

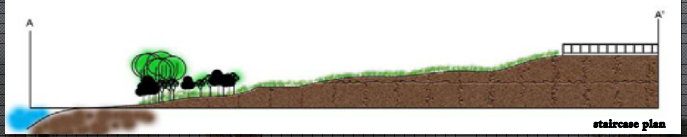


McCall Field Campus  
Dining Hall

**Amphitheater:**

The amphitheater provides a venue for entertainment as well as education for the city of McCall. Located near the dining facility, the auditorium can work with the dining patio to accommodate crowds of 350 or more people:

amphitheater plan



staircase plan

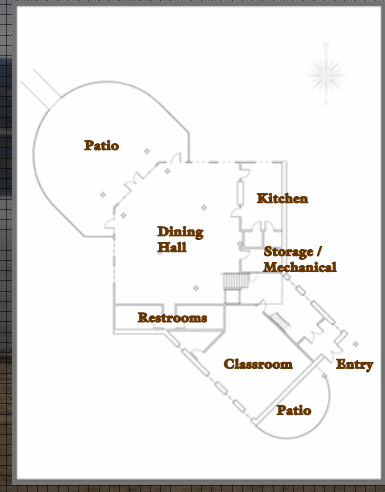


McCall Field Campus  
Dining Hall

**Main Floor Plan**

**Building Program:**

- Overall building statistics:
  - 4,700 Square Feet without patios
  - 9' difference in grade
- Air Lock Entry:
  - 108 Square Feet
  - Minimize heat gains and losses
- Lobby:
  - 380 Square Feet
  - Wall space to display student work
  - Access to catwalk
- Classrooms:
  - 960 Square Feet
  - Office/Storage for teaching materials
  - Direct access to path system to experience subject matter
- Dining Hall:
  - 2,000 Square Feet
  - Multi-function - Conferences, Meetings etc.
- Restrooms:
  - 180 Square Feet each
- Storage/Mechanical Rooms:
  - 270 Square Feet
  - Dining equipment storage, electrical panels, radiant flooring systems
- Kitchen:
  - 416 Square Feet
  - Walk in refrigerator and freezer, serving window
- Exterior Patios:
  - 2,200 Square Feet
  - Additional meeting areas
  - Overflow dining area
  - Vista points



McCall Field Campus  
Dining Hall

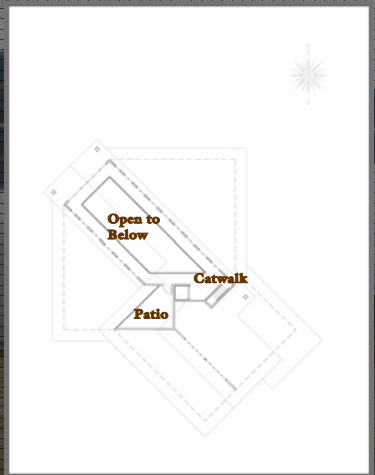
**Catwalk Floor Plan**

**Building Program:**

- Catwalk/Patio
  - Access to exterior views
  - Access to Daylighting, PV panels, electrical systems

**Design Strategies:**

- Earth-berm/rammed-earth construction
- PV panels to power fans and lighting
- Operable clerestory glazing
- Food waste to compost
- Wastewater to living machines
- Recycled finishes
- Operable skylights and windows
- Passive heating and cooling
- Radiant flooring



McCall Field Campus  
Dining Hall

**Building Elevations**

**Building Materials:**

- Concrete footings: Medium
- Rebar: High
- Lightweight Concrete floor: Medium
- radiant heating over rigid insulation: Medium
- 40% Flyash: Low
- Rammed earth walls with Gyprock aggregate: Medium
- Interior plaster finish: Medium
- Exterior local stone in mortar bed where exposed: Low
- Wood framed walls: Medium
- Recycled wood interior finishes: Low
- Exterior stucco system: Medium
- Parallel manufactured columns: Low
- Stone bases at exterior columns: Low
- Solarban low E double pane windows: Low
- argon filled operable windows: Medium
- Parallel manufactured timber roof framing: Low
- SIPS panels: Low
- Metal roofing: Medium
- Custom trusses: Medium
- Interior finishes: Medium
- Recycled glass tiles, yogurt containers, soybean/sunflower seed bio-composites: Low

**Carbon Ratings:**



## McCall Field Campus Dining Hall

### Building Elevations

**Target Finders**

Based on the estimated energy use, this building rates at 86 slightly below the target of 90 but still remains in the top quartile. Reasons for this may be the high energy use of the kitchen.

