim and Escutcheon Components

1. To insure a proper finished appearance, the AV Contractor shall furnish and install

trim/escutcheon components at all conditions where A/V components pass through the finished ceilings. This would include but not be limited to video projector supports, television monitor/receiver supports and any other component which is not specifically supplied with integral flanges/trim components, i.e. speaker mounts, assistance listening devices, etc.

2. The visible component of any trim should be minimal in size, preferably no wider than 1/2". All trim components at the ceiling plane shall be finished to match the approved ceiling finish. The audiovisual contractor should obtain a sample from the General Contractor, including any custom color information, or standard color numbers.
3. All visible components and finish options shall be submitted to the Design Team for review and approval prior to fabrication.

D. Raceway Systems and Cable Installation

1. All wire bundles are to be neat and combed free of cable crossovers.
2. All cables, regardless of length, shall be marked with a permanent, self-laminating wrap-around number or letter cable marker at both ends, similar to the Panduit "Pan-Code" system. Labels must be computer-generated for legibility. Wire labels done by hand in the field must be replaced with computer generated labels. There shall be no unmarked cables at any place in the system. Marking codes used on cables shall correspond to codes shown on drawings and or run sheets.
3. All cables shall be grouped according to the signals being carried. In order to reduce signal contamination, separate groups shall be formed for the following cable families:
    a. Power cables
    b. Control cables
    c. Data cables (both IEEE 802 and proprietary signal types (HD-Base-T)
    d. Video cables
    e. Audio cables carrying signals less than – 20 dBm
    f. Audio cables carrying signals between – 20 dBm and +20 dBm
    g. Audio cables carrying signals above +20 dBm
4. As a general practice, all power cables, control cables, and high level cables shall be run on the left side of an equipment rack as viewed from the rear. All other cables shall be run on the right side of an equipment rack, as viewed from the rear.
5. Cables ties shall be placed at appropriate intervals of no greater than six inches for vertical bundles, two inches for horizontal bundles.
6. All vertical cable bundles shall be attached to the rack frame.
7. All cables shall be continuous lengths without splices. All system wire, after being cut and stripped, shall have the wire strands twisted back to their original lay and be terminated by approved soldered or mechanical means. Except where noted otherwise in the specifications, NO BARE WIRE TERMINATIONS WILL BE ACCEPTED. Heat-shrink tubing shall be used to insulate the ground or drain wire. Unused wires at the end of a cable shall remain unstripped and shall be laid back and held in place with Velcro ties.
8. All solder connections shall be made with rosin-core solder using temperature-controlled solder stations. Care shall be taken to avoid cold or cracked solder joints. Any connections that do not appear to be clean and shiny, or which show signs of cracking, shall be resoldered by the contractor before final acceptance of the system.
9. Mechanical connections using insulated, crimp-type connectors shall be bonded to the connector by soldering the wire to the metal part of the connector.
10. Connections made with screw actuated pressure type terminal strips shall be made by stripping approximately 1/4 inch of insulation from the stranded conductor. Then the un-tinned wire shall be inserted into the terminal and the screw tightened using a secure fitting precision screwdriver.
11. Terminal blocks, boards, strips or connectors shall be furnished for all cables which interface

with racks, cabinets, consoles, or equipment modules. No audio cables shall run directly to the audio patch panel jacks. Each audio patch panel shall be furnished with an audio terminal block and all audio cables to and from the audio patch panel shall terminate on this block.

12. All wire markers shall face a common direction.
13. All cables shall have proper connector housing.
14. Cables shall not protrude from the back of racks.
15. All cable entry shall be through the tops of racks or through entrance holes in the base of the rack. No cable shall enter racks through front, rear or side panel openings.
16. All cables that can be terminated in the field (except video and pulse cables, which must be cut to an electrical length) shall be cut to the length dictated by the run. No splices shall be permitted in any pull boxes without prior permission of the Consultant. For equipment mounted on casters, in drawers or on slides, the interconnecting cables shall be provided with a service loop of appropriate length.
17. No cable shall be installed with a bend radius less than that recommended by the cable manufacturer.
18. Where cables are visible, the cables will be sheathed in a color wrap that has been submitted for approval by the Design Team.
19. All cables and cable bundles shall be bound using only Velcro wrap, flexible rubber wrap, or other approved means. Ratcheting zip-ties are prohibited and will not be accepted.

E. Connection Plate Receptacles unless otherwise specified:

1. Audio (microphone or line level) – XLR type.
2. Audio (loudspeaker level) – Neutrik Speakon®.
3. HD-Base-T and AV-over-IP (QaT and IGMP-Snoop based systems) – Neutrik Ethercon, Ruggedized RJ-45, CAT6A compliant, full-shielding for F/UTP applications.
4. Audio over IP (Audinate Dante, AES67, AVB (IEEE 802.1 TSN) - Ruggedized RJ-45, CAT6A compliant, full-shielding for F/UTP applications.
5. Intercom – XLR or ¼ inch diameter tip/ring/sleeve type, or as required by the intercom system. Jack shall be insulated from panel type.
6. 3G/12G SDI Video – BNC type (50 or 75 Ohm as required).
7. DVI (Inclusive of DVI-A, DVI-I and DVI-D signal types) – DVI-I type connector unless otherwise specified.
8. HDMI – HDMI 2.1b compliant with locking nut.
9. USB – USB Type A (for 2.0/3.0 applications), USB Type C (for 3.0/3.1 and later applications, including high-power charging).
10. Category 6/6A – RJ45 Type, full shielded body/barrel.
11. **Note**: All connectors on wall plates, or in other exposed locations, are to be recessed, and when able, to have the face-flange mounted behind the panel.
12. Panels finishes shall be as approved by the Architect, with typical panels finished in white powder coat (not ivory) white finished Philips screw heads to match. Where available, connector finishes shall be white or clear nickel.

F. Patch Panel Assignments

1. All patch panels shall be wired so that signal “sources” (outputs from) appear on the upper row of a row pair; and all “loads” (inputs to) appear on the lower row of a row pair.

G. Patch Panel Designation Strips

1. All audio and video patch panel designation strips shall utilize alphanumeric identifications and descriptive information. The jack position in each horizontal row shall be numbered sequentially from left to right. The horizontal jack rows shall be lettered sequentially from top to bottom. The alphanumeric identification of each jack shall be included on the functional block drawings, as well as on reproductions of these drawings, which shall be mounted in an appropriate location near the patch bays.

H. All IP switches furnished by the Contractor, whether specified by the Consultant or Owner, or not specified, shall be verified for use in their intended application by the manufacturer of the transport platform being supported by the IP switches in the systems. Applications shall include, but not be limited to:

1. AV-over-IP transport platforms, such as:
    a. Creston NVX
    b. Extron NAV
    c. QSC Q-Sys
2. Audio-over-IP transport platforms, such as:
    a. AVB audio (refer to Part 3)
    b. Audinate Dante
    c. AES67 standard transport

I. Network switches provided shall meet the minimum bandwidth requirements, not only of the endpoint nodes, but also provide adequate switching and 'backplane' bandwidth to allow support of all endpoint nodes that will be in simultaneous use in the system or network segment in question.

J. IP network equipment whether wired or wireless, shall – immediately upon delivery to the integrator for configuration, have all default login credentials replaced with secure login credentials, as specified by the Owner's IT group. These credentials shall be documented in the equipment IP coordination table, as specified in 1.19.A.1.h.

K. Maintaining Ground Integrity

L. In order to minimize problems resulting from improper grounding, and to achieve maximum signal-to- noise ratios, the following grounding practices shall be adhered to in order to maintain the integrity of the grounding system:

1. General
    a. Because of the great number of possible variations in grounding systems, it shall be the responsibility of the Contractor to follow good engineering practice, as outlined below, and to deviate from these practices only when necessary to minimize crosstalk, ground loops, ground- induced noise, and to maximize signal-to-noise ratios in the audio, video, and control systems.
2. System Power Ground
    a. A single primary "system ground" shall be established for the system in each particular area. All grounding conductors in that area shall connect to this primary system ground.
    b. The system ground shall be provided at the audio equipment rack for the area, and shall consist of a copper bar of sufficient size to accommodate all secondary ground conductors. A copper conductor having a maximum of 0.1 Ohms total resistance shall connect the primary system ground bar to the nearest approved ground. The Contractor shall be responsible for determining if the metallic conduit is properly electrically bonded to the building ground system.
    c. Secondary system grounding conductors shall be provided between all racks, audio consoles, and audiovisual system equipment local to the area. Each of these grounding conductors shall have a maximum of 0.1 Ohms total resistance.
    d. Under no conditions shall the AC neutral conductor, either in the power panel or in a receptacle outlet, be used as a system ground, except as specifically defined by NFPA 70 for bonding.

e. Ungrounded equipment with either an inline transformer or a 2-prong plug, shall be bonded to the rack bus bar using #12awg cable.

3. Audio Cable Shields

a. All audio cable shields shall be grounded at one point only. There are no exceptions. For inter and intra-rack wiring, this requires that the shield be connected at one end only. For ungrounded portable equipment, such as microphones, the shield shall be connected at both ends but grounded at only one end.

4. Video Receptacles

a. All video receptacles that are provided and installed by the Contractor shall be insulated from the mounting panel, outlet box, or wireway. Unless otherwise detailed herein, this shall be accomplished by using insulated-from-panel type receptacles.

