222 South Central Ave.
Suite 501
St. Louis, MO 63105
314.863.4994
www.bondarchitectsinc.com

bond architects

Addendum

TO:	COMPANY:	FAX NO/EMAIL:
All Bidders		
FROM:	**ADDENDUM ISSUE DATE:**	**ADDENDUM NUMBER:**
Bond Architects	11/21/2025	003
PROJECT:	**PROJECT NO:**	
Wright City High School Performance Gym Addition	20034.7	

TO ALL BIDDERS:

THIS ADDENDUM FORMS A PART OF THE CONTRACT DOCUMENTS AND MODIFIES THE ORIGINAL BID DOCUMENTS DATED 11.04.2025. PLEASE ACKNOWLEDGE RECEIPT OF THIS ADDENDUM ON THE BID FORM.

GENERAL QUESTIONS

1. Drawings page AD 2.2H Area H, NOTE 02.61 Peel Back roofing membrane and remove cover board down to insulation. What is the existing roof assembly in those sections? If the existing roof assembly is foamed down, we won't be able to separate the existing cover board and existing crickets down to the flat insulation without damaging the insulation. Then You might need to consider complete roof tear off down to the metal deck in those areas and install new one to the new specifications. Please Clarify.
    a. Bid it to tear down to metal deck and reinstall to meet R38 minimum. See detail 2/A9.3 for minimum requirements of reinstalled roofing.
2. A10.1 Logo (SF8) and Letters (WP5) specifications mention painted acrylic letters for the interior the callouts (not keynotes like other signage items) are for Golterman Sable items. are these 10400 or something else?
    a. Neither SF-8 nor WP-5 are signage items. Refer to Finish Material Schedule on sheet A13.0 for information about these finishes.
3. 10.2 Vinyl Logos specifications do not call for vinyl prints. Are vinyl prints required?
    a. Vinyl is called out as SF-7. Refer to Finish Materials Schedule on sheet A13.0 for information about this finish. They are required.
4. specs 3.03 flag mount signs this section of the specs seems to indicate they want some flag mounted restroom signs. we don't see those in the A15.0 drawings, are these required? If yes, dimensions and / or a drawing would help us price them
    a. Spec section 10 1400, 3.03 describes flag type signs at doorways or entries above doors, as located on the drawings. Sign type L on sheet A15.0 are the flag type signs used in this project.
5. Who is responsible for Builders Risk Insurance?
    a. The School District.
6. Are there any allowances for this project?
    a. No allowances for this project.
7. Is there a project estimate or budget?
    a. Between $8,000,000 – $10,000,000.

8. Substantial completion is called out as the following:
    i. Section 00 0102-1 (1.04) July 1, 2027.
    ii. Section 00 1100-2 (1.11) July 10, 2027.
    iii. Section 00 4100-2 (1.08) May 1, 2027.

    Please clarify which date is correct.
    a. July 1st, 2027.
9. Bid Form 00 4100-1, 1.06, Item D: Says to include taxes, however this is a tax-exempt project. Can this line be removed from the bid form?
    a. Yes, 1.06 Item D can be removed from the bid form, as this is a tax-free project.
10. Please verify the quantity of displays needed because the current specs do not clarify how many are needed.
    a. Refer to drawings.
11. Per pec section 116843, 1.01B, 9a "Display video with sound and sync with projector system both video and sound." Do you want us to include a sound system into our package? Or do you want our video display to sync with your sound system?
    a. Video display shall sync with sound system used in the gym.
12. Please provide the following forms that are listed but not provided in the specifications:
    00 4323 – Alternates Form
        a. N/A - we have no alternatives.
    00 4325 – Substitution Request Form – During Procurement
        a. Included in addendum 3
    00 4373 – Proposed Schedule of Values Form
        a. Use standard AIA form G-703
    Owner's Standard Schedule of Values Form
        a. Use standard AIA form G-703
    Owner's Standard Application for Payment Form
        a. Use G-702, 703
    AIA A305 – Bidder's Qualifications
        a. Use standard AIA form
    AIA A310 – Bid Bond
        a. Use standard AIA form
    AIA A312 – Performance and Payment Bond
        a. Use standard AIA form
    Substance Abuse and Safety Program Supplier/Vendor/Visitor Acknowledgement
        a. Form by contractor
    Fire Alarm System Record of Completion Form: NFPA 72
        a. Form by contractor
    OSHA 10-Hour Construction Safety and Health Training Log Form
        a. Form by contractor
    Affidavit of Compliance with the Prevailing Wage Law
        a. Form by contractor
    Affidavit of Record Document Completion
        a. Form by contractor
    AIA G702
        a. Use standard AIA form
    AIA G703
        a. Use standard AIA form
13. Spec Section 00 3100 mentions a Geotechnical Report dated April 2021 is available. Please provide the Geotech Report.
    a. Geotech report can be issued to winning bidder, as the site has been developed since it was done.

14. Spec 01 2100, Section 1.04.A states a Contingency Allowance. Are we to include a Contingency Allowance in our pricing? If we are to include a Contingency Allowance in our number, what amount do we need to include?
    a. No allowances for this project
15. Spec 00 4322 and 01 2200 state unit prices along with blank lines for quantities for those unit prices. Will those quantities be provided to us in order for us to provide an accurate unit price for each item?
    a. Contractor to provide cost per unit as stated on the form, “for example cost per cubic yard of rock” Please include in your base bid what you have for the project.
16. What forms will be required for us to turn in on bid day for our proposal?
    a. Bid form signed, bonding, unit pricing, addendum acknowledgement, e-verify, Quals statement, and the Israel forms are required on bid day.
17. Will we be able to provide some forms the next day if we are competitive?
    a. Yes, the next day is acceptable
18. For example, Form 00 4336 Proposed Subcontractors Form. Will this be required on bid day in our proposal? Or, if we are competitive in our pricing once the bids are read, can we provide this the next day?
    a. Yes, the next day is acceptable
19. With another addendum coming out this week and potentially a fourth addendum with RFI responses, next week is Thanksgiving with most if not all companies having only three (3) days of work, and then the bid is due right away the following week, is there a possibility of a bid extension due to the Thanksgiving holiday?
    a. Not at this time.
20. I did not see any allowances listed in the bid documents. Should we be including any in our bids?
    a. No allowances for this project
21. It was brought up that heavy duty traffic can not use Roelker Rd. and if we did for construction we would have to make repairs. Seeing that it is the only feasible way in and out, can there be an allowance line item included for all bidders for these repairs and a unit cost if it were to exceed the allowance. This would be a major risk for the contractor to try and cover.
    a. No allowances for this project
22. In regards to the existing 4" paving around the new gym edition. There is very little called out to be removed for the new building, but we have to get a lot of equipment in, out and around the building. Can we get an identified area to be removed for the construction entrance up to the building and a larger area TBR around the perimeter to get lull's, lifts etc. around.
    a. The pavement shown to be replaced is required at minimum. Means and methods are the contractor’s responsibility. Any fencing removed, or any concrete damaged, will be the contractor’s responsibility to replace. This cost shall be included in the contractor’s bid, and will not be approved as an additional cost to the owner.
23. Can you confirm that the existing vapor barrier on the building will still meet its criteria after demo. It will have months of sun/weather exposure and we are not sure how long it was exposed during the original construction. Most of these fluid applied barriers are not warrantied after extended exposure.
    a. Install new vapor barrier.
24. We use submittal software, similar to Procore, called Trimble “ProjectSite”. Would this be acceptable software in lieu of Submittal Exchange or Newforma ConstructEx?
    a. We have no objection to the software used.
25. When is the date of substantial completion?
    a. July 1st, 2027.
26. Can contractors use the entrance off of Roelker Rd.? Can contractors use the entrance off of Highway F?
    a. Contractors may use either entrance. The City of Wright City has an ordinance that a contractor will repair city-owned roads if damaged.

b. If the entrance off Highway F is used, contractors must repair, regrade, etc. the gravel road to its current condition.

