



Council Business Meeting

April 16, 2024

Agenda Item	Contract for 2024 Briscoe Floor Replacement & Grant Budget Review	
From	Michael Jay Scott Fleury PE	Senior Project Manager Public Works Director
Contact	Michael.jay@ashland.or.us Scott.fleury@ashland.or.us	
Item Type	Requested by Council <input type="checkbox"/> Update <input type="checkbox"/> Request for Direction <input checked="" type="checkbox"/> Presentation <input type="checkbox"/>	

SUMMARY

Before the Council acting as the local contract review board, is a request for review and approval of a public improvement contract with Vitus Construction to abate existing asbestos containing floor tile and install new vinyl composite and carpet tiles at Briscoe Elementary School. The local contract review board is meant to ensure the proper procedures were used in the solicitation and contracting process.

The City of Ashland received one complete bid from Vitus Construction providing a low bid of \$180,990. The project budget is approved and comes from a \$1.3 million dollar State of Oregon Grant for facility improvements (HB5203).

POLICIES, PLANS & GOALS SUPPORTED

City Council Goals, Visions and Values:

- Community affordability, including available housing and childcare
- Public Safety
- Quality infrastructure and facilities through timely maintenance and community investment

Department Goals:

- Maintain existing infrastructure to meet regulatory requirements and minimize life cycle costs.
- Deliver timely life cycle capital improvement projects.
- Maintain and improve infrastructure that enhances the economic vitality of the community.

PREVIOUS COUNCIL ACTION

The Council has taken numerous actions regarding improvements to Briscoe School including acceptance of a \$1.3 million dollar grant for improvements and most recently approval of a roof replacement construction contract ([Staff Report](#)).





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BACKGROUND AND ADDITIONAL INFORMATION

The Briscoe school was built circa 1950 with materials and equipment typical of that time, which included the use of asbestos containing material and a central boiler fed heating system with no cooling. The school was operated by the Ashland School District until the early 2000's when it was leased to the Oregon Childhood Development Coalition (OCDC). In 2018 the City of Ashland purchased the school from the Ashland School District and assumed ownership of the lease. The City most recently extended OCDCs lease in August of 2022 to June 30, 2025 with one three (3) year extension available if requested.

The City of Ashland received a grant of \$1.3 million from the State of Oregon in 2022 to support facility improvements to Briscoe School. The facility improvements were meant to make the structure safer for OCDC use and allow OCDC to fundraise and finance additional improvements for their operations.

The grant was developed to support the following (reference fact sheet, attachment #5)

1. Roof Replacement
 - a. Contract awarded by Council
2. Floor Replacement
 - a. Under consideration by Council
3. Asbestos mitigation
 - a. Part of floor and roof construction contracts
4. Heating, ventilation and air conditioning improvements (preliminary engineering analysis complete, pending next steps)
 - a. Next steps for HVAC system updates would be to engage an engineering firm to develop the plans/specifications/estimates for the construction phase along with coordinating with the Electrical Department for estimating electrical infrastructure improvements within the right of way to accommodate the additional electrical loading required for the HVAC system upgrades.

With Council previously approving the roof replacement contract, staff moved next to the flooring replacement phase and developed an Invitation to Bid (ITB). Staff also engaged an engineering firm to review the existing HVAC systems for the facility and provide general recommendations for improvements.

Briscoe Flooring ITB Procedure:

The ITB for the Briscoe Flooring Replacement Project was posted on OregonBuys, Oregon's procurement network on January 19, 2024. Notice was given in the Daily Journal of Commerce and placed on the City's website the following day. Bids were received on February 13, 2024, with



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one contractor submitting a complete bid. The bid was deemed responsive and contained the required bonds, documentation and acknowledgements. Bidding information is shown in the attached bid (Attachment #1).

Public and non-profit private schools have distinct regulatory requirements to protect school children and school employees from asbestos exposure.

The Asbestos Hazard Emergency Response Act (AHERA) and its regulations require public school districts and non-profit schools including charter schools and schools affiliated with religious institutions to:

- Inspect their schools for asbestos-containing building materials.
- Prepare management plans and to take action to prevent or reduce asbestos hazards

Project Description:

Remove and properly dispose of asbestos containing floor material by an asbestos abatement contractor licensed in the State of Oregon. Following existing floor removal, install new vinyl composite & carpet tile per drawings. . The original intent of the project was to remove and replace all flooring at the school. However it became clear that the entire scope of work could not be accomplished in the summer time window during which OCDC could accommodate the work. This resulted in the project being split into two phases as shown on Attachment #2 - Drawings.

Staff has already begun coordination between the contractor and OCDC to minimize the impact to OCDCs operation for the flooring replacement project. There is limited downtime in OCDCs operations and the draft schedule reflects OCDCs ability to perform work required of them in order to facilitate the construction phase of the project, see below.

Flooring Work Draft Schedule:

Schedule	Responsible Party	Activity
July 1st - July 10th	OCDC	Move Classrooms, office space, library, miscellaneous rooms
July 1st - July 10th	Contractor	Move kitchen, remove bathroom partitions/toilets
July 11th - August 5th	Abatement Contractor	Remove all phase 1 flooring
August 6th - September 4th	Flooring Contractor	Install all phase 1 flooring
September 5th - 13th	OCDC	Move back in
September 5th - 13th	Contractor	Move kitchen and restrooms back





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FISCAL IMPACTS

The City was awarded a \$1.3 million dollar grant to cover costs associated with roof replacement, flooring replacement, asbestos mitigation and potential heating, ventilation and air conditioning improvements.

The current budget of expenditures and encumbrances is shown below in table 1.

Table 1:

Contractors(Activities)	Briscoe Expenditures and Encumbrances
Hoag Roofing (Roof Replacement)	\$560,089
Coleman Creek Consulting (Asbestos Analysis)	\$3,944
Vitus Construction (Flooring/Asbestos)	\$180,990*
Marques (HVAC Analysis)	\$10,950
Tru North Construction (Temporary Roof Repairs)	\$52,011
Solicitation Advertisements	\$666
City Building Permit	\$3,515
Budget	\$1,300,000
Remaining Budget	\$ 487,835

Cost Estimates - HVAC Improvements (pending next steps) \$

*Note under consideration for award

The current expenditures and encumbrances leave approximately \$487k for phase 2 of the flooring project and potential HVAC improvements. Staff estimates that the phase 2 flooring cost will be similar to phase 1 as there is less square footage area to mitigate/replace, but more furniture/systems to remove and put back after construction.





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DISCUSSION QUESTIONS

- Does the Council have any questions about the Briscoe Flooring Replacement?
- Does the Council have any questions about future Briscoe improvements or grant expenditures?
- Does the Council wish to direct staff to do any additional work associated with Briscoe improvements?

SUGGESTED NEXT STEPS

Next steps include issuing a notice to proceed after award of contract and coordinating the schedule of work activities with Vitus Construction.

Staff will continue to work with the City's Communication Officer about posting appropriate information on the City's website and coordinating construction impacts with OCDDC.