5. Audio Receptacles

a. All audio receptacles that are provided and installed by the Contractor shall be insulated from the mounting panel, outlet box, or wireway. Unless otherwise detailed herein, this shall be accomplished by using insulated-from-panel type receptacles.

3.2 GENERAL SYSTEM PERFORMANCE STANDARDS

A. Unless restricted by the published specifications of a particular piece of equipment, or unless otherwise required under the Detailed Specifications, the following performance standards shall be met by each system. The signal paths for the above Performance Standards shall be as follows: From all source inputs to all signal destinations. See Contractor System Checkout 3.3 for testing procedures.

B. Analog Audio

1. Frequency Response: Within plus or minus 0.5dB, 20 Hz to 20,000 Hz
2. Signal to Noise Ratio: greater than 90dB (including crosstalk and hum at all input/output levels)
3. Total Harmonic Distortion: 0.05% maximum from 20 Hz to 20,000 Hz.
4. Input Levels

a. Microphone (Nominal) ..... -50dbu

b. Overload (Minimum gain) ..... -5dbu

c. Maximum Gain..... -26dbu

d. Line (Nominal) ..... +4dbu

e. Overload (Minimum gain) ..... +24dbu

f. Maximum Gain..... +9dbu

g. Input Common Mode Rejection..... >100db Output Levels

h. Line (Nominal) ..... +4dbu

i. Maximum..... +24dbu

j. Output Impedance..... < 0.5 Ohms

k. Load Impedance..... >150 Ohms

C. 3G SDI – Per SMPTE 424M

D. 12G SDI – Per SMPTE ST-2082

E. HDMI – Per HDMI Ver. 1.4b; HDMI 2.0b

F. DVI – Per DVI Ver. 1.0

G. Display Port Version 1.4

H. Audio Video Bridging (AVB)

1. IEEE 802.1AS: Timing and Synchronization for Time-Sensitive Applications
2. IEEE 802.1Qat: Stream Reservation Protocol (SRP)
3. IEEE 802.1Qav: Forwarding and Queuing for Time-Sensitive Streams
4. IEEE 802.1BA: Audio Video Bridging Systems

I. Audiovisual System, Control System and User Interface Programming

J. Control system user interfaces pages and programming shall be designed for this project exclusively. While there are a great number of design approaches to designing the user interface, the following guidelines shall be adhered to:

1. The use of custom system programming from prior projects and/or 'modules' provided by a given manufacturer or programmer may or may not meet the functional intent of the systems and work described herein. It is the responsibility of the contractor to meet the functional intent of the systems in this specification, including any and all necessary modification of program code or creation of custom modules as required.
2. The operation(s) of all system(s) are to match the functional intent already implemented at the owner's facilities as applicable.
3. All panels are to have the time and date as icons, in the same position on every page.
4. All panels are to have a title, indicating the piece of equipment and/or functionality being controlled.
5. Final programming shall include capability to remotely control all functions of the audiovisual system. Only functions required for normal use shall appear on top level pages while underlying "Tech Pages" shall provide access to full manufacturer's remote control functionality.
6. Devices similar in nature shall be programmed to operate with a common format.
7. No individual component shall be programmed to function atypically.
8. Whenever the same button appears on more than one page, it will be in the same position on each page.
9. Where feasible, multi-level access to controls should be implemented. See paragraph "e", above.
10. During performance testing, all equipment shall be operated under standard conditions as recommended by the manufacturer.
11. Please see Detailed Specifications for further information on specific control system programming requirements.

3.3 CONTRACTOR CLOSEOUT DOCUMENTATION

A. Close Out Submittals

B. At the completion of the installation, the Contractor shall provide one (1) set of electronic copies, and to the Owner one (1) set of hard-copies of each of the following:

1. Test results, in "spreadsheet" format, of electrical audio and/or video performance testing for all systems end-to-end in every room and/or between rooms as applicable.
2. **Note***: It is the sole responsibility of the Contractor to fully test the audiovisual systems prior to Consultant check-out and verification*. Until these test results are provided, no audiovisual systems check-out or verifications (functional or otherwise) will be performed by the Consultant. If any anomalies in system performance are detected, the Contractor shall correct these before performing any other tests.
3. Results of RF Spectrum analysis as used to establish available frequencies for wireless devices included in this contract.
4. Equipment manufacturer's operation manuals for each piece of equipment.
5. "As-built" drawings for every item indicated in the "Detailed Specification" sections of this specification as installed. A final, approved copy shall be placed in a metal pocket mounted

on the inside of the rear door of the rack. Contractor to coordinate the preferred format (hard copy or digital) of these documents with the owner upon completion.

6. System functional block drawings showing all input and output circuit cable and terminal block numbers as well as all jack field circuit I.D. designations. A copy of these drawings shall be framed in protective plastic and mounted near the equipment racks, or as otherwise directed by the owner.
7. A System Operation and Maintenance Manual. This manual shall be produced by the Contractor especially for the systems detailed herein. The “Operation” section shall describe all typical procedures necessary to activate each system to provide for the functional requirements as listed under the Detailed Specifications. Manuals will use graphical representation of touch panel screens, as to easily be identified by user. Owner’s Manuals and/or Operations manuals supplied by manufacturers for a given piece of equipment, though required, are not acceptable substitutes for these materials.
8. The reader of this manual shall be assumed to be technically competent, but unfamiliar with this particular facility. Additionally, the Contractor shall provide a single page of basic operating instructions for each room, and other audio-visually equipped spaces.
9. The “Maintenance” section shall provide a recommended maintenance schedule with reference to the applicable pages in the manufacturer’s maintenance manuals. Where inadequate information is provided by the manufacturer, the Contractor shall provide the information necessary for proper maintenance.
10. In addition to the Operation and Maintenance Manual(s), the contractor shall provide a simplified user’s guide (“cheat sheet”) for each audiovisual system.
11. Copies of all software files and program source-code files, including all source code for: control systems, touch-panels, control-panels, event-controllers, audio and AV DSP platforms. These files shall become the property of the Owner and shall be provided under the agreement that they will not be used by the Owner for outside Work for Hire, but for maintenance and upgrades to the installed systems in the facilities.
12. Finalized IP equipment tables as specified under 1.19.A.1.h., including a record of the last version of firmware installed on each piece of equipment.
13. All and any online account information and login credentials for cloud-based or software services provide to the Owner by the Contractor, for continued support and maintenance.

C. Distribution

1. Three copies of the above documentation will be retained by the Owner.
2. One copy of the above documentation will be retained by the Architect.
3. One copy shall be delivered to the Owner’s Representative prior to the System Commissioning.
4. At least one copy of the above documentation will be retained by the Contractor.

D. Procedure for Resubmitting

1. Make corrections or changes in O & M and/or Record Drawings as required by the Architect and resubmit when the Architect’s stamp requires re-submittal.
2. Clearly identify changes made other than those specifically requested by the Architect when resubmitting Record Drawings. Changes shall be clouded or similarly highlighted as coordinated with the Architect. Only changes that have been specifically requested by the Architect or have been clouded by the Contractor will be reviewed on resubmittals.
3. Any drawing sheets added to the resubmittal shall be clearly identified and clouded, and shall not change the sheet numbering scheme for previously issued Record Drawings.
4. The Contractor shall be responsible for any delays caused by the re-submittal process.

3.4 CONTRACTOR SYSTEM CHECKOUT

A. Before Commissioning Tests are scheduled, the Contractor shall perform his own system checkout based upon an approved testing procedure for the systems. The Contractor shall furnish all required test equipment and shall perform all work necessary to determine and/or modify performance of the system to meet the requirements of this specification. The Contractor

shall submit a testing plan (refer to 1.18-A.-15) for approval by the individual or firm representing the Owner during the Audiovisual Installation. At a minimum, the following sub-components of the Audiovisual System shall be tested and verified:

1. Cable and Connectors
    a. All cables and connectors shall be tested and verified to comply with the manufacturer's specifications and design intent.
    b. Cable test results shall be submitted in advance of the Commissioning for review by the Owner's Representative.
2. Devices
    a. All devices shall meet the functionality as specified by manufacturer.
    b. If any device is found to deviate from the manufacturer's functionality it shall be replaced by the Audiovisual Systems Contractor at no cost to the Owner.
3. Signal Types
    a. The Audiovisual System shall be tested to comply with all video and audio standards as specified in the Performance Standards section and described by the design intent.
4. System Function
    a. The cables and connectors, devices, and signal types shall meet the functional requirements as specified by the design intent.
    b. Acceptable testing procedures may include but is not limited to that which is described in the detailed specifications such as (streaming, push-to-talk, annotation, etc.)
5. Document that all matrix switching crosspoints have been tested and verified.
6. Test all audio and video systems for compliance with the Performance Standards, using the example procedure outlined in appendix A:
    a. Test Equipment.
        i. The following test equipment (or submit equivalent for approval) shall be used to test the systems on site:
            a) Video Testing:
                i) Digital video and Audio test generator, Extron VTG 400 DVI
                ii) Digital Video test generator with EDID and HDCP components, PureLink HDG-8000 PRO
                iii) Media and portable hardware (i.e laptop) representative of all types found in the subject system including but not limited to Blu-ray ™ players and discs (provide discs with and without HDCP encrypted content), mobile PC/Tablets.
                iv) Video cable
                v) Set of terminations, 'T' pieces etc.
            b) Audio Testing:

i) Time based measurement system, Goldline TEF20 or SIA Smaartlive with laptop PC, calibrated omnidirectional mic, and appropriate interfaces.