27. Will a plan holders list be provided.
    a. The list of County Blue Reprographics plan holders, as of 11/21/25 at 2pm, is attached to this addendum.
28. Is the gymnasium addition a storm shelter?
    a. No, the school's existing practice gym is their storm shelter. The new gym is not storm shelter construction.
29. What is the estimated construction cost?
    a. Between $8,000,000 – 10,000,000.
30. Is there a proposed electrical feed route from existing room EX317?
    a. The exact routing for electric feeders from the existing main electrical room EX317 to the existing electrical room 502 will need to be coordinated in the field with the existing piping and ductwork installed above the accessible ceiling. A suggested route would be to run South down the corridor connecting Areas F and E and then run East to the electrical room. Alternatively, the feeders could potentially be routed through the corridor at the Northen end of Area E and then South through Area E to the electrical room. These routes are merely suggestions. Contractor is responsible for carrying the costs of all associated work including but not limited to the feed route, verification, coordination, materials and installation in their bid. After the bid is submitted, no additional costs to the owner will be approved for this work.
31. Are the existing parking lot drive lanes and parking stalls heavy duty concrete?
    a. The drive aisles and parking spaces in front of the proposed gym are standard duty concrete not heavy duty concrete. The northern access road and the bus lot are heavy duty. Any damaged concrete is to be replaced at the contractor's expense.
32. Will egress need to be maintained?
    a. Yes, with modifications potentially to Corridor CR401 currently egresses through the exterior door onto the concrete plaza. Coordination with AHJs will need to take place to determine contractor's needs & AHJ requirements.
33. Will public/school access be needed near the site?
    a. Sporting events, such as football games, and school activities, such as PE class, will need access to the football field during construction. School will utilize the existing cafetorium doors to route students to the field. The public will need access from the parking lot to the football field. Contractor will need to coordinate with the owner & contractor is to provide temporary fencing/barriers to prevent public from accessing construction equipment or materials during these events.
34. Will contractors and subcontractors need to pass a background check?
    a. Yes.
35. Have existing plumbing tie in locations been verified?
    a. Yes.
36. Is there a planned pre-bid meeting for this project?
    a. November 18th was the pre-bid meeting.
37. Will site visits be allowed to see existing systems being tied into and/or expanded under the project scope of work?
    a. Yes, coordinate with Matt Abernathy.
38. Will specification documents be issued for the video surveillance, access control, public address and clock systems?
    a. See Bid Specifications
39. Spec section 12 6613, 2.04, A, 2 mentions a top row rear guardrail. Is this needed? Are bleachers against a wall?
    a. Bleachers are against a wall. Top Row Rear Guardrails are not to be included.
40. Will the following spec sections be coming out in an addendum?

2.20 DIVISION 27 – COMMUNICATIONS
2.21 DIVISION 28 – ELECTRONIC SAFETY AND SECURITY

a. No specs for these divisions are used.

41. A10.1 letters and logo interior not keynoted. Specs indicate painted acrylic for interior lettering no callouts for the letters and logo other than SF8 and WP5, which are golterman sabo items, and not something we can price.
    a. Refer to finish tags & Finish Material Schedule. Neither SF-8 nor WP-5 are signage items. Refer to Finish Material Schedule on sheet A13.0 for information about these finishes. Bids are required to include these items.
42. A10.2 wildcat logos interior of gym….is this 10400
    a. Wildcat logos are marked with SF-7 on sheet A10.2. Refer to Finish Material Schedule on sheet A13.0 for information
43. A10.2 there are two vinyl logos which we can price as full color digital prints on vinyl for textured surfaces.
    a. Logos are marked with SF-7 on sheet A10.2. Refer to Finish Material Schedule on sheet A13.0 for information
44. Are the specifications under 3.03 schedule required please indicate if flag mounted signage is desired for restroom locations Please show this sign type in the drawings, with dimensions. Thes can be made like a flag mount fire extinguisher location sign: double sided, glyph and text only, bracket mounted
    a. Spec section 10 1400, 3.03 describes flag type signs at doorways or entries above doors, as located on the drawings. Sign type L on sheet A15.0 are the flag type signs used in this project. All sign types are required to match the equivalent existing signs in the building.
45. Spec section 00 1100, subparagraph 1.11 states for substantial completion to be July 10,2027 but Bid Form states for substantial completion to be May, 1, 2027. Which is correct?
    a. Substantial completion date is July 1st, 2027.
46. Numerous spec sections refer to “Alternates”. I do not see ann alternates spec. The bid form also refers to “Alternates: Football Stadium, Performance Gym, Baseball Field”. Please clarify if any alterantes are on this project.
    a. There are no alternates in this project. The “Alternates: Football stadium, performance gym, baseball field” line in the bid form does not apply.
47. Who is to provide and pay for Builders Risk?
    a. The School District.
48. There are a items on the Subcontractors list that do not pertain to this project. Please Clarify list.
    a. Leave these lines blank.
49. The Allowance Spec does not have a dollar amount included. Please Clarify.
    a. No allowances for this project

CHANGES TO THE PROJECT MANUAL

SPEC SECTION 07 4233 — TRESPA PANEL

1. SUBSTITUTION OF ABET LAMINATI MEG IS REJECTED.

SPEC SECTION 08 8000 — GLAZING

1. REISSUED SPEC SECTION.

SPEC SECTION 09 6466 — WOOD ATHELTIC FLOORING

1. SUBSTITUTION OF AACER POWERPLAY IS REJECTED.

SPEC SECTION 10 2113.19 — PLASTIC COMPARTMENTS

1. SUBSTITUTION OF HADRIAN IS REJECTED.
2. REISSUED SPEC SECTION.

SPEC SECTION 10 5613 METAL STORAGE SHELVING

1. REMOVED SPEC SECTION.

SPEC SECTION 11 6843 SCOREBOARDS

1. REISSUED SPEC SECTION.

SPEC SECTION 12 6613 TELESCOPING BLEACHERS

1. SUBSTITUTION OF HANSON SPORTS IS REJECTED.

CHANGES TO THE DRAWINGS

CIVIL DRAWINGS

N/A

ARCHITECTURAL DRAWINGS

N/A

STRUCTURAL DRAWINGS

N/A

MEP DRAWINGS

N/A

LIST OF ATTACHMENTS

Pre-Bid Meeting Sign-In Sheet

Plan Holder List, as of 2pm 11/21/2025

Substitution Request Form

AIA A101

Specifications

END OF ADDENDUM NO. 3

Wright City High School Performance Gym – Pre-Bid Meeting Sign-In
November 18, 2025

Company	Contact	Phone	Email
Freise Construction	Tom, Drafter	636-706-8985	tom@freiseconstruction.com
Wright Construction	Colby Patterson	636-220-6850	bids@wrightconstruct.com
Alloy ABATE DEMO	MIKE STILLWELL	314-327-1650	mstillwell@alloygroup.com
Lawlor	Sam Aufmuth	314-504-4053	sam@lawlorcorp.com
DOKTRONICS	Ken Green	314 265 5962	ken.green@doktronics.com
Bombshell Const. Services	Beth Hoelting	636-233-4085	Info@Bombshellcs.com
TSI Global	Tim Duncan	636-425-1377	tduncan@tsi-global.com
Eckelkamp electric	Eric Rehaisen	636-751-9237	eric@eckelkampelectric.com
Bingman	Justin Schmidt	636-384-6466	jjs@bingmancc.com
LCS, LLC	Jacob Eaton	636-448-1088	Jake@LCSconstruct.com

Wright City High School Performance Gym – Pre-Bid Meeting Sign-In
November 18, 2025

Company	Contact	Phone	Email
Marschel Wrecking	Rodger Tucker	636-359-5314	rodger@marschelwrecking.com
MR Bathe Electric	Eric Tiefenthaler	636-562-7567	etiefenthaler@MRBathe.com
Hankins Construction	Mike Maret	636-448-1790	Bids@Hankinsmidwest.com
M.R. Systems/Bathe	Matthew Largent	314-565-3647	MLargent@MRBathe.com
Questec	Tommy Nichols	573-220-2002	tommy.nichols@questec.us

Wright City High School Performance Gym – Pre-Bid Meeting Sign-In
November 18, 2025

Company	Contact	Phone	Email
Techtree Partners	Joseph Puzzo	417 372 3607	joseph@techtreepartners.com
SM WILSON	JEANNE GARLOCK	3143137570	jeanne.garlock@smwilson.com