ACTIONS, OPTIONS & POTENTIAL MOTIONS

- I move to award a public improvement contract to Vitus Construction for Project No. 2019-27 Briscoe Flooring Replacement in the amount of \$180,990.00.
- I move to direct staff to perform a new solicitation.
- I move to take no action.

REFERENCES & ATTACHMENTS

Attachment #1 – Vitus Construction Bid

Attachment #2 – Drawings

Attachment #3 – Colman Creek Asbestos Analysis

Attachment #4 – HB5203 Fact Sheet

Attachment #5 – OCDDC Letter of Support

Attachment #6 – Marques Assessment Report (HVAC Upgrades)



BID AND BID SCHEDULE

NAME OF BIDDER Vitus Construction, Inc

CONTACT Corey Vitus

ADDRESS PO Box 1097

CITY Gold Hill **STATE** Oregon **ZIP** 97525

TELEPHONE NO. 541-855-7177

FAX NO. 541-855-7520

EMAIL ADDRESS corey@vitusconstruction.com

To the Honorable Mayor and City Council
City Hall
City of Ashland
20 East Main Street
Ashland, Oregon 97520

In response to the City of Ashland's Invitation to Bid, this Bid is submitted as an offer by the undersigned to enter into a contract with the City of Ashland for furnishing all permits, labor, tools, machinery, materials, transportation, equipment and services of all kinds required for, necessary for, or reasonable incidental to, the completion of all the work in connection with the Briscoe School Floor Replacement Project No 2019-27b (hereinafter "Project") for the City of Ashland, Oregon, as described in the contract documents, including the general conditions, all applicable special conditions, plans, specifications or any supplemental documents. This offer is subject to the following declarations as to the acts, intentions and understandings of the undersigned and the agreement of the City of Ashland to the terms and prices herein submitted.

1. The undersigned has familiarized itself with the nature and extent of the Contract Documents, the project work, the site, the locality, the general nature of work to be performed by the City or others at the site that relates to the project work required by the Contract Documents, local conditions, and federal, state, and local Laws and Regulations that in any manner may affect cost, progress, performance, or furnishing of the project work.
2. The undersigned has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) examinations, investigation, exploration, tests, and studies which pertain to the conditions (subsurface or physical) at or contiguous to the site (including without limitation utility interference) or otherwise and which may affect the cost, progress, performance, or furnishing of the project work as Contractor deems necessary for the performance and furnishing of the project work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract Documents; and no additional or supplementary examinations, investigations, explorations, tests, reports, or similar information or data are or will be required by Contractor for such purposes.

FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

INSTRUCTIONS

Instructions for Submitting Form

Submit the First-Tier Subcontractor Disclosure form in any of the following manners:

- Not later than two working hours after the time set for opening Bids. (For example, before 11:00 a.m. after a 9:00 a.m. Bid Opening.) Submit according to one of the following methods:
- Print the form from the Bid Booklet, fill it in, and:
 - Deliver to the following address where it can be time and date stamped

City of Ashland
c/o Michael Jay
Community Development and Engineering Services Building
51 Winburn Way
Ashland, OR 97520, or

Instructions for First-Tier Subcontractor Disclosure

The City estimates that this project will exceed \$100,000. As such, Bidders are required to disclose information about first-tier subcontractors that will furnish labor or labor and materials (See ORS 279C.370) if the contract amount of a first-tier subcontractor is greater than or equal to: 1) 5% of the total bid or \$15,000, whichever is greater or 2) \$350,000, regardless of the percentage of the total project Bid.

- The name of the subcontractor
- The category of work that the subcontractor will be performing
- The dollar amount of the subcontract

If the Bidder will not be using any first-tier subcontractors as defined above, the Bidder is still required to submit the form, with the appropriate box checked or enter "NONE" on the first line.

THE AGENCY MUST REJECT BIDS if the Bidder fails to submit the disclosure form with this information by the stated deadline.

3. The undersigned has notified the City of any conflicts, errors, ambiguities or discrepancies discovered in the Contract Documents.
4. A mandatory pre-bid meeting will be held. The meeting will take place at 10:00 am on January 25th, 2024 at the Briscoe School. All statements made by the Contracting Agency's representatives shall be non-binding upon the Contracting Agency unless confirmed by written addendum.
5. It is understood that the City shall investigate and determine the qualifications of the apparent low responsive bidder prior to awarding the contract. The City shall reject any bid by a nonqualified or disqualified bidder. The City of Ashland reserves the right to reject for any good cause any or all bids, waive formalities, or to accept any bid which appears to serve the best interests of the City. The City reserves the right to reject any bid not in compliance with all prescribed public bidding procedures and requirements and may reject all bids for good cause upon a finding that it is in the public interest to do so. Evaluation of bids will be based on minimum requirements established by the specifications and compliance with conditions of the Notice to Contractors and Invitation to Bid, and compliance with City public contracting rules. Additional evaluation criteria are as follows: Demonstrated previous experience with a similar scope of work on three different projects. The list of past work experience shall be included with the bid submittal.
6. No additional pre-qualification is required. Please see requirements contained within paragraph 5 above.
7. The deadline to file a written protest or request, pursuant to the Instructions to Bidders to change contract terms, conditions or specifications is not less than ten (10) calendar days prior to bid opening. Bid closing may be extended by the City to consider a protest or request.
8. All of the contract documents, including all plans, specifications, and drawings have been examined and an examination of the site of the proposed work, together with such investigations as are necessary to determine the conditions to be encountered have been made by the undersigned and the terms and conditions of the contract and solicitation documents are hereby accepted, and that if this Offer is accepted, the undersigned will contract with the City of Ashland, Oregon, in a form substantially similar to the attached Agreement and agree to be bound to the terms and conditions of said contract and solicitation documents.
9. It is understood that the contract drawings may be supplemented by additional drawings and specifications in explanation and elaboration thereof and, if they are not in conflict with those referred to in paragraph 1 above, they shall have the same force and effect as though they were attached, and they shall be accepted as part of the contract when issued.
10. The undersigned agrees that upon written acceptance of this bid s/he will, within ten working days, of receipt of such notice, execute a formal contract agreement with the City. The undersigned further agrees that s/he will provide the following in order to execute the contract:
 - Performance Bond and Corporate Surety Payment Bond, both in the amount equal to 100% of the awarded contract;
 - Certificates of Insurance for Liability and property damage coverage;
 - Certificates of Coverage for Workman Compensation and unemployment insurance;
 - All other bonds, permits, licenses, information, etc. as required in the contract documents.
11. It is understood that all the work will be performed under a lump sum or unit price basis and that for the lump sum or unit price all services, materials, labor, equipment, and all work necessary to complete the project in accordance with the plans and specifications shall be furnished for the said lump sum or unit price named. It is understood that the quantities stated in connection with the price schedule for the

contract are approximate only and payment shall be made at the unit prices named for the actual quantities incorporated in the completed work. If there shall be an increase in the amount of work covered by the lump sum price, it shall be computed on a basis of "extra work" for which an increase in payment will have been earned and if there be a decrease in the lump sum payment, it shall be made only as a result of negotiation between the undersigned and the Owner. Furthermore, it is understood that any estimate with respect to time, materials, equipment, or service which may appear on the plans or in the specifications is for the sole purpose of assisting the undersigned in checking the undersigned's own independent calculations and that at no time shall the undersigned attempt to hold the Owner, the Engineer, or any other person, firm or corporation responsible for any errors or omissions that may appear in any estimate.