ii) Audio test set, Audio Precision ATS-1DD

iii) Media representative of all types found in the subject system.

iv) Audio cables as required to connect test equipment to the system.

v) Set of terminations, adapters etc.

c) Gain Setting

i) Adjust all systems (end to end within a system) for maximum signal-to-noise ratio. No hiss should be audible through any loudspeaker at the completion of gain structure setting, and all audio gain stages should clip simultaneously.

d) Signal Paths

i) Video/Audio

- Connect the output of the video signal generator to a floor box/table/rack connector and select the “Full Field Color Bar” signal. Connect the combined waveform monitor/vectorscope to a final output point, e.g. an input to a picture monitor or video projector. Ensure that the test signal is routed to the selected output.
- Measure and record the signal amplitudes.
- Repeat item ‘i’ after selecting the “Multiburst, 50 IRE” test signal.
- Measure and record the signal amplitudes.
- Repeat item ‘i’ after selecting the “Modulated 5-step” test signal.
- Measure and record the signal differential phase and gain.
- Repeat item #’s ‘i’ through ‘vi’ for other video signal paths.
- Repeat item ‘i’ after selecting the Window test signal.
- Measure and record the signal line and field tilt.
- Repeat item ‘i’ after connecting the Black Burst signal from a rear mounted connector.
- Measure and record the signal/noise ratio.
- Connect the output of the audio test set to a floor box/table/rack program audio connector and connect the input of the audio test set to a final output point, e.g. an input to a program speaker power amplifier. Ensure that the test signal is routed to the selected output, that the volume control is set to 100% and that the equalizers are bypassed.
- Measure and record the signal/noise ratio, total harmonic distortion and frequency response.
- Repeat items ‘xii’ and ‘xiii’ for other audio signal paths.
- Connect the output of the audio test set to a floor box/table/rack speech audio connector and connect the input of the audio test set to a final output point, e.g. an input to a speech speaker power amplifier. Ensure that the test signal is routed to the selected output, that the volume control is set to 100% and that the equalizer is bypassed.

- Measure and record the signal/noise ratio, total harmonic distortion and frequency response.
- Repeat items ‘xv’ and ‘xvi’ for other audio signal paths.

e) HDMI

i) Using an appropriate HDMI generator, HDCP enabled, test for correct resolution and timing of all HDMI input signals and signal transmission coming into the display using the entire cabling path to the extent possible.

ii) Test each HDMI input to verify working condition.

iii) Test and verify video type, picture and audio.

iv) Verify HDCP sources can be routed to all destinations.

v) Verify EDID configuration and functionality.

vi) Verify CEC functionality (if being implemented) and that automatic CEC functions do not affect the display.

vii) Verify displays can switch between and display different resolutions and color space.

viii) Verify images are stable, no scaling artifacts or latency.

f) HDMI 2.1

i) Future capabilities to include: 4K@120 up to 8K@60, resolution up to 10K, 48 Gbps b/w uncompressed, backwards compatible, eARC, VRR, QMS, QFT, ALLM.

ii) 4K

1. Test and verify HDMI cables and product can support 4K functionality when connected to a 4K device.
2. Test and verify HDMI can transport 4K video at 50-60 frames per second, support 4096 x 2160 (UHD 3840 x 2160) resolution, color bit depth 10bit up to 12 bit.

iii) Data rates

1. Test and verify HDMI can pass data rates at a minimum of 10.2 Gbit/s and up to 18.0 Gbits/s.

iv) Refresh rates

1. Test and verify product can support common refresh rates up to 120Hz.

g) KVM/USB

i) Test and verify USB-passes high speed, functional, electrical, mechanical and legacy compliance testing.

ii) Can use a USB test tool analyzer or software test package to verify driver and hardware interoperability.

iii) Test and verify USB 2.0, 3.0, or 3.1 performance pertaining to system design.

iv) Test and verify that USB host and endpoint function correctly for its intended application.

v) If using USB as a controller:

vi) Verify that host can recognize attached devices and install appropriate drivers.

vii) Verify power budget if connecting to multiple devices, that power does not exceed manufacture specified power requirements.

viii) If using USB or KVM extenders, test and verify all data cables and connectors pass conformance testing. This includes but not limited to data rates, skew, return loss, resistance etc. according to test manufacture specifications.

h) HD-Base-T

i) Test and verify all data cable and connectors pass conformance testing. This includes but not limited to data rates, skew, return loss, resistance etc. according to test manufacture specifications.
ii) Test and verify audio source and video source from point of origination through HD-Base-T system to the destination functions correctly.
iii) Test and verify rs232 control functionality.
iv) Test and verify HD-Base-T system functions within system configuration.

i) Streaming

i) Bit Rate – image quality, 8-15 Mbps
ii) Latency - ensure that a minimal level of audio quality and latency are sustained so as to not degrade the user experience.
iii) Buffer – how long before the video loads and ready to watch.
iv) Lag – is the playback smooth, watch and wait time.
v) Does the network service provided by the ISP furnish the necessary QOS to acquire, render, search, broadcast and deliver content for the intended application?
ix) Check that the image is correctly displayed on the picture flat panel display(s) and/or by the video projector.

j) Display Set-up and Calibration:

i) Set up display for intended usage per manufacture recommendations.

ii) Allow display to warm up to standard operating temperatures.

iii) Setup and verify that display is set to its native resolution.

iv) Setup and verify correct aspect ratio, verify no overscan or underscan.

v) Bring up a proper test pattern.

vi) Perform colorimetry calibration.

vii) Set pixel clock and phase as required.

viii) Use a black PLUGE pattern, or appropriate test pattern generator to set black level.

ix) Use a white PLUGE pattern, or appropriate test pattern generator to set white level.

B. At the conclusion of the tests, return all equipment settings to previously calibrated positions.

C. Provide written records of all test results in spreadsheet form.

D. Check all control functions, from all controlling devices to all controlled devices, for proper

operations.

E. Adjust, balance, and align all equipment for optimum quality and to meet the manufacturer's published specifications. Establish and mark normal settings for all level controls, and record these settings in the "System Operation and Maintenance Manual".

F. Check all optical projection images for average light level, light fall-off, and image alignment and size to comply with the Performance Standards and specifications drawings. Check to determine that all projectors, projector bases, carts, tables, and mirrors are rigid and vibration-less in operation.

G. Maintain documentation of all performance tests for reference by the Owner's Representative during the Commissioning.

3.5 COMMISSIONING TESTS

A. Commissioning Tests will not be performed until the Contractor's System Checkout has been completed and the test results have been reviewed. The Commissioning Tests will be supervised by the Owner's Representative and shall consist of the following at a minimum:

1. A physical inventory of all equipment on site and will be compared to equipment lists in the contract documents.
2. The operation of all system equipment shall be demonstrated by the Contractor.
3. Review of final As-Build documentation as described in the "Contractors Documentation" section of this specification.

B. Both subjective and objective tests will be required by the Owner's Representative to determine compliance with the specifications. The Contractor shall be responsible for providing test equipment for these tests.

C. In the event further adjustment is required, or defective equipment must be repaired or replaced, tests may be suspended or continued at the option of the Owner's Representative.

D. Any charge for additional time incurred by the Owner's Representative required to over-see the system tests, due to improper system installation or previous failed systems, shall be the responsibility of, and charged directly to the contractor.

E. **Note**: As noted in 1.5, "Warranty Statement" and 1.6 "Preventative Maintenance & Service Contract," Warranty and Preventative Maintenance Periods shall commence after final commissioning by both the Owner and Consultant.

3.6 SERVICE IDENTIFICATION PLATE

A. All installations shall bear the following service identification plate, supplied by this contractor, mounted on the front of the main rack at the top, using the Maven Pro typeface:

SYSTEMS DESIGNED BY:
ABD Engineering & Design, Inc.
833 SW 11th Avenue
Suite 925
Portland, OR 97205
503-444-5656

SYSTEMS FABRICATED, INSTALLED & SERVICED BY:
(This Contractor)

Engraving shall be white filled lettering on a black background or as appropriate to the identification plate material.

PART 4 - APPENDIX A – EQUIPMENT LISTS

A. See the attached Appendix for the equipment lists for the audiovisual systems. These lists are

provided for the bidding process.

