

ROBERT EHMET HAYES & ASSOCIATES, PLLC

2512 DIXIE HIGHWAY, FT. MITCHELL, KENTUCKY 41017-3094

ARCHITECTS

859-331-3121

reh@reharchitects.com

www.reharchitects.com

January 3, 2022

VIA EMAIL and HAND DELIVERY

To: Dr. Rob Stafford, Superintendent
Owen County Board of Education

Re: Owen County High School
HVAC Upgrades
BG #21-215 / REH #378-121-A

- Enclosures:
1. One set of Bidding Documents, dated January 18, 2022 (PDFs of progress prints will be emailed with final hard copies to follow).
 2. Two copies of BG-2 and BG-3, dated January 3, 2022, for completed Drawings and Specifications.

Action

Required:

1. Obtain Board approval of the Bidding Documents, BG-2 and BG-3.
2. Execute both copies of BG-2 and BG-3 and return one copy of each to our office. Retain the second copy for your file.
3. Advise of any changes to be issued by addendum.



Joseph Ahrens Hayes

JAH:aes

OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA

District Name: Owen County District Code: 471 Facility Name: Owen County High School School Code: 080

Project Name: HVAC Upgrades REH Project #378-121-A Date: 1/3/21

PROJECT TYPE: Yes No Gross Building Area (sf.)
 New Building _____
 Addition _____
 Renovation 112,629

Provisions for Future Expansion: _____

Proposed Alternates: (1) _____ (4) _____
 (2) _____ (5) _____
 (3) _____ (6) _____

Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed.

BUILDING CONSTRUCTION CHARACTERISTICS:

Description of Building Structure:

Foundation: _____
 Exterior Walls: _____
 Roof Structure: _____

ENERGY EFFICIENT DESIGN (KRS 157.450 and KRS 157.455):

50 Energy Consumption "Existing" (kBtu/sf/yr)

48 Energy Consumption Target (kBtu/sf/yr)

YES NO
 LEED Certified Other: _____
 Designed to meet Energy Star
 Exceeds ASHRAE 90.1(2007) by 10% (Minimum)
 Whole Building Life Cycle Cost Analysis Demonstrating Cost Effective Design
 Life Cycle Cost Analysis Software Used: _____

If not yes to one or more of the above, explain why. Equipment replacement only. Project does not change system type.

Designed to be Net-Zero
 Designed to be Net-Zero Ready

Energy Efficient Design Features: (See List Page 4, or Use Drop Down List)

East / West Building Orientation YES NO
 Gross Exterior Wall Area (sf): _____ Avg. Exterior Wall R-Value: _____
 Gross Window / Door Area (sf): _____ Avg. Window/Door R-Value: _____
 Gross Roof Area (sf): _____ Avg. Roof R-Value: _____
 Exterior Wall Type: _____ Other: _____
 Roofing Type: _____ Other: _____
 HVAC System Type: C - ground source heat pump system with air make up Other: _____
 Classroom Lighting: _____ Other: _____
 Active Daylighting: _____ Other: _____
 Passive Daylighting: _____ Other: _____
 On Site Energy Generation: _____ Other: _____

Project: Owen County High - HVAC Upgrades REH Project #378-121-A Date: 1/3/21

Air Purification Systems : YES NO
 Gray Water System : YES NO
 Low Water Use Fixtures : YES NO

Other: _____

PLUMBING:

Type of Sewage Disposal: Municipal

HEATING, VENTILATION AND AIR CONDITIONING:

Heating Only: _____ Heating & Mechanical: _____ HVAC: X A/C Only: _____
 Ventilation Only

Fuel Source/Backup (if applicable): N/A

ELECTRICAL:

Source of Electric Power: Utility

Voltage Serving Facility: 480

Number of Convenience Outlets:
 Classrooms _____
 Library/Media Center _____
 Business Ed _____
 Family & Consumer Science _____

Camera System: _____

Lighting Intensity (fc.):
 Std. Classrooms _____
 Library/Media Ctr _____
 Science Lab _____
 Science Clrm _____
 Band/Music _____
 Business Ed _____
 Shops _____
 Corridors _____
 Stairways _____
 Cafeteria _____
 Pre-School Clrm _____
 Art Classroom _____
 Gymnasium _____