12. The undersigned submits the unit prices as those at which s/he will perform the work involved. The extensions of the column headed "ITEM TOTAL" are made for the sole purpose of facilitating bid comparisons and if there are any discrepancies between the unit prices and the total amount shown, the unit prices shall govern.
13. The undersigned agrees to furnish labor, tools, machinery, materials, transportations, equipment and services of all kinds required for, necessary for, or reasonably incidental to, construction of this Project with all appurtenant work as required by the plans and specifications of this Offer for the unit or lump sum prices in the "BID SCHEDULE".
14. In stating prices, it is understood that the prices include all materials and work required to complete the project in accordance with the Contract Documents, the plans and the specifications. If any material, item, or service required by the plans and specifications has not been mentioned specifically in the "BID SCHEDULE," the same shall be furnished and placed with the understanding that the full cost to the City has been merged with the several prices stated in the "BID SCHEDULE."
15. The City reserves the right to cancel this solicitation or to reject any and all bids in whole or in part when the cancellation or rejection is in the best interests of the City as determined by the City in accordance with ORS 279B.100
16. The foregoing prices shall include all labor, materials, equipment, overhead, profit, insurance, and all other incidental expenses to cover the finished work of the several kinds called for.
17. If the proposed bid price will exceed \$50,000.00 the undersigned, as bidder, acknowledges that provisions of ORS 279C.800 to 279C.870 relating to workers on public works to be paid not less than prevailing rate of wage shall be included in the contract, or in the alternative, if the project is to be funded with federal funds and is subject to the Davis-Bacon Act (40 U.S.C. §276a) bidder agrees to comply with the Davis-Bacon Act requirements. "Prevailing Wage Rates for Public Works Contracts in Oregon," which are incorporated herein by reference, and can be accessed at: https://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx. The undersigned Contractor agrees to be bound by and will comply with the provisions of ORS 279C.838, 279C.840 or 40 U.S.C. 3141 to 3148. [OAR 137-049-0200(1)(a)(J)]. Bidder shall include the cost of all filing fees within the bid, a separate payment will not be made.
18. The undersigned shall furnish bonds required by the specifications and comply with the laws of the Federal Government, State of Oregon and the City of Ashland which are pertinent to construction contracts of this nature even though such laws may not have been quoted or referred to in the specifications.
19. Accompanying this Offer is a certified check, cashier's check or a bid bond, for the sum of \$18,099.00, payable to the City of Ashland, Oregon, this being an amount for ten percent (10%) of the total bid based upon the estimate of quantities at the above price according to the conditions

of the advertisement. If this Offer is accepted by the City and the undersigned fails to execute a satisfactory contract and bonds as stated in the Advertisement within ten (10) working days from the date of notification, then the City may, at its option, determine that the undersigned has abandoned the contract and there upon this Offer shall be considered null and void, and the bid security accompanying this Offer shall be forfeited to and become the property of the City of Ashland. If the bid is not accepted, the bid security accompanying this Offer shall be returned to the undersigned.

20. The undersigned certifies that the undersigned Contractor is not ineligible to receive a contract for a public work pursuant to ORS 279C.860 as well as the disqualification provisions of ORS 279C.440 and OAR 137-049-0370. Bidder further agrees, if awarded a contract, that every subcontractor will be eligible to receive a contract for a public work pursuant to ORS 279C.860.
21. The undersigned certifies that the undersigned Contractor has not discriminated against minority, women or emerging small businesses enterprises in obtaining any required subcontracts. The bidder understands and acknowledges that it may be disqualified from bidding on this public improvement project as set forth in OAR 137-049-0370, including but not limited to City discovery a misrepresentation or sham regarding a subcontract or that the Bidder has violated any requirement of ORS 279A.110 or the administrative rules implementing the Statute.
22. The undersigned agrees that the time of completion shall be defined in the special provisions, and further, the undersigned agrees to initiate and complete this Project by the date stated below.
 - The work shall commence in a timely fashion to meet project completion dates once the Notice to Proceed is issued.
 - The work shall be completed in all respects by September 13th 2024.
 - The undersigned agrees that the "Time of Completion" shall be as defined in the special provisions and that the bidder will complete the work by the date stated for each schedule after "Notice to Proceed" has been issued by the Owner. Bidder furthermore agrees to pay as liquidated damages, for each calendar day thereafter, the amounts shown in the Special Provisions, for each day the project remains incomplete.
23. The undersigned bidder is registered with the Oregon Construction Contractors Board (CCB), the registration is current and valid, and the bidder's registration number is stated below. [OAR 137-049-0230(1)] Bidder understands that failure to have a current CCB license shall result in rejection of this bid.
24. The undersigned bidder is licensed by the State Landscape Contractors Board, *if applicable*, the license is current and valid, and the bidder's registration number is stated below. [OAR 137-049-0200(1)(a)(K)] Bidder understands that failure to have a current LCB license shall result in rejection of this bid.
25. The undersigned is aware that no person may engage in any business within the City without first obtaining a City Business License and paying the fee prescribed pursuant to City of Ashland ordinance. The Contractor and their subcontractors shall obtain a City of Ashland Business License prior to beginning any work within the City of Ashland.
26. In determining the lowest responsible bidder, City shall, for the purpose of awarding the contract, add a percent increase on the bid of a non-resident bidder equal to the percent, if any, of the preference given to that bidder in the state in which the bidder resides. "Resident bidder" of Oregon means a bidder that has paid unemployment taxes or income taxes in this state during the 12 calendar months immediately preceding submission of the bid, has a business address in this state and has stated in the bid that the bidder is a "resident bidder" of the State of Oregon. The undersigned represents him/her self in this bid to be either a Resident or a Nonresident bidder by completing the appropriate blank below.

