# **OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA**

District Name: N	Marion Co	ıntv	District Code:	Facility Name:	Marion County Middle School	School Code:				
<del>-</del>		•	<del>-</del>		•					
Project I	Name:	Marion County Middle School - Addition & Renovation								
PROJECT	TYPE:	Yes	No	Gross Buil	lding Area (sf.)					
New Buildin	g									
Addition		✓		57	00 sf					
Renovation										
Provisions f	or Future	Expansion:	Relocation of some	utilities and expa	nsion of geothermal capacity for	future additions.				
Proposed A	lternates:	(1) Owner prefferred HVAC c								
			Owner prefferred d	oor har						
		(3)	)							
Describe sp	ecial cond	litions, phasir	ng of project and alto	ernates, attach a s	supplemental sheet, if needed.					
BUILDING	CONSTRU	JCTION CHA	RACTERISTICS:							
Description	of Building	g Structure:								
Fo	oundation:	Concrete sp	read footings							
Exterior Walls: CMU structure with expanding spray foam insulation and brick										
5 (	0	<u> </u>								
Roof	Structure:	Steel joists v	with corrugated meta	al deck.						
ENERGY E	FEIGIENT	DEGION (K	DO 457 450 4 KD	0.457.455\-						
ENERGY E	FFICIENT	DESIGN (KI	RS 157.450 and KR	<u>8 157.455)</u> :						
44.	.4	Energy Cons	sumption "Existing"	(kBtu/sf/yr)						
44.	.4	Energy Cons	sumption Target (kE	tu/sf/yr)						
YES N	10									
	<b></b> ✓	LEED Certifi	ïed C	ther:						
☑ [		Designed to	meet Energy Star							
<b>2</b> [		Exceeds AS	SHRAE 90.1(2007) b	y 10% (Minimum)						
	V	Whole Build	ling Life Cycle Cost	Analysis Demonst	rating Cost Effective Design					
		Life	e Cycle Cost Analys	is Software Used:						
If not yes to	o one or n	nore of the a	bove, explain why							
		D : 11	7							
		-	be Net-Zero							
	<b>☑</b>	Designed to	be Net-Zero Ready							
Energy Effi	icient Des	ign Features	s: (See List Page 4	l, or Use Drop Do	own List)					
East / West	Building (	Orientation	☐ YES	⊠NO						
Gross Exter	rior Wall A	rea (sf):	4,341		Avg. Exterior Wall R-Value:	20				
Gross Wind	low / Door	Area (sf):	268		Avg. Window/Door R-Value:	2				
Gross Roof Area (sf): 2,523			2,523		Avg. Roof R-Value:	30				
Exterior Wa	ıll Type:	B - face brick, c	captured air space, spray	ed insulation on CMU		Other:				
Roofing Type:		A - modified bit	umen over rigid insulation	Other:						
HVAC System Type:		C - ground sour	rce heat pump system wi	Other:						
Classroom Lighting:		E - other				Other: LED				
Active Daylighting:		F - none				Other:				
Passive Day	ylighting:					Other:				
On Site Ene	ergy Gene	Other:								

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# **OUTLINE SPECIFICATIONS ENERGY DESIGN CRITERIA**

Air Purification Syste	ms: YES	□ NO ☑				
Gray Water System :	YES	□ NO ☑				
Low Water Use Fixtu Other:	res: YES	☑ NO □				
PLUMBING:						
Type of Sewage Disp	oosal: <u>Municipal</u>					
HEATING, VENTILA	TION AND AIR CON	IDITIONING:				
Heating Only:	Heating & Me Ventilation O			HVAC: X	_ A/C Only:	
Fuel Source/Backup	(if applicable):	Geothermal				
ELECTRICAL:						
Source of Electric Po	wer: Utility			Lighting Intensity (fc. Std. Classrooms	): 50	
Voltage Serving Faci	lity: 208/120/3ph	and 480/277/3	3ph	Library/Media Ctr Science Lab	NA NA	
Number of Convenier Classrooms	8			Science Clrm Band/Music	50 NA	
Library/Media Center Business Ed	NA NA			Business Ed Shops	NA NA	
Family & Consumer S				Corridors	20	
Camera System: NA				Stairways Cafeteria	NA	
				Pre-School Clrm Art Classroom	NA NA	
				Gymnasium	NA	
SPECIAL EQUIPME	NT:					
System	Conduit Only		Conduit &	Wiring	Complete with Equipment	
Bell Clock	NA NA	_				
Fire Alarm		_			Yes	
Intercom Telephone	NA	_			Yes	
Television	NA	_				
Computer Wireless Network		_	Yes Yes			
Interactive White bd		_	Yes		<del></del>	
Voice Amplification	NA	_				
FIXED EQUIPMENT	<u>i</u>					
Teacher Cabinet			Cu	stodial Room Shelves	<u> </u>	
Student Lockers				ience Laboratories	Yes	
Folding Bleachers Library Furnishings			Family & Consumer Sci Other			
Dry Food Shelves				her		

INTERIOR FINISH SCHEDULE:								
AREA	FLOOR	WAINSCOT	WALLS	CEILING				
General Office	N/A	N/A	N/A	N/A				
Corridors	VCT	N/A	Paint	ACT				
Custodial	N/A	N/A	N/A	N/A				
Kitchen	N/A	N/A	N/A	N/A				
Cafeteria	N/A	N/A	N/A	N/A				
Gym	N/A	N/A	N/A	N/A				
Showers/Locker	N/A	N/A	N/A	N/A				
Toilets	N/A	N/A	N/A	N/A				
Library/Media Cnt	tr N/A	N/A	N/A	N/A				
Classrooms	VCT	N/A	Paint	ACT				
Music	N/A	N/A	N/A	N/A				
Art	N/A	N/A	N/A	N/A				
Science	VCT	N/A	Paint	ACT				
FMD	N/A	N/A	N/A	N/A				
OTHER AREAS Storage	Paint	N/A	Paint	Paint				
Miscellaneous Project Specific Features:								
Kentucky Registe	red Architect:	Signat	ure	Date:				
Kentucky Registe	red Engineer:	Signat	ure	Date:				
Board Designee o	or Superintendent:	Signat	ure	Date:				

#### **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

For Reference