Plan Holders For - Wright City Gym

Return To List

ASPIRE CONSTRUCTION SERVICES DEVIN DOLDES 1382 CHARLESTOWN INDUSTRIAL DRIVE ST CHARLES MO 63303 devindoldes@aspire-stl.com	ASPIRE CONSTRUCTION SERVICES DEVIN OLDS 1382 CHARLESTOWN INDUSTRIAL DRIVE ST CHARLES MO 63303 dolds@aspire-stl.com
BEX CONSTRUCTION SERVICES ELIZABETH elizabeth@bexstl.com	BINGMAN CONSTRUCTION COMPANY CHRISTINE SCHEER 102 RESOURCE DRIVE WENTZVILLE MO 63385 crs@bingmancc.com
BOMBSHELL CONSTRUCTION SERVICES BETH HOELTING 641 VIOLA DR EUREKA MO 63025 bhoelting@bombshellcs.com	C. RALLO CONTRACTING CO., INC. MARK HAYNES 5000 KEMPER AVENUE ST. LOUIS MO 63139 markh@crallo.com
EPLAN REPORTER 1400 FORUM BLVD STE 7B COLUMBIA MO 65203 eplan@eplanbidding.com	FREISE CONSTRUCTION CO. MARY FREEEMANQ 17 RECKAMP ROAD OLD MONROE MO 63369 mary@freiseconstruction.com
HOLLAND CONSTRUCTION SERVICES MATT FRANK 4495 NORTH ILLINOIS STREET SWANSEA IL 62226 mfrank@hollandcs.com	LAWLOR SAM 1440 STRASSNER ST. LOUIS MO 63144 sma@lawlorcorp.com
S. M. WILSON & CO. JAKE.FENSTER@SMWILSON.COM Jake Fenster	WRIGHT CONSTRUCTION SERVICES, INC. COLBY PATTERSON 11 LAMI INDUSTRIAL DR ST PETERS MO 63304 bids@wrightconstruct.com

SUBSTITUTION REQUEST

(During the Bidding/Negotiating Stage)

Project: _____ Substitution Request Number: _____

_____ From: _____

To: _____ Date: _____

_____ A/E Project Number: _____

Re: _____ Contract For: _____

Specification Title: _____ Description: _____

Section: _____ Page: _____ Article/Paragraph: _____

Proposed Substitution: _____

Manufacturer. _____ Address: _____ Phone: _____

Trade Name: _____ Model No.: _____

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: _____

Signed by: _____

Firm: _____

Address: _____

_____

Telephone: _____

A/E's REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Substitution approved as noted - Make submittals in accordance with Specification Section 01 33 00 Submittal Procedures.
☐ Substitution rejected - Use specified materials.
☐ Substitution Request received too late - Use specified materials.

Signed by: Date:

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ _____

Form Version: October 2017
CSI Form 1.5C

DRAFT

AIA® Document A101™ – 2017

Standard Form of Agreement Between Owner and Contractor

where the basis of payment is a Stipulated Sum

AGREEMENT made as of the « 6 » day of November» in the year «2025 »
(In words, indicate day, month and year.)

BETWEEN the Owner:
(Name, legal status, address and other information)

«Wright City R-II School District »« »
««»Board of Education
90 Bell Road
Wright City, MO 63390
« »
« »

and the Contractor:
(Name, legal status, address and other information »
« »

for the following Project:
(Name, location and detailed description)

««»Performance Gymnasium for The High School – Phase 2
159 Roelker Road
Wright City, MO 63390
««»
««»

The Architect:
(Name, legal status, address and other information)

«Bond Architects, Inc. »« »
«222 South Central Avenue »
«Suite 501 »
«St. Louis, MO 63105 »

The Owner and Contractor agree as follows.

ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

The parties should complete A101™–2017, Exhibit A, Insurance and Bonds, contemporaneously with this Agreement. AIA Document A201™–2017, General Conditions of the Contract for Construction, is adopted in this document by reference. Do not use with other general conditions unless this document is modified.

ELECTRONIC COPYING of any portion of this AIA® Document to another electronic file is prohibited and constitutes a violation of copyright laws as set forth in the footer of this document.

TABLE OF ARTICLES

ARTICLE 1 THE CONTRACT DOCUMENTS

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary, and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement, and Modifications issued after execution of this Agreement, all of which form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. An enumeration of the Contract Documents, other than a Modification, appears in Article 9.

ARTICLE 2 THE WORK OF THIS CONTRACT

The Contractor shall fully execute the Work described in the Contract Documents, except as specifically indicated in the Contract Documents to be the responsibility of others.

ARTICLE 3 DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION

§ 3.1 The date of commencement of the Work shall be:
(Check one of the following boxes.)

[« »] The date of this Agreement.

[« X »] A date set forth in a notice to proceed issued by the Owner.

[« »] Established as follows:
(Insert a date or a means to determine the date of commencement of the Work.)

«»

If a date of commencement of the Work is not selected, then the date of commencement shall be the date of this Agreement.

§ 3.2 The Contract Time shall be measured from the date of commencement of the Work.

§ 3.3 Substantial Completion

§ 3.3.1 Subject to adjustments of the Contract Time as provided in the Contract Documents, the Contractor shall achieve Substantial Completion of the entire Work:
(Check one of the following boxes and complete the necessary information.)

[« »] Not later than « » (« ») calendar days from the date of commencement of the Work.

[« X »] By the following date: « »

Final Completion shall be thirty (30) calendar days after the date of Substantial Completion, subject to adjustments of the Contract Time as provided in the Contract Documents.

§ 3.3.2 Subject to adjustments of the Contract Time as provided in the Contract Documents, if portions of the Work are to be completed prior to Substantial Completion of the entire Work, the Contractor shall achieve Substantial Completion of such portions by the following dates:

Portion of Work	Substantial Completion Date

§ 3.3.3 If the Contractor fails to achieve Substantial Completion as provided in this Section 3.3, liquidated damages, if any, shall be assessed as set forth in Section 4.5. Such damages shall be in addition to, and not in lieu of, any other rights or remedies Owner may have against Contractor for failure to timely achieve Substantial Completion and damages for failure to achieve Substantial Completion and failure to achieve Final Completion may run concurrently. If the Work is not finally completed by the time stated in the Agreement, or as extended, no payments for Work completed beyond the time shall be made until the Project reaches Final Completion.

ARTICLE 4 CONTRACT SUM

§ 4.1 The Owner shall pay the Contractor the Contract Sum in current funds for the Contractor's performance of the Contract. The Contract Sum shall be » ($ «»), subject to additions and deductions as provided in the Contract Documents.

§ 4.2 Alternates

§ 4.2.1 Alternates, if any, included in the Contract Sum:

Item	Price

§ 4.2.2 Subject to the conditions noted below, the following alternates may be accepted by the Owner following execution of this Agreement. Upon acceptance, the Owner shall issue a Modification to this Agreement.
(Insert below each alternate and the conditions that must be met for the Owner to accept the alternate.)

Item	Price	Conditions for Acceptance

§ 4.3 Allowances, if any, included in the Contract Sum:
(Identify each allowance.)

Item	Price

§ 4.4 Unit prices, if any:
(Identify the item and state the unit price and quantity limitations, if any, to which the unit price will be applicable.)

Item	Units and Limitations	Price per Unit ($0.00)

§ 4.5 Liquidated damages, if any:
(Insert terms and conditions for liquidated damages, if any.)

« »$1,500 a day past the Substantial Completion date. In the event that the Contractor does not substantially complete the work by the required Substantial Completion date, the Contractor agrees to pay the Owner, or to deduct from the Contract Sum, not as a penalty, but as liquidated damages, the amount of One Thousand Five

hundred Dollars ($1500) for each and every calendar day that Substantial Completion date is delayed. If Contractor shall neglect, refuse, or fail to complete the remaining work and closeout documents within Thirty (30) calendar days after Substantial Completion date (including any proper extension granted by the Owner), Contractor shall pay the Owner the stipulated sum of One Thousand Five hundred Dollars ($1500) for each day that expires after the time specified for completion and readiness for final payment.

§ 4.6 Other:
(Insert provisions for bonus or other incentives, if any, that might result in a change to the Contract Sum.)

« »

ARTICLE 5 PAYMENTS

§ 5.1 Progress Payments

§ 5.1.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

§ 5.1.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

« »

§ 5.1.3 Provided that an Application for Payment is received by the Architect not later than the «1st » day of a month, the Owner shall make payment of the amount certified to the Contractor not later than the « 15th» day of the « following» month. If an Application for Payment is received by the Architect after the application date fixed above, payment of the amount certified shall be made by the Owner not later than « sixty» (« 60 ») days after the Architect receives the Application for Payment. Moreover, if Owner is entitled to deduct damages or amounts provided in the Contract Documents, including clean-up fees, the Owner shall be entitled to deduct such damages, amounts and fees at any time.
(Federal, state or local laws may require payment within a certain period of time.)