- The Bidder is or is not a Resident Bidder as defined in ORS 279A.120.
27. The undersigned hereby represents that no Councilor, Commissioner, officer, agency or employee of the City of Ashland is personally interested directly or indirectly in this Contract or the compensation to be paid hereunder and that no representation, statement or statements, oral or in writing, of the City, its Councilors, Commissioners, officers, agents or employees had induced him/her to enter into this Contract, and the papers made a part of its terms;
 28. The undersigned has not directly or indirectly induced or solicited any person to submit a false or sham bid or refrain from bidding. The undersigned certifies that this bid has been arrived at independently and submitted without connection with any person, firm or corporation making a bid for the same material and is, in all respects, fair and without collusion or fraud.
 29. The undersigned confirms that this firm has a Qualified Drug Testing Program for employees in place and will demonstrate this prior to award of contract. [OAR 137-049-0200(1)(c)(B)]
 30. The undersigned confirms that if this contract involves asbestos abatement or removal, the bidder is licensed under ORS 468A.710 for asbestos removal.
 31. The City of Ashland may waive minor informalities, reject any bid not in compliance with all prescribed public bidding procedures and requirements, and may reject for good cause any or all bids upon a finding that it is in the public interest to do so.
 32. The undersigned confirms that this offer is not contingent upon City's acceptance of any terms and conditions other than those contained in this Solicitation and the Contract Documents.
 33. The undersigned, by the act of submitting a bid, affirms that the undersigned has investigated and is satisfied as to the site subsurface condition to be encountered, as to the character, quality and quantities of work to be performed and materials to be furnished, and as to the requirements of the Contract.
 34. The bidder understands that the City reserves the right to make changes to the Notice to Contractors / Invitation to Bid and the resulting contract by written addenda up to 5 days prior to the closing time and date. Addenda will be posted to the OregonBuys website for download. The bidder must check the OregonBuys website frequently until closing.

The bidder acknowledges that the Addendum(s) listed below have been reviewed online or a copy obtained and considered as part of the submittal of this Offer and Bid Schedule.

ADDENDUM NUMBER 1 THROUGH 1 HAVE BEEN REVIEWED

35. The bidder understands that the City will be awarding the contract to the Responsible Bidder with the lowest Responsive Bid per OAR 137-049-0200(1)(b)(C). Whether a bidder is responsible will be determined by ORS 279C.375 and the City's completion of the attached Bidder Responsibility Determination Form (Exhibit K).
36. Bidder understands that the price provided by Bidder shall be based on the presumption that Contractor will provide material as described in the Special Provisions. Assumptions regarding the possibility of post-bid approvals of "or-equal" substitutions are made at Bidders sole risk.
37. Instructions for First-Tier Subcontractors Disclosure.
Bidders are required to disclose information about certain first-tier subcontractors (those subcontractors contracting directly with the bidder) when the contract price exceeds \$100,000 (see ORS 279C.370).

Specifically, when the contract amount of a first-tier subcontractor is greater than or equal to: (i) 5% of the project bid, but at least \$15,000, or (ii) \$350,000 regardless of the percentage, bidder must disclose the following information about that subcontract within two working hours of bid closing:

- The subcontractor's name and address;
- The subcontractor's Construction Contractor Board registration number, if one is required, and;
- The subcontract dollar value.

If you will not be using any subcontractors that are subject to the above disclosure requirements, you are required to indicate "NONE" on the form.

THE CITY WILL REJECT A BID IF THE BIDDER FAILS TO SUBMIT A PROPERLY COMPLETED DISCLOSURE FORM WITHIN TWO HOURS OF BID CLOSING.

THIS DOCUMENT SHALL NOT BE FAXED. IT IS THE RESPONSIBILITY OF BIDDERS TO SUBMIT THIS DISCLOSURE FORM AND ANY ADDITIONAL SHEETS BY THE DEADLINE.

The disclosure should be submitted on the First-Tier Subcontractor Disclosure Form attached to this Invitation to Bid.

38. Bidder Information and Signature

Vitus Construction, Inc
Firm Name of Bidder


Signature of Bidder

Corey E. Vitus
Printed Name of Bidder

President
Official Title

Oregon
State of Incorporation

63643
CCB Number

Dated this 13 day of February 2024.

Name of Bidder Vitus Construction, Inc

Address PO Box 1097, Gold Hill, Oregon 97525

Telephone No. 541-855-7177

BID SCHEDULE

No.	Description	Bid Unit	Qty	Unit Price \$/Unit	Line Total \$
1	Removal and disposal of existing flooring systems by a licensed asbestos abatement contractor (to include coving)	Sq Ft	10000	\$5.87	\$58,700.00
2	Repair of subfloor as required to support new flooring	Sq Ft	100	\$37.24	\$3,724.00
3	Installation of vinyl composition tile (VCT)	Sq Ft	6000	\$6.31	\$37,860.00
4	Installation of sheet vinyl	Sq Ft	900	\$17.14	\$15,426.00
5	Installation of carpet	Sq Ft	4000	\$16.32	\$65,280.00

BID TOTAL

\$180,990.00

Corey E. Vitus

One hundred eighty thousand nine hundred ninety and 00/100 dollars.

Name of Authorized Representative

Total Written in Dollars



2/13/2024

Authorized Representative Signature

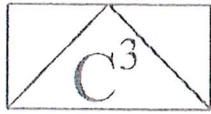
Date

NO.	REVISIONS

Phase 1
Phase 2



11.1.18 - PHASE 2 ONLY - IMPROVEMENTS



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

GREEN 9" FLOOR TILE & BLACK MASTIC



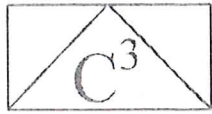
BULK SAMPLE ANALYSIS RESULTS

Sample # - Sample Location - % Asbestos / Type

Sample # 08-260A.3 – Health Room Office – <1% Chrysotile (Tile) 4% Chrysotile (Mastic)
 Sample # 08-260A.33 – Main Hall, Perimeter – 3% Chrysotile (Tile) 3% Chrysotile (Mastic)
 Sample # 08-260A.53 – SE Hall at Room 1 – 2% Chrysotile (Tile)

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Green 9" Floor Tile & Black Mastic	HSA-1	FS-2	Throughout the school in halls classrooms, offices, and restrooms. Majority of areas in the SE portion are under carpet	X

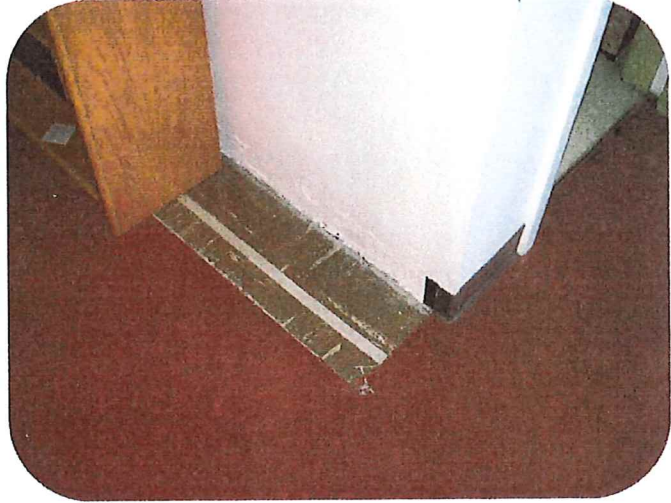
- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

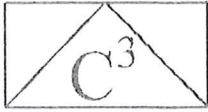
BROWN 9" FLOOR TILE & BLACK MASTIC



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
 Sample # 08-260A.9 – Room 7 – <1% Chrysotile (Tile) 4% Chrysotile (Mastic)

