

# Waukee C.S.D. Timberline School

Waukee, Iowa

## Architect & Structural Engineer

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The Waukee School District's fast-growing population required it to add facilities in order to accommodate the influx of students – averaging over 400 new learners per year in the last 10 years.

Previously, their system had multiple Pre-K to 5th grade elementary schools, two 6th to 8th grade middle schools, a 9th grade building, and a 10th to 12th grade high school. A citizens' committee was formed to study and make recommendations to realign grades and recommend new facilities. After a four-month review, the committee recommended the district create two 6th to 7th grade middle schools and two 8th to 9th grade schools, to keep the existing 10th to 12th grade high school, and to eventually add a second 10th to 12th grade high school.

Timberline School was created to add the second 8th to 9th grade building for the district. Located on the top of a ridge that looks out over a timberline campground, the facility is located across the street from one of the district's 6th to 7th grade buildings.

The school provides opportunities for students to grow academically, socially, and emotionally, and to explore their passions in order to help shape their identity. This student-centered learning environment includes six educational learning communities that are the foundation for the student's day. From this home base, student interaction expands through experiencing opportunities within centrally-located media, creative, physical, and technical education areas in the building.

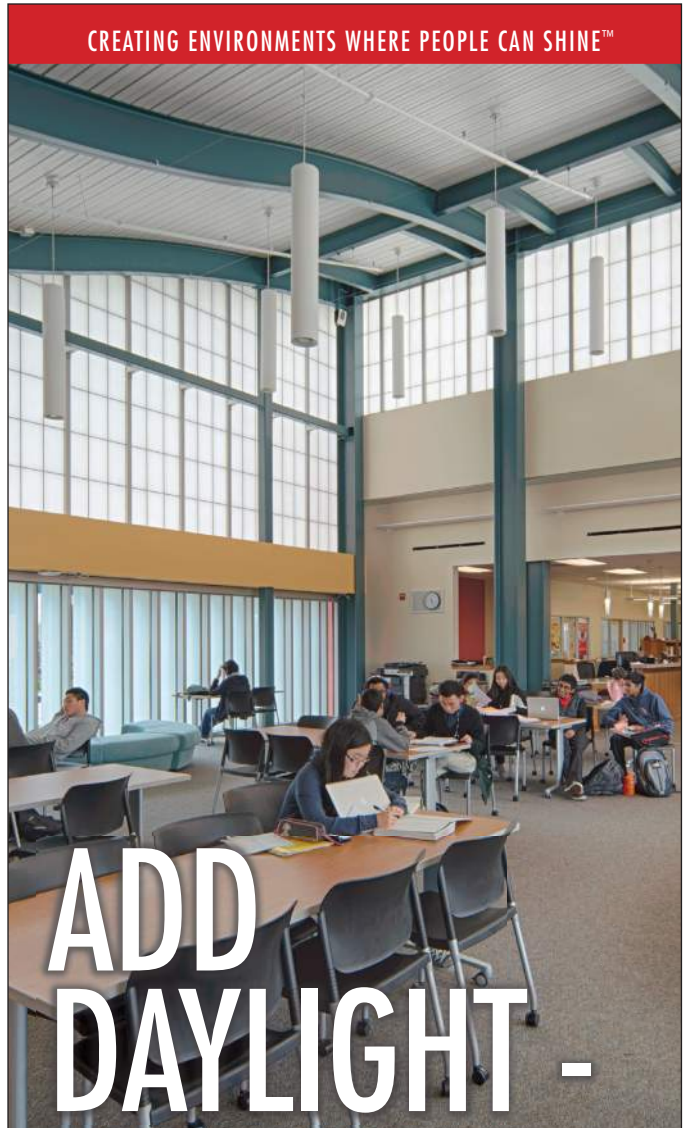
The two-story steel-frame building uses a combination of masonry, metal panels, and glazing to articulate its massing. Extensive daylighting and exterior views strengthen the vibrant and open educational environment, helping to foster interaction between the students and the world to which they are connected. Collaborative learning areas and flexible furnishings support opportunities for the dedicated staff to meet student needs through differentiated instruction and research-based delivery, all the while pushing students to take ownership of their learning.



Photos Courtesy of Cameron Campbell/Integrated Studio







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### Product Information

*Building Envelope:* Metal Design Systems

*Roofing:* Firestone Building Products

*Curtain Wall, Entrances & Storefronts*

*Windows:* EFCO, a Pella Company

*Glazing:* PPG

*Interior:* USG, Lyon

*Flooring:* Shaw, Tarkett, Connor Sports Flooring

*Daylighting/Skylights:* Major Industries

*Elevator:* Schindler Elevator Corp.

