

# Grant Ragan Elementary School

Waukee, Iowa

**Architect & Structural Engineer**

frk architects + engineers

**T**he Waukee Community School District is the fastest growing district in the state of Iowa. To keep up with new incoming students, Grant Ragan Elementary was built as the eighth elementary school within the district, and serves 750 students ranging from pre-kindergarten to fifth grade.

frk architects + engineers worked closely with administration and teaching staff, and paid careful attention to how the building would be organized. They designed the learning environment with three learning communities surrounding a central circulation core, minimizing the distance students need to travel to access shared program spaces such as the media center, computer labs, guidance, and music classrooms. Each learning community represents core learning studios that share a flexible activity area, providing opportunities for students and staff to maximize experiences and meet varied needs.

Addressing security protocols set within the district, the building uses a secure vestibule, and requires all school visitors to pass through and check in the main office reception area before entering the rest of the facility. Student safety concerns were also addressed in the design of the site, with the bus drop off and pick up area separated from parent and teacher vehicular circulation.

The exterior façade of the building is comprised of masonry, prefinished metal and phenolic composite wall panels, providing both durability and aesthetic interest to this neighborhood school. Interior elements of the building are primarily metal stud walls with drywall. Ceramic tile and phenolic panels are used in high-traffic areas.

Vibrant colors were employed throughout the rooms and corridors to activate the learning space. A continuous translucent panel clerestory window provides diffused natural light all along the central core corridors, helping drive daylight into all parts of the school.

## Product Information

*Building Envelope:* Endicott, Anchor Block Company, Centria, Tresa

*Roofing:* Versico

*Windows, Entrances, Storefronts & Curtain Walls:* Manko

*Flooring:* Connor, Philadelphia, Armstrong, American Olean, Fiandre-USA

*Interior:* Lyon, Bradley, CS, Modernfold, ADP/LEMCO Athletic Equipment, USG

*Daylighting/Skylights:* Kalwall

*Lighting:* Phillips, GE, Cooper



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Three learning communities surround a central circulation core, minimizing the distance students need to travel to access shared program spaces.

Photos Courtesy of Cameron Campbell/Integrated Studio



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The exterior façade of the building is comprised of masonry, prefinished metal, and phenolic composite wall panels, providing both durability and aesthetic interest to this neighborhood school.



The modern classroom is filled with color and is engaging to students.



A continuous translucent panel clerestory window provides diffused natural light that brings the colors and students to life.

**Architect & Structural Engineer**

frk architects + engineers  
2600 Westown Parkway, #340, West Des Moines, IA 50266  
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**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**

Larson & Larson Construction, LLC  
10703 Justin Drive, Urbandale, IA 50322

**Food Service**

Rippe Associates, Inc.  
6117 Blue Circle Drive, #100, Minneapolis, MN 55343

**Project General Description**

**Location:** Waukee, Iowa

**Date Bid:** Jun 2014

**Construction Period:** Jul 2014 to Jun 2016

**Total Square Feet:** 96,752

**Site:** 20 acres.

**Number of Buildings:** One; 46 classrooms, seating 26; gymnasium, seating 180.

**Building Sizes:** First floor, 96,752; total, 96,752 square feet.

**Building Height:** First floor, varies from 16' to 25'; total, 25'.

**Basic Construction Type:** New/Structural Steel/Tilt-Up.

**Foundation:** Cast-in-place, slab-on-grade.

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

**Roof:** Membrane.

**Floors:** Concrete.

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



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	237,820	1.93	2.46	—
GENERAL REQUIREMENTS	695,402	5.63	7.19	—
CONCRETE	826,702	6.69	8.54	Reinforcing, cast-in-place, cast decks & underlayment, grouting.
MASONRY	1,273,250	10.31	13.16	Unit, stone assemblies.
METALS	829,985	6.72	8.58	Structural metal framing, joists, decking, fabrications.
WOOD, PLASTICS & COMPOSITES	94,210	0.76	0.97	Rough carpentry, finish carpentry, structural plastics.
THERMAL & MOISTURE PROTECTION	1,363,787	11.04	14.10	Dampproofing & waterproofing, thermal protection, weather barriers, roofing & siding panels, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, fire & smoke protection, joint protection.
OPENINGS	700,625	5.67	7.24	Doors & frames, specialty doors & frames, entrances, storefronts & curtain walls, windows, roof windows & skylights, hardware, glazing, louvers & vents.
FINISHES	1,261,563	10.21	13.04	Plaster & gypsum board, tiling, ceilings, flooring, acoustic treatment, painting & coating.
SPECIALTIES	178,415	1.44	1.84	Visual display boards, signage, toilet partitions, toilet accessories, operable partitions, cubicles, lockers, fire extinguishers & cabinets, flag pole, other.
EQUIPMENT	357,495	2.89	3.69	Food service, athletic.
FURNISHINGS	164,560	1.33	1.70	Casework, multiple seating.
FIRE SUPPRESSION	141,660	1.15	1.46	Water-based fire-suppression systems.
PLUMBING	894,576	7.24	9.25	Piping & pumps, equipment, fixtures.
HVAC	1,965,424	15.92	20.31	Piping & pumps, air distribution, central heating equipment, central cooling equipment, central HVAC equipment.
ELECTRICAL	1,305,830	10.58	13.50	Medium-voltage distribution, lighting.
ELECTRONIC SAFETY & SECURITY	59,170	0.49	0.62	Fire alarm.
<b>TOTAL BUILDING COSTS</b>	<b>12,350,474</b>	<b>100.00</b>	<b>\$127.65</b>	
EARTHWORK	526,318			Site clearing, earth moving, mobilization, termite control.
EXTERIOR IMPROVEMENTS	1,333,677			Bases, bollards & paving, fencing & gates, landscaping.
UTILITIES	760,395			Water, sanitary sewerage, storm drainage.
<b>TOTAL PROJECT COST</b>	<b>14,970,864</b>			

**UPDATED ESTIMATE TO AUGUST 2017: \$144.62 PER SQUARE FOOT**

**Regional Cost Trends**  
*This project, updated to August 2017 in the selected cities of the United States.*

EASTERN U.S.	Sq.Ft. Cost	Total Cost	CENTRAL U.S.	Sq.Ft. Cost	Total Cost	WESTERN U.S.	Sq.Ft. Cost	Total Cost
Atlanta, GA	\$141.54	\$13,694,594	Dallas, TX	\$136.93	\$13,248,031	Los Angeles, CA	\$183.08	\$17,713,660
Pittsburgh, PA	\$178.47	\$17,267,097	Kansas City, KS	\$184.62	\$17,862,514	Las Vegas, NV	\$167.70	\$16,225,117
New York, NY	\$227.70	\$22,030,434	Chicago, IL	\$192.31	\$18,606,786	Seattle, WA	\$183.08	\$17,713,660

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