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Brown 9" Floor Tile & Black Mastic	HSA-1	FS-2	Main office	X

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

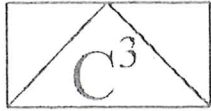
ORANGE VINYL FLOORING



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
 Sample # 08-260A.17 – Staff Break Room – 30% Chrysotile

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Orange Vinyl Flooring	HSA-1	FS-2	Staff Break Room	5

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

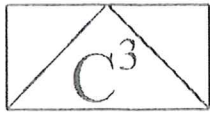
WHITE VINYL FLOORING



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
Sample # 08-260A.18 – Girl’s Restroom – 30% Chrysotile

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
White Vinyl Flooring	HSA-1	FS-2	Boy’s & Girl’s Restroom in Main Hall	5

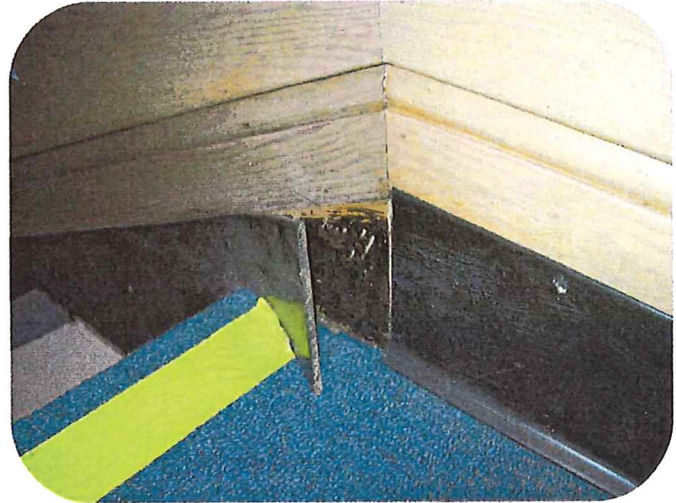
- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
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 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

BROWN COVE BASE MASTIC



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
 Sample # 08-260A.19 – Main Hall at Boy’s Restroom – 2% Chrysotile

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Brown Cove Base Mastic	HSA-1	FS-2	Throughout Building	5

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material

BRISCOE SCHOOL REHABILITATION PROJECT

Built in 1948 and located within a National Register of Historic Places district, Briscoe School in Ashland was in continuous operation as a public elementary school until 2004. Since 2003, the school building has been leased to the non-profit Oregon Child Development Coalition (OCDC). The City of Ashland purchased the property in 2018 from Ashland Public Schools and continues to lease the building to OCDC.

The City is now considering selling the 36,000 square-foot building and the 3.79-acre property upon which it is located to OCDC, while retaining the playground area as a public park.

OCDC is a nonprofit established in 1971. Migrant farmworker children's needs for care during the day become incredibly difficult during Oregon's peak agricultural months. Originally incorporated under the name The Migrant Indian Coalition, the mission of the organization was to ensure access to early childhood care and education opportunities for Oregon's migrant farm workers. OCDC has evolved into one of the largest early childhood care and education service providers in Oregon and is the state's sixth largest nonprofit. Each year the OCDC serves over 4,000 children and families in need in 12 Oregon counties.



Briscoe School would continue to be used for its current purpose by OCDC. Currently serving 266 children, programs offered at the Briscoe School include:

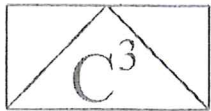
- **Migrant and Seasonal Head Start** - Comprehensive child development services to economically disadvantage children of families that work in agriculture.
- **Pre- Kindergarten** - Serves 3-5-year-old children from low-income families helping prepare young children for school.
- **Oregon Pre- Kindergarten Prenatal to Three** - Serves newborn to three-year-old children from low-income families develop skills they need to be successful in school.

Repairs & upgrades are necessary for OCDC to obtain financing and complete the purchase. Estimated funding for repair includes:

Roof Replacement	\$350,000
Floor Replacement	\$250,000
Asbestos abatement	\$200,000
Replace HVAC system	\$250,000 (*under review)

**TOTAL FUNDING NEEDED:
\$1,050,000- \$1,300,000**

**For information: Representative Pam Marsh - Rep.PamMarsh@oregonlegislature.gov
or Ashland City Manager Pro Tem Gary Milliman - gary.milliman@ashland.or.us.**



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

RED & GRAY 9" FLOOR TILE & BLACK MASTIC



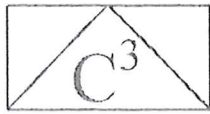
BULK SAMPLE ANALYSIS RESULTS

Sample # - Sample Location - % Asbestos / Type

Sample # 08-260A.23 – Classroom 8 (Under Carpet) – <1% Chrysotile (Tile)
 Sample # 08-260A.24 – Classroom 8 (Under Carpet) – 3% Chrysotile (Mastic)
 Sample # 08-260A.42 – Kitchen Storage Room – <1% Chrysotile (Tile) & 3% Chrysotile (Mastic)

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Red & Gray 9" Floor Tile & Black Mastic	HSA-1	FS-2	Classroom 8 & Kitchen Storage Room	X

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

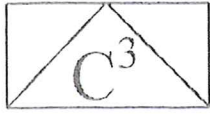
TAN 9" FLOOR TILE & BLACK MASTIC



BULK SAMPLE ANALYSIS RESULTS		
Sample # - Sample Location - % Asbestos / Type		
Sample # 08-260A.34	Kitchen Storage Room	<1% Chrysotile (Tile) & 3% Chrysotile (Mastic)
Sample # 08-260A.52	Kitchen Storage Room	2% Chrysotile (Tile)

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Tan 9" Floor Tile & Black Mastic	HSA-1	FS-2	Main Halls, Supply Room & Break Room	X

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

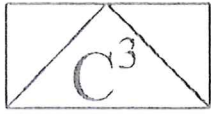
BROWN 12" FLOOR TILE



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
 Sample # 08-260A.44 – Classroom 6 at Sink – <1% Chrysotile

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Brown 12" Floor Tile	HSA-1	FS-2	Classroom 2, 5, 6 & Restrooms	X

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
 - 5 = ACBM with potential for damage
 - 6 = ACBM with potential for significant damage
 - 7 = Any remaining friable ACBM or friable suspect ACBM
 - X = Non-friable surfacing or miscellaneous material



BRISCOE ELEMENTARY SCHOOL

ASBESTOS CONTAINING MATERIAL SUMMARY SHEET

GREEN 12" FLOOR TILE



BULK SAMPLE ANALYSIS RESULTS
Sample # - Sample Location - % Asbestos / Type
Sample # 08-260A.48 – Classroom 4 at Sink – 2% Chrysotile

MATERIAL DESCRIPTION	HOMOGENEOUS SAMPLING AREA	FUNCTIONAL SPACE	MATERIAL LOCATIONS	AHERA CATEGORY
Green 12" Floor Tile	HSA-1	FS-2	Classroom 4	X