SPECIAL EQUIPMENT:

System	Conduit Only	Conduit & Wiring	Complete w Equipment
Bell	_____	_____	_____
Clock	_____	_____	_____
Fire Alarm	_____	_____	_____
Intercom	_____	_____	_____
Telephone	_____	_____	_____
Television	_____	_____	_____
Computer	_____	_____	_____
Wireless Network	_____	_____	_____
Interactive White bd	_____	_____	_____
Voice Amplification	_____	_____	_____

FIXED EQUIPMENT:

Teacher Cabinet	_____	Custodial Room Shelves	_____
Student Lockers	_____	Science Laboratories	_____
Folding Bleachers	_____	Family & Consumer Sci	_____
Library Furnishings	_____	Other	_____
Dry Food Shelves	_____	Other	_____

Project: Owen County High - HVAC Upgrades REH Project #378-121-A Date: 12/22/21

INTERIOR FINISH SCHEDULE:

AREA	FLOOR	WAINSCOT	WALLS	CEILING
General Office	_____	_____	_____	_____
Corridors	_____	_____	_____	_____
Custodial	_____	_____	_____	_____
Kitchen	_____	_____	_____	_____
Cafeteria	_____	_____	_____	_____
Gym	_____	_____	_____	_____
Showers/Locker	_____	_____	_____	_____
Toilets	_____	_____	_____	_____
Library/Media Cntr	_____	_____	_____	_____
Classrooms	_____	_____	_____	_____
Music	_____	_____	_____	_____
Art	_____	_____	_____	_____
Science	_____	_____	_____	_____
FMD	_____	_____	_____	_____
OTHER AREAS				
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Miscellaneous Project Specific Features: _____

Kentucky Registered Architect: _____ Date: 1-12-22

Signature
Robert Ehmet Hayes & Associates, PLLC

Kentucky Registered Engineer: _____ Date: 1-12-22

Signature
CMTA

Board Designee or Superintendent: _____ Date: _____

Signature
Owen County Board of Education

Energy Efficient Design Features Lists

Exterior Wall Type

- A - face brick, captured air space, board insulation and waterproof CMU
- B - face brick, captured air space, sprayed insulation on CMU
- C - face brick, captured air space, sheathing over metal insulated stud system, interior finish system
- D - face brick, ICF poured concrete, interior finish system
- E - other, describe

Roofing Type List

- A - modified bitumen over rigid insulation
- B - EPDM over rigid insulation
- C - plastic single ply over rigid insulation
- D - metal roofing over nailable deck with insulation
- E - asphalt shingle roofing over nailable deck with insulation
- F - other, describe

HVAC System Type List

- A - two pipe unit ventilator system
- B - water source heat pump system with air make up
- C - ground source heat pump system with air make up
- D - hybrid water source heat pump system with boiler/chiller and well field with air make up
- E - variable refrigerant flow (VRF) with air make up
- F - hybrid geothermal/variable refrigerant flow (VRF) with air make up
- G - variable refrigerant volume (VRV) with air make up
- H - hybrid geothermal/variable refrigerant volume (VRV) with air make up
- I - chilled beam system
- J - hybrid chilled beam/geothermal system
- L - other

Classroom Lighting List

- A - T8 fluorescent fixtures
- B - T5 fluorescent fixtures
- C - high energy gas fixtures
- D - low voltage systems
- E - other

Active Daylight System List

- A - classroom fluorescent dimming including dimming switches, ballasts and sensors
- B - occupancy light control sensors
- C - remote sensor bi-level lighting with no fixtures dimming
- D - manual bi-level lighting with no fixture dimming
- E - other
- F - none

Passive Daylight Systems List

- A - upper classroom clerestory lighting with sloped ceiling plane
- B - lower classroom clerestory lighting that does NOT require sloping the ceiling plane
- C - exterior light shelves
- D - solar tubes without dimming
- E - solar tubes with internal dimmers
- F - other
- G - none

On Site Energy Generation List

- A - solar water heating
- B - solar electric generation (small units for demonstration or for limited areas)
- C - solar electric generation (to support the entire building's energy needs)
- D - wind generation (small units for demonstration or for limited areas)
- E - wind generation (to support the entire building's energy needs)
- F - other

For Reference