*Lighting:* Cooper, Lumenpulse, Axis, U.S. Architectural Lighting

**Architect & Structural Engineer**

frk architects + engineers  
 2600 Westtown Pkwy., #340, West Des Moines, IA 50266  
 www.frk-ae.com

**Project Team**

**Mechanical & Electrical Engineer:**

Farris Engineering  
 12700 West Dodge Road, Omaha, NE 68154

**Civil Engineer:**

Bishop Engineering  
 3501 104th Street, Des Moines, IA 50322

**General Contractor:**

Rochon Corporation of Iowa  
 3401 106th Circle, Urbandale, IA 50322

**Project General Description**

**Location:** Waukee, Iowa

**Date Bid:** Jun 2013

**Construction Period:** Jul 2013 to May 2015

**Total Square Feet:** 187,375 **Site:** 48 acres.

**Number of Buildings:** One; 77 classrooms, gymnasium seating 1005.

**Building Sizes:** First floor, 125,440; second floor, 61,935; total, 187,375 square feet.



**Building Height:** First floor, 12'8"; second floor, 15'4"; total, 28'.

**Basic Construction Type:** New.

**Foundation:** Cast-in-place, pier & grade beam, reinforced concrete, slab-on-grade.

**Exterior Walls:** CMU, brick, curtain wall, metal panel.

**Roof:** Membrane. **Floors:** Concrete, precast.

**Interior Walls:** CMU, metal stud drywall.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQ.	314,396	1.44	1.68	—
GENERAL REQUIREMENTS	1,320,483	6.07	7.05	—
CONCRETE	1,951,809	8.97	10.42	Cast-in-place, precast, case decks & underlayment, grouting.
MASONRY	1,723,322	7.92	9.20	Unit.
METALS	2,415,183	11.10	12.89	Structural metal framing, joists, decking, cold-formed metal framing, fabrications, decorative.
WOOD, PLASTICS & COMPOSITES	226,005	1.04	1.21	Rough carpentry, finish carpentry, plastic fabrications.
THERMAL & MOISTURE PROTECTION	1,736,016	7.98	9.26	Dampproofing & waterproofing, thermal protection, weather barriers, roofing & siding panels, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, fire & smoke protection, joint protection.
OPENINGS	988,839	4.54	5.28	Doors & frames, specialty doors & frames, entrances, storefronts & curtain walls, windows, hardware, glazing, louvers & vents.
FINISHES	2,142,187	9.84	11.43	Plaster & gypsum board, tiling, ceilings, flooring, acoustic treatment, painting & coating.
SPECIALTIES	312,857	1.44	1.67	Visual display, signage, toilet compartments & accessories, fire protection, lockers, flag poles.
EQUIPMENT	639,767	2.94	3.41	Vehicle & pedestrian, food service, entertainment, athletic & recreational.
FURNISHINGS	427,491	1.96	2.28	Casework, multiple seating.
CONVEYING SYSTEMS	39,000	0.18	0.21	Elevator (1 passenger).
FIRE SUPPRESSION	319,800	1.47	1.71	Water-based fire-suppression systems.
PLUMBING	1,639,019	7.53	8.75	Piping & pumps, equipment, fixtures, insulation.
HVAC	2,666,228	12.25	14.23	Piping & pumps, air distribution, central HVAC equipment, insulation.
ELECTRICAL	2,428,000	11.16	12.95	Medium-voltage distribution, facility electrical power generating & storing equipment, lighting.
COMMUNICATIONS	371,000	1.70	1.97	Data, voice, distributed communications & monitoring systems.
ELECTRONIC SAFETY & SECURITY	101,000	0.47	0.54	Electronic access control & intrusion detection, electronic detection & alarm.
<b>TOTAL BUILDING COSTS</b>	<b>21,762,402</b>	<b>100%</b>	<b>\$116.14</b>	
EARTHWORK	513,430			Site clearing, earth moving.
EXTERIOR IMPROVEMENTS	1,777,705			Bases, bollards & paving, fencing, landscaping.
UTILITIES	837,618			Water, sanitary sewerage, storm drainage.
<b>TOTAL PROJECT COST</b>	<b>24,891,155</b>			

**UPDATED ESTIMATE TO APRIL 2016: \$126.91 PER SQUARE FOOT**

**Regional Cost Trends**

*This project, updated to April 2016 in the selected cities of the United States.*

EASTERN U.S.			CENTRAL U.S.			WESTERN U.S.		
Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost		Sq.Ft. Cost	Total Cost	
Atlanta GA	\$124.21	\$23,274,717	Dallas TX	\$120.16	\$22,515,759	Los Angeles CA	\$160.67	\$30,105,341
Pittsburgh PA	\$156.62	\$29,346,383	Kansas City KS	\$162.02	\$30,358,327	Las Vegas NV	\$147.17	\$27,575,480
New York NY	\$199.82	\$37,441,936	Chicago IL	\$168.77	\$31,623,257	Seattle WA	\$160.67	\$30,105,341

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