END OF SECTION 274100

Appendix A

MASTER TABLE OF COSTS - 27 41 00 AUDIOVISUAL SYSTEMS

AREA	QUANTITY of SPACES	EQUIPMENT	ENGINEERING	PRE-INSTALL	INSTALL	G&A	AREA TOTAL
27 41 20 - AUDITORIUM: AUDIOVISUAL SYSTEMS	1						
27 41 25 - BACK OF HOUSE SPACES: AUDIOVISUAL SYSTEMS	1						
TOTALS	2						

SECTION 27 41 20
THEATER AUDIOVISUAL SYSTEMS

PART 1 - GENERAL INFORMATION

1.1 OPERATIONAL SUMMARY

A. This section of the specification describes the functional details of the audiovisual systems to be furnished and installed in the Theater and associated spaces – which include:

1. Theater 108 – A 520 seat house sectioned into six moderately raked seating sections with a large cross-aisle.
2. Stage 2 – A roughly 1,450 square foot stage with an approximately 200 square foot apron, and a 450 square foot shallow uncovered orchestra pit in front of the apron.
3. Control Room – A windowed control room for sound and lighting tech crew. This space will be modified by the District JOC to facilitate live mixing and include a new AV headend and equipment rack.
4. The theater house features an open ceiling to the structural truss members and deck, with rows of acoustical reflectors and a catwalk roughly 10-12' upstage from the cross aisle.
5. The Stage area has a relatively low barrier ceiling, approximately 2' above the proscenium opening, that limits the use of rigging and scenery, but is accessible above, from a spiral staircase in the stage left cheekwall, that also leads to the catwalk and provides access to the space above the house reflectors.

    a. The design intent is that major cabling pathways between the Stage and Control Room, will make use of free-air pathway – using J-hooks or cable-tray to traverse this space, and feed systems onstage, at the pit, and in back-of-house spaces.

    b. A new JOC provided system of surface raceway at the orchestra pit, will provide connectivity for AV systems at the pit and stage apron.

B. The Theater space will provide audio program and reinforcement, as well as capture and routing, video display, capture, and routing, as well as control and management functions to serve an audience, classes and meetings – including outside events and users, with active participants on stage numbering up to 100+ persons. Each of the spaces, as noted in paragraph 'A', will operate in the following manner:

1. Theater Stage & House:

    a. Audio Systems shall include:

        i. A house main audio system, which includes:

            a) A main reinforcement loudspeaker system consisting of a pair (2) of full-range 3-way horn-loaded vertical beamforming cabinets that are flown above the pit at the apron line, and may be configured to use as a mono-sum mix or as a stereo pair – particularly when used for reproduction of program audio accompanying video.

            b) A high-output subwoofer cabinet, flown from the ceiling structure, and located between each full-range cabinet, along a common time-aligned arc at the stage apron/pit.

        ii. A house mixing and routing system to include Dante IP audio networking, with a new 24 fader digital FoH mix console in the Control Booth position and new stage box(es) providing microphone/line and monitor speaker connectivity onstage or in the pit.

iii. A rack-mounted Dante IP audio networking DSP signal processing unit will provide loudspeaker processing, fixed signal flow for non-production work, as well as feeds to ADA assistive listening systems (ALS), as well as feeds to/from recording/streaming systems, and other rooms in the facility – as needed.

iv. Wireless microphone systems will include digital RF systems, with house-mounted antennae, RF distribution/amplification, and multiple multi-channel receivers. Transmitters shall include handheld condenser, lavaliere omni capsules with belt-packs, as well as head-worn condenser microphones.

v. An ADA-2010 compliant ALS system shall be provided, with network integration to allow use of personal Wi-Fi devices with the Owner's guest Wi-Fi network to provide ALS or supplemental audio to users with Android, iOS devices.

b. Production Intercom (PIC) systems shall include:

i. A two-channel rack-mounted party-line master station, and new shared 1.9 GHz wireless RF intercom system with master-station, wall-mounted transceiver and portable rechargeable belt-pack units and headsets.

ii. Two channel speaker/microphone wall panels as shown on the drawings.

iii. Two channel passive wall panels, for use with single and dual-channel belt-packs and headsets, at onstage operator/crew locations and in the control room and followspot booth.

c. Display and Video Systems shall include:

i. A replacement motorized, tab-tensioned large format projection screen, mounted in the proscenium soffit, replacing the existing 46 year old square format, non-tensioned, borderless screen.

a) The AV Contractor shall coordinate the installation of the screen, and any re-wiring, trimming/cutting, patching and painting of the screen and surrounding soffit, with the District's project manager and assigned JOCs.

ii. A large format digital video projector with appropriate lens to provide projected content to the screen, mounted from the roof truss structure above, using new infrastructure, pathway and power provided under a separate JOC by the Owner.

iii. A PTZ HD video camera to provide situational awareness views to the back-of-house spaces, as well as provide streaming content to the campus network and existing signage players, as coordinated with the Owner.

iv. A variety of HD-Base-T and (portable) AV-over-IP transmitter/receiver or encoder/decoder devices, both fixed and portable, to allow transmission of source content from portable and user devices (laptops, computers, media players, etc..) to display systems in the room, or portable display device.

v. An OFE wireless presentation interface, to allow user connectivity through a local dedicated WAP or the enterprise Wi-Fi network, to be integrated at the direction of and coordination with District IT staff.

vi. A desktop streaming encoder/recorder appliance to allow event and presentation streaming of video from the PTZ camera and presentation source simultaneously on a single stream or recording channel with audio from the House systems.

d. Other Systems and Functions shall include:

i. A selection of portable devices, such as:

a) AV-over-IP encoders/decoders, for use on-stage and back-of-house.

b) Production intercom belt-packs and half-muff headsets, for two-channel wired party-line system, reusing the existing party-line master station and system wiring, where able.

c) Wireless production intercom systems, including wireless 2-channel belt-packs, single-muff headsets, Li-ion batteries and outboard battery chargers.

d) Sets of microphones, as per Appendix 'A' to provide instrumental and choir mic'ing capabilities, including on-stage pickup of dance and onstage movement.

e) Self-powered onstage wedge monitor speakers.

f) Dante I/O 'dongle' devices to serve as portable network connections for analog input/output, Bluetooth and USB-C/A sources.

ii. A number of input/output (I/O) panels at the plaster-line of the proscenium wall, upstage rear wall, house, and Control Booth will provide connectivity for audio and audio/video IP network devices, analog audio, production intercom systems (PIC), and feeds for media and videography recording.

iii. Dedicated IP networks for various AV networking functions, with associated IP patch-panels, managed layer-3 IP switches with SFPs and stacking capabilities with adequate bandwidth for future expansion. Networks to be broken down as:

a) AV-over-IP Network, for high-bandwidth time-critical video/audio/control/USB applications on 1G or 10G links. This network shall be dedicated and not shared or VLANed with other enterprise or AV networks.

b) Dante Audio (and/or AES67) Network, for use with Dante audio systems and endpoint connections. This network may be VLANed off with and share hardware with the AV Control Network.

c) AV Control Network, for use by AV unified control systems hardware and endpoint devices, for monitoring, control, and management, as well as low-demand content. This network may be VLANed off with and share hardware with the Dante Audio Network.

iv. Systems control shall include an integrated control processor which will provide control signals using legacy formats, or the IP control network to communicate with other devices in the system, including associated house lighting through an IP interface.

a) The user interface shall consist of a wired tabletop touch panel control, to be used in the Control Room, and a wall-mount touchpanel at the stage-right Stage Manager's position, as well as software to allow designated OFE computers and User tablets to emulate the functions of the Control Room Touchpanel from locations in the space over the Enterprise Wi-Fi.

2. The Control Room will include, as described in-part above, the following:

a. Production intercom panels for audio, and lighting/tech use.

b. A tabletop touch-panel controller.

c. The tabletop streaming/recording appliance as noted above.

d. Wireless microphone chargers and storage.

e. Production intercom belt-pack/headset storage and charging docks.

f. ALS receiver storage and charging docks/bases.

g. A replacement AV rack, to house new AV equipment, patching, wire management, power distribution, storage, blank/vent panels and required thermal management.

C. Events hosted in this space will include, but not be limited to:

1. Music performance: Orchestral, wind-band, ensemble, chamber and solo, acoustical instruments with some amplified or close miked instrumentation.
2. Amplified music performance.
3. Vocal performance: choral, ensemble and solo, with and without accompaniment
4. Dramatic performance with or without talent-worn microphones.
5. Musical theater with talent-worn microphones, with a live pit band/orchestra onstage or at the forestage apron area (pit).
6. Public meetings, presentations and panel groups.
7. Classroom and Lecture instruction.
8. Cinema and video screening, with basic left/right program audio.

D. All systems shall be dedicated and permanently installed as described above and, in the following, ‘functional’ descriptions.

1.2 RELATED WORK

A. Installation of all floor boxes and/or poke thru devices (excluding any plates and connectors to be provided by the contractor.

B. Telephone and telecommunications jacks and special telecom outlets not related directly to AV, (LAN/WAN, Wireless access points (WAPs), PTSN/POTS, etc.).

C. Provide in accordance with Section 27 41 00 – Audiovisual Systems.

D. Work noted in the drawings to occur under separate JOC under the District, as described in 27 41 00.

1.3 SYSTEM INTERCONNECTION & FUNCTIONAL DESCRIPTION

A. Display Systems

1. Provide and integrate a large-venue video projector and long throw lens as shown on the drawings.

a. Provide and integrate a projector mount with a 1-1/2” NPT pipe, and suspend from the overhead ceiling structure, using approved means, as coordinated with the District structural engineer or JOC.

b. Field-verify and adjust the mounting height of the projector as required from the location referred to in the drawings. Provide appropriate extension pipe column to support mount from pipe-clamp.

c. Field-verify the lens specified in Appendix ‘A’ with throw distance and geometry requirements on-site.

2. Provide and integrate a new motorized tab-tensioned projection screen, as per the drawings and Appendix ‘A’. Screen shall include integral low-voltage controller.

a. Coordinate demolition of the existing projection screen and projection screen case with the District project manager and their assigned JOC, to:

i. Disconnect existing power and remove screen and case.

ii. Mount new case is location of existing and reconnect 120V power.

iii. Run wiring for low-voltage control to AER-01.

iv. JOC to trim in new screen case and provide patching and painting as required upon completion and testing of new screen.