- AHERA Assessment Category:**
- 1 = Damaged or significantly damaged TSI ACBM
 - 2 = Damaged friable surfacing ACBM
 - 3 = Significantly damaged friable surfacing ACBM
 - 4 = Damaged or significantly damaged friable miscellaneous ACBM
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 - 7 = Any remaining friable ACBM or friable suspect ACBM
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Oregon Child Development Coalition

Cultivating our children's future

Administrative Central Office
9140 SW Pioneer Court, Suite E
P.O. Box 2780, Wilsonville, OR 97070
Tel: 503-570-1110 – Fax: 503-682-9426 www.ocdc.net

February 26, 2024

Mr. Michael Jay, Sr. Engineering Project Manager
City of Ashland, Public Works
51 Winburn Way
Ashland, OR 97520

Dear Mr. Jay:

Please accept this letter as OCDC's response to your email dated February 14, 2024 and as requested, OCDC's confirmation that your prioritized list of 2024 City Landlord Improvements and Repairs to the Briscoe School Facility property is appropriate operationally to the needs of OCDC as stated below in your email:

1. Roof Replacement.
2. Flooring Abatement & Replacement.
3. Boiler/HVAC.

Please let the City Manager and City Council know that OCDC who as tenant has been leasing the School Facility and operating its comprehensive child education and care program there for many years sincerely appreciates the City's efforts to finally and completely repair these three most important and serious hazardous/environmental/health and long deferred maintenance issues that potentially threaten the health and safety of its children and staff, which issues predate the City's ownership of the Facility.

Furthermore, even though we are hereby confirming the above list of repairs please let the City Council know that, as previously agreed, all three listed repairs are vital to the continued health and safety of the children and the community we serve as well as our dedicated staff.

To that end, please recommend and request that the City Council fully budget for and fund all three repairs for completion in 2024 in the above order of priority.

On behalf of children and the community, OCDC sincerely thanks you and the City Manager and City Council for completing these three repairs in 2024.

Best Regards,

A handwritten signature in blue ink that reads "Donalda Dodson".

Donalda Dodson, MPH, RN
Executive Director
Oregon Child Development Coalition



YOUR PROFESSIONAL ENGINEERING TEAM SINCE 1957

P 541-772-7115 F 541-779-4079 1120 EAST JACKSON PO BOX 490 MEDFORD, OR 97501
EMAIL: info@marquess.com WEB: www.marquess.com

LOWER WING AND GYM MECHANICAL SYSTEM ASSESMENT OF THE ASHLAND GEORGE A. BRISCOE SCHOOL



Table of Contents

1 Project Introduction	2
2 Lower Wing and GYM Mechanical System Evaluation.....	3
3 Mechanical System Conclusion.....	6
4 Mechanical System Upgrade Recommendations.....	9



RENEWS: DECEMBER 31, 2024

1 Project Introduction

The City of Ashland (COA) Public Works Department is centrally located in Ashland, OR in Jackson County. Briscoe Elementary School is located at 265 N Main Street in Ashland, OR. The COA has retained Marquess and Associates, Inc. to perform a mechanical system evaluation of Briscoe Elementary Schools lower wing and GYM. The purpose of this evaluation is to provide the COA with an objective, comprehensive analysis of the condition of the existing mechanical systems in the lower wing and GYM.

The Public Works Department is responsible for numerous facilities located in Ashland, OR in Jackson County. COA purchased the George A. Briscoe School in 2018. The facility is currently used by Oregon Child Development Coalition to house a preschool program. The purpose of the assessment is to determine the adequacy of the existing HVAC systems to provide conditioning and fresh air ventilation to the indoor occupied spaces. This evaluation was performed in accordance with the 2022 Oregon Mechanical Specialty Code (OSSC) and the latest Oregon Energy Specialty Code.

Scope of Work

The following scope of work was developed to meet the objectives outlined above.

Mechanical Systems Scope of Work Includes:

- Review original building construction drawings to determine existing mechanical systems and equipment.
- Perform walk through and gather information for each conditioning system serving the indoor space by space. The evaluation will include the heating and cooling capability, filtration ability, and check for compliance with current fresh air requirements, and make up air requirements.
- Investigate the gym air conditioning system and provide recommendations for replacement systems (to include ability to cool and filter air)
- Provide final engineering report outlining conditions of existing systems and make recommendations for effective steps to upgrade aging portions of system (window units would be an example) with a goal to most cost effectively heat and cool, provide filtration and reduce natural gas consumption (in that order).

2. Lower Wing and Gym Mechanical System Evaluation

The building's interior spaces are comprised of classrooms, restrooms, offices, and a gym. They are currently cooled and heated using a combination of small residential style window packaged units and separate hot water plate-fin heat exchanger, see **Figure 1** for room layout and equipment locations. There are QTY. (13) packaged cooling only window units, QTY. (17) floor mounted radiant heaters, QTY. (1) ceiling mounted radiant heater, and QTY. (1) heating only air handler fan coil. The equipment is primarily serving rooms with exterior exposures and access to fresh air. The indoor coordinators office does not have any means of heating, ventilating, or cooling the space. The lower wing also contains the mechanical room where the campus boiler is located. This boiler is large and serves the lower wing and the gyms heating needs. The upper wings mechanical systems have been updated with new ventilation, heating, and cooling equipment. This previous upgrade reduced the heating demand on the boiler, making it oversized for the current demand load.