§ 5.1.4 Each Application for Payment shall be based on the most recent schedule of values submitted by the Contractor in accordance with the Contract Documents. The schedule of values shall allocate the entire Contract Sum among the various portions of the Work. The schedule of values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Architect may require. This schedule of values shall be used as a basis for reviewing the Contractor's Applications for Payment. If Contractor fails or refuses to complete the Work, or has unsettled claims with Owner, any payment to Contractor shall be subject to deduction for such amounts as the Architect shall determine as the cost for completing incomplete Work and the value of unsettled claims.

§ 5.1.5 Applications for Payment shall show the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment. Such applications shall include:

- Certified payrolls, an original accounting of all labor rates and hour of Work
- Invoices for all materials, rental equipment, and Contractor's statements
- Copies of Contractor's daily log
- Compliance with prevailing wage laws as per annual wage order issued with this contract
- If invoicing for stored materials that have not been delivered to the project site, the following must be provided: proof of stored materials including certificate of insurance for facility where materials are stored, photographs of such materials, materials are labeled with signs indicating materials are "Property of Wright City School District" and copies of invoices for materials from the vendors/supplier.

§ 5.1.6 In accordance with AIA Document A201™–2017, General Conditions of the Contract for Construction, and subject to other provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

§ 5.1.6.1 The amount of each progress payment shall first include:

.1 That portion of the Contract Sum properly allocable to completed Work, as determined by multiplying the percentage completion of each portion of the Work by the share of the Contract Sum allocated to that portion of the Work in the schedule of values;

.2 That portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction, or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing; and

.3 That portion of Construction Change Directives that the Architect determines, in the Architect's professional judgment, to be reasonably justified.

§ 5.1.6.2 The amount of each progress payment shall then be reduced by:

.1 The aggregate of any amounts previously paid by the Owner;

.2 The amount, if any, for Work that remains uncorrected and for which the Architect has previously withheld a Certificate for Payment as provided in Article 9 of AIA Document A201–2017;

.3 Any amount for which the Contractor does not intend to pay a Subcontractor or material supplier, unless the Work has been performed by others the Contractor intends to pay;

.4 For Work performed or defects discovered since the last payment application, any amount for which the Architect may withhold payment, or nullify a Certificate of Payment in whole or in part, as provided in Article 9 of AIA Document A201–2017, or amounts certified by the Architect and disputed by the Owner; and

.5 Retainage withheld pursuant to Section 5.1.7.

§ 5.1.7 Retainage

§ 5.1.7.1 For each progress payment made prior to Substantial Completion of the Work, the Owner may withhold the following amount, as retainage, from the payment otherwise due:
(Insert a percentage or amount to be withheld as retainage from each Application for Payment. The amount of retainage may be limited by governing law.)

«Five percent (5%) »

§ 5.1.7.1.1 The following items are not subject to retainage:
(Insert any items not subject to the withholding of retainage, such as general conditions, insurance, etc.)

«N/A »

§ 5.1.7.2 Reduction or limitation of retainage, if any, shall be as follows:
(If the retainage established in Section 5.1.7.1 is to be modified prior to Substantial Completion of the entire Work, including modifications for Substantial Completion of portions of the Work as provided in Section 3.3.2, insert provisions for such modifications.)

«N/A »

§ 5.1.7.3 Deleted

§ 5.1.8 Deleted

§ 5.1.9 Except with the Owner's prior approval, the Contractor shall not make advance payments to suppliers for materials or equipment which have not been delivered and stored at the site.

§ 5.2 Final Payment

§ 5.2.1 Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when

.1 the Contractor has fully performed the Contract except for the Contractor's responsibility to correct Work as provided in Article 12 of AIA Document A201–2017, and to satisfy other requirements, if any, which extend beyond final payment; and

.2 a final Certificate for Payment has been issued by the Architect.

§ 5.2.2 The Owner's final payment to the Contractor shall be made no later than 30 days after the issuance of the Architect's final Certificate for Payment, or as follows:

«After final inspection of all resolved punch list items »

§ 5.3 Interest
Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.
(Insert rate of interest agreed upon, if any.)

« Zero » % « 0 »

ARTICLE 6 DISPUTE RESOLUTION

§ 6.1 Initial Decision Maker
The Architect will serve as the Initial Decision Maker pursuant to Article 15 of AIA Document A201–2017, unless the parties appoint below another individual, not a party to this Agreement, to serve as the Initial Decision Maker.
(If the parties mutually agree, insert the name, address and other contact information of the Initial Decision Maker, if other than the Architect.)

« Any claims or disputes between the parties of this agreement arising from or relating to the agreement of breach thereof, may be submitted to non-binding mediation upon agreement of the parties. The mediator's fees and expenses and any costs associated with the mediation shall be borne equally by both parties. Each party shall be responsible for paying its own costs, expenses, and attorney fees related to participating in the mediation. Disputes under this agreement shall be exclusively litigated in the Circuit Court of Warren County, Missouri. »
« »
« »
« »

§ 6.2 Binding Dispute Resolution
For any Claim subject to, but not resolved by, mediation pursuant to Article 15 of AIA Document A201–2017, the method of binding dispute resolution shall be as follows:
(Check the appropriate box.)

[« »] Arbitration pursuant to Section 15.4 of AIA Document A201–2017

[« X »] Litigation in Circuit Court for Warren County, Missouri

[« »] Other *(Specify)*

« »

If the parties do not resolve the disputes through voluntary mediation, the method of binding dispute resolution shall be litigation brought only in the Circuit Court of Warren County, Missouri. The parties agree that this court shall be the sole and exclusive venue for any litigation arising out of this Contract. The parties hereby agree to waive their right to a trial by jury, and understand and agree that their disputes shall be resolved by the Court.

ARTICLE 7 TERMINATION OR SUSPENSION

§ 7.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of AIA Document A201–2017.

§ 7.1.1 Deleted
« »

§ 7.2 The Work may be suspended by the Owner as provided in Article 14 of AIA Document A201–2017.

ARTICLE 8 MISCELLANEOUS PROVISIONS

§ 8.1 Where reference is made in this Agreement to a provision of AIA Document A201–2017 or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

§ 8.2 The Owner's representative:
(Name, address, email address, and other information)

« Dr. Amy Salvo, Superintendent »
« 90 Bell Road
Wright City, MO 63390»
«. »

§ 8.3 The Contractor's representative:
(Name, address, email address, and other information)

«»
«»

§ 8.4 Neither the Owner's nor the Contractor's representative shall be changed without ten days' prior notice to the other party.

§ 8.5 Insurance and Bonds

§ 8.5.1 The Contractor shall secure and maintain at its own cost and expense and throughout the duration of this Contract and until the work is completed and accepted by the Owner, insurance of such types and in such amounts as may be necessary to protect it and the interests of the Owner against all hazards or risks of loss as hereunder specified or which may arise out of the performance of the Contract Documents. The Contractor shall maintain adequate insurance coverage at all times during the term of the Contract. Failure on the Contractor to maintain coverage shall not relieve it of any contractual responsibility or obligation or liability under the Contract Documents. Purchase of any insurance or the inclusion of the Owner as an additional insurer required by this Agreement shall not constitute a waiver of the Owner's sovereign or government immunity.

Certificates of insurance, including evidence of the required endorsements hereunder or the policies, shall be filed with the Owner within ten (10) days after the date of the receipt of Notice of Award of the Contract to the Contractor and prior to the state of work. Work may not proceed until proof of all required insurance has been provided to the Owner.

§ 8.5.2 The minimum coverage for the insurance referred to herein shall be in accordance with the requirements established below:

a. Workers' Compensation: Statutory coverage per RSMo. 287.010 et seq.; Employer's Liability: $1,000,000.00 for bodily injury each accident or disease, each employee for injury by disease.
b. Commercial General Liability Insurance: Including coverage for Premises, Operations Products and Completed Operations, Contractual Liability, Broad Form Property Damage, Independent Contractors, Explosion, Collapse, and Underground Property Damage and endorsed for blasting if blasting required. Such coverage shall apply to Bodily Injury and Property Damage on an "Occurrence Form Basis" with limits of Three Million Dollars ($3,000,000.00) for products/completed operations and One Million Dollars ($1,000,000.00) for any one person in a single accident or occurrence/advertising injury. Aggregate limits to apply separately to the Project other than completed operations hazards.
c. Automobile Liability Insurance: ISO CA0001, CA0002, CA0005, CA0020 or equivalent. Covering Bodily Injury and Property Damage for owned, non-owned and hired vehicles with limits of Three Million Dollars ($3,000,000.00) for all claims arising out of a single accident or occurrence.