B. Video Systems

1. Provide and integrate a rack-mounted HD-Base-T AV matrix switcher as per the drawings and Appendix ‘A’.
2. Provide and integrate HD-Base-T receivers and transmitters as per the drawings and Appendix ‘A’.
3. Provide and integrate AV-over-IP encoder and decoder units as per the drawings.
    a. Provide and integrate AV-over-IP encoder/decoder multicast manager/controller unit, for up to 50 endpoints, as per Appendix ‘A’.
4. Provide an integrate a wall-mounted HD PTZ camera as per the drawings and Appendix ‘A’. Provide all required mounting accessories to mount to the lighting bar at the Control Booth.
    a. Provide connectivity to IP network for control and streaming of H.265 content.
    b. Provide 12G-SDI converters to get camera signals into the Control Room, to the streaming encoder/recorder.
5. Provide and integrate a tabletop dual stream encoder/recording appliance, as per the drawings and Appendix ‘A’.
6. Provide and integrate an Owner Furnished (OFE) wireless presentation appliance, as per the drawings and Appendix ‘A’.
    a. Coordinate with Owner to receive device and integrate to a free input at the AV matrix switch.
    b. Provide input selection in the GUI to address device.
    c. Owner to provide al network and Wi-Fi integration through District IT staff.

C. Audio Systems

1. Provide and integrate production intercom systems (PIC) as per the drawings and Appendix ‘A’. Systems shall provide an analog 2-channel party-line system, operating on shared buses with a 2-channel wireless 1.9 GHz wireless intercom system, complete with:
    a. New 2-channel rack-mounted master station, connected with:
    b. 2-channel rack-mounted wireless base-station. Base station shall integrate with the analog party-line ‘A’ and ‘B’ buses, as well as:
    c. Wireless IP splitter and power supply, installed in the AER-01 rack with the base station, and powering a:

i. Wireless transceiver, supporting up to 8 registered wireless belt-packs and located at the stage right house-side-tormentor pipe – providing coverage to crew on stage, in the House and Back-of-House corridors and dressing spaces.

ii. Field-verify the location of the transceiver with the use of wireless PIC beltpacks in the House and Stage, as well as BoH areas. Review this information with the manufacturer and provide proposal to add a second transceiver location if required for uniform coverage.

iii. Cabling from master station/head-end shall be free air from the transceiver at the tormentor bar, through the House ceiling space to the AER-01 equipment rack in the Control Booth.

d. Wall-mounted custom belt-pack panels, as dual-channel plug-in points, as per the drawings.

e. 1 channel wired belt-packs, with clip on accessories and required cables with adaptor or interface to panels.

f. 2-channel wireless belt-packs, with clip on accessories, extra batteries, and tabletop battery chargers as per Appendix ‘A’.

g. Half-muff headsets for use with wired and wireless belt-packs or wall-stations.

h. New speaker/mic wall stations with volume controls and belt-pack/headset plug-in points, as per the drawings and Appendix ‘A’.

2. Provide and integrate a full front of house (FOH) main loudspeaker system as per the drawings and Appendix ‘A’ manufacturer custom quotation. This system will provide the primary sound reinforcement system for live sources in the room.

a. Provide a left-right two (2) cabinet system, consisting of a 3-way horn-loaded active beamforming array cabinet, each, to provide uniform front-to-back coverage of the listening area. Coordinate exact layout and tuning of system with the Consultant and manufacturer’s EASE5.0 file and adjust as required by field conditions and approved by the commissioning/tuning agent.

i. Include professional commissioning and tuning services by the manufacturer as included in the custom quotation.

ii. Coordinate provision and obtaining of custom asymmetric beamforming DSP files and FIR filter sets from the manufacturer to be implemented prior to systems tuning.

iii. Provide rigging supports to structure, as per the manufacturer’s quote, Appendix ‘A’, and appropriate means and methods, as coordinated with the District’s structural engineer or JOC. Support location shall follow modelling with speaker supports between the existing arc soffit above the stage apron and the first row of acoustical reflector ‘clouds’.

iv. Contractor shall use a manufacturer-certified rigger and follow all recommended and statutory requirements for flying the loudspeaker systems over the stage and house.

b. Provide a flown subwoofer, with dual-18” drivers, as per the Appendix ‘A’ quotation, installed between the full-range main loudspeakers and separately rigged, as per the drawings and custom quotation.

c. Provide and integrate all amplification as per the custom quote and Appendix ‘A’. Amplification must match manufacturer's quoted make and types.

3. Provide and integrate a rack-mounted audio DSP unit with 8x8x8 analog I/O, and

Dante/AES67 64x64 (48kHz/24bit) channel I/O. DSP shall provide USB interface for use with computer and UC/Web-conference applications.

a. Program and configure the DSP to provide loudspeaker management, and standard routing I/O for non-tech operator events, with touch panel control for non-tech events.

b. Provide integration with a mix of assigned fixed Dante channels and user-routable Dante channels using Dante Controller software. Provide a plan of Dante channel assignments for review by the Consultant and Owner to determine the best configuration for fixed and staged tech events.

c. Provide integration and programming to assign selection of (2) handheld and (2) belt-pack wireless microphone systems for use through systems control in 'non-tech' setting, reassigning these channels to/from the house mixing systems when used for non-tech mode through an auto-mixing module.

d. Provide integration and programming to assign the forestage apron Dante I/O panels to an Automix mode when system is used in a non-tech model as described above in paragraph 'c'.

4. Provide and integrate audio amplifiers as per the drawings and Appendix 'A' manufacturer quotation.
5. Provide and integrate a rack-mounted Assistive Listening System (ALS) to provide local Wi-Fi enabled ALS to users with 'smart' devices loaded with the appropriate 'app'.

   a. Provide all required accessories for a complete 'kit' including receivers, earphones, neck T-coil loops, charging base, and ADA-compliant signage.

   b. Coordinate integration of Wi-Fi ALS services with district guest network services to allow users access to ALS with Port 80 pass-thru.

6. Provide and integrate digital wireless microphone systems as per the drawings and Appendix 'A'. Wireless microphone systems shall be installed in AER-01 and include the following:

   a. Wireless multi-channel rack mount receivers with integrated Dante networking, networked monitoring/management, and RF distribution amplifiers. Receiver channels to be shared between hand-held and belt-pack transmitters in unequal number (4 handheld units matched alongside 4 belt-packs) and will require owner training to mitigate misuse.

   b. Existing to reuse wireless rack mounted RF distribution amplifier. Remove DA unit from existing road case and move to AER-01 and integrate.

   c. Existing to reuse wireless log-periodic antennae, with wall/arm mounts, splitter/combiners and in-line amplification, as required.

      i. Remove wireless antennas from backstage and install at House wall as per the drawings.

   d. Wireless handheld transmitter units with cardioid condenser capsules and rechargeable battery.

   e. Wireless belt-pack transmitter units with omnidirectional lavaliere condenser capsules, clips and rechargeable batteries.

   f. Existing to reuse head-worn thin-line condenser microphones for use with belt-pack transmitters.

   g. Rack-mounted battery chargers with interfacing for battery types specified for transmitters in Appendix 'A'. Provide in quantity to allow charging of all batteries

simultaneously. Install in AER-01

h. Provide wireless RF survey and assignment plan as per 27 41 00.

7. Provide and integrate a new 33-fader front-of-house (FoH) live digital mixing console with Dante audio interface.
8. Provide and integrate a new front-of-house (FoH) Dante digital stage-box in a 16 in x 8 out configuration for use with live instrumentation and microphones.
9. Provide and integrate a pair of desktop powered studio monitors to allow for monitoring of FoH audio within the Control Room, for use by crew in that position.
10. Provide and integrate Dante input/output panels as per the drawings and Appendix 'A'.

    a. Confirm settings for XLR-3F inputs with Owner and Consultant, re: mic/line, level/attenuation, etc… prior to checkout and signoff.

11. Provide as loose portable pool equipment:

    a. Provide intercom belt-packs and headsets as noted above.

    b. Provide self-powered low-profile stage monitor loudspeaker systems as per Appendix 'A'.

    c. Provide wired microphone and microphone kits with accessories, as per Appendix 'A'.

    d. Provide input/output Dante interfaces and connectivity as per Appendix 'A'.

D. Control Systems

1. Provide and integrate a system of programmable systems control including a master processor with IP networking, as well as RS-232/422, GPIO, relays/contacts and IR control.
2. Provide and integrate a wall-mounted 7" and tabletop 7" touchpanels as per the drawings and Appendix 'A'. Provide integration to allow use of the touchpanel at the following locations in the room:

    a. In the Control Booth, at the countertop location.

    b. At the stage-right wing position, adjacent to the existing lighting touchpanel control.

E. User Interface

1. Provide programming of control interfaces as directed by Owner's Representative and Consultant. Programming shall provide simple user interface to select local video and audio sources and adjust room and area volume to within predetermined limit.

    a. Provide proposed layout based upon meeting with Consultant and Owner's end users to draft plan for and hierarchy of needed controls and configuration of pages/menus. This meeting will be used by the Contractor to formulate first round of GUI submittals as per 27 41 00.

    b. Consultant will meet with Owner to review proposed GUI, and make comments as required, for return to Contractor for revision and resubmittal. Upon resubmittal a final round of review with the Contractor's programmer and any submitted comments will be used to provide a finalized submittal for the GUI.