Energy Performance Rating (1-100)	Design	Target	Top 10%
Energy Performance (kWh)	85	90	90
Energy Performance (kWh)	20	20	20
Energy Use Intensity (kWh/ft²)	17.8	16.2	16.2
Site Energy Use Intensity (kWh/ft²)	22.0	20.1	20.1
Total Annual Source Energy (kBtu)	309,762.0	329,814.3	329,814.3
Total Annual Site Energy (kBtu)	148,069.0	148,069.0	148,069.0
Total Annual Energy Cost (\$)	\$ 2,284	\$ 1,875	\$ 1,875

**Northeast Elevation**

**Southeast Elevation**

## McCall Field Campus Dining Hall

### Roof Plan

**Parallelum Building Products**

Parallelum Products are made of recycled materials adhered together to create a durable, environment friendly, and aesthetically pleasing building material

**Allowable Uniform Loads (PLF)**

7' 2.25" Parallelum® PL Commercial Beams

Roof Slope	18"	24"	30"	36"	42"	48"
Span 10'	10,544	12,512	14,512	16,512	18,512	20,512
Span 12'	12,652	15,024	17,424	19,824	22,224	24,624
Span 14'	14,760	17,536	20,336	23,136	25,936	28,736
Span 16'	16,868	19,952	22,960	25,960	28,960	31,960
Span 18'	18,976	22,368	25,584	28,608	31,632	34,656
Span 20'	21,084	24,784	28,208	31,232	34,256	37,280
Span 22'	23,192	27,200	30,832	33,856	36,880	39,904
Span 24'	25,300	29,616	33,456	36,480	39,504	42,528
Span 26'	27,408	32,032	36,080	39,088	42,112	45,152
Span 28'	29,516	34,448	38,696	41,696	44,720	47,776
Span 30'	31,624	36,864	41,312	44,304	47,328	50,400
Span 32'	33,732	39,280	43,928	46,912	49,936	53,024
Span 34'	35,840	41,696	46,544	49,520	52,544	55,648
Span 36'	37,948	44,112	49,160	52,128	55,152	58,272
Span 38'	40,056	46,528	51,776	54,736	57,760	60,896
Span 40'	42,164	48,944	54,392	57,344	60,368	63,520
Span 42'	44,272	51,360	57,008	60,000	62,976	66,144
Span 44'	46,380	53,776	59,624	62,608	65,584	68,768
Span 46'	48,488	56,192	62,248	65,216	68,192	71,392
Span 48'	50,596	58,608	64,872	67,824	70,800	74,016
Span 50'	52,704	61,024	67,488	70,432	73,408	76,640
Span 52'	54,812	63,440	70,112	73,040	76,016	79,264
Span 54'	56,920	65,856	72,736	75,648	78,624	81,888
Span 56'	59,028	68,272	75,360	78,256	81,232	84,512
Span 58'	61,136	70,688	77,984	80,864	83,840	87,136
Span 60'	63,244	73,104	80,608	83,472	86,448	89,760
Span 62'	65,352	75,520	83,232	86,080	89,056	92,384
Span 64'	67,460	77,936	85,856	88,688	91,664	95,008
Span 66'	69,568	80,352	88,480	91,296	94,272	97,632
Span 68'	71,676	82,768	91,104	93,904	96,880	100,256
Span 70'	73,784	85,184	93,728	96,512	99,488	102,880
Span 72'	75,892	87,600	96,352	99,120	102,096	105,504
Span 74'	78,000	90,016	98,976	101,728	104,704	108,128
Span 76'	80,108	92,432	101,600	104,336	107,312	110,752
Span 78'	82,216	94,848	104,224	106,944	109,920	113,376
Span 80'	84,324	97,264	106,848	109,552	112,528	116,000
Span 82'	86,432	99,680	109,472	112,160	115,136	118,624
Span 84'	88,540	102,096	112,096	114,768	117,744	121,248
Span 86'	90,648	104,512	114,720	117,376	120,352	123,872
Span 88'	92,756	106,928	117,344	120,000	122,960	126,496
Span 90'	94,864	109,344	120,000	122,608	125,568	129,120

## McCall Field Campus Dining Hall

### Photovoltaic Panels

**Amorphous solar panel systems:**

These solar panels are adhered directly to the metal roofing. They are effective in shaded areas and even under snow loads. A major portion of the roof will be exposed to the sun throughout the day providing an estimated 60% of all electrical needs of the building.

**Roof Structure:**

- PV Panel
- Metal Roofing
- Waterproof barrier
- 2.75" Plywood
- 6" Air space
- 8" Rigid Insulation
- .5" Plywood

**South Elevation**

## McCall Field Campus Dining Hall

### Building Section

**Key Plan**

**Beam to Beam Connections:**

Major beams are supported by a series of 4 small columns that are bolted together to create an appealing structural element.



McCall Field Campus  
Dining Hall

### Building Section

**Key Plan**

**Beam to Beam Connections:**  
Where no column exists at beam connections hangers shall be used

McCall Field Campus  
Dining Hall

### Radiant Heating

**Closed loop Heating system:**

The Dining Hall will utilize a closed loop radiant heating system that brings in hot water from the bio-fuel heat plant on site and transfers that heat to the anti-freeze in the closed loop via a mixing valve. The cooler returning water can then be used in the kitchen and restrooms, ultimately returning to the living machine and heat plant to complete the cycle.

**Tubing:**  
The reverse spiral return is the most effective distribution method for this building. We will use 10 zones at 300 linear feet of tubing per zone

**Reverse Spiral Return**

McCall Field Campus  
Dining Hall

**I welcome your questions, and thank you for your time.**