DESIGN COST DATA

July-August 2025

DIGITAL EDITION

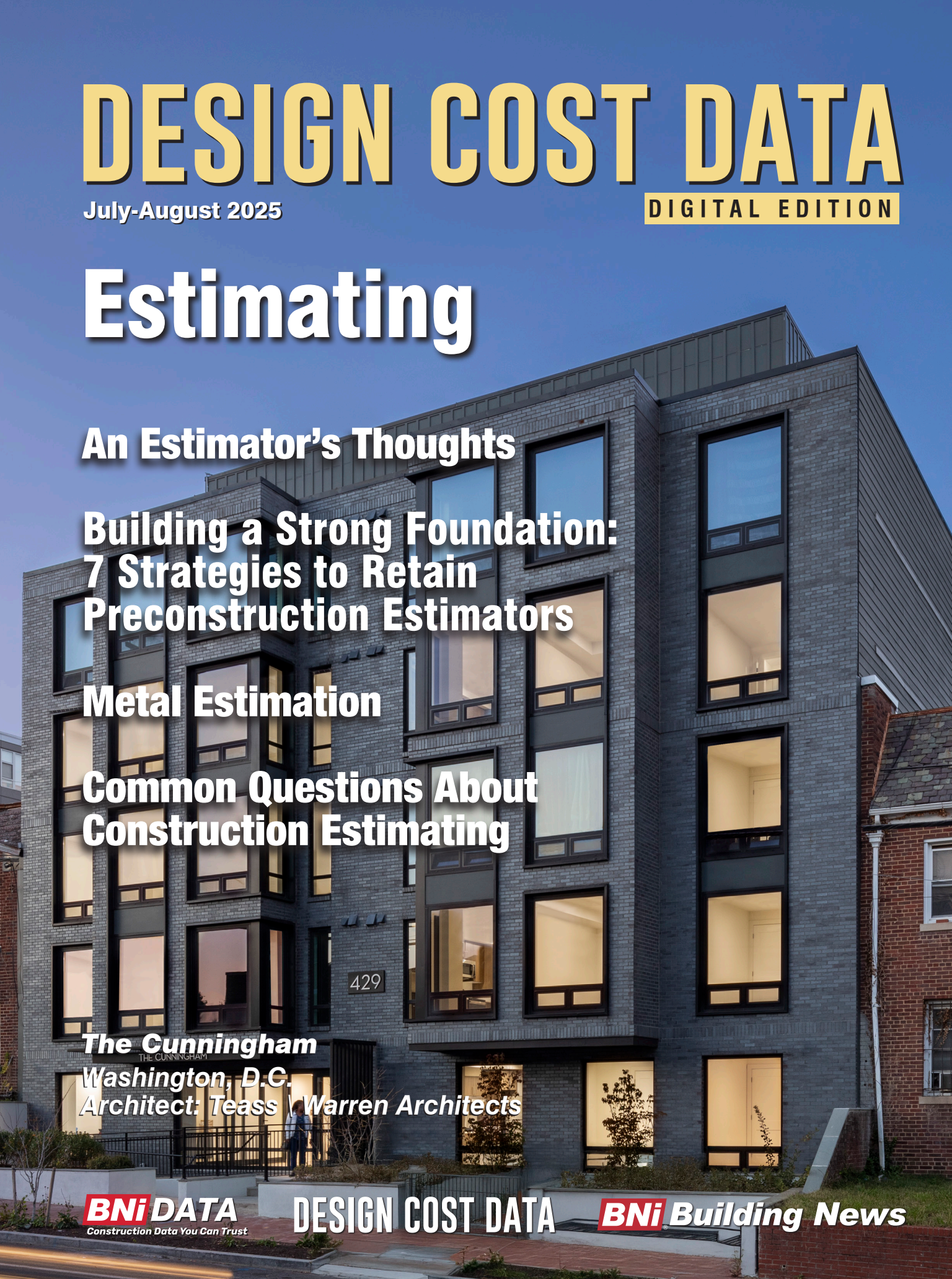
Estimating

An Estimator's Thoughts

Building a Strong Foundation: 7 Strategies to Retain Preconstruction Estimators

Metal Estimation

Common Questions About Construction Estimating



The Cunningham
Washington, D.C.
Architect: Teass \ Warren Architects



With our new, innovative iridescent glaze, Luminescent transforms architectural surfaces, creating a mesmerizing dance of colors that shifts beautifully from dawn to dusk. Available in four contemporary colors, this refined face brick enhances architectural designs with its unique light-responsive finish.

www.beldenbrick.com | 330-456-0031 | *The Standard of Comparison Since 1885*

BELDEN
THE BELDEN BRICK COMPANY
COMMERCIAL | RESIDENTIAL | PAVING



Now, you can do it in one fell swoop.

Introducing *BirdSmart*™ Bird Safe Glass by Vitro Architectural Glass, a first-surface laser-etched glass with a *Solarban*® low-e coating produced at one central location.

Now you can order all your glass—including bird safe glass—from the name you know and trust.

vitroglazings.com/birdsmart



BirdSmart™
Speck 6 Inline 2x2

BirdSmart™
BIRD SAFE GLASS

Vitro®
Architectural Glass

Volume 69 - Number 4 July-August 2025

CONTENTS

COST CASE STUDIES

COMMERCIAL

26 Sachse Animal Shelter

30 San Diego Airport Restroom Remodel

46 Heartland Credit Union

52 Lightspeed Technologies Interior Renovation

EDUCATIONAL

34 Early Childhood Education Center

40 Daniel H. Lopez Chemistry Building

INDUSTRIAL

20 S & J Asphalt Paving Company

MEDICAL

14 FirstHealth Cancer Center

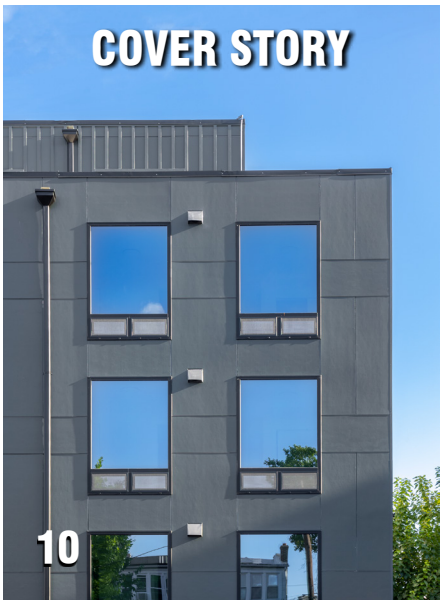
RESIDENTIAL

10 The Cunningham











ESTIMATING

13 Onsite vs. Offsite Materials in Construction

24 Building a Strong Foundation: 7 Strategies to Retain Preconstruction Estimators

29 An Estimator's Thoughts

32 Metal Estimation

39 Accurately Estimating Construction Projects

48 Common Questions About Construction Estimating

DESIGNING FOR TODAY

7 Las Vegas Sphere Named Year's Most Outstanding Engineering Achievement

8 Green Ideas Celebrates LEED® Gold Certification

19 Generational Seed Company Uses Bifold, Hydraulic doors

44 Building Expansion Incorporates Area's Scenic Surroundings

54 BNBuilders Completes Pacific Center

55 55 Key West International Airport Ushers in the Future of Travel

ECONOMIC OUTLOOK

25 AGC Data Digest – Construction Spending Decreases

33 Mortenson's Construction Cost Index

37 New Construction Offers a Boost in Home Affordability

39 Cost Ranges Across Building Divisions: A Breakdown for Construction Projects

44 AGC Construction Employment – Construction Jobs Increase

56 Regional Wage Rates: Chicago, Milwaukee, Detroit

57 BNi Construction Material Costs 2025

58 Cost Escalation Table and Regional Modifiers

INDUSTRY NEWS

9 U. S. Green Building Council Announces 2025 LEED® for Cities Certification Cohort

22 Construction Industry Outlook

38 Belden Brick Introduces Luminescent

45 The Rise of Construction Technologists

50 Builder Sentiment at Third Lowest Reading Since 2012

51 United States Construction Industry Report 2025









Experience the Future of Door Spec Writing Today!

NEW

iSPECIFY It™

Find It. Spec It. Submit It.

iSpecifyIt™ is a patented interactive architectural tool developed to help you find your optimal door solution and build a detailed ready-to-submit 3-part spec without the need to be an automatic door expert. iSpecifyIt maximizes your productivity and optimizes your submittal process by generating exacting specifications within seconds and giving you the freedom to collaborate with your design team members… all from the comfort of your desk!

Get Started » **iSpecifyIt.hortondoors.com**

Horton®

A Word from the Editor

This issue of *Design Cost Data* highlights estimating. With uncertainty about tariffs, material cost fluctuations, and ongoing supply chain problems, estimating continues to be a hot topic. In keeping with this issue's focus on estimating, DCD is pleased to announce the availability of ASPE's Standard Estimating Practice, 3-Volume Set – 2025 Edition, a comprehensive guide to professional construction estimating. This definitive collection, encompassing Volumes I, II-A, II-B, and III, is designed to equip construction professionals with the most current standards, methodologies, and tools for accurate and reliable estimating. For more information, visit ***bnibooks.com/SEP12***.

Featured articles include "Metal Estimation" (page 32), providing you with some helpful tips; "An Estimator's Thoughts" (page 29), informing you about how a seasoned construction estimator stays relevant by continuing credentialing, professional development, and self-improvement; "Common Questions about Construction Estimating" (page 48), offering answers to a variety of pertinent questions; and "Accurately Estimating Construction Projects (page 39).



The Cunningham
Washington, D.C.

We're also including our tried-and-true square-foot cost studies of new buildings and renovation projects submitted by your peers.

Our cover project, The Cunningham (page 10), is one of these case studies, and was conceived as a "modern classic," offering residents an experience that feels almost hotel-like. Designed with a focus on veterans and their families, the project delivers thoughtfully planned, high-quality rental units that combine affordability with dignity and comfort.

Other projects covered in this issue include:

- FirstHealth Cancer Center and Parking Garage (page 14), where the Architect's design centered on creating inclusive, non-institutional environments that prioritize comfort, clarity, and a sense of belonging.
- Sachse Animal Shelter (page 26), that now has an increased capacity to house more animals, improved workspaces for animal care, outdoor play areas, and dedicated spaces for potential adopters to meet and bond with pets.