§ 8.5.3 Performance and Payment Bonds
The Contractor shall furnish a Performance Bond and a Labor and Materials Payment Bond with surety approved by the Owner and on the forms approved by the Owner. Each bond shall be in the full amount of the parties' contract and shall be conditioned upon the full and faithful performance of all major terms and conditions of the contract and payment of all labor and material suppliers.

§ 8.7 Other provisions:

«Allowable Mark-Up for Extra Work

Trade Contractor shall be allowed to place percentages of mark-up for overhead and profit (10%) for extra work it performs that has been authorized by the Owner. Subcontractors of the Trade Contractor can be marked up by 5%. A detailed cost breakdown will be required for extra work.

Hourly rates, which are requested as part of the Bid Form shall be limited to Prevailing Wage rates and are not subject to additional mark-up. Overhead and Profit cannot be added to premium time costs for extra work. Premium time costs shall only include actual costs incurred.

Should the Prime Contractor in any Work Package require the services of a 2nd tier Subcontractor, only the Prime Contractor may submit cost to the Owner for review. Furthermore, the Prime Contractor may include a 5% markup for work performed by the 2nd tier Subcontractor, but may not include additional markup beyond that extent. »

§ 8.8 The Contractor shall comply with all local, state, and federal laws, rules, and regulation applicable to the provision of services and products under the Contract, including but not limited to: the Americans with Disabilities Act, employment discrimination laws, wage and hour laws (including as required by Section 290.210 et seq. RSMo), the transient employer financial assurance law (sections 285.230 et seq. RSMo.) and public contracting laws. The Contractor affirmatively states that payment of all local, state and federal taxes and assessments owned by the Contractor is either current or under lawful protect with the applicable taxing jurisdiction.

§ 8.9 Contractor will obtain criminal and child abuse and neglect background checks for its employees assigned to this Project prior to their presence on school premises. Contract will provide copies of background checks upon Owner's request. Contract will not allow any employee on Owner's property who has been charged, convicted or plead guilty to any offense involving a minor, violent offense or sexual offense.

§ 8.10 Contractor agrees to comply with Missouri's Discrimination Against Israel Statute. Accordingly, Contractor will not engage, during the term of this Agreement, in a boycott of Israeli goods or services either directly or indirectly. Failure to comply will result in forfeiture of the Contract.

§ 8.11 Not less than the prevailing hourly rate of wages specified under Section 290.210-290.340 of the Revised Missouri Statutes and set out in the Wage Determination shall be paid to all workers performing Work under this Contract. The Contractor shall forfeit as provided in Section 290.250 of the Revised Missouri Statutes as a penalty to the Owner the sum of One Hundred Dollars ($100.00) for each worker employed, for each calendar day, or portion thereof, that such worker is paid less than the prevailing rate for any work done under said Contract by the Contractor or by any of its Subcontractors.

§ 8.12 In no event shall the Owner be liable to the Contractor for special, indirect, or consequential damages, except those caused by the Owner's willful misconduct arising out of or in any way connected with a breach of this Contract. The maximum liability of the Owner shall be limited to the amount of money to be paid by the Owner under this Contract.

ARTICLE 9 ENUMERATION OF CONTRACT DOCUMENTS

§ 9.1 This Agreement is comprised of the following documents:

.1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor

.2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds

.3 AIA Document A201™–2017, General Conditions of the Contract for Construction

.4 AIA Document E203™–2013, Building Information Modeling and Digital Data Exhibit, dated as indicated below:

(Insert the date of the E203-2013 incorporated into this Agreement.)

« »

.5 Drawings

Number	Title	Date

.6 Specifications

Section	Title	Date	Pages
			950

.7 Addenda, if any:

Number	Date	Pages

Portions of Addenda relating to bidding or proposal requirements are not part of the Contract Documents unless the bidding or proposal requirements are also enumerated in this Article 9.

.8 Other Exhibits:
(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[« »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017 incorporated into this Agreement.)

« »

[« »] The Sustainability Plan:

Title	Date	Pages

[« »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages

.9 Other documents, if any, listed below:
(List here any additional documents that are intended to form part of the Contract Documents. AIA Document A201™–2017 provides that the advertisement or invitation to bid, Instructions to Bidders, sample forms, the Contractor's bid or proposal, portions of Addenda relating to bidding or proposal requirements, and other information furnished by the Owner in anticipation of receiving bids or proposals, are not part of the Contract Documents unless enumerated in this Agreement. Any such documents should be listed here only if intended to be part of the Contract Documents.)

« »

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

OWNER *(Signature)*	**CONTRACTOR** *(Signature)*
«Austin Jones, President, Board of Education , »«Wright City School District »	»

SECTION 08 8000
GLAZING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Insulating glass units.

B. Glazing units.

C. Laminated Intruder Resistant Glazing Units

D. Glazing compounds.

E. Display Cases and Sculpture artwork protection.

1.02 RELATED REQUIREMENTS

A. Section 07 2500 - Weather Barriers.

B. Section 072726 - Fluid Applied Membrane Air Barriers

C. Section 07 9200 - Joint Sealants: Sealants for other than glazing purposes.

D. Section 08 1213 - Hollow Metal Frames: Glazed borrowed lites.

E. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.

F. Section 08 4313 - Aluminum-Framed Storefronts: Glazing provided as part of storefront assembly.

G. Section 08 5113 - Aluminum Windows: Glazing provided by window manufacturer.

H. Section 08 8300 - Mirrors.

1.03 REFERENCE STANDARDS

A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; Current Edition.

B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test; 2015 (Reaffirmed 2020).

C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005 (Reapproved 2019).

E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2018 (Reapproved 2024).

F. ASTM C1036 - Standard Specification for Flat Glass; 2025.

G. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass; 2025.

H. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2024.

I. ASTM C1193 - Standard Guide for Use of Joint Sealants; 2025.

J. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass; 2021a.

K. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2024.

L. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2019.

M. ASTM F1233 - Standard Test Method for Security Glazing Materials And Systems; 2021.

N. GANA (GM) - GANA Glazing Manual; 2022.

O. GANA (SM) - GANA Sealant Manual; 2008.

P. IGMA TM-3000 - North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial & Residential Use; 1990 (Reaffirmed 2016).

Q. NFRC 100 - Procedure for Determining Fenestration Product U-factors; 2023.

R. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence; 2023.

S. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems; 2023.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by each of the affected installers.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements for submittal procedures.

B. Product Data on Insulating Glass Unit, Glazing Unit, Plastic Sheet Glazing Unit, and Plastic Film Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.

C. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental characteristics, limitations, special application requirements, and identify available colors.

D. Samples: Submit two samples 12 by 12 inch in size of glass units. TGU sample shall have manufacturer's label

E. Samples: Submit 3 inch long bead of glazing sealant, color as selected.

F. Certificate: Certify that products of this section meet or exceed specified requirements.

G. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience and approved by manufacturer.

C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

1.07 FIELD CONDITIONS

A. Do not install glazing when ambient temperature is less than 40 degrees F.

B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

1.08 WARRANTY

A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

B. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units.

C. Laminated Glass: Provide a five (5) year manufacturer warranty to include coverage for delamination, including providing products to replace failed units.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Laminated Intruder Resistant Glazing Units:
   1. Basis of Design: LTI Smart Glass, Inc. School Guard Glass

B. Glass Fabricators:
   1. Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/#sle.
   2. Viracon, Inc: www.viracon.com/#sle.

3. Guardian Glass, LLC www.guardianglass.com/#sle

C. Float Glass Manufacturers:
   1. AGC Glass North America, Inc: www.agcglass.com/#sle.
   2. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
   3. Guardian Glass, LLC: www.guardianglass.com/#sle.
   4. Pilkington North America Inc: www.pilkington.com/na/#sle.
   5. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.
   6. Oldcastle: www.oldcastlebe.com..
   7. LTI Smart Glass, Inc.
   8. Viracon of Apogee Enterprises, Inc[<>]: www.viracon.com/#sle.