2. Provide and program software management/monitoring interface for Owner's technical staff, which will allow advanced system control and monitoring functions using a PC connected to the control system LAN.
3. Provide control panel operations that are consistent from page to page.
4. Provide feedback that indicates the current equipment and/or system status where

possible.

F. Software

1. Provide control capability for every function available on every piece of equipment being controlled by the system. Define and provide “macro” commands for the most used functions.
2. Provide control capability to OFE Windows tablet devices, as well as end-user iOS and Android devices by providing the appropriate executable files and app deployment of the control system GUI for the space. Include all necessary programming and licensing costs for this feature.
3. Provide password protection for any operations that can adversely affect certain room set-up functions. Provide for the ability for remote monitoring of system functions and adjustments via-TCP/IP. Capability for configuration will require password protection for use of facility management. Provide for the delivery of email fault alerts to facility management.

G. The Contractor shall provide all interconnection cable, connectors, terminal strips, wireways, flexible conduit, etc., to facilitate the audiovisual systems as detailed within these specifications and drawings.

H. Conduit and power systems are detailed in the Electrical Engineer’s drawings.

I. Miscellaneous

1. Provide and integrate a new equipment rack as noted in the Appendix ‘A’ document and drawings. Provide and integrate with rear door, rear-rails, wire-management, storage drawers with foam inserts, blank and vent panels, low-noise fans and thermostatic thermal management accessories, , lacing-bars, horizontal and vertical wire management, and power distribution as required per the specifications and drawings, as well as best practices defined by AVIXA, TIA/EIA, and BiCSi.
2. Provide and integrate power conditioning and distribution as required with PDUs dedicated to low-demand equipment and separate PDUs and circuits to supply amplifiers.
3. Integrate PoE+/++ network switches to support control, video and audio systems and VLANs at the main AV rack as shown on the drawings. Switch shall be Gigabit Ethernet, managed and allow integration with the Owner’s IT network. Switches and VLANs will be configured to provide segmented networks that will be dedicated to systems control and monitoring, as well as transport of IP media content other than in-room audio (conferencing, streaming video, etc.) [Refer to paragraph 1.5.B below]
4. Provide and integrate rack-mounted patch panel(s) at the IP switch in the main AV rack to allow patching and management of AV related IP devices in the rack.
    a. Patch panels shall be located on the front face of the rack, between horizontal wire management and active IP switches, and allow user-access to patch endpoints in the stage and house areas unimpeded.
    b. Omission of patch panels or installation of panels in the rear of the rack is unacceptable and will be rejected.
5. Provide and install all hardware, cabling, connectors, faceplates, terminators, adapters, audio combiners, balanced-unbalanced audio converters, wall boxes, etc. required to ensure installation of a fully functional audiovisual system as depicted in the attached AV Systems drawings.

1.4 EQUIPMENT LAYOUT

A. The equipment in this area shall be as detailed on drawings.

B. All equipment shall be installed with rack ears/mounts or custom rack-mounts/face-plates, using security screws.

C. Where rack-mount kits are not available or practical, the Contractor shall provide a vented rack-mount shelf unit with the appropriate clamp-mount or Velcro wrap systems to secure devices within the rack and rack-shelf and provide adequate device spacing and cooling, allowing space for access and servicing.

D. There shall not be any loose components in the audiovisual racks nor untrained cables or cables without appropriate service loops.

1.5 OWNER FURNISHED EQUIPMENT

A. All room furniture will be furnished by the Owner (Unless otherwise noted in this specification).

B. All Windows PC computers will be furnished by the Owner, along with wired and wireless keyboard/mice/trackpads and monitors. All software and licensing for PC computers will be OFE. Coordinate I/O connectivity requirements with Owner IT staff and provide any required adaptors, baluns or interfaces.

C. Unless noted otherwise in Appendix 'A', All IP Network switches will be furnished by the Owner. Coordinate switch allocation with owner, including dedicated switches for AV-network-only applications.

1.6 RELATED WORK SPECIFIED ELSEWHERE

A. The following systems and equipment are not provided under this contract. The Contractor is to coordinate with the base bid contractors as necessary to insure compatibility.

B. Installation of all floor boxes and/or poke thru devices (excluding any plates and connectors to be provided by the contractor.

C. Telephone and telecommunications jacks and special telecom outlets not related directly to AV, (LAN/WAN, Wireless access points (WAPs), PTSN/POTS, etc.).

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Included with Contract Documentation

1. Provide in accordance with Appendix 'A' – 27 41 20.

B. Pre-Approved Alternate Manufacturers

1. Provide in accordance with Section 27 41 00.

2.2 AUDIOVISUAL SYSTEMS HARDWARE & COMPONENTS

A. Provide in accordance with Appendix 'A' – 27 41 20, which includes the following:

1. Equipment description, including parameters and options required.
2. Manufacturer to be base-bid.
3. Model number of equipment or series to be bid.
4. Quantity of equipment, or reference to drawing quantities.
5. Designation of any Owner-Furnished (OFE), Existing to Reuse (ETR), Not-in-Contract (NIC) or Future equipment.
6. Custom Quotation numbers, where applicable, to be bid as a pre-approved dealer or representative of the manufacturer quoted.

PART 3 - EXECUTION

3.1 PROVIDE IN ACCORDANCE WITH SECTION 27 41 00 – AUDIOVISUAL SYSTEMS: PART 3 - EXECUTION.

APPENDIX A – EQUIPMENT LISTS

See the attached Appendix for the equipment lists for the audiovisual systems. These lists are provided for the bidding process.

END OF SECTION 274120

Appendix A

27 41 20 - AUDITORIUM: AUDIOVISUAL SYSTEMS

Item #		Product	Manuf.	Model #	Unit	Qty	Ext.
CONTROL							
1	CP-01	Wall Mounted Touch Panel, 7" capacitive touchscreen with 1024x600 resolution. Provide with appropriately sized blank rack panel with 2-gang knockout to rack mount touchpanel. (color selection by owner, submital process)	Q-SYS	TSC-70-G3	_____	1	_____
2	CP-02	Tabletop Touch Panel, 7" capacitive touchscreen with 1024x600 resolution. (color selection by owner, submital process)	Q-SYS	TSC-70-G3, w/ TSC-710t-G3	_____	1	_____
3	IPSW-01	Ethernet Switch - Rack-mounted L3/4; 40 Port; 40 ports PoE+ (960W), 2x1G and 8xSFP+ Managed Switch	Netgear	M4250-40G2XF-PoE+ (GSM4248PX)	_____	1	_____
4	IPSW-02	Ethernet Switch - Rack-mounted L3/4; 30 Port; 24 ports PoE+ (480W), 2x1G and 4xSFP+ Managed Switch	Netgear	M4250-30G2XF-PoE+ (GSM4230PX)	_____	1	_____
DISPLAY & VIDEO							
5	CAM-01	Wall-mounted PTZ camera: UHD/4K type, 1/2.3"" CMOS Sensor, 20x Zoom Lens, with 3G-SDI output, H.264/65 output, USB and RS-232 control, RJ-45, Provide with wall mount	Canon	CR-N300	_____	1	_____
15	HBTX-01	HD-Base-T wall plate transmitter - HDMI, USB-C, Audio input, 4K/60/4:4:4	Extron	DTP3 T 212 D	_____	2	_____
16	IPE-01	AVoIP protocol encoder, 1G bandwidth; Transmits and scales 4K/60 @ 4:4:4 video, audio, Ethernet, and USB over 1 Gbps IP networks. Portable	LibertyAV	IPEX5101	_____	2	_____
17	IPD-01	AVoIP protocol decoder, 1G bandwidth; Receives and scales 4K/60 @ 4:4:4 video, audio, Ethernet, and USB over 1 Gbps IP networks. Portable	LibertyAV	IPEX5102	_____	1	_____
18	IPE-01	AVoIP protocol encoder, 1G bandwidth; Transmits and scales 4K/60 @ 4:4:4 video, audio, Ethernet, and USB over 1 Gbps IP networks. Rack mounted	LibertyAV	IPEX5101	_____	1	_____
19	IPM-01	Propietary AVoIP protocol system manager, secure, troubleshooting and management network interface	LibertyAV	IPEXCB	_____	1	_____
20	EPS-01	Electric Projection Screen - 146"x260", tab tensioned 16:9 HDTV format. XT1300X Matt White fabric.	Draper	Paragon V PN: 114614TH	_____	1	_____
21	SENC-01	Streaming Encoder with 12G SDI input; streaming to 4K 60fps; RTMP in H.264, SRT in H.264 and H.265; ethernet control	Epiphan	Pearl Mini	_____	1	_____
22	VMX-01	4K/60 Matrix Video Switcher, w/ 6 HDMI in; configurable: 2 DTP/HDMI in, 1 DTP out, 2 HDMI Out, Analog Audio I/O	Extron	DTP3 Crosspoint 662	_____	1	_____
23	VP-01	Large Venue HD Video Projector - Ceiling Suspended, Laser-lamped 24,000 ISO Lumen HD/WUXGA Video Projector, with 2.00 - 4.00 Zoom Lens	Digital Projection	M-Vision 24000 WU w/ 120-627 Lens	_____	1	_____
24	VP-01	Projector MOUNT ADAPTER. Universal, high capacity. Provide with 1.5" NPT pipe, interface, and any necessary mounting accessories to interface with wall.	Chief	VCMU	_____	1	_____