All of these studies include square-foot prices for divisions and regional cost trends to help you convert the total project cost to your area.

Thank you for choosing this issue of *Design Cost Data*. Please give us a call or email if you have any questions, comments, or suggestions. We'd love to hear from you!



Sincerely,
Barb Castelli
Publisher
barb@dcd.com



Joan Hamilton
Editor-in-Chief
joan@dcd.com

Design Cost Data™ is published bimonthly by DC&D Technologies, a div. of BNi Publications, 990 Park Center Dr. Ste E, Vista CA, 92081, Phone: 800-533-5680. • Subscription rates: $179.00 one year, $245.00 two years; Microfilm copies are available from: Department F.A., University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106. • ©2023, a div. of BNi Publications. This publication may not be reproduced, photocopied, stored in any electronic retrieval device, or transmitted by facsimile without the written permission of the publisher. All rights under USA and International Copyright Laws are reserved. • Authorization to photocopy items for internal or personal use, or the internal or personal use of specific clients, is granted by BNi, only when a royalty of U.S. $1.00 per page, plus U.S. 10¢ per impression is paid directly to: Copyright Clearance Center, 27 Congress Street, Salem, MA 01970, USA. For those organizations that have been granted a photocopy license by CCC, a separate system of payment has been arranged. The fee code for users of the Transactional Reporting Service is [1054-3163/95 $1.00 + 10¢]. • This publication is designed to provide accurate and authoritative information regarding the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering legal, accounting, or other professional service. If legal advice or other expert assistance is required, the services of a professional person should be sought. Statements of fact and opinion are made on the responsibility of the authors and do not necessarily reflect the opinions of the publisher. BNi nor Design Cost Data magazine do not guaranteed the accuracy, adequacy, or completeness of any published information and are not responsible for any errors or omissions therein or for the results obtained from the use of such information or for any damages resulting there from • Contributions of articles and pictures of interest to readers within the industry are welcome. Due recognition will be given to such contributors. However, publisher accepts no responsibility for unsolicited manuscripts. All unsolicited material should be accompanied by SASE.

DESIGN COST DATA
DIGITAL EDITION

STAFF

Publisher
BARB CASTELLI
(barb@dcd.com)

Editor-in-Chief
JOAN HAMILTON
(joan@dcd.com)

Editor
BILL MAHONEY

Associate Editor
JAMES NGUYEN
(james@dcd.com)

Contributing Editor
MICHAEL BROWN

Estimating Consultant
RORY WOOLSEY
rw@rorywoolsey.com

Art Director
ROBERT WRIGHT
(robert@dcd.com)

HEADQUARTERS:

Mailing Address:
Advertising, editorial, administration, circulation, and production

990 Park Center Dr., Suite E
Vista, CA 92081-8352
Tel: **800-533-5680**
Advertising: **800-533-5680**

COVER
Photo Courtesy: Kate Wichlinski

Las Vegas Sphere Named Year's Most Outstanding Engineering Achievement

New York-based Severud Associates Wins Coveted Grand Conceptor Award

Severud Associates of New York has received the American Council of Engineering Companies' (ACEC) highest distinction, the prestigious Grand Conceptor Award, for its exceptional structural engineering work on Las Vegas Sphere. This honor places Severud among the most elite and visionary firms in the nation, recognized for pushing the boundaries of what is possible in the built environment. The award was presented at the 58th Annual Engineering Excellence Awards Gala (EEA), a national juried competition awards ceremony sponsored by ACEC. Hosted by comedian Paul Mecurio for the second consecutive year, the celebration spotlighted 194 outstanding engineering achievements from the U.S. and around the globe, showcasing the critical role engineers play in shaping a sustainable and forward-looking future.

The Sphere, already a cultural and architectural icon, is a marvel of engineering ingenuity. Engineered to endure the relentless challenges of the Mojave Desert, the venue is built to withstand massive daily temperature swings — causing its equatorial circumference to expand and contract by up to three feet each day. Severud's solution? A flexible, dynamic structure capable of breathing with the desert heat, without compromising strength or stability.

Las Vegas' nearly constant sunlight posed another unprecedented challenge for the venue's massive LED exterior, known as the Exosphere — the largest and most complex LED screen ever constructed. To ensure seamless image clarity across the curved surface, Severud engineered a bold and unconventional solution: pre-deflecting large sections of the screen during fabrication. This meant that once installed and under real-world conditions, the panels would align precisely, ensuring crisp, undistorted visuals from every angle. It's a feat of precision that has drawn global admiration from architects, engineers, and artists alike.

But Sphere is more than an engineering achievement — it is a sensory revolution. Designed to immerse audiences in an unparalleled multimedia environment, it delivers an "onstage" experience that engages every sense. From spatial audio that envelops each guest to 16K resolution visuals that transform the interior into any imaginable environment, Sphere has redefined what it means to attend a live performance. No matter where you sit, you're at the heart of the action.

"Sphere is like the magnum opus of them all," proclaimed Severud Associates Principal Cawsie Jijina. "I have waited all my life for a client to say, 'We're going to do this [design] that basically no one else has ever done before.' It seems like all my life I've been preparing for this one."

This groundbreaking project now joins a distinguished list of previous Grand Conceptor winners, including New York's Grand Central Madison (formerly East Side Access), the Sixth Street Viaduct Project in Los Angeles, and Moynihan Train Hall, also in New York — all landmark projects that exemplify innovation, complexity, and transformative public impact.

Founded in 1956, Severud Associates is known for its innovative structural engineering — with the Grand Conceptor Award marking a landmark achievement in its legacy.

The American Council of Engineering Companies (ACEC) represents over 5,500 firms and 600,000 professionals, advocating for the business of engineering and the projects that shape communities and infrastructure nationwide.



Green Ideas Celebrates LEED® Gold Certification for Chase Sapphire Lounge at Phoenix Sky Harbor

Green Ideas Building Science Consultants is proud to announce that the new Chase Sapphire Lounge at Phoenix Sky Harbor International Airport has officially achieved LEED for Commercial Interiors (LEED-CI) Gold certification as of April 14, 2025. Located in Terminal 4, Concourse Level 3, the 3,592-square-foot space exemplifies Chase's strong commitment to sustainable, high-performance design and construction.

Green Ideas collaborated with the Chase AEC team — Alston Construction, Corgan, and GLUMAC Engineers — to support the project's LEED certification journey. The Green Ideas team provided key services, including a Construction Waste Management Plan, Indoor Air Quality Management Plan and Assessment, and guidance on sustainable material selection featuring Environmental Product Declarations (EPDs). These efforts helped ensure the project met and exceeded LEED program requirements typically assigned to general contractors.



Photo Courtesy: Green Ideas

The Chase Sapphire Lounge at Phoenix Sky Harbor.

The Phoenix lounge is part of Chase's global rollout of Sapphire Lounge locations, offering travelers exceptional spaces for both work and relaxation. Other locations include Boston Logan, Austin-Bergstrom, Harry Reid International in Las Vegas, and Hong Kong International Airport. Amenities include wellness areas, private shower suites, high-speed Wi-Fi, and locally inspired food and beverage options.

Travelers at Phoenix Sky Harbor can finally enjoy the highly anticipated Chase Sapphire Lounge by The Club — a stunning elevated space where culture meets world-class hospitality. Designed for relaxation and work, the lounge is open to all travelers, regardless of airline. Chase Sapphire Reserve cardmembers, Priority Pass members, and those with a day pass are welcome.

Guests can unwind at a centerpiece bar, which features craft cocktails and stylish seating, lounge on an "indoor patio" that opens up to the concourse, or relax near ribbon windows with panoramic views of the southern airport landscapes. A retrofitted Airstream food truck, featuring a curated local menu from Phoenix favorite The Larder & The Delta, brings an extraordinary dining experience. Arizona-based Press Coffee is featured, serving exceptional brews, and wine lovers will appreciate the curated selection from Parcelle, one of the country's top wine retailers.

Local artist Timmy Ham (aka SLOTH) adds an Arizona vibe, with hand-painted license plates on the Airstream, featuring sun-inspired designs and vibrant Southwestern themes.

This project holds special meaning for Green Ideas, following their recent success on the Terminal 4 South Concourse 1 project at Sky Harbor. That initiative, completed in partnership with McCarthy Construction, earned LEED for New Construction (LEED-NC) Silver certification on October 28, 2024.

For over 22 years, Green Ideas has helped Architecture-Engineering-Construction professionals raise the bar on green building performance. Their track record includes consistently delivering LEED certifications at levels higher than initially targeted — thanks to their innovative and collaborative approach.

Visit the Green Ideas website to learn more about the sustainable achievements of the Chase Sapphire Lounge, ***Egreenideas.com***

U.S. Green Building Council Announces 2025 LEED® for Cities Certification Cohort

USGBC Partners with Bank of America to Help Local Leaders Achieve City-scale Sustainability

The U.S. Green Building Council (USGBC), developer of the LEED® green building program, has announced 16 local governments selected for the 2025 LEED for Cities Certification Cohort. These communities will participate in a year-long initiative to advance sustainability, resilience, and livability through the LEED for Cities rating system — a globally recognized framework for measuring and managing the performance of urban environments.

The LEED for Cities Certification Cohort supports local governments in setting and achieving ambitious sustainability goals. Through technical guidance, peer-to-peer learning, and structured collaboration, USGBC helps participants strengthen internal capacity and develop comprehensive strategies to improve energy efficiency, enhance public health, promote equity, and build long-term resilience. Using the LEED for Cities framework, participating communities set benchmarks, collect data, and validate progress across multiple performance areas, including climate action, water and energy use, waste reduction, and mobility.

This annual cohort is part of USGBC's ***Local Government Leadership Program***, a nationwide initiative made possible through a longstanding partnership with Bank of America. Since its launch, the program has provided direct support to nearly 120 local governments across the U.S., representing a combined population of more than 55 million people. The 2025 cohort alone accounts for more than 14 million residents, amplifying the program's reach and impact in advancing local climate leadership and sustainable development.

Since its inception in 2017, the program has helped cities and counties across the country respond to the growing need for integrated, forward-thinking approaches to sustainability and resilience. With LEED for Cities, communities demonstrate measurable progress in key areas such as climate resilience, clean energy, green infrastructure, air quality, mobility and transportation, stormwater management, and inclusive planning policies.