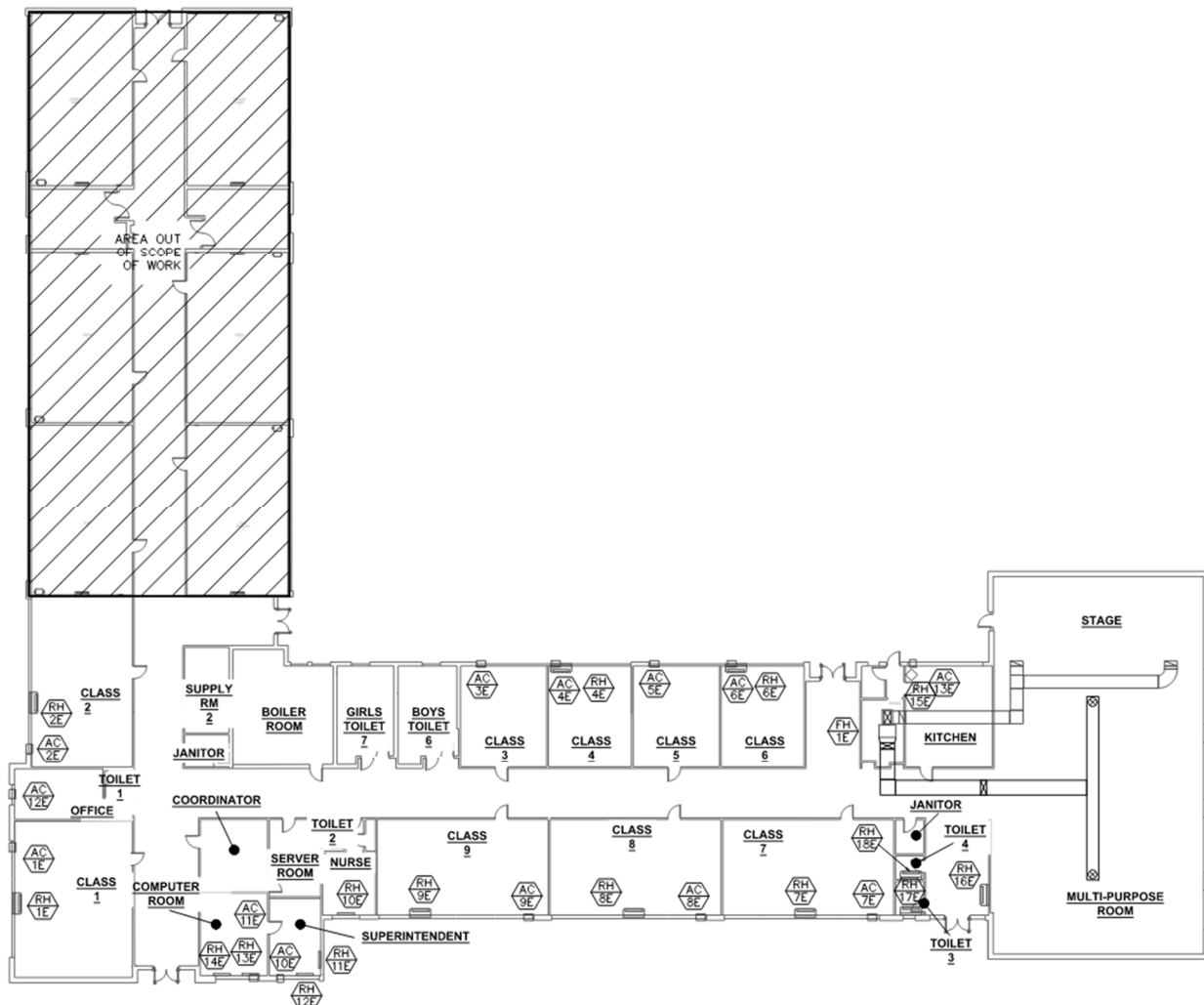


Figure 1: School and Room layout



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 EMAIL: info@marquess.com WEB: www.marquess.com

To determine the conditions of the existing equipment, a site visit was arranged to perform a visual inspection of the equipment and collect data for each piece of equipment. During the inspection it was determined that the air conditioning equipment is inadequate for the current cooling demand within the rooms. The cooling capacity of the packaged unit's range in size from 0.75 tons to 1 ton. The classrooms and offices have cooling demands that range between 2.0 tons to 4.0 tons see **Table 1**, below.

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Heating Load (MBH)	Floor Area (ft ²)
Zone 1				
SUPERINTENDENT	1	6.6	4.4	221.0
COORDINATOR	1	8.3	5.5	276.0
GYMNASIUM	1	94.5	59.1	2953.0
KITCHEN	1	48.6	15.9	497.0
LW CLASS 1	1	46.6	20.7	1036.0
LW CLASS 2	1	43.7	19.4	971.0
LW CLASS 3	1	22.2	9.9	493.0
LW CLASS 4	1	21.3	9.4	472.0
LW CLASS 5	1	22.2	9.9	493.0
LW CLASS 6	1	21.3	9.5	473.0
LW CLASS 7	1	36.8	18.4	920.0
LW CLASS 8	1	36.8	18.4	920.0
LW CLASS 9	1	36.8	18.4	920.0
NURSE	1	10.5	5.2	262.0
OFFICE	1	11.9	5.9	297.0
STAGE	1	35.6	15.8	790.0
COMPUTER ROOM	1	14.0	1.8	311.0

Table 1: Lower Wing Building Heating and Cooling Loads

From **Table 1**, we see that the classrooms have much more cooling demand than the currently installed equipment can support. This leads to having warmer classrooms during the spring and summer months. The gymnasium and stage space has a total cooling demand of approximately 10 tons, but there is no cooling in this space. There is much room for improvement when it comes to the heating and cooling system upgrades in the lower wing and gymnasium.

Furthermore, the cooling and heating units for the indoor spaces do not provide sufficient ventilation air to meet the latest mechanical code requirements. The outside air that these size units provide is 25% of the total airflow of the unit. The cooling and heating units can only provide 60-80 CFM of fresh air to the indoor space. This amount of fresh air falls short of the code required amount of fresh air needed. The fresh air ventilation requirements for the classrooms range



between 172 CFM to 414 CFM. The following calculations were prepared using the latest 2022 Oregon Mechanical Specialty Code, see **Table 2** below for the calculations and fresh air requirements for each space.

OUTDOOR AIR VENTILATION AND EXHAUST REQUIREMENTS PER OMSC 2022													
OUTSIDE AIR REQUIREMENTS									EXHAUST REQUIREMENTS				
SPACE DESCRIPTION	Room	Area (SQ.FT.)	Number of Rooms	Occupants per Room	CFM per Occupant	CFM per SQ. FT.	Required OSA CFM	Total Required OSA CFM	Number of Stalls	Exhaust Airflow Rate CFM/ft2	Exhaust Airflow Rate Per Stall	Room Exhaust CFM	Design Exhaust Total CFM
GYMNASIUM	1	2953	1	20	20.0	0.18	1242	1242					
STAGE	2	790	1	6	20.0	0.18	350	350					
LOWER WING CLASS	1	1036	1	18	10.0	0.12	406	406					
LOWER WING CLASS	2	971	1	17	10.0	0.12	382	382					
LOWER WING CLASS	3	493	1	12	10.0	0.12	239	239					
LOWER WING CLASS	4	472	1	8	10.0	0.12	182	182					
LOWER WING CLASS	5	493	1	7	10.0	0.12	172	172					
LOWER WING CLASS	6	473	1	8	10.0	0.12	182	182					
LOWER WING CLASS	7	920	1	18	10.0	0.12	387	387					
LOWER WING CLASS	8	920	1	20	10.0	0.12	414	414					
LOWER WING CLASS	9	920	1	20	10.0	0.12	414	414					
OFFICE		287	1	1	5.0	0.06	30	30					
NURSE		262	1	2	5.0	0.06	34	34					
SUPERINTENDENT		221	1	1	5.0	0.06	24	24					
COMPUTER ROOM		311	1	6	5.0	0.06	65	65					
COORDINATOR		276	1	2	5.0	0.06	35	35					
KITCHEN		497	1	10	7.5	0.12	180	180					

(1) VENTILATION REQUIREMENTS PER OMSC 2022 SECTION 403.
 (2) EXHAUST PER OMSC 2022 SECTION 403 AND TABLE 403 REQUIREMENTS.

Table 2: Outside Air Ventilation Calculation per OMSC 2022

The gymnasium is served by a heating only fan coil unit that provides fresh air and space heating to the gym. The conditioned air is routed through insulated sheet metal ducts through the attic and into the occupied space. The hot water coil located with-in the equipment is supplied by the existing boiler in the mechanical room. The space does not have any alternative options for cooling the during the warmer months of the year. This unit is also located in the attic above the storage room in the kitchen and would be difficult to replace if needed to be upgraded.