Appendix A

27 41 20 - AUDITORIUM: AUDIOVISUAL SYSTEMS

Item #		Product	Manuf.	Model #	Unit	Qty	Ext.
AUDIO							
25	AMP-01A	2 Channel, 6400W Amplfiier. Includes onboard DSP and Dante Network	Biamp / Community	ALC-3202D	**[Provide lump sum per quotation, including professional services]**	1	
26	AMP-01B	4 Channel, 1600W/Ch Amplfiier. Includes onboard DSP and Dante Network	Biamp / Community	ALC-1604D		2	
27	AMP-01C	4 Channel, 400W/Ch Amplfiier. Includes onboard DSP and Dante Network	Biamp / Community	ALC-404D		4	_____
28	S-01L, S-01R	Steerable Beamforming Main loudspeaker. 90 Degree fixed horizontal coverage. Include mounting U-bracket, to interface to Polar Focus mount on line item below.	Biamp / Community	LVH-909/AP w/(2) LVH-900UB		2	
29	SUB-01	High Power, dual 18-inch Subwoofer. Black finish.	Biamp / Community	IS8-218B		1	
30		Pole mount and interface to suspend S-01 speakers, provide stem length and interface hardware as required (field verified Means & Methods)	Polar Focus	PY0 (or) PY1 series	_____	2	_____
31	AMP-02	Audio Amplifier: Four Channel, 70/100V 200 W/Ch. @ 8Ω Peak, Analog I/O	Extron	XPA U 2004 FX	_____	1	_____
32	DSP-01	Audio DSP Unit: 12x8 I/O with: Dante 64x64 I/O, USB Port, with AEC co-processor module w/16 channels	Q-SYS	Core 24F w/ SLDAN-64-P	_____	1	_____
33	DWP-01	Dante Wall Panel - 2x2 mic/line I/O XLR-3F/M, 2-gang Decora opening [Black Finish]	RDL Labs	DDB-BN22	_____	2	_____
34	DWP-02	Dante Wall Panel - 0x2 mic/line I/O XLR-3/M, 1-gang Decora opening [Black Finish]	RDL Labs	DB-RN02	_____	2	_____
35	MIX-01	32 channel / 42 bus Dante-networked mixing console. 12 Analog I/O, 2x1 stereo. 24 faders, including 64x64 I/O card.	Allen & Heath	SQ7 w/ AH-M-SQ-SDANTE64-A & AH-AP11334	_____	1	_____
36	MPIC-01	Production Intercom Master Station, 2ch.	Clear-com	MS-702	_____	1	_____
37	PIC-02	Production Intercom Speaker/Mic Wall Station	Clear-com	KB-702	_____	4	_____
38		Production Intercom Belt-Pack and Headset Combo: 1-Channel Belt-Pack, with half-headset	Clearcom	CC300 w/RS-701	_____	3	_____
39	WPIC-01	Wireless Production Intercom Base Station, 2ch.	Clear-com	FSE-BASE-II	_____	1	_____
40	TXC-01	Wireless Production Intercom Transceiver Unit. [Provide model based upon onsite RF survey]	Clear-com	FSII-TCVR-XX-US	_____	1	_____
41		Wireless Production Intercom Belt-Pack and Headset Combo: 2-Channel Belt-Pack, with half-headset	Clear-com	FSII-BPXX	_____	6	_____
42		Freespeak beltpack charging station. (5) bay.	Clear-com	AC60	_____	2	_____
43	SB-01	16 input x 8 output stage box, Dante network, remote preamps.	Allen & Heath	DT168	_____	1	_____
44	ANT-01	Passive log-periodic wide band UHF panel-type antenna.	Shure	PA805	_____	2	_____

Appendix A

27 41 20 - AUDITORIUM: AUDIOVISUAL SYSTEMS

Item #		Product	Manuf.	Model #	Unit	Qty	Ext.
45	RFD-1	Wireless Microphone Antenna Distribution Amplifier - 1x4 (x2) with LV power supply and cascade output. [Provide model based upon onsite RF survey]	Shure	UA844+SWB	_____	1	_____
46	WMR-01	Wireless Microphone Receiver - Digital diversity FM unit, with dual-unit rack-mount ears [Provide model based upon onsite RF survey]	Shure	ULXD4Q-XXX	_____	6	_____
47	WMT-01	Wireless Mic Transmitter - Beltpack type, with clip-on lavaliere omni capsule	Shure	ULXD1 w/WL183	_____	24	_____
48	WMT-02	Wireless Microphone Hand-held Transmitter and capsule - Super Cardioid Condenser; rechargable Lion battery;	Shure	ULXD2/SM87	_____	4	_____
49		Rack-mounted Charger for ULXD system batteries - with modules to support belt-pack and handheld batteries	Shure	SBRC w/(4) SBC-AX	_____	3	_____
50	ALS-01	Assistive Listening Transmitter - Wi-Fi based system using Owner's guest network Wi-Fi. Provide rack-mount kit and necessary signage, including rigid/permenant QR code placard, Provide system that includes sixteen (16) receivers and Battery charging dock	ListenTech	LWS-16-A1	_____	1	_____
PORTABLE AUDIO HARDWARE							
51	MON-01	Self-powered floor-wedge 2-way monitor speaker - small/low-profile	DB Technologies	FMX10	_____	6	_____
52		Boundary Layer Microphone - PZM type for use on stage for free-field pickup	AKG	PZM6 D	_____	3	_____
53		Small-diaphragm condenser cardioid microphones, matched pair set	Audio Technica	AT4041SP	_____	1 (pair)	_____
54		Small-diaphragm condenser omnidirectional microphones	Audio Technica	AT4022	_____	2	_____
55		Small-diaphragm choir microphone with carbon fiber boom and floor stands, windscreens, accessories bundle (3-pack/LCR)	Acacia Audio	LizChoirLCR	_____	1 (kit)	_____
56		Piano Microphone Kit - matched pair of small-diaphragm condensers on short goosneck with plate clips, include clips for use with acoustic string instruments (guitar, violin)	Neumann	MCM114 set w/MC1, MC6 and MC9, mounts	_____	1 (kit)	_____
57		Set of Dante I/O 'dongle' units for I/O connection to Dante network infrastructure: Provide quantities noted to support USB-C, Bluetooth, analog XLR +4dBu I/O connections	Audinate Dante AVIO	(1) ADP-USBC-AU-2X2, (1) ADP-BT-AU-2X1, (2) ADP-DAI-AU-2x0, (2) ADP-DAO-AU-0x2	_____	Lot	_____
MISCELLANEOUS HARDWARE							
58	AER-01	AV Equipment Rack; 45 RU 32" Deep, 23" Wide; Provide: fan top, vented front door, split rear doors, side panels; fixed base, PDUs, lacing strips, rackshelves, blank and vent plates; vertical & horizontal wire mgmt; rear rack-rails and fan controller as required; (2) 2 RU Drawer	Middle Atlantic	BGR-4532; BGR-RD38; BGR-552FT-FC; BGR-RR41; PD-2420SC-NS; U4V; SSHD-28; Lace-40-OW-A; (2) D2; SSHD-28; plus required cable mgmt, blank & vent panels;	_____	1	_____
59	PIC-01	Custom Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	5	_____
60	WP-01	Custom 4-Gang Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	2	_____
61	WP-02	Custom 4-Gang Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	2	_____

Appendix A							
27 41 20 - AUDITORIUM: AUDIOVISUAL SYSTEMS							
Item #		**Product**	**Manuf.**	**Model #**	**Unit**	**Qty**	**Ext.**
62	WP-03	Custom 2-Gang Panel for AV I/O - Per Detail Drawings - Mounted Within Wiremold 4000 Series Raceway	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	2	_____
63	WP-04	Custom 2-Gang Panel for AV I/O - Per Detail Drawings - Mounted Within Wiremold 4000 Series Raceway	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	2	_____
64	WP-05	Custom 2-Gang Panel for AV I/O - Per Detail Drawings - Mounted Within Wiremold 4000 Series Raceway	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	1	_____
65	WP-06	Custom 3-Gang Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	1	_____
66	WP-07	Custom 6-Gang Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	1	_____
67	PP-01	CAT6A 10G Punchdown PatchPanel - Normal Density 48-port; Provide with 24" patch cables in quantity. 2 RU	Panduit	DP486X88TGY	_____	2	_____
68	PP-02	CAT6A 10G Punchdown PatchPanel - Normal Density 24-port; Provide with 24" patch cables in quantity	Panduit	CP246X88BL	_____	1	_____
69		Miscellaneous hardware, switches, relays panels, connectors, cabling, lamps, terminal blocks, etc., necessary to insure a complete and operating system.			_____	LOT	_____
70		Set audiovisual systems functional drawings, shall be photo-reproduced laminated & stored in pocket, audiovisual equipment racks.			_____	LOT	_____

SECTION 27 41 25
BACK OF HOUSE SPACES: AUDIOVISUAL SYSTEMS

PART 1 GENERAL

1.1 OPERATIONAL SUMMARY

A. This section of the specification describes the functional details of the audiovisual systems to be furnished and installed in the back-of-house spaces that include:
   1. Dressing Rooms 12, 14, and 16, and adjacent connecting corridor to N101G.
   2. Corridor N101G.
   3. Drama Classroom 024A and B.

