

# YMCA Pool Addition & Renovation

Fargo, North Dakota

Architect & Cost Estimator

Foss Architecture & Interiors, Ltd.



Generous south-facing windows and high ceilings help to flood the interior with natural light.



A new six-lane lap pool with a climbing wall.

Photos Courtesy of Brandon Stengel/Farmkid Studios

The original natatorium at the Fargo YMCA, built in 1965, was a windowless structure with low ceilings and an aging, narrow, four-lane lap pool. In 1979, additional construction added a warm water pool in the lower level of a three-story addition adjacent to the existing natatorium.

This project demolished the original natatorium and lap pool, creating the opportunity to construct a pool addition consisting of a new six-lane lap pool with a climbing wall, a new zero-entry recreation pool with water features, and the replacement of the warm-water pool well and surrounding deck in the existing structure.

Generous south-facing windows and high ceilings help to flood the area with natural light. The new natatorium is located adjacent to existing locker rooms, but includes new offices, a staff room, storage and an adjacent viewing area at deck level, as well as viewing windows in a second floor exit corridor serving the existing building. HVAC equipment is located in a penthouse structure above.

The existing wall between the lap pool and warm-water pool was demolished to construct a new full-glass partition allowing for visual continuity while maintaining individual HVAC control of these adjacent spaces.

The new natatorium construction consists of a poured-in-place concrete foundation, masonry-cavity walls, EIFS for wall caps and penthouse, curtain wall, and steel



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joist roof structure with ballasted EPDM roofing. New pool wells are shotcrete construction with equipment located in below-deck basement space. Heat is provided from an existing boiler system serving new air-handling units, with new DX air conditioning and dehumidification equipment.

## Product Information

Roofing: Versico  
Windows, Entrances, Storefronts &  
Curtain Walls: Kawneer  
Flooring: Daltile, Mannington  
Lighting: Lithonia



**Architect & Cost Estimator**

Foss Architecture & Interiors, Ltd.  
810 1st Avenue, N., Fargo, ND 58102  
www.fossarch.com

**Project Team**

**Structural Engineer**

Heyer Engineering  
1020 36th Street, S.W., Fargo, ND 58103

**Mechanical & Electrical Engineer**

Karges-Faulconbridge, Inc.  
2280 45th Street, S., #213, Fargo, ND 58104

**General Contractor**

Roers Construction, LLC  
200 45th Street, S., Fargo, ND 58103

**Aquatics Engineering**

Associated Pool Builders, Inc.  
2121 Lovett Avenue, Bismarck, ND 58504

**Project General Description**

**Location:** Fargo, North Dakota

**Date Bid:** Jan 2015

**Construction Period:** May 2015 to Apr 2016

**Total Square Feet:** 21,385

**Site:** 0.34 acres.

**Number of Buildings:** One.

**Building Sizes:** Basement, 1,600; first floor, 13,865; second floor, 5,240; each additional floor, 680; total, 21,385 square feet.

**Building Height:** Basement, 10'; first floor, 12'; second floor, 11'; penthouse, 12'10"; total, 37'8".

**Basic Construction Type:** Addition/Renovation/Type II.

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

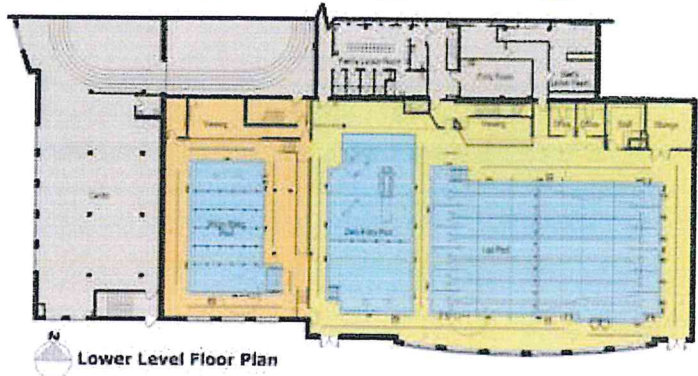
**Exterior Walls:** CMU, brick, curtain wall, EIFS.

**Roof:** Membrane.

**Floors:** Concrete, precast.

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

Existing    Renovation    Addition    Pool



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	57,279	1.16	2.68	—
GENERAL REQUIREMENTS	376,099	7.64	17.59	—
CONCRETE	204,897	4.16	9.58	Forming & accessories, reinforcing, cast-in-place, precast, cast decks & underlayment, grouting, cutting & boring.
MASONRY	201,855	4.10	9.44	Unit, corrosion resistant.
METALS	237,645	4.83	11.11	Structural metal framing, joists, decking, cold-formed metal framing, fabrications.
WOOD, PLASTICS & COMPOSITES	69,538	1.41	3.25	Rough carpentry, architectural woodwork, plastic fabrications.
THERMAL & MOISTURE PROTECTION	195,721	3.97	9.15	Dampproofing & waterproofing, thermal protection, weather barriers, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, joint protection.
OPENINGS	233,631	4.74	10.92	Doors & frames, specialty doors & frames, entrances, storefronts & curtain walls, windows, hardware, glazing, louvers & vents.
FINISHES	527,930	10.72	24.69	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	20,103	0.41	0.94	Visual display, signage, toilet & bath accessories.
FURNISHINGS	270	0.01	0.01	Blinds.
SPECIAL CONSTRUCTIONS	1,478,153	30.02	69.12	Swimming pool, lap pool, warm pool.
FIRE SUPPRESSION	44,335	0.90	2.07	Water-based fire-suppression systems.
PLUMBING	367,072	7.45	17.16	Piping & pumps, equipment, fixtures, pool & fountain plumbing systems.
HVAC	697,805	14.17	32.63	Piping & pumps, air distribution, air cleaning devices, central cooling equipment, decentralized HVAC equipment.
ELECTRICAL	185,434	3.77	8.68	Medium-voltage distribution, low-voltage transmission, electrical & cathodic protection, lighting.
ELECTRONIC SAFETY & SECURITY	26,300	0.54	1.24	Fire alarm.
<b>TOTAL BUILDING COSTS</b>	<b>4,924,067</b>	<b>100.00</b>	<b>\$230.26</b>	
EXISTING CONDITIONS	75,566			Demolition.
EARTHWORK	235,508			Site clearing, earth moving, earthwork methods, shoring & underpinning, excavation support & protection, geomembrane system.
EXTERIOR IMPROVEMENTS	61,435			Bases, bollards & paving, fences, gates, landscaping.
UTILITIES	65,949			Sanitary sewerage, storm drainage.
<b>TOTAL PROJECT COST</b>	<b>5,362,525</b>			

**UPDATED ESTIMATE TO AUGUST 2017: \$255.30 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	\$239.67	\$5,125,244	Dallas, TX	\$231.85	\$4,958,117	Los Angeles, CA	\$310.00	\$6,629,392
Pittsburgh, PA	\$302.19	\$6,462,265	Kansas City, KS	\$312.61	\$6,685,101	Las Vegas, NV	\$283.95	\$6,072,300
New York, NY	\$385.55	\$8,244,958	Chicago, IL	\$325.63	\$6,963,647	Seattle, WA	\$310.00	\$6,629,392

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