OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA

702 KAR 4:160

| District Name: | Elizabethte | own | District Code: | 152 | Facility Name: | Elizabethtown High School | School Code: | 010 | | |
|--|---|--|--|------------|-------------------|---------------------------|-----------------|---|--|--|
| Projec | ct Name: | Elizabethtown Independent Schools Guaranteed Energy Savings Contract | | | | | | | | |
| PROJECT TYPE: Yes | | Yes | No Gross Building Area (sf.) | | | | | | | |
| New Build | ding | | 2 | | | , | | | | |
| Addition | | | | | | | | | | |
| Renovation | | v | <u>141229</u> | | | | | | | |
| Provision | s for Future | Expansion: | | | | | | | | |
| Proposed Alternates: (1) | | | | | | | | | | |
| | | (2) (3) | | | | | | · · · · · · · · · · · · · · · · · · · | | |
| Describe | Describe special conditions, phasing of project and alternates, attach a supplemental sheet, if needed. | | | | | | | | | |
| BUILDING CONSTRUCTION CHARACTERISTICS: | | | | | | | | | | |
| Description | on of Buildin | g Structure: | | | | | | | | |
| | | | | | | | | | | |
| | . 00,100,00 | | | | | | | | | |
| Ex | terior Walls: | <u> </u> | | | | | | | | |
| Ro | of Structure: | | * | | | | | | | |
| | | | | | | | | | | |
| ENERGY | EFFICIENT | r DESIGN (K | RS 157.450 a | nd KRS 1 | <u>57.455)</u> : | | | | | |
| 7 | 74.6 | Energy Con | sumntion "Exi | stina" (kB | tu/sf/vr\ | | | | | |
| | | _Energy Consumption "Existing" (kBtu/sf/yr) | | | | | | | | |
| | 52.4 | _ Energy Con | sumption Targ | jet (kBtu/ | sf/yr) | | | | | |
| YES | NO | | | | | | | | | |
| | v . | LEED Certif | | Othe | r: | | | | | |
| | | - | Designed to meet Energy Star | | | | | | | |
| <u> </u> | | | Exceeds ASHRAE 90.1(2007) by 10% (Minimum) | | | | | | | |
| | П | | Whole Building Life Cycle Cost Analysis Demonstrating Cost Effective Design Life Cycle Cost Analysis Software Used: Trane Trace | | | | | | | |
| If not ves | to one or | | above, explai | • | onware use | ed: Trane Trace | | | | |
| | | | | | | | | | | |
| | | Designed to | be Net-Zero | | | | | | | |
| | | Designed to | be Net-Zero I | Ready | | | | | | |
| Energy E | fficient Des | sign Feature: | s: (See List I | Page 4. o | r Use Drop | Down List) | | | | |
| | est Building | - | □ YES | □ N | - | , | | | | |
| 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: | | | | | | | | | | |
| HVAC System Type: | | | | | | | Other: | chilled/hot water 4-pipe | | |
| Classroom Lighting: E- other | | | | | | | Other: | T5/LED | | |
| Active Da | aylighting: | | | | | | Other: | P. C. | | |
| Passive Daylighting: Other: | | | | | | | | | | |
| On Site E | nergy Gene | Other: | | | | | | | | |

KENTUCKY DEPARTMENT OF EDUCATION

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| Air Purification Syster | ns: YES [| □ NO ☑ | | | | |
|--|--------------------------------|---|---|--|--|--|
| Gray Water System : | YES | □ NO ☑ | | | | |
| Low Water Use Fixture Other: | res: YES | | | · | | |
| | | | | | | |
| PLUMBING: | | | | | | |
| Type of Sewage Disp | osal: | | | | | |
| HEATING, VENTILA | | | | | | |
| Heating Only: | Heating & Me Ventilation Or | | HVAC: | CA/C Only: | | |
| Fuel Source/Backup | (if applicable): | | | · · · | | |
| ELECTRICAL: | | | | | | |
| Source of Electric Po | wer: | | Lighting Intensit | | | |
| Voltage Serving Facil | ity: | | Std. Classrooms Library/Media C Science Lab | | | |
| Number of Convenier Classrooms Library/Media Center Business Ed Family & Consumer S Camera System: | | | Business Ed Shops Corridors Stairways Cafeteria | Band/Music Business Ed Shops Corridors Stairways Cafeteria | | |
| | | | Art Classroom Gymnasium | | | |
| SPECIAL EQUIPME | NT: | | | | | |
| System Bell Clock Fire Alarm Intercom Telephone Television Computer Wireless Network Interactive White bd Voice Amplification | Conduit Only | - - - - - - - - - | Conduit & Wiring | Complete with Equipment | | |
| FIXED EQUIPMENT: | | | | | | |
| Teacher Cabinet Student Lockers Folding Bleachers Library Furnishings Dry Food Shelves | | | Custodial Room Sh Science Laboratorie Family & Consumer Other Other | es | | |

OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA

| INTERIOR FINISH SCHEDULE: | | | | | | | | | |
|---|----------|----------|-------------|--|--|--|--|--|--|
| AREA | FLOOR | WAINSCOT | WALLS | CEILING | | | | | |
| General Office | | | | | | | | | |
| Corridors | | | | | | | | | |
| Custodial | | | | The state of the s | | | | | |
| Kitchen Cafeteria | | | | | | | | | |
| Gym | | <u> </u> | | | | | | | |
| Showers/Locker | | | | | | | | | |
| Toilets | | | | | | | | | |
| Library/Media Cnti | | | | | | | | | |
| Classrooms | | | | | | | | | |
| Music Art | | | _ | | | | | | |
| Science | | | _ | | | | | | |
| FMD | - | | | | | | | | |
| | | | | | | | | | |
| OTHER AREAS | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | _ | | | | | | |
| Miscellaneous Project Specific Features: | | | | | | | | | |
| 8 - WILLIAM SERVICE | | | | | | | | | |
| GESC Qualified P | rovider: | Et (| Shop - | Date: <u> </u> | | | | | |
| | | Signati | Te V | Planter | | | | | |
| Kentucky Registered Engineer: Date: 5/2/2015 | | | | | | | | | |
| Signature | | | | | | | | | |
| Board Designee or Superintendent: Date: | | | | | | | | | |
| Signature | | | | | | | | | |

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 place
- 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
- G none