B. All systems shall be dedicated and permanently installed as described above and, in the following, 'functional' descriptions.

1.2 RELATED WORK

A. Installation of all floor boxes and/or poke thru devices (excluding any plates and connectors to be provided by the contractor.

B. Telephone and telecommunications jacks and special telecom outlets not related directly to AV, (LAN/WAN, Wireless access points (WAPs), PTSN/POTS, etc.).

C. Provide in accordance with Section 27 41 00 – Audiovisual Systems.

1.3 SYSTEM INTERCONNECTION & FUNCTIONAL DESCRIPTION

A. Functional intent

   1. The ceiling speakers shall provide overflow audio from the Theater, as directed through the control system, with volume set a local rotary encoder or autotransformer control.

   2. Wall mounted flat-panel display will provide a mix of the following content:

      a) Situational awareness video from PTZ streaming camera in the Theater House.

      b) Control of display power on/off shall be from the Theater control system and related touchpanel controls.

   3. New wall-mounted two-channel party-line production intercom speaker/mic panels.

   4. In the Drama Classroom, Ethercon/CAT6A ties lines shall be provided to the AER-01 equipment rack to allow patching of remote production elements from the Theater to the Drama Classroom, which may facilitate offstage musical performance, or visual elements.

B. Display Systems

   1. Provide and install wall-mounted flat panel displays, as per the drawings and Appendix 'A'.

      a) Provide integration of the display to the AV network, to allow control of the display through the Q-Sys control platform, using a page within the theater control panels.

   2. Provide and install wall-mounted flat panel display mounts over the LegrandAV Chief PAC-series in-wall enclosures as per the drawings (PAC-series boxes and infrastructure to be provided and installed under separate JOC by the District).

C. Video Systems

      a) Provide and install streaming decoders behind each display, as per the drawings and Appendix 'A'. Provide mounting accessories to secure within PAC-series backbox.

D. Audio Systems

1. Provide and integrate recessed ceiling mounted 70V distributed loudspeakers as per the drawings and Appendix 'A". Provide mounting hardware to mount in existing ceiling type, including seismic and safety cables.
    a) Provide and integrate wall-mounted autotransformer rotary volume controls as per the drawings and Appendix 'A' to allow setting of levels in each room from a single zone amplifier circuit.
2. Provide and integrate wall-mounted 2-channel production intercom speaker/mic panels as per the drawings and Appendix 'A'.
3. Provide and integrate custom wall panel in the Drama Classroom for tie-lines to the Theater as per the drawings and Appendix 'A', for use with OFE/Future audio and video transport systems, as needed.

E. Control Systems
1. Provide integration of display devices with the specified 3rd party control network, to allow power state switching if displays, as well as resetting default display status when switched on – nulling any previous user settings for input, volume/muting, and video settings.
2. Provide software emulation of the control panel GUI that may be run on an OFE laptop or Windows tablet device. This emulation may take place using a web-browser interface to direct to the processor host, or an executable file that provides the GUI and interfacing to the processor.

F. User Interface
1. Provide programming of control interfaces as directed by Owner's Representative and Consultant. Programming shall provide simple user interface to select local video and audio sources and adjust room and area volume to within predetermined limit.
2. Provide and program software management/monitoring interface for Owner's technical staff, which will allow advanced system control and monitoring functions using a PC connected to the control system LAN.
3. Provide control panel operations that are consistent from page to page.
4. Provide feedback that indicates the current equipment and/or system status where possible.

G. The Contractor shall provide all interconnection cable, connectors, terminal strips, wireways, flexible conduit, etc., to facilitate the audiovisual systems as detailed within these specifications and drawings.

H. Conduit and power systems are detailed in the Electrical Engineer's drawings.

I. Miscellaneous
1. Provide and install all hardware, cabling, connectors, faceplates, terminators, adapters, audio combiners, balanced-unbalanced audio converters, wall boxes, etc. required to ensure installation of a fully functional audiovisual system as depicted in the attached AV Systems drawings.

1.4 EQUIPMENT LAYOUT

A. The equipment in this area shall be as detailed on drawings.

B. All equipment shall be installed with rack ears/mounts or custom rack-mounts/face-plates, using security screws. There shall not be any shelf-mounted components in the audiovisual racks.

1.5 OWNER FURNISHED EQUIPMENT

A. All room furniture will be furnished by the Owner (Unless otherwise noted in this specification).

B. All Windows PC computers will be furnished by the Owner, along with wired and wireless keyboard/mice/trackpads and monitors. All software and licensing for PC computers will be OFE. Coordinate I/O connectivity requirements with Owner IT staff and provide any required adaptors, baluns or interfaces.

C. Unless noted otherwise in Appendix 'A', All IP Network switches will be furnished by the Owner. Coordinate switch allocation with owner, including dedicated switches for AV-network-only applications.

1.6 RELATED WORK SPECIFIED ELSEWHERE

A. The Contractor is to coordinate with the other Trades as necessary to insure compatibility.
   1. Installation of all floor boxes and/or poke thru devices (excluding any plates and connectors to be provided by the contractor.
   2. Telephone and telecommunications jacks and special telecom outlets not related directly to AV, (LAN/WAN, Wireless access points (WAPs), PTSN/POTS, etc.).

PART 2 PRODUCTS

2.1 APPROVED MANUFACTURERS

A. Included with Contract Documentation
   1. Provide in accordance with Appendix 'A' – 27 41 25.

B. Pre-Approved Alternate Manufacturers
   1. Provide in accordance with Section 27 41 00.

2.2 AUDIOVISUAL SYSTEMS HARDWARE & COMPONENTS

A. Provide in accordance with Appendix 'A' – 27 41 25, which includes the following:
   1. Equipment description, including parameters and options required.
   2. Manufacturer to be base-bid.
   3. Model number of equipment or series to be bid.
   4. Quantity of equipment, or reference to drawing quantities.
   5. Designation of any Owner-Furnished (OFE), Existing to Reuse (ETR), Not-in-Contract (NIC) or Future equipment.
   6. Custom Quotation numbers, where applicable, to be bid as a pre-approved dealer or representative of the manufacturer quoted.

PART 3 EXECUTION

3.1 PROVIDE IN ACCORDANCE WITH SECTION 27 41 00 – AUDIOVISUAL SYSTEMS: PART 3 - EXECUTION.

APPENDIX A – EQUIPMENT LISTS

See the attached Appendix for the equipment lists for the audiovisual systems. These lists are provided for the bidding process.

END OF SECTION 27 41 25

Appendix A

27 41 25 - BACK OF HOUSE SPACES: AUDIOVISUAL SYSTEMS

Item #		Product	Manuf.	Model #	Unit	Qty	Ext.
CONTROL							
1	VC-01	Autotransformer rotary volume control - 70-Volt, 35 Watt rated, with 3 dB steps and 10 index positions, in stainless steel panel - single-gang	Atlas-IED	AT35	_____	3	_____
2	VC-02	Push-button rotary encoder volume control panel. With programmable OLED menu screen. Ethernet-based control for Q-SYS. (color selection by owner, submital process)	Q-SYS (Attero-Tech)	Axon C1	_____	1	_____
DISPLAY & VIDEO							
2	FPD-01	55" Wall-mounted Flat-Panel-Display: UHD, 350 nit panel with HDMI inputs, Wi-Fi screen casting, RS-232 & Network/IP control	Samsung	QB55C-N	_____	4	_____
3	FPD-01	Wall-mount for 55" FPD, with 5-axis micro-adjustment, compatible with PAC-series wall-enclosures	Chief/LegrandAV	LSM1U	_____	4	_____
4	FPD-02	50" Wall-mounted Flat-Panel-Display: UHD, 350 nit panel with HDMI inputs, Wi-Fi screen casting, RS-232 & Network/IP control		QB50C	_____	1	_____
5	FPD-02	Wall-mount for 50" FPD, with 5-axis micro-adjustment, compatible with PAC-series wall-enclosures	Chief/LegrandAV	LSM1U	_____	1	_____
6	IPD-01	AVoIP protocol decoder, 1G bandwidth; Receives and scales 4K/60 @ 4:4:4 video, audio, Ethernet, and USB over 1 Gbps IP networks. Rack mountable	LibertyAV	IPEX5102	_____	5	_____
AUDIO							
7	S-03A	Pendant-mounted 2-way 6.5" Ceiling Speaker w/70V, 60W transformer	Biamp	Desono DP6B	_____	4	_____
8	S-03B	Recessed 2-way 6.5" Ceiling Speaker w/70V, 60W transformer	Biamp	Desono CM60DTD	_____	6	_____
9	S-04	Recessed 2-way 6.5" Ceiling Speaker w/70V, 60W transformer	Biamp	Desono CM60DTD	_____	QTY. PER PLANS	_____
MISCELLANEOUS HARDWARE							
10	WP-08	Custom 2-Gang Wall Panel for AV I/O - Per Detail Drawings	Pro-Co, RCI, Panelcrafters, etc…	Custom [Refer to Drawings]	_____	1	_____
11		Miscellaneous hardware, switches, relays panels, connectors, cabling, lamps, terminal blocks, etc., necessary to insure a complete and operating system.			_____	LOT	_____