In addition to the national cohort, the Local Government Leadership Program includes regional leadership summits designed to deepen engagement and foster the exchange of best practices among participating communities. To further accelerate adoption, USGBC also launched LEED for Cities Accelerators, which provide targeted support to local governments that are new to the program — helping them gather baseline data, track sustainability metrics, and navigate the certification process effectively.

Together, these efforts aim to empower local leaders with the tools, knowledge, and partnerships they need to drive progress and create more equitable, sustainable, and resilient places to live, work, and thrive.

Learn more about the Local Government Leadership Program ***here***.

For more information, visit the ***LEED for Cities*** page.



The Cunningham

Washington, D.C.

Architect

Teass \ Warren Architects



Photo Courtesy: Kate Wichlinski

Designed with a focus on veterans and their families, The Cunningham delivers thoughtfully planned, high-quality rental units.

Located in the rapidly transforming Kennedy Street Corridor — an emerging Opportunity Zone in Washington, D.C. — The Cunningham is a newly constructed, 37-unit multi-family apartment building that sets a new standard for affordable housing. Designed with a focus on veterans and their families, the project delivers thoughtfully planned, high-quality rental units that combine affordability with dignity and comfort.

The Cunningham was conceived as a "modern classic," offering residents an experience that feels almost hotel-like. With an emphasis on family living, each unit in the building is either a two- or three-bedroom apartment — an intentional move to address the growing need for spacious, family-oriented affordable housing. Four of the units are designated through the District's Inclusionary Zoning (IZ) program, ensuring a broader mix of incomes and housing opportunities.

Sustainability is woven into every aspect of the project. The building features a 14-kilowatt rooftop solar panel system, electric vehicle charging stations, and an advanced stormwater management infrastructure — demonstrating a strong



The Cunningham sets a new standard for affordable housing.



Designed as a "modern classic," The Cunningham offers residents an experience that feels almost hotel-like.



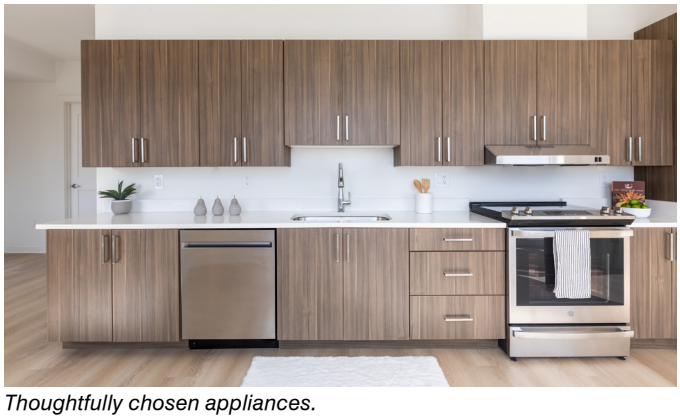
A kitchen with a view.



An abundance of natural light opens up the kitchen area.



The apartments combine affordability with dignity and comfort.



Thoughtfully chosen appliances.



Each unit in the building is either a two- or three bedroom apartment.

commitment to environmental stewardship and long-term resilience.

Teass \ Warren Architects is a boutique design firm based in Washington, D.C., known for delivering innovative architecture and interior design for infill and urban development projects. They partner with homeowners, developers, and business owners to craft tailored, high-impact spaces that elevate everyday life.

Product Information

Interior: Sherwin Williams, GE Appliances, Elkay, Iron Thor Welding
Roofing: GAF, *Green Roof:* Ecospaces
Windows: Intus Windows
Entrances & Storefronts: Kawneer
Elevators: Schindler; *Lifts:* Symmetry Elevating Solutions
Lighting: Signify



A spacious bathroom.

Architect

Teass \ Warren Architects
609 H Street NE, Suite 600, Washington, DC 20002
Teass-warren.com

Project Team

Structural Engineer
Onyx Design and Consulting, LLC
1215 E. Fort Avenue, Suite 002, Baltimore, MD 21230
Mechanical & Electrical Engineer
KK Engineering, LLC
8850 Columbia 100 Parkway, Suite 316, Columbia, MD 21045
Civil Engineer
Huska Consulting, LLC
3 Bethesda Metro Center, Suite 1400, Bethesda, MD 20814
General Contractor
JAP Construction, LLC
2309 18th Street, Suite 2, Washington, DC 20009
Landscape Architect
Moody Graham
609 H Street NE, Suite 600, Washington, DC 20002

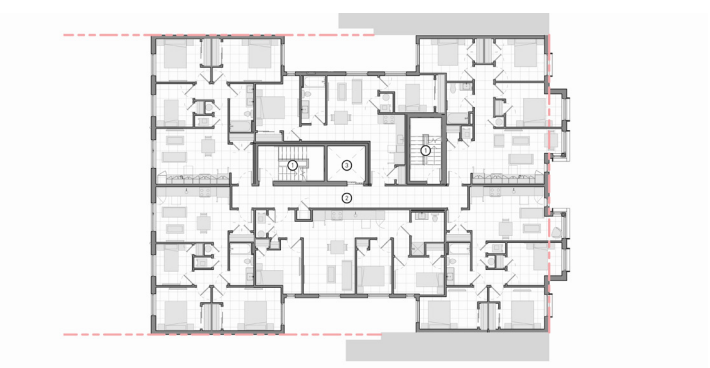
Project General Description

Location: Washington, DC
Date Bid: Jan 2021
Construction Period: Sep 2022 to Aug 2024
Site: 0.22 acre.
Total Square Feet: 31,506.
Building Square Feet: Basement, 5,655; first floor, 5,655; second floor, 5,655; each additional floor, 5,655, penthouse, 3,231; total, 31,506 square feet.
Building Height: Basement 8'; first floor, 8'; second floor, 8'3"; each additional floor, 8'3"; floor to floor, 9'4"; penthouse, 10'4"; fifth floor, 7'8"; total, 50'.
Number of Buildings: One.
Basic Construction Type: New/Podium Construction, 1-A, III-B.
Foundation: Cast-in-place.
Exterior Walls: Block.
Roof: Membrane.
Floors: Concrete, wood.
Interior Walls: Metal stud drywall, CMU, wood stud drywall.

Ground Floor Plan



Typical Floor Plan



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
GENERAL REQUIREMENTS	993,995	12.10	29.64	—
CONCRETE	1,353,900	17.55	42.97	Foundations, walls, underpinnings, slabs, sheathing & shoring.
MASONRY	174,462	2.26	5.54	Unit.
METALS	236,200	3.06	7.50	Structural metal framing, handrails & railings, other.
WOOD, PLASTICS & COMPOSITES	1,086,560	14.08	34.49	Rough carpentry, rough frame.
THERMAL & MOISTURE PROTECTION	462,160	5.99	14.67	Waterproofing, insulation, roof & gutters, siding.
OPENINGS	605,635	7.85	19.22	Exterior doors & windows, interior doors, hardware.
FINISHES	781,330	10.13	24.80	Drywall, tile, flooring, painting.
SPECIALTIES	30,850	0.40	0.98	—
EQUIPMENT	115,900	1.50	3.68	Appliances.
FURNISHINGS	222,995	2.89	7.08	Cabinets, countertops.
SPECIAL CONSTRUCTION	100,000	1.30	3.17	Solar.
CONVEYING SYSTEMS	247,000	3.20	7.84	Elevators (1) & lift (1).
FIRE SUPPRESSION	104,765	1.36	3.33	Sprinkler system.
PLUMBING	359,905	4.66	11.42	Plumbing, fixtures.
HVAC	336,000	4.35	10.66	HVAC.
ELECTRICAL	564,407	7.31	17.91	Rough in, wiring, power, transmission & distribution, low-voltage distribution, lighting, communications.
TOTAL BUILDING COSTS	**7,716,064**	**100%**	**$244.91**	
EXISTING CONDITONS	88,000			Demolition.
EARTHWORK	233,000			Excavation & grading.
EXTERIOR IMPROVEMENTS	270,000			Landscaping, fencing, pavement.
UTILITIES	79,500			—
TOTAL PROJECT COST	**8,386,564**			

UPDATED ESTIMATE TO AUGUST 2025: $338.00 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$270.40	$8,519,314	**Dallas, TX**	$270.40	$8,519,314	**Los Angeles, CA**	$386.29	$12,170,448
Pittsburgh, PA	$328.35	$10,344,881	**Kansas City, KS**	$334.78	$10,547,722	**Las Vegas, NV**	$370.19	$11,663,346
New York, NY	$444.23	$13,996,015	**Chicago, IL**	$383.07	$12,069,028	**Seattle, WA**	$370.19	$11,663,346

For more information on this project and similar projects visit www.dcd.com



Photo courtesy: elements.envato.com

Onsite vs. Offsite Materials in Construction: Navigating Material Inflation Challenges

In the ever-changing construction industry, material costs remain one of the biggest challenges for project owners, developers, and contractors alike. With inflation impacting everything from lumber and steel to concrete and drywall, understanding the difference between onsite and offsite materials — and how inflation affects them — is critical to managing risk and staying on budget.

Let's break down the key differences between onsite and offsite materials, their unique cost drivers, and strategies for navigating material inflation in today's market.

What Are Onsite and Offsite Materials?

Onsite Materials: These are materials that are delivered directly to the construction site and stored or used there as the project progresses. Examples include lumber, concrete, drywall, piping, and other standard building materials.

Offsite Materials: These materials are fabricated, assembled, or staged at a location away from the construction site, such as in a factory or warehouse, before being delivered for installation. Examples include prefabricated walls, modular systems, trusses, or custom architectural elements.

How Inflation Impacts Onsite vs. Offsite Materials

Onsite materials are prone to price swings:

- *Fluctuating Prices:* Onsite materials are often subject to market volatility, with prices impacted by global supply chains, shipping delays, and local shortages.
- *Storage Risks:* Storing large quantities onsite exposes materials to theft, damage, or weather impacts, increasing costs.
- *Lead Times:* Materials sourced last minute can come at a premium, especially during periods of high demand.