D. Laminated Glass Manufacturers:
   1. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
   2. Viracon, Architectural Glass segment of Apogee Enterprises, Inc: www.viracon.com/#sle.
   3. Guardian; www.guardianglass.com.

E. Intruder Resistant Glass: ASTM F1233, class 1.4
   1. Guard Glass, SG5
   2. Childgard Glass, 2118McGrory Glass, Defend EDOld Castle, Armorgarde
   3. McGrory Glass, Defend ED
   4. Old Castle, Armorgarde

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
   1. Design Pressure: Calculated in accordance with ASCE 7.
   2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
   3. Seismic Loads: Design and size glazing components to withstand seismic loads and sway displacement in accordance with the requirements of ASCE 7.
   4. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
   5. Glass thicknesses listed are minimum.

B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
   1. In conjunction with weather barrier related materials described in other sections, as follows:
   2. To utilize inner pane of multiple pane insulating glass units for continuity of vapor retarder and/or air barrier seal.
   3. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.

C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
   1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
   2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
   3. Solar Optical Properties: Comply with NFRC 300 test method.

2.03 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless otherwise indicated.
   1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
   2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.

3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.
4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
5. Impact Resistant Safety Glass: Complies with ANSI Z97.1 - Class B, or 16 CFR 1201 - Category I criteria.
6. Tinted Type: ASTM C1036, Class 2 - Tinted, Quality - Q3, with color and performance characteristics as indicated.
7. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

B. Laminated Glass: Float glass laminated in accordance with ASTM C1172. Lites in doors, side lites, exterior glazing within 3' of grade, glazing adjacent to doors.
1. Laminated Safety Glass: Complies with ANSI Z97.1 - Class B or 16 CFR 1201 - Category II impact test requirements.
2. Polyvinyl Butyral (PVB) Interlayer: 0.030 inch thick, minimum.

C. Intruder Resistant Glass: Laminated glass in accordance with ASTM F1233 - Class 1.4

2.04 INSULATING GLASS UNITS

A. Manufacturers: Basis of Design: Vitro Solarban 70 (2) Optigray on Clear Low-E
1. AGC Glass North America, Inc: www.agcglass.com/#sle.
2. Cardinal Glass Industries: www.cardinalcorp.com/#sle.
3. Guardian Glass, LLC: www.guardianglass.com/#sle.
4. Pilkington North America Inc: www.pilkington.com/na/#sle.
5. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.
6. School Guard
7. Childgard
8. McGrory Glass
9. Substitutions: See Section 01 6000 - Product Requirements.
   a. For any product not identified as "Basis of Design", submit information as specified for substitutions.

B. Insulating Glass Units: Types as indicated.
1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.
3. Spacer Color: Black.
4. Edge Seal:
5. Color: Black.
6. Purge interpane space with dry air, hermetically sealed.

C. Insulating Glass Units: Vision glass, double glazed. Basis of Design: Vitro Solarban 70 (2) Optigray on Clear Low-E
1. Applications: Exterior glazing unless otherwise indicated.
2. Space between lites filled with argon.
3. Outboard Lite: Annealed float glass, 1/4 inch thick, minimum.
   a. Tint: Gray.
   b. Coating: Low-E (solar control type), on #2 surface.
4. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
   a. Tint: Clear.
5. Total Thickness: 1 inch.
6. Thermal Transmittance (U-Value), Winter - Center of Glass: 24, nominal.
7. Visible Light Transmittance (VLT): 62 percent, nominal.
8. Solar Heat Gain Coefficient (SHGC): 27 percent, nominal.
9. UV Transmittance: 6 percent.

10. Glazing Method: Wet glazing method, sealant and sealant.

D. Insulating Glass Units: Safety glazing. Basis of Design: Vitro Solarban 70 (2) Optigray on Clear Low-E
   1. Applications:
      a. Glazed lites in exterior doors.
      b. Glazed sidelights and panels next to doors.
      c. Other locations required by applicable federal, state, and local codes and regulations.
      d. Other locations indicated on drawings.
   2. Space between lites filled with argon.
   3. Glass Type: Same as other vision glazing except use fully tempered float glass for both outboard and inboard lites.
   4. Tint: Gray.
   5. Total Thickness: 1 inch.
   6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.24, nominal.
   7. Visible Light Transmittance (VLT): 62 percent, nominal.
   8. Solar Heat Gain Coefficient (SHGC): 0.27 percent, nominal.
   9. UV Transmittance: 6 percent.
   10. Glazing Method: Wet glazing method, sealant and sealant.

E. Insulated Glass Units: Intruder Resistant Insulating Glass Units: Basis of Design: LTI Smart Glass, School Guard Glass, SG5, Vitro solarban 70 (2) opti gray on clear.
   1. Applications:
      a. As indicated on drawings.
   2. Space between lites filled with argon.
   3. Glass Type: SG5 IGU meeting ASTM F1233, class 1.4
   4. Tint: Gray.
   5. Total Thickness: 1 inch.
   6. Thermal Transmittance (U-Value), Winter - Center of Glass: 0.24, nominal.
   7. Visible Light Transmittance (VLT): 68 percent, nominal.
   8. Solar Heat Gain Coefficient (SHGC): 0.38 percent, nominal.
   9. UV Transmittance: 30 percent.
   10. Glazing Method: Wet glazing method, sealant and sealant.

F. Display Cases
   1. General: Built-in display case; with finished interior and pivoting hinge glazed doors at front, and trim on the face to cover edge of opening.
      a. Frame Profile: As indicated on drawings.
      b. Size: As indicated on drawings.
   2. Display Case:
      a. Display Case: Built-in, basis of desing CRL, see specifications
   3. Back Panel: None
   4. Locks:
      a. Cam, Keyed alike per display case
      b. Steel, High Security
   5. Glazed pivoting hinge Doors: Tempered, low iron, safety tempered glass unframed, with CRL DXR Door Rail System
   6. Glazed Pivot doors, Tempered, low iron safety glasssee specifications
      a. Thickness: 5/8 inch
      b. Number of Doors: See drawings for width at each display case. (8) Number as indicated on drawings.
   7. Shelves: 1/4 inch thick, low iron, tempered glass; supported on adjustable shelf standards that extend the full height of display case.
      a. Depth: As indicated on drawings
      b. Number of shelves: As indicated on drawings.

c. Shelf Standard Finish: Clean Anodized

8. Illumination System: Refer to electrical drawings for fixtures, lamps, wiring and connections.

2.05 GLAZING UNITS

A. Monolithic Interior Vision Glazing:
1. Applications: Interior glazing unless otherwise indicated.
2. Glass Type: Fully tempered float glass.
3. Tint: Clear.
4. Thickness: 1/4, 5/8 inch, nominal.

B. Monolithic Safety Glazing: Non-fire-rated.
1. Applications:
a. Lites and Sidelights are Security Glazing SG5 as shown on drawings.
b. Glazed view windows and panels in partitions enclosing athletic activity rooms, except in fire-rated walls and partitions.
c. Other locations required by applicable federal, state, and local codes and regulations.
d. Other locations indicated on drawings.
2. Glass Type: Laminated safety safety glass as specified.
3. Tint: Clear.
4. Thickness: 1/4, 5/8 inch, nominal.

C. Security Glazing Basis of Design: LTI Smart Glass, School Guard Glass - SG5 Laminated glass, 2-Ply.
1. Applications: Locations as indicated on drawings.
2. Tint: Clear.
3. Thickness: As required to meet performance criteria.
4. Outer Lite: Tempered glass.
5. Interlayer: Polyvinyl butyral (PVB), thickness as required to meet performance criteria.
6. Inside Lite: Tempered glass.
7. Performance Criteria:
a. Forced Entry Resistance: Pass ASTM F1233 tests in compliance with Forced Entry Sequence of Testing, Class Achieved 1.4: Sledge Hammer, 25 impacts.
8. Manufacturers:
a. McGrory Glass, Inc; DefendEd Series _____: www.mcgrory.com/#sle.
b. School Guard.
c. Childgard
d. Old Castle

2.06 GLAZING COMPOUNDS

A. Type GC-5 - Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C920, Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

2.07 ACCESSORIES

A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.

B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Continuous by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.

C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
1. Width: As required for application.