The filtration capability of all the equipment was inspected to determine the air filtration efficiency of the existing units. During the inspection, it was determined that the heating units have MERV-8 box filter and the window packaged air conditioning units have washable MERV-8 filters. The MERV-8 filters provide the standard minimum efficiency for a classroom setting. There is no additional filtration capability or protection for smoke during wildfire season.

3. Mechanical System Conclusions

Most of the equipment located in the lower wing and gym is old and at the end of its life. All water heating units are 30+ years old and would require significant modification to get them to provide more ventilation air. Currently, they would not meet the latest ventilation requirements in the OMSC. In addition, the heating units require the use of the 40+ year existing boiler that has become inefficient compared to present day standards.

With regards to the physical conditions of the equipment, there were several signs of aging and some wear to the casings, condenser fins, and heat exchangers on each piece of equipment, see *Images 1* through *10* below. The heating unit seem to be well maintained and cleaned for continued operation. The packaged cooling units all looked to be operational, but this could not be verified since the inspection occurred during the winter months. As previously mentioned in the report, the cooling unit are undersized for the cooling demand in each room. Additionally, both the heating units and cooling unit do not provide adequate ventilation to meet the present-day Oregon Mechanical Specialty Code standard outside air ventilation requirements for classrooms.



Image 1: Example of Radiant Heater



Image 2: Example of Packaged AC unit



Image 3: Exterior of Packaged AC unit



Image 4: Interior Packaged AC unit



Image 5: Interior packaged AC unit



Image 6: Radiant heater in classroom



Image 7: Ceiling mounted radiant heater



Image 8: Packaged AC unit



Image 9: Radiant heater and Packaged AC



Image 10: Exterior fresh air louver

4. Mechanical System Upgrade Recommendations

To bring the mechanical systems up to meet the latest ventilation, cooling, and heating requirements for the school, it is recommended that a full replacement of the mechanical system in the lower wing and gymnasium be upgraded to meet the latest code. This work would require the decommissioning of the heating units, cooling units, fan coil, and boiler that serve the heating needs of the lower wing and gym indoor spaces. The demolition work would involve removing equipment, cutting pipe, and capping off any unused components. Once this work is complete, the equipment would be replaced with new more efficient equipment that meet the ventilation requirements and conditioning needs of each space. Some options for system are presented below.

There are several options for conditioning indoor spaces, but for this project we are focusing on one option for the classrooms and offices. For the classrooms and offices, we recommend equipping the rooms with new variable refrigerant flow (VRF) heat pumps to tackle the heating and cooling needs of the room, see **Figure 2** below.



Figure 2: VRF Heat Pump Outdoor Unit and Indoor Fan Coil

These units can handle the cooling and heating demands of each space without the use of natural gas as the source of heat. The outdoor unit would be located on the roof and mounted on curbs to raise them up above any snow that may accumulate during the winter months. The indoor unit would be located within the indoor occupied space on a wall. The two pieces of equipment are connected using a line set that would be routed through the wall to minimize disturbing the ceiling tiles in the room. The smaller series of heat pumps provided by manufacturers, range in cooling and heating capacities of 0.75 ton to 6 tons. These VRF heat pump system do not offer any ventilation capacity on their own. Typically, these units must be paired with an energy recovery ventilator (ERV) that would provide fresh air to the indoor space, see **Figures 3 and 4** below.



Figure 3: ERV fresh air ventilator

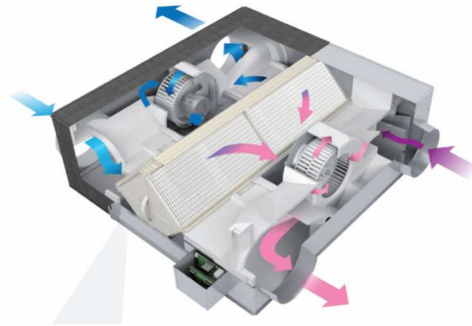


Figure 4: ERV fresh air ventilator diagram

The room code ventilation requirements would be handled using new energy recovery ventilators (ERV). These would be good options for the classrooms and offices in the lower wing. Depending on the ventilation requirement for each room, these may be combined and ducted to provide ventilation air to multiple spaces if needed.

Our recommendations for the gymnasium and stage would be the use of a heat pump packaged air conditioning unit that would handle the cooling and heating needs of the indoor space, see **Figure 5** below.

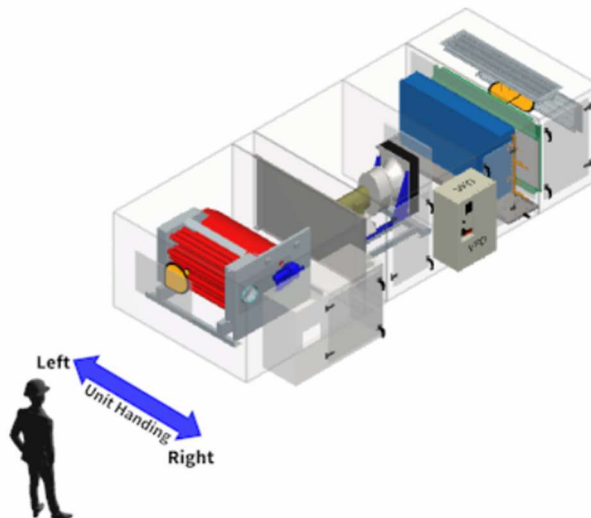


Figure 5: Heat Pump Air Handling Unit

This packaged unit would also handle the ventilation requirements of the gymnasium and stage area. Due to the size and weight of the equipment it is recommended that this unit be placed on the ground near the gym. The conditioned air would then have to be transported using sheet metal

ductwork that would be routed up the exterior of the building and into the occupied space. The unit would offer additional filtration options for the smoke season.

To conclude this report, Marquess & Associates Inc. was contracted to evaluate the existing mechanical systems at the Briscoe Elementary School. Our investigation required a couple site visits and review of the existing building plans to determine the over all conditions of the equipment. The results of this evaluation determined that there is a need to upgrade the heating and cooling equipment in the lower wing offices, classrooms, and gymnasium. The current equipment that serves these spaces do not have the cooling capacity to condition the rooms for the increased occupant loads and indoor heat loads in the room. Furthermore, these unit do not provide sufficient fresh air ventilation to the spaces as required in the latest Oregon Mechanical Specialty Code for schools.

These inefficiency in the equipment can only be mitigated by upgrading the existing mechanical equipment that serves each of the space. The owner of the building should consider complete replacement of the window AC units, radiant heaters, and air handling fan coil. The replacement of equipment can be completed in phases or all at once depending on the budget available for the upgrade. Taking these steps would reduce the consumption of natural gas and ensure that the appropriate cooling, heating, filtration, and fresh air ventilation air is being provided to the occupants that use the building daily.