Offsite materials offer some cost control, but are not immune to ups and downs:

- *Upfront Costs*: Prefabrication often requires significant upfront investment, locking in prices earlier in the process, which can mitigate inflation risk.
- *Shipping & Logistics:* While offsite manufacturing may offer price stability, shipping costs, fuel surcharges, and freight delays can erode those savings.
- *Design Constraints:* Prefabricated systems may limit flexibility, requiring precise design decisions early, which could lead to change orders if inflation shifts project scope.

Navigating Inflation: Best Practices

Lock in Prices Early: For both onsite and offsite materials, securing pricing through bulk orders or long-term agreements can help stabilize costs before inflation escalates.

Leverage Prefabrication Strategically: Offsite materials can offer protection against some inflation risks, but it's important to assess total costs — including shipping, storage, and labor — before committing.

Track Market Trends: Stay informed about material cost trends and factor inflation projections into your budgeting and risk assessments. Working with suppliers who offer transparent pricing and updates is critical.

Collaborate Across Teams: Early collaboration between design, procurement, and construction teams can help optimize material choices and avoid last-minute changes that lead to higher costs.

Build Contingency into Budgets: Inflation is often unpredictable. Setting aside a contingency fund specifically for material price increases can help protect the project's bottom line.

Inflation in the construction industry isn't going away — but by understanding the dynamics of onsite vs. offsite materials, project stakeholders can make informed decisions to manage risk, control costs, and keep projects moving forward.

About NWM Risk Management: *NWM works as an extension of your lending team. With extensive construction experience, they act as an effective liaison between the lender, the borrower, and the contractor. NWM offers construction progress monitoring, construction risk management, building assessments and engineering, and environmental consulting, and helps clients navigate these challenges every day. From material sourcing assessments to risk mitigation strategies, NWM are here to support your next project. For more information, visit* ***nwmriskmanagement.com****.*

FirstHealth Cancer Center

Pinehurst, North Carolina

Architect

CPL Architects



Photo Courtesy: Sterling E. Stevens

FirstHealth's 120,000-square-foot expansion of the Moore Regional Hospital campus in Pinehurst, North Carolina.

FirstHealth of the Carolinas set out to create a centralized cancer center as part of its *Building the Dream* campaign — one that would eliminate the hardship of long-distance travel and bring top-tier care closer to home. To bring this vision to life, CPL was selected to design a 120,000-square-foot expansion of the Moore Regional Hospital campus in Pinehurst, North Carolina, utilizing an integrated project delivery (IPD) approach.

Understanding that cancer care is deeply personal, CPL's design centered on creating inclusive, non-institutional environments that prioritize comfort, clarity, and a sense of belonging. From day one, CPL partnered closely with FirstHealth leadership, conducting patient journey mapping, interviews, and surveys to inform a truly patient-focused design.



CPL's design centered on creating inclusive, non-institutional environments that prioritize comfort.



Natural light and wellness are woven throughout the facility.

The four-story center consolidates a wide array of services under one roof — including infusion therapy, radiation oncology, clinical trials, palliative care, and multidisciplinary clinics. Two healing gardens — one welcoming patients at the entrance, the other just beyond the infusion bays — offer calming, restorative connections to nature. Their design draws inspiration from the local Sandhills landscape and the resilient pine tree, an enduring symbol of strength and renewal for patients.

Natural light and wellness are woven throughout the facility. Expansive floor-to-ceiling windows flood interiors with daylight and views, while a rooftop wellness hub fosters holistic healing through yoga, meditation, and art therapy. Personalized care is embedded in thoughtful touches like private infusion bays with adjustable privacy levels and a visitor center designed with warm finishes, a fireplace, and accessible technology.

A dynamic horizontal frame grounds the building in a human scale, echoing the flexible, responsive nature of care that adapts to evolving patient needs. Every architectural and interior detail was carefully considered to reduce anxiety, lift spirits, and promote healing.

The FirstHealth Cancer Center is more than a medical facility: it's a haven of hope and compassion, designed to meet patients where they are and walk beside them on their path to recovery.



The FirstHealth Cancer Center is a haven of hope and compassion.

Product Information

Glazing: **Vistacool® Azuria® glasses and Vistacool® Pacifica® glasses, each with a third-surface Solarban® 60 low-e coating.**

Architect

CPL
255 Woodcliff Drive, Suite 200, Fairport, NY 14450
cplteam.com

Project Team

Structural Engineer, Mechanical, Plumbing & Electrical Engineer & Interior Designer
CPL
255 Woodcliff Drive, Suite 200
Fairport, NY 14450

Civil Engineer
LKC Engineering
140 Aqua Shed Court, Aberdeen, NC 28315

Construction Manager
Brasfield & Gorrie
3021 7th Ave. S., Birmingham, AL 35233

Electrical Contractor
Adams Electric
401 N. Greene Street, Greensboro, NC 27401

Mechanical Contractor
Ivey Mechanical
181 Corinth Avenue, Dunn, NC 28334

Plumbing Contractor
Precision Plumbing
474 W. Matthews Street, Matthews, NC 28105

Drywall Contractor
Precision Walls
1230 NE Maynard Road, Cary, NC 27513

Project General Description

Location: Pinehurst, North Carolina
Date Bid: May 2021
Construction Period: May 2021 to Mar 2023
Site: 6.32 acres.
Total Square Feet: 132,043.
Building Square Feet: 132,043 square feet.
Building Height: Four floors, total, 64'.
Number of Buildings: One.
Basic Construction Type: Addition.
Foundation: Cast-in-place, rammed aggregate piers & grade beam, reinforced concrete, slab-on-grade.
Exterior Walls: Brick, curtainwall, metal composite panel, synthetic wood plank.
Roof: Membrane. **Floors:** Concrete slab on metal deck.
Interior Walls: Metal stud drywall.



FirstHealth is designed to walk beside patients on their path to recovery.



The four-story center consolidates a wide array of services under one roof.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
GENERAL REQUIREMENTS	10,349,525	18.26	78.38	—
CONCRETE	3,387,609	5.98	25.66	Forming & accessories, reinforcing, cast-in-place, precast, cast decks & underlayment.
MASONRY	806,593	1.42	6.11	Unit.
METALS	4,194,269	7.40	31.76	Structural metal framing, joists, decking, cold-formed metal framing, fabrications.
WOOD, PLASTICS & COMPOSITES	1,572,975	2.78	11.91	Rough carpentry, finish carpentry.
THERMAL & MOISTURE PROTECTION	2,334,569	4.12	17.68	Roofing & siding panels, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, joint protection, EIFS.
OPENINGS	4,046,926	7.14	30.65	Doors & windows, entrances & storefronts, curtain walls, glazing, hardware.
FINISHES	7,058,230	12.46	53.45	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, painting & coating.
SPECIALTIES	240,506	0.42	1.82	Interior, signage.
EQUIPMENT	468,264	0.83	3.55	—
CONVEYING SYSTEMS	704,804	1.24	5.34	Elevators.
FIRE SUPPRESSION	461,769	0.81	3.50	Water-based fire-suppression systems, fire-extinguishing systems.
PLUMBING	3,278,816	5.79	24.83	Piping & pumps, equipment, fixtures, gas & vacuum systems for laboratory & healthcare.
HVAC	8,564,481	15.11	64.86	Piping & pumps, air distribution, central heating equipment, central HVAC equipment, decentralized HVAC equipment.
ELECTRICAL	9,197,839	16.23	69.66	Low-voltage transmission, facility electrical power generating & storing equipment, lighting.
TOTAL BUILDING COSTS	**56,667,175**	**100%**	**$429.16**	
EARTHWORK	2,737,854			Site paving, all other site work.
TOTAL PROJECT COST	**59,405,029**			

UPDATED ESTIMATE TO AUGUST 2025: $582.19 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$635.12	$83,862,627	**Dallas, TX**	$635.12	$83,862,627	**Los Angeles, CA**	$907.31	$119,803,753
Pittsburgh, PA	$771.21	$101,833,190	**Kansas City, KS**	$786.33	$103,829,919	**Las Vegas, NV**	$869.50	$114,811,930
New York, NY	$1,043.40	$137,774,316	**Chicago, IL**	$899.75	$118,805,388	**Seattle, WA**	$869.50	$114,811,930

For more information on this project and similar projects visit www.dcd.com



The three-level parking deck.

Architect

CPL
255 Woodcliff Drive, Suite 200, Fairport, NY 14450
cplteam.com

Project Team

Structural Engineer, Mechanical, Plumbing & Electrical Engineer & Interior Designer
CPL
255 Woodcliff Drive, Suite 200
Fairport, NY 14450

Civil Engineer
LKC Engineering
140 Aqua Shed Court, Aberdeen, NC 28315

Construction Manager
Brasfield & Gorrie
3021 7th Ave. S., Birmingham, AL 35233

Electrical Contractor
Adams Electric
401 N. Greene Street, Greensboro, NC 27401

Mechanical Contractor
Ivey Mechanical
181 Corinth Avenue, Dunn, NC 28334

Plumbing Contractor
Precision Plumbing
474 W. Matthews Street, Matthews, NC 28105

Drywall Contractor
Precision Walls
1230 NE Maynard Road, Cary, NC 27513

Project General Description

Location: Pinehurst, North Carolina
Date Bid: May 2021
Construction Period: May 2021 to Mar 2023
Site: 6.32 acres.
Total Square Feet: 99,046.
Building Square Feet: 99,046 square feet.
Building Height: —
Number of Buildings: One, Parking deck, 3 levels, 297 spaces.
Basic Construction Type: New.
Foundation: Cast-in-place, rammed aggregate piers & grade beam, reinforced concrete, slab-on-grade.
Exterior Walls: Precast concrete with thin brick veneer and composite metal panel.
Floors: Concrete.
Interior Walls: —

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
GENERAL REQUIREMENTS	1,595,048	21.86	16.10	—
CONCRETE	2,587,312	35.45	26.12	—
MASONRY	982,800	13.47	9.92	—
METALS	611,520	8.38	6.17	—
WOOD, PLASTICS & COMPOSITES	342,160	4.69	3.45	Rough carpentry, finish carpentry.
THERMAL & MOISTURE PROTECTION	95,368	1.31	0.96	Dampproofing, flashing & sheet metal, roof & wall specialties & accessories.
FINISHES	32,032	0.44	0.32	Painting & coating, wall finishes.
SPECIALTIES	60,424	0.83	0.61	Fire protection, signage.
EQUIPMENT	133,224	1.83	1.35	Parking.
CONVEYING SYSTEMS	83,720	1.15	0.85	Elevators.
PLUMBING	98,280	1.35	0.99	—
ELECTRICAL	675,584	9.26	6.82	—
TOTAL BUILDING COSTS	**7,297,472**	**100%**	**$73.68**	
EARTHWORK	702,528			Site paving, all other site work.
TOTAL PROJECT COST	**8,000,000**			