2. Thickness: As required for application.
3. Spacer Rod Diameter: As required for application.
4. Manufacturers:
    a. Pecora Corporation: www.pecora.com.
    b. Tremco Global Sealants: www.tremcosealants.com.
    c. Substitutions: See Section 01 6000 - Product Requirements.

D. Glazing Clips: Manufacturer's standard type.

2.08 SOURCE QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements for additional requirements.

PART 3 EXECUTION

3.01 VERIFICATION OF CONDITIONS

A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.

B. Verify that the minimum required face and edge clearances are being provided.

C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.

D. Verify that sealing between joints of glass framing members has been completed effectively.

E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean contact surfaces with appropriate solvent and wipe dry immediately before glazing. Remove coatings that are not tightly bonded to substrates.

B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.

C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

3.03 INSTALLATION, GENERAL

A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.

B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.

C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.

D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.

E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.

F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

3.04 INSTALLATION - WET GLAZING METHOD (SEALANT AND SEALANT)

A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.

B. Place setting blocks at 1/4 points and install glazing pane or unit.

C. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch intervals, 1/4 inch below sight line.

D. Fill gaps between glazing and stops with GC-5 type sealant to depth of bite on glazing, but not more than 3/8 inch below sight line to ensure full contact with glazing and continue the air and vapor seal.

E. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.05 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements for additional requirements.

B. Glass and Glazing product manufacturers to provide field surveillance of the installation of their products.

C. Monitor and report installation procedures and unacceptable conditions.

3.06 CLEANING

A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

B. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.

C. Remove nonpermanent labels immediately after glazing installation is complete.

D. Clean glass and adjacent surfaces after sealants are fully cured.

E. Clean glass on both exposed surfaces not more than 2 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

3.07 PROTECTION

A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.

B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

3.08 SCHEDULES

A. New Exterior glazing below 7'-0" AFF shall be insulated Intruder resistant security laminated units.

B. New Exterior glazing above 7'-0" AFF shall be insulated units.

C. New Interior glazing below 7'-0" AFF shall be Intruder resistant security laminated units.

D. New Interior glazing above 7'-0" AFF shall be annealed units.

END OF SECTION

SECTION 10 2113.19
PLASTIC COMPARTMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Solid plastic shower compartments.

B. Solid plastic toilet compartments.

C. Urinal and vestibule screens.

1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Blocking and supports.

B. Section 10 2800 - Toilet, Bath, and Laundry Accessories.

1.03 REFERENCE STANDARDS

A. ASTM A666/A666M - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar; 2024.

B. NFPA 286 - Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth; 2024.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination: Coordinate the work with placement of support framing and anchors in walls and ceilings.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide data on panel construction, hardware, and accessories.

C. Shop Drawings: Indicate partition plan, elevation views, dimensions, details of wall supports, door swings.

D. Samples: Submit two samples of partition panels, __6__by__6__ inch in size illustrating panel finish, color, and sheen.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Solid Plastic Shower Compartments:
   1. AJW Architectural Products: www.ajw.com/#sle.
   2. Scranton Products: www.scrantonproducts.com/#sle.
   3. Bobrick Washroom Equipment, Inc; www.bobrick.com.

2.02 PLASTIC TOILET COMPARTMENTS

A. Solid Plastic Shower Compartments: Factory fabricated doors, pilasters, and divider panels made of solid molded high density polyethylene (HDPE), tested in accordance with NFPA 286; floor-mounted headrail-braced.
   1. Color: as selected by the architect from a full range of colors.

B. Doors:
   1. Thickness: 1 inch.
   2. Width: 24 inch.
   3. Width for Handicapped Use: 36 inch, out-swinging.
   4. Height: 55 inch.

C. Panels:
   1. Thickness: 1 inch.
   2. Height: 55 inch.
   3. Depth: As indicated on drawings.

D. Pilasters:
   1. Thickness: 1 inch.
   2. Width: As required to fit space; minimum 3 inch.

E. Screens: Without doors; to match compartments; mounted to wall with two panel brackets.

2.03 ACCESSORIES

A. Pilaster Shoes: Formed ASTM A666, Type 304 stainless steel with ____ finish, 3 in high, concealing floor fastenings.
   1. Provide adjustment for floor variations with screw jack through steel saddles integral with pilaster.

B. Head Rails: Extruded aluminum, anti-grip profile.

C. Wall and Pilaster Brackets: Satin stainless steel.

D. Attachments, Screws, and Bolts: Stainless steel , tamper proof type.
   1. For attaching panels and pilasters to brackets: Through-bolts and nuts ; tamper proof.

E. Hinges: Stainless steel, manufacturer's standard finish.
   1. Continuous-type hinge, self closing.

F. Door Hardware: Stainless steel, manufacturer's standard finish.
   1. Door Latch: Slide type with exterior emergency access feature.
   2. Door Strike and Keeper with Rubber Bumper: Mount on pilaster in alignment with door latch.
   3. Provide door pull for outswinging doors.

G. Coat Hook: One per compartment, mounted on door.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field measurements are as indicated.

B. Verify correct spacing of and between plumbing fixtures.

C. Verify correct location of built-in framing, anchorage, and bracing.

3.02 INSTALLATION

A. Install partitions secure, rigid, plumb, and level in accordance with manufacturer's instructions.

B. Maintain 3/8 to 1/2 inch (9 to 13mm) space between wall and panels and between wall and end pilasters.

C. Attach panel brackets securely to walls using anchor devices.

D. Attach panels and pilasters to brackets. Locate head rail joints at pilaster center lines.

E. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.03 TOLERANCES

A. Maximum Variation From True Position: 1/4 inch (6mm).

B. Maximum Variation From Plumb: 1/8 inch (3mm).

3.04 ADJUSTING

A. Adjust and align hardware to uniform clearance at vertical edge of doors, not exceeding 3/16 inch (5mm).

B. Adjust hinges to position doors in partial opening position when unlatched. Return out-swinging doors to closed position.

C. Adjust adjacent components for consistency of line or plane.

END OF SECTION

SECTION 11 6843
SCOREBOARD

SECTION INCLUDES

1.01 SCOREBOARD

A. SINGLE-SIDED LED VIDEO SCOREBOARDS

B.

1. REFERENCES
   a. Standard for Electric Signs, UL 48
   b. Standard for Control Centers for Changing Message Type Signs, UL-1433, 4th Edition
   c. Standard for CSA C22.2 #207
   d. Federal Communications Commission Regulation Part 15
   e. National Electric Code
2. SUBMITTALS
   a. Product data: Submit manufacturer's product illustrations, data and literature that fully describe the scoreboards and accessories proposed for installation.
   b. Shop drawings: Submit mechanical and electrical drawings, mounting information and elevation for locations.
   c. Maintenance data: Submit manufacturer's installation, operation, and maintenance manuals.
3. DELIVERY, STORAGE, AND HANDLING
   a. Product delivered on site
   b. Scoreboard and equipment to be housed in a clean, dry environment
4. PROJECT CONDITIONS
   a. Environmental limitations: Do not install scoreboard equipment until mounting structure is secure and concrete has ample time to cure.
   b. Field measurements: Verify position and elevation of structure and its layout for scoreboard equipment. Verify dimensions by field measurements.
   c. Verify mounting structure is capable of supporting the scoreboard's weight and windload in addition to the auxiliary equipment.
   d. Installation may proceed within acceptable weather conditions.
5. QUALITY ASSURANCE
   a. For Indoor use.
   b. Source Limitations: Obtain each type of scoring or related equipment through one source from a single manufacturer.
   c. ETL listed to UL 48 and 1433
   d. NEC compliant
   e. FCC compliant
   f. CE compliant
   g. EU EMC Directives 55022/55024/61000 compliant
   h. ETLC listed to CSA 22.2 #207
6. WARRANTY
   a. Provide 5 years of no cost parts exchange including standard shipping on electronics parts and radios due to manufacturing defects
   b. Provide toll-free service coordination
   c. Provide technical phone support during Daktronics business hours

1.02 PRODUCT

A. MANUFACTURER
   1. Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128
   2. Nevco

B. Communication type
   1. Fiber Optic (50/125 µm multi-mode)

C. PRODUCTS
1. Basketball/volleyball/wrestling: Daktronics LVN-2010 3.9mm. Scoreboard can also score any sport requiring a clock, score and period function. Displays show live and recorded video clips, real-time scores/stats, animations, graphics, and text messages. Modules feature SMD (3-in-1) LED packages with 3.9mm row and column spacing to provide wider viewing angles and extremely close viewing distances Display video with sound and sync with projector system both video and sound.