UPDATED ESTIMATE TO AUGUST 2025: $99.95 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$109.04	$10,799,641	**Dallas, TX**	$109.04	$10,799,641	**Los Angeles, CA**	$155.77	$15,428,059
Pittsburgh, PA	$132.40	$13,113,850	**Kansas City, KS**	$135.00	$13,370,985	**Las Vegas, NV**	$149.28	$14,785,223
New York, NY	$179.13	$17,742,268	**Chicago, IL**	$154.47	$15,299,492	**Seattle, WA**	$149.28	$14,785,223

For more information on this project and similar projects visit www.dcd.com

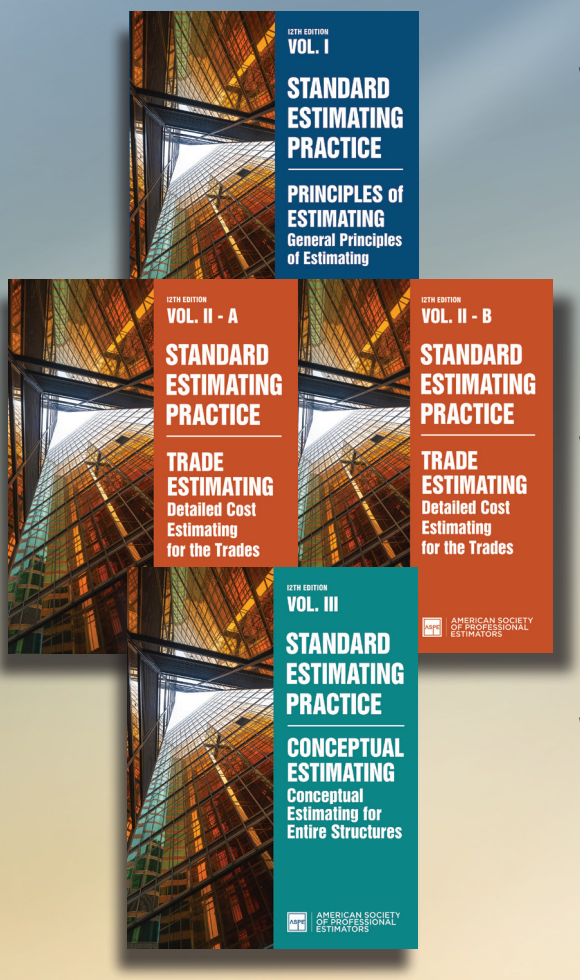
AMERICAN SOCIETY OF PROFESSIONAL ESTIMATORS

Brand-New 12th Edition

Standard Estimating Practice



A step-by-step guide to creating clear, consistent, and verifiable construction cost estimates.



Volume-by-Volume Overview

Volume I: General Principles of Estimating

- ***Fully Revised:*** Updated across all nine parts to reflect modern industry practices.
- ***New Trade Disciplines:*** Added guidelines and examples for specialized estimators.
- ***Current Certification Info:*** Includes 2024 certification stats and requirements.
- ***Modernized Tools:*** Refreshed tables, forms, and checklists for surveys, bids, and evaluations.
- ***Refined Glossary & References:*** Improved definitions and expanded resources for accuracy.
- ***Aligned with Modern Delivery Methods:*** Enhanced guidance on cost planning across delivery types.

Volumes II-A & II-B: Specialized Trade Estimating

- ***Two-Volume Format:***
- ***II-A:*** Concrete, masonry, metals, wood, thermal protection, finishes, openings.
- ***II-B:*** Mechanical, plumbing, HVAC, electrical, fire suppression, utilities, sitework.
- ***30+ New Sections:*** Includes green roofing, biopharma HVAC, and erosion control.
- ***Updated Practices:*** Reflects current standards, materials, labor, and methods.
- ***Educational Enhancements:*** Improved tools for classroom and jobsite use.
- ***CSI MasterFormat Aligned:*** Ensures industry-standard consistency.

Volume III: Conceptual Estimating for Whole Structures

- ***Expanded Scope:*** Adds OmniClass® divisions like bridge construction and fire-damaged repairs.
- ***Updated Case Studies:*** Real-world scenarios with current cost insights.
- ***Advanced BIM Guidance:*** Revised BIM-based cost modeling techniques.
- ***Enhanced Glossary & Tables:*** More terminology and updated conversions.
- ***Focus on Occupied/Phased Projects:*** Advice for hidden costs and safety-conscious scheduling.

Save $120 when you order the entire 3-volume set.
Your total savings with the Costbook included is $260!

Start Building Better Estimates – Buy Now

bnibooks.com/SEP12

Generational Seed Company Uses Bifold, Hydraulic Doors to Build for the Future

The newly constructed dual-purpose shed at Thalmann Seed Farm is the definition of modern efficiency and versatility. Replacing a long-standing structure that had served the farm for many years, this new shed ushers in an exciting new era for the operation.

Established in Plato, Minnesota in 1877, Thalmann Seed Farm has been a pillar of resilience and hard work for almost 150 years. What was started by Brian Thalmann's great-great-grandfather as a small, family-run farm, has evolved into a successful agricultural seed conditioning enterprise spanning six generations. Supported by his son Adam and his [nearly] retired father, Brian Thalmann and his company continue to prosper.



A drone's-eye view of the large bifold door wide open, with a distant glimpse of the Thalmann Seed farm on the horizon.

Across the property are several Lester Buildings post-frame structures, primarily used for equipment storage. Additionally, there is a seed warehouse, and multiple silos dedicated to the operation. Among the buildings on the property, one of the older structures has recently been demolished to make way for a new agricultural shed. Measuring 100' × 220' , the shed is divided into two sections: One-third is dedicated to cold storage, while the remaining two-thirds is insulated to retain warmth, making it a versatile addition to the farm's operations.

A unique door from Schweiss Doors is at each end of the new building. The Thalmann Seed property showcases some essential differences between the needs best met by bifold and hydraulic doors.

On the non-insulated end of the building, there is a bifold door measuring 40' wide × 20' tall. Positioned at the north end, the bifold door was chosen after careful consideration. Given that more snow accumulates at the north end of the shed, the vertical liftstrap mechanism of the bifold door provides a distinct advantage, ensuring easy access even in snowy conditions.

Since the door opens by lifting straight up, there is no need to plow in front of the door to open it. The bifold door features a bottom-driven liftstrap system for easy maintenance. It's



Photo courtesy: Schweiss Doors

The bifold door from the inside, during the construction process. Nearby, large farm equipment highlights the true scale of the door.

equipped with six liftstraps that wrap around the bottom drums as the door opens. Liftstraps require less maintenance and are faster and quieter than cable-driven bifold doors. When shutting the door, two automatic strap latches on each side pull the door in and securely lock the door into position. To help keep the cold storage end of the building dry, the large bifold door is fitted with a complete weather seal kit, preventing snow and other elements from easily entering the building. The bifold door complements the building's design, featuring grey sheeting with a charcoal gray wainscoting.

Schweiss offers flexibility in customization, allowing the shell to be fitted with various types of sheeting and build to any desired size.



From the side of the bifold door, the yellow Schweiss liftstraps are visible, lifting the door open.

(Continued on page 28)

S & J Asphalt Paving Company

Canton, Michigan

Construction Manager

D. J. Maltese Construction Company



Photo Courtesy: D. J. Maltese

The S & J team uses the latest asphalt paving techniques and modern equipment.

Excited about exploring the project, D. J. Maltese scheduled a site visit to assess the existing conditions. The building (approximately 6,000 square feet) included a small office space. The rest of the property was a gravel lot that had served as parking and equipment storage for over 20 years.

Wasting no time, Maltese developed a concept design, budget estimate, and project schedule, presenting it to the owners by the end of March. Impressed by Maltese's efficiency, the owners gave Maltese the green light to move forward. Within a month and a half, Maltese finalized site plan approval drawings and submitted them to both the city and county for review. That's when the real challenges began.

The city's initial review took several weeks and came back with an extensive list of required modifications. Maltese's engineer adjusted the plans accordingly, ensuring that they maintained approximately three acres of gravel storage at the rear of the property. With the revisions complete, Maltese resubmitted the documents to both the city and the county.

Then came the delays. Due to staffing shortages, the county's review lasted months. And when the county finally responded, they mandated a complete redesign, citing a new ordinance requiring all groundwater to be contained and stored on-site. This meant paving the entire back area — an unplanned and costly requirement. Maltese revised the plans (again) and resubmitted them (again).

Just as Maltese thought they were making progress, they hit another roadblock: MDOT had to review the plans since the property fronted Michigan Avenue. Their feedback conflicted with some of the county's requirements, forcing yet another redesign. At this point, the project was entering its second year, and the regulatory maze showed no signs of ending.

The biggest challenge was determining who had final authority — the city, the county, or MDOT. After months of back-and-forth discussions, MDOT agreed to oversee the portion along Michigan Avenue, while the county managed the rest. With this clarity, Maltese completed yet another round of revisions.

The final requirements were extensive: underground water retention, paving the entire three-acre gravel area, perimeter fencing, paved parking for the office and warehouse, lighting, walkways, and landscaping. After another year of adjustments and compliance efforts, the project was (finally) completed.

Understandably, the cost of the site work ended up surpassing the cost of the building itself — nearly doubling Maltese's initial estimates. What started as a straightforward expansion turned into a prolonged and expensive battle with regulatory agencies. Despite the setbacks, Maltese successfully navigated the complexities and delivered a fully compliant, developed site that met all municipal, county, and state requirements.



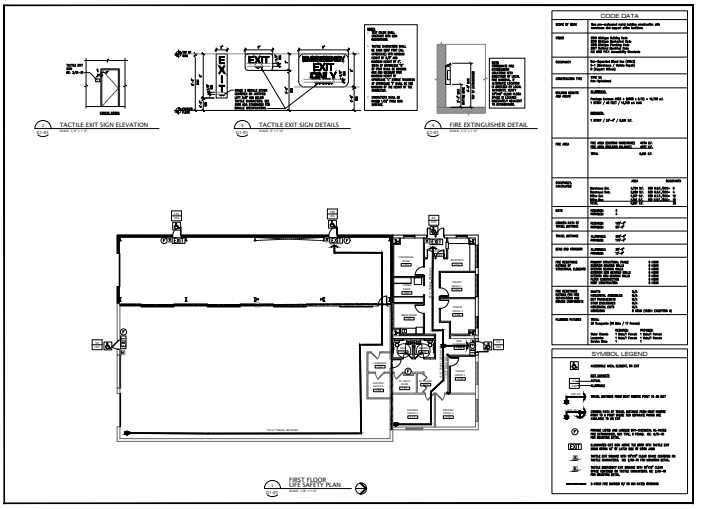
Maltese successfully delivered a fully compliant, developed site that met all requirements.

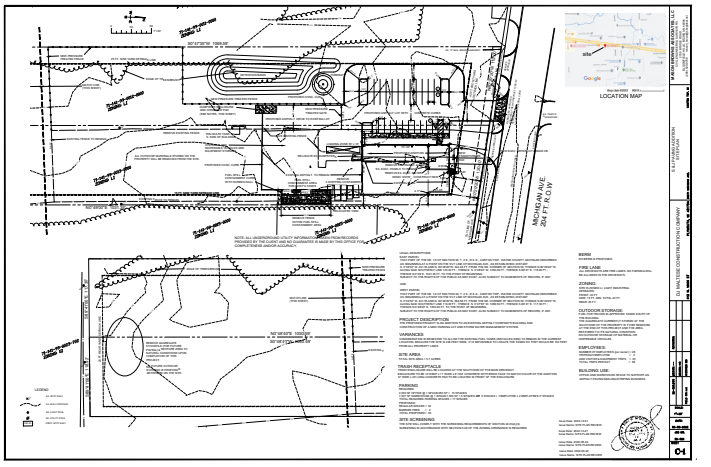
Construction Manager

D. J. Maltese Construction Company
412 N. Main Street, Plymouth, MI 48170
www.djmaltese.com

Project Team

Architect
Amy Baker Architect
1012 Owana Avenue, Royal Oak, MI 48067
Structural Engineer
Revere Pre-Engineered Building
280 Royal Oak Drive, Butler, PA 16002
Mechanical & Electrical Engineer
REJS, LLC
3835 Lakeview Boulevard, Orchard Lake, MI 48324
Civil Engineer
Mason L. Brown & Associates
2708 Bridle Road, Bloomfield, MI 48304
Cost Estimator
D. J. Maltese Construction Company
412 N. Main Street, Plymouth, MI 48170
Landscape Architect
Vert Verde Landscape Architect
44960 Albert Drive, Plymouth, MI 48170





Project General Description

Location: Canton, Michigan
Construction Period: Mar 2023 to Mar 2025
Site 5.7 acres.
Total Square Feet: 9,261.
Building Square Feet: New warehouse area, 2,289; existing warehouse area, 4,704; new office first floor, 1,061; existing office first floor, 1,207; total, 9,261 square feet.
Building Height: Plant, 24'4"; first floor, 8'; total, 24'4".
Number of Buildings: One.
Basic Construction Type: Addition/Renovation.
Foundation: Cast-in-place.
Exterior Walls: CMU, metal.
Roof: Metal. **Floors:** Concrete.
Interior Walls: Metal stud drywall, vinyl backed insulation.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	10,000	0.56	1.08	—
GENERAL REQUIREMENTS	375,895	20.95	40.59	—
CONCRETE	172,012	11.22	21.74	Cast-in-place, cutting & boring.
MASONRY	201,336	11.22	21.74	Unit.
METALS	204,626	11.41	22.10	—
WOOD, PLASTICS & COMPOSITES	153,207	8.54	16.54	Rough carpentry, finish carpentry.
THERMAL & MOISTURE PROTECTION	105,654	5.89	11.41	Dampproofing, roofing & siding panels, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories.
OPENINGS	71,000	3.96	7.67	Doors & frames, hardware, entrances & storefronts.
FINISHES	158,045	8.81	17.07	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, painting & coating.
EQUIPMENT	12,504	0.70	1.35	—
PLUMBING	14,900	0.83	1.61	—
HVAC	27,494	1.53	2.97	—
ELECTRICAL	102,738	5.73	11.09	—
COMMUNICATIONS	110,000	6.13	11.88	—
ELECTRONIC SAFETY & SECURITY	74,652	4.16	8.06	
TOTAL BUILDING COSTS	**1,794,063**	**100%**	**$193.72**	
EXISTING CONDITIONS	249,000			Demolition & structure moving.
EARTHWORK	661,556			Site paving, all other site work.
EXTERIOR IMPROVEMENTS	115,000			—
UTILITIES	24,000			—
TOTAL PROJECT COST	**2,843,619**			

UPDATED ESTIMATE TO AUGUST 2025: $251.87 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$187.23	$1,733,930	**Dallas, TX**	$187.23	$1,733,930	**Los Angeles, CA**	$267.47	$2,477,043
Pittsburgh, PA	$227.35	$2,105,486	**Kansas City, KS**	$231.81	$2,146,770	**Las Vegas, NV**	$256.33	$2,373,833
New York, NY	$307.59	$2,848,599	**Chicago, IL**	$265.24	$2,456,401	**Seattle, WA**	$256.33	$2,373,833

*For more information on this project and similar projects visit **www.dcd.com***

Construction Industry Outlook: A Balanced Approach to Growth and Challenges

The construction industry outlook for the rest of the year is a mix of cautious optimism and a sense of renewal as the sector moves forward from several years of disruptions, including the pandemic and global supply chain challenges. While the construction industry is poised for growth, there are significant hurdles to overcome, including labor shortages, material cost fluctuations, and the need for strategic adaptation. Below, we explore some of the key trends and developments that are shaping the construction industry.

1. Continued Growth in Infrastructure Projects

One of the most promising aspects of the construction industry outlook is the sustained focus on infrastructure development. Governments across the globe are committing to large-scale infrastructure projects to revitalize aging systems and ensure future growth. In the U.S., the Infrastructure Investment and Jobs Act (IIJA) has paved the way for expanded projects in transportation, energy, water systems, and broadband.

In addition to meeting infrastructural needs, there is a significant emphasis on sustainability. Green building materials, energy-efficient solutions, and climate-resilient designs are becoming top priorities, fostering innovation in materials and processes. This shift will open new opportunities for construction professionals and engineers in 2025.

2. The Role of Technology in Construction

Technology plays a crucial role in shaping the construction industry. Innovations like Building Information Modeling (BIM), drones, and robotics are transforming how construction projects are managed, executed, and monitored. These tools reduce costs, enhance accuracy, and speed up project timelines.

Looking forward, Artificial Intelligence (AI) and machine learning will take on a more central role. By leveraging predictive analytics, these technologies will allow construction companies to optimize resource allocation, improve project forecasting, and prevent issues before they escalate. As technology continues to evolve, the construction industry will see more efficient, data-driven processes.

3. Sustainability and Green Construction Practices

As sustainability becomes a primary focus, the construction industry outlook for 2025 points to an increasing adoption of green building practices. Energy-efficient designs, low-carbon construction materials, and eco-friendly technologies — such as solar panels and wind turbines — will become standard in new projects.

This shift is not just driven by market demand but also by government regulations and incentives aimed at reducing carbon footprints. Projects pursuing LEED® (Leadership in Energy and Environmental Design) certification or aiming for net-zero energy standards will become more common in the years ahead, further cementing sustainability as a key driver in the construction industry.

4. Skilled Labor Shortages and Workforce Development

A major challenge for the construction industry is the ongoing shortage of skilled labor. While demand for new construction projects continues to rise, many sectors are struggling to find qualified workers. To address this, construction companies are expected to place greater emphasis on workforce development through apprenticeships, training programs, and partnerships with educational institutions.

Additionally, automation and robotics are increasingly being used to complement human labor. Although machines and AI-driven tools cannot replace workers entirely, they will help alleviate the physical demands of certain tasks, allowing laborers to focus on more specialized activities that require human expertise.

5. Inflation and Material Costs

Inflationary pressures and fluctuating material costs continue to pose risks. Supply chain disruptions, geopolitical tensions, and rising energy costs are expected to keep material prices volatile. As a result, contractors will need to closely monitor the prices of essential construction materials like steel, lumber, and concrete.

To mitigate these risks, construction companies will rely more on innovative sourcing strategies and digital supply chain management tools. The use of technology to track and forecast material prices will help firms make informed decisions and avoid cost overruns.

6. Smart Cities and Urban Development

As urbanization accelerates and cities become more technology-driven, smart cities are becoming a defining feature of the construction industry. These cities integrate advanced technologies — such as smart grids, autonomous transportation systems, and data-driven urban planning — to create more efficient, sustainable living environments.

This trend will drive demand for construction firms specializing in the development of smart infrastructure. Mixed-use developments, affordable housing, and vertical construction will continue to be in high demand, particularly in crowded urban areas where space is limited.

7. Global Supply Chain and Logistics Adjustments

The disruptions in global supply chains over the past few years have highlighted vulnerabilities in the construction sector. In response, the construction industry predicts a shift toward more localized and diversified sourcing strategies. This approach aims to reduce reliance on distant suppliers and build more resilient supply chains.

Digital tools that track inventory, manage logistics, and streamline delivery times will help mitigate supply chain challenges. These tools will improve coordination between contractors, suppliers, and manufacturers, ensuring smoother material flow and reducing costly delays.

Conclusion

The construction industry outlook for the remainder of 2025 reveals a sector in transition, balancing growth opportunities with significant challenges. The continued focus on infrastructure projects, technological advancements, sustainability, and workforce development will drive industry evolution. However, challenges such as labor shortages, material cost volatility, and supply chain issues must be managed carefully to ensure successful outcomes.