D. SCOREBOARD Display
1. **Display General information Basketball/volleyball**
   a. Dimensions: 6'-10" high, 11'-9" wide, 0'-7" deep
   b. Base weight: 500lb – options may increase weight
   c. Base power requirement: 4800 W – options may increase wattage
   d. Color: Black, choose from manufacturer's standard paint selections
2. Construction
   a. aluminum and steel construction
   b. Service access from front
   c. Cabinet withstands high-velocity impact from air-filled sports balls without the need for protective screens
3. Digits & Indicators
   a. LED color:
      1) Color Capacity: 16 bit (281 trillion colors)
      2) LED Refresh Rate: 3840 Hz as defined by the number of times per second the LED image is repainted in intensity
      3) Display has signal redundancy allowing for signal path both forward and backwards through panels allowing for loss of only 1 panel vs. rows or blocks of multiple panels in case of failure.
   b. Viewing Characteristics:
      1) Calibrated Intensity: 1500 nits
      2) Brightness Control: 256 levels (manual, scheduled or automatic)
      3) Suggested Viewing Angle: 140° horizontal and +60°/-80° vertical
   c. Pixel Characteristics
      1) Each pixel consists of one RGB 3-in-1 surface-mount device LED.
      2) Pixel spacing measurement must be measured from the center points of neighboring physical pixels, rather than neighboring physical and virtual pixels.
   d. LED Module Characteristics
      1) Module shall be for indoor use.
      2) Module shall have anti-reflective paint or coating applied to display face. Black state across all modules shall exhibit a Delta E color variation of no more than .4.
      3) Modules shall have horizontal louvers running between LEDs or pixels.
      4) Modules shall be able to be removed and installed from the front of the display.
      5) It is not necessary to remove or insert screws in order to remove or install modules.
   e. Video Processing
      1) Video Frame Rate: 50/60 frames per second
      2) Graphic Frame Rate: 30 frames per second
      3) Processing Architecture: 22 bit (distributed)
      4) System Architecture: 100% digital
      5) Video Enhancement: Color space conversion, adjustable gamma correction, proprietary sharpening technology and enhancement algorithms for optimal picture quality
   f. LED Quality
      1) Quality Control: Sorted by intensity and color wavelength

2) LED Lifetime: 100,000 hours of operation as defined by time at which display intensity has decreased to 50 percent of the original intensity

g. Calibration
   1) Pixel-to-pixel and module-to-module optical color calibration must be performed at the factory. The manufacturer must also provide easy-to-use calibration software that allows individual modules and pixels to be independently adjusted while in the display.
   2) If modules should need replacement during the life of the display, the calibration software must match newer modules' brightness levels to older modules' levels to preserve picture quality and maintain a uniform display appearance.

h. Display Interface
   1) The full-color video display must be able to interface and display real-time data from the control system without the need for a duplicate or redundant input.

E. 1 VIDEO INPUT CONTROL SYSTEM
1. Equipment Rack
   a. 1. Dimensions: 25.75" (654 mm) H x 19.25" (489 mm) W x 26" (660 mm) D; 14RU
   b. 2. A larger rack may be required based on additional optional equipment.
2. Media Player
   a. Provide a Digital Media Player (DMP).
   b. Resolution: Up to 1080p 59.94
   c. Video Input: HDMI up to 1080p 59.94
   d. Video Output: DisplayPort to Daktronics Display Interface
   e. Audio Output: balanced 3-pin XLR
   f. Memory: 16 GB DDR4
   g. Storage: 1 TB
   h. Networking: 10/100/1000 Ethernet (RJ-45 LAN) @1
   i. Dimensions: Half-width 1RU; 1.75" (44.5 mm) H x 8.75" (222 mm) W x 12" (305 mm)
3. Display Interface
   a. Provide a Display Interface (DI).
   b. Video Input: DisplayPort from Daktronics DMP
   c. Video Output: Daktronics ProLink® 6 (fiber optic) @4
   d. Storage: 32GB mSATA, SLC
   e. Networking: 10/100/1000 Ethernet (RJ-45 LAN) @1
   f. Dimensions: Half-width 2RU; 3.4" (86 mm) H x 8.7" (221 mm) W x 12.5" (318 mm) D
4. Network Router - 1 Gigabit

F. CONTROL COMPUTER
1. Laptop
   a. Operating System: Windows® 11 Pro
   b. Processor: Intel® Core™ i5
   c. Memory: 16 GB RAM
   d. Hard Drive: 500 GB
   e. Form Factor: Dell Latitude 5510
   f. Laptop may be removed from the control location so content can be created and modified elsewhere. When the laptop is reconnected to the rack, updated content is synced in a matter of minutes.
2. CONTROL SOFTWARE
   a. Manufacturer must provide a Windows® 11 based computer with the control software loaded, configured, and ready to control display at startup.
   b. Must be developed by the manufacturer of the Display, Media Player, and Video Processor.
   c. The display's control software must provide simple, user-friendly features for creating, editing, scheduling, running and deleting messages.
   d. Display Software features:

1) Direct control of an infinite number of displays located on a network
2) Simultaneous display and edit capability
3) Content playlists with loop, shuffle, random and next play functionality
4) Thumbnail preview of content clips
5) Onscreen display monitor
6) Unlimited, color-coded buttons with adjustable sizes
7) Multiple operator workspaces
8) Support input devices such as a mouse, keyboard, touch screen, and dual monitor
9) Icon and pull-down menu programming features
10) Help screens

e. Content Editor Software features:
1) Display of TrueType fonts and other Windows® compatible character fonts
2) Inline text editing
3) Outlined, Drop shadowed, Bold, Italic, and Underlined text modes
4) Ability to copy and paste text from most Windows applications
5) Import common image and animation formats, including BMP, JPEG and AVI
6) Content preview
7) Content layering
8) Real-time data (RTD) integration allows operators to create messages with information that automatically updates without user intervention. Such data may include scores, game time, player/team statistics, time-of-day, date or temperature.
9) Profanity protection and Spell Check
10) Multiple transition effects for entry, hold and exit

3. SCORING CONTROL SOFTWARE
a. Modern interface allows control via provided laptop and/or touchscreen tablet.
b. Score the following sports:
1) Basketball
2) Practice Mode
3) Volleyball
4) Wrestling

c. Create team profiles, rosters, and matchups ahead of game time.
d. Assign common or custom rule profiles to fit the level of play.
e. Seamlessly switch between scoring the game and changing display content with Display Software Hot Buttons:
1) Manually play content directly from the Scoring Control Software.
2) Automatically play content via game triggers, such as when a team scores.

f. Multiple data outputs send Real-Time Data (RTD) to video displays and control fixed-digit numeric scoreboards.
g. Create custom color schemes for different teams/operators.
h. Support for tactile start/stop switches ensures precise timing during critical moments.
i. Battery backup activates when power is lost.

1.03 EXECUTION

A. EXAMINATION
1. Verify that mounting structure is ready to receive scoreboard. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings. Verify concrete has cured adequately according to specifications.

B. INSTALLATION
1. All power and control cables to scoreboards and displays will be routed in conduit. Power to the scoreboards/displays as well as raceways shown on electrical plans by the

Electrical Contractor. Scoreboard control wiring including conduit will be the responsibility of the contractor assigned the scoreboard equipment.

2. Power conduit, cables and outlet boxes to be provided and installed by the electrical contractor. Signal raceways, conduit and boxes to be provided by the electrical contractor. Electrical contractor is responsible for pulling signal wire and terminators between each display and control location. Display vendor to terminate signal wire of controller and conduit to display.
3. Install scoreboards and exterior displays to beams in location detailed and in accordance with manufacturer's instructions. Verify unit is plumb and level.

C. INSTALLATION—CONTROL CENTER

1. Provide boxes, cover plates and jacks as required to meet control specification requirements. Control cables to control panels shall be concealed.
2. Provide boxes, cover plates and jacks in locations per plans.
3. Conduct operator training on the scoreboard/controller operation.
4. Test connect control unit to all jacks and check for proper operation of control unit, scoreboard and all features. Leave control unit in carrying case and other loose accessories with owner's designated representative.
5. Verify earth ground does not exceed 15 ohms.
6. Manufacturer must supply all required signal conversion hardware to allow for direct wire control of electronic display.

END OF SECTION