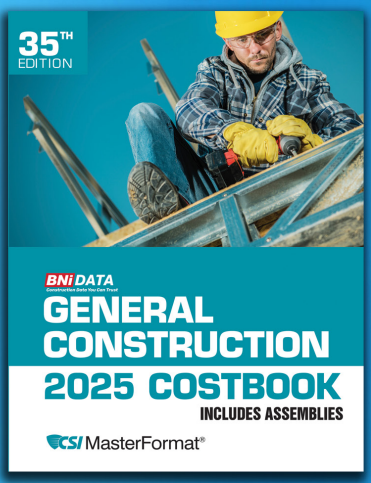
To thrive, construction firms must embrace adaptability. Leveraging technology, prioritizing sustainability, and investing in workforce training will be essential strategies. With a balanced approach, the construction industry can not only overcome challenges but also contribute to global economic growth and create a more sustainable, efficient built environment.

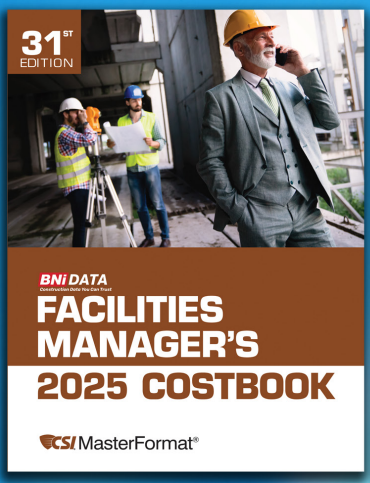
About NWM Risk Management: *NWM Risk Management specializes in delivering top-tier construction monitoring and risk management services.*

This article was reprinted with permission from NWM Risk Management.

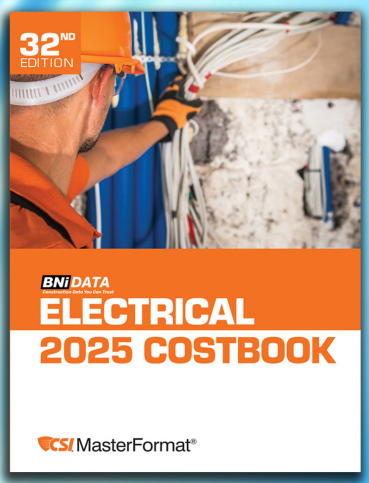
For more information, visit ***nwmriskmanagement.com***.

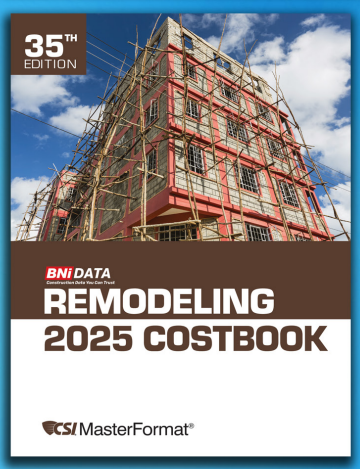
All New BNi Building News
2025 ESTIMATING COSTBOOKS
Fully updated for current inflation



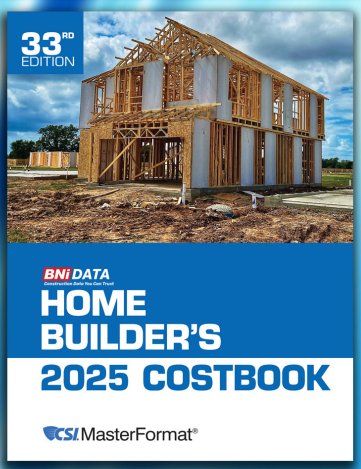














Download the digital eBook versions NOW!

BNi DATA
Construction Data You Can Trust

DESIGN COST DATA

BNi Building News

Call Toll FREE 1-888-264-2665 or go to www.bnibooks.com

Click here to ORDER NOW!

Building a Strong Foundation: 7 Strategies to Retain Preconstruction Estimators

Your project's success can be won — or lost — before the first shovel ever hits the ground. That's where preconstruction estimators come in. Their expertise in analyzing project plans, assessing costs, and providing accurate estimates impacts profitability and client satisfaction. Retaining skilled estimators has become increasingly challenging.

Let's explore some strategies that will help retention rates and ensure sustained growth.

The Critical Role of Preconstruction Estimators

Preconstruction estimators are responsible for evaluating project specifications, conducting material and labor cost analyses, and developing comprehensive estimates that guide decision-making processes. Their insights are key for setting realistic budgets and timelines, which are foundational to project success. Losing experienced estimators can result in project delays, budget overruns, and a loss of client trust.

Robert A. Nidzgorski, FCPE, VMA, CCHM, and Director of Preconstruction at Austin Commercial, puts it this way, "A good construction project starts with a good estimate and a schedule structured from the beginning that is realistic and follows a logical sequence."



Allowing estimators to gain on-site experience creates understanding and engagement.

Recognizing the essential role of estimators underscores the importance of implementing strategies to retain them and keep them happy. Here are seven ways you can increase your preconstruction estimators' satisfaction with their role.

1. Implement Structured Career Pathways

One of the primary reasons estimators seek opportunities elsewhere is a lack of clear career progression. When your firm establishes a structured roadmap that outlines advancement from estimator roles to preconstruction managers, directors, or executives, it can motivate employees to envision a long-term future with your company.

Here are four things you can do to give them that vision.

- *Fast-Track Career Pathing:* Providing a transparent progression plan helps estimators understand the skills and experiences required for advancement. Regular performance reviews and personalized development plans can further support their growth.
- *Professional Development Opportunities:* Encouraging estimators to pursue certifications, such as ***Certified Professional Estimator*** (CPE), or engage in specialized training programs to enhance their competencies and demonstrate your investment in their professional growth.



Photo Courtesy: iStock

Creating mentor programs accelerates growth and builds relationships.

- *Enhanced Compensation and Benefits:* Competitive compensation packages are essential in retaining top talent. Beyond base salaries, personalized benefits can make a significant difference. (The ***Construction Estimator Salary 2025 Report*** from Niche Specialist Staffing Partners offers good benchmarks.)
- *Tailored Compensation Packages:* Offering customized benefits such as profit-sharing, stock options, or professional development stipends aligned with individual goals can increase job satisfaction and loyalty. Health and wellness benefits, including mental health support, also matter.

2. Promote Cross Training and Field Experience

Estimators often work in isolation, focusing solely on numbers and projections. Integrating cross-training opportunities with operations can bridge the gap between estimating and project execution.

Here are two ways to do just that.

- *Field Experience Integration:* Allowing estimators to gain on-site experience creates a greater understanding of projects, enhancing their ability to provide accurate estimates and increasing their engagement with the company's operations.
- *Interdepartmental Collaboration:* Encouraging estimators to work closely with project managers, engineers, and other stakeholders promotes a comprehensive understanding of the construction process and leads to more accurate estimates.

Brent Pilgrim, national director of preconstruction for The Beck Group, shares, "Cross-training opportunities were important to my story, and why I have been so happy at Beck. To this day, I consider cross-training to be one of the most undervalued experiences we can ask our employees to go through. I consider myself a lifelong learner, curious and interested in different things."

3. Encourage Innovation and Continuous Learning

The construction industry is rapidly evolving. Encouraging estimators to stay updated with tools and methodologies can lead to increased efficiency and job satisfaction.

Try these three strategies to encourage estimators to keep up with the latest technology.

- *Dedicated Innovation Time:* Allocating time for estimators to explore new tools, workflows, and software promotes a culture of innovation. This not only benefits individual growth but also enhances the company's competitive edge.

- *Access to Advanced Estimating Tools:* Providing estimators with state-of-the-art software solutions streamlines processes and reduces errors. For instance, ***DESTINI Estimator*** offers advanced estimating capabilities that integrate takeoff, estimating, and proposal functionalities into a single cloud-based platform, enhancing efficiency and accuracy.
- *Attendance at Conferences and Workshops:* Supporting participation in industry events enables estimators to stay current with the latest trends. (Two of the biggest conferences to consider are ***Precon World*** or ***Advancing Preconstruction***.)

4. Establish Mentorship Programs

Mentorship can impact an estimator's professional development. Pairing junior estimators with seasoned professionals facilitates knowledge transfer and creates a supportive work environment. Here are two suggestions to put into practice.

- *Structured Mentorship Initiatives:* Experienced mentors can provide real-world guidance in areas such as value engineering and risk analysis, accelerating the growth of junior estimators.
- *Peer Learning Opportunities:* Creating platforms for estimators to share experiences and best practices encourage continuous learning and professional camaraderie.

5. Create Collaborative, Rewarding Environments

Encouraging collaboration among estimators can lead to the development of innovative cost-modeling techniques and a deeper understanding of industry trends. Try these three ideas to create a collaborative atmosphere in your firm.

- *Estimation Labs and Think Tanks:* Internal groups where estimators collaborate on projects and share insights can stimulate creativity and continuous improvement.
- *Formal Recognition Programs:* Implementing systems to celebrate individual and team accomplishments can boost morale and motivation.
- *Performance-Based Incentives:* Offering bonuses or other rewards tied to performance reinforces the importance of their contributions and encourages excellence.

6. Cultivate a Supportive Work Environment

A positive work environment that prioritizes open communication and work-life balance is essential for retaining preconstruction estimators. Consider these two methods.

- *Transparent Communication Channels:* Encouraging open dialogue between management and estimators ensures that concerns are addressed quickly. It also creates a culture of trust.
- *Work-Life Balance Initiatives:* Offering flexible work arrangements and fostering a healthy work-life balance can help reduce burnout and enhance job satisfaction.

7. Provide Clear Project Objectives and Expectations

Ensuring that estimators have a clear understanding of project goals and expectations enhances their ability to deliver accurate and effective estimates. When estimators feel appreciated and affirmed in their work, they will be less likely to leave.

Here are two ways to share expectations.

- *Detailed Project Briefings:* Conducting comprehensive briefings that outline project objectives, constraints, and client requirements ensures that estimators have the necessary information to develop accurate estimates.
- *Regular Feedback Loops:* Establishing mechanisms for regular feedback enables estimators to adjust their approaches in response to project developments and stakeholder input.

Retaining preconstruction estimators requires a multifaceted approach that aligns with the values and expectations of today's workforce. By prioritizing these strategies, construction companies can build a resilient and skilled estimating team.

About Beck Technology: *Beck Technology empowers construction professionals with innovative preconstruction and estimating software. For more information, visit* ***www.beck-technology.com****.*

AGC's Data Digest

Construction Spending Decreases By 0.4 Percent from March to April and 0.5 Percent Over 12 Months

Private Nonresidential Investment and Homebuilding Decline as Uncertainty over Tariffs and Trade Friction Keeps Contractors and Owners Guessing about Costs and Demand for Upcoming Projects

Construction spending fell for the third straight month in April, declining 0.4% from March and 0.5% from a year earlier — the first annual drop since April 2019, according to an analysis by the Associated General Contractors of America (AGC). Officials warned the slowdown could hurt U.S. competitiveness and economic growth.

"A pullback in private nonresidential projects and a sharp drop in homebuilding contributed to the decline," said Ken Simonson, AGC's chief economist. "Uncertainty around tariffs and potential retaliation by trading partners makes owners reluctant to launch new projects."

Spending totaled $2.15 trillion at a seasonally adjusted annual rate in April. The decline followed drops of 0.8% in March and 0.7% in February.

Private non-residential construction shrank 0.5% in April. Manufacturing plant spending fell 0.6%, power construction declined 0.7%, and commercial construction dropped 1.0%.

Private residential construction fell 0.9% for the month and 4.8% year-over-year. Single-family building declined 1.1%, with improvements down 0.8% and multifamily slipping 0.1%.

Public construction helped offset declines, rising 0.4% in April and 5.5% year-over-year. Highway spending rose 0.5%, transportation facilities 0.7%, while education dipped 0.1%.

AGC urged the administration to avoid tariffs on key inputs like steel, aluminum, and lumber. "Without greater cost certainty, private construction will likely keep falling," said CEO Jeffrey Shoaf. "That threatens U.S. competitiveness and growth."

For more information, visit ***www.agc.org***.

Sachse Animal Shelter

Sachse, Texas

Architect

Ron Hobbs Architecture & Interior Design, LLP

The City of Sachse proudly announced the opening of the new Sachse Animal Shelter, the first major project completed as part of the Bond 2021 program on October 26, 2024.

The new Sachse Animal Shelter features increased capacity to house more animals, improved workspaces for animal care, outdoor play areas, and dedicated spaces for potential adopters to meet and bond with pets. The shelter also has wheelchair accessible entrances and parking.

One of the City's major goals for its new animal shelter was to increase awareness and promotion of animal adoption. The site for the new animal shelter is on one of the City's major thoroughfares. The building has been designed to take advantage of the exposure the site offers. The public spaces, including adoption areas, are placed in a "pavilion" like space and plaza that face the street. Animal intake, work areas, kennels, and other support space are located on the backside of the building screened from the street.



Photo Courtesy: Jack Palmer

The site for the new animal shelter is on one of the City's major thoroughfares.

The building contains 25 kennels, 4 isolation kennels, housing for both domestic and feral cats, cat condos, laboratory, indoor and outdoor meet - n - greet space, staff work areas and offices, and a multi-purpose room. The building's exterior is designed with a combination of metal siding and limestone.



Kennels are located on the backside of the building screened from the street.



The employee break room.



The welcoming pavilion faces the street.



The whimsical paw prints add a touch of humor.

Architect

Ron Hobbs Architecture & Interior Design, LLP
614 West Main Street, Suite 200, Garland, TX 75040
Ronhobbsarchitects.net

Project Team

Structural Engineer
Joe P. Hill, PE, Inc.
1801 N. Hampton Road, Suite 440, DeSoto, TX 75115
Mechanical & Electrical Engineer
MD Engineering
1255 West 15th Street, Suite 300, Plano, TX 75075
Civil Engineer
RLK Engineering, Inc.
111 West Main Street, Allen, TX 75013
Construction Manager at Risk
Steele Freeman, Inc.
1301 Lawson Road, Fort Worth, TX 76131
Cost Estimator
Steele Freeman, Inc.
1301 Lawson Road, Fort Worth, TX 76131

Project General Description

Location: Sachse, Texas
Construction Period: Jul 2023 to Oct 2024
Site: 2.6 acres.
Total Square Feet: 5,792.
Building Square Feet: First floor, 5,792; total, 5,792 square feet.
Building Height: First floor, 13'; total, 13'.
Number of Buildings: One.
Basic Construction Type: New.
Foundation: Cast-in-place, pier & grade beam, reinforced concrete, slab-on-grade.
Exterior Walls: Storefront, stone & metal panels.
Roof: Membrane.
Floors: Concrete.
Interior Walls: Metal stud drywall, CMU.



The kennels.



The new shelter features increased capacity to house more animals.

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	134,467	4.10	23.22	—
GENERAL REQUIREMENTS	779,008	23.77	134.50	—
CONCRETE	63,195	1.93	10.91	Forming & accessories, reinforcing, cast-in-place.
METALS	247,329	7.55	42.70	Steel fabrication & erection, structural steel framing, joists & deck.
WOOD, PLASTICS & COMPOSITES	115,031	3.51	19.86	Rough carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	194,192	5.93	33.53	Membrane roofing, metal panels.
OPENINGS	179,780	5.49	31.04	Finish hardware, wood doors, hollow metal doors & frames.
FINISHES	484,424	14.78	83.64	Plaster & gypsum board, tiling, ceilings, flooring, painting & coating.
SPECIALTIES	53,305	1.63	9.20	Lockers, toilet partitions, fire extinguishers & cabinets, knox boxes.
FURNISHINGS	554	0.02	0.10	Window coverings.
SPECIAL CONSTRUCTION	200,394	6.11	34.60	Animal enclosures.
FIRE SUPPRESSION	20,502	0.63	3.54	Material, labor, inspections.
PLUMBING	303,762	9.27	52.45	Rough in, solid interceptor, top out, domestic water, insulation, trim.
HVAC	180,302	5.50	31.13	Equipment, unit heater, exhaust fan, louvers & vents, grilles, piping, ducts, start up.
ELECTRICAL	283,840	8.66	49.01	Rough in, trim out, switchgear & panel, lighting.
COMMUNICATIONS	17,568	0.54	3.03	Material & labor.
ELECTRONIC SAFETY & SECURITY	19,500	0.60	3.37	Fire alarm.
TOTAL BUILDING COSTS	**3,277,153**	**100%**	**$565.81**	
EARTHWORK	502,394			Pond excavation, rough grade & balance site, fill, backfill, site demolition, termite control, final grade.
EXTERIOR IMPROVEMENTS	325,391			Pavement markings, synthetic grass surfacing, chain link fences, landscaping & irrigation.
UTILITIES	279,716			Water, sewer & storm.
TOTAL PROJECT COST	**4,384,654**			

UPDATED ESTIMATE TO AUGUST 2025: $724.86 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$724.86	$4,198,402	**Dallas, TX**	$724.86	$4,198,402	**Los Angeles, CA**	$1,035.72	$5,997,718
Pittsburgh, PA	$880.19	$5,098,060	**Kansas City, KS**	$897.45	$5,189,022	**Las Vegas, NV**	$992.37	$5,747,813
New York, NY	$1,190.85	$6,897,375	**Chicago, IL**	$1,026.98	$5,947,737	**Seattle, WA**	$992.37	$5,747,813

For more information on this project and similar projects visit ***www.dcd.com***

(Generational Seed Company Uses Bifold, Hydraulic Doors to Build for the Future continued from page 19)

On the south end is a Schweiss hydraulic door, measuring 50' wide × 20' high. The hydraulic door was chosen for the south end because there is less snow, and it melts faster in the sunshine. Unlike the bifold door, the bottom of a hydraulic door swings outward and up, requiring a clear space in front of the door to operate. So, heavy snow must be removed before operating the door to avoid scooping snow onto the door frame.

"As the door swings open, the windows give a clear view of the space in front, serving a practical purpose while also allowing natural light into the shop," says Brian Thalmann.



Positioned to the right of the door, you get a full view of the cold storage interior. Beyond the bifold door, the large farming equipment is visible, showcasing how the door opens to accommodate it.



In this head-on view, the hydraulic door reveals its large size, featuring four windows and a two-tone gray sheeting with wainscoting.



Looking out from inside the building, the hydraulic door is fully extended, providing a vast opening and unobstructed view



From the front, the un-sheeted Schweiss bifold door frame is revealed, equipped with the Schweiss yellow liftstraps — ready for operation.



A bird's-eye view from the south end of the building, highlighting the hydraulic door in its closed state.

Covered in the same grey sheeting and charcoal grey wainscoting as the bifold door and building, the hydraulic door also features four windows, each measuring 4½' × 3½'. The interior of the door is covered in white sheeting, blending seamlessly with the building's interior.

To the side of the door is the hydraulic pump, mounted roughly six feet off the floor — out of the way, but easily accessible. The control station is mounted below the pump so the door operator can monitor the door when opening and closing.

Insulated and fitted with radiant floor heating, the southern end serves as the Thalmann's repair shop. The floor is heated by two natural gas boilers, providing efficient and reliable heating for the entire area. With the large Schweiss hydraulic door, there is a generous opening for the semis to enter the building.

"The size of the door ensures we don't have to limit what can enter the building, providing enough space for larger trucks and equipment to enter, which is exactly what we wanted," Thalmann says.

The hydraulic door is insulated with spray foam to keep the temperature stable in the insulated area. It also has a complete Schweiss Doors weather-seal kit, protecting the building from Minnesota's unpredictable weather and unwanted insects.

Mid-Minnesota Builders of Glencoe, Minnesota, erected the building, and Schweiss Doors installed the doors.

About Schweiss Doors: *Schweiss Doors is the premier manufacturer of hydraulic and bifold liftstrap doors. Doors are custom made to any size for any type of new or existing building for architects and builders determined to do amazing things with their buildings, including the doors. Schweiss also offers a cable-to-liftstrap conversion package. For more information, visit* ***www.bifold.com****.*

An Estimator's Thoughts

Credentialing, Professional Development, and Self Improvement for Design and Construction Practitioners

By Daniel G. Frondorf, CPE, CDT



Photo courtesy: elements.envato.com

Despite being a veteran construction cost estimator, I've noticed as I've advanced in my career (meaning "gotten older") that there is still much I don't know … and need to learn. For me, and I suspect for others of a certain age and experience level, the need to continue learning keeps increasing, but not inversely to how much knowledge and experience I may already have. The opposite is true: the more you know, the more you don't know — sounds a tad askew, I know, but that's my reality, or at least how I perceive it. What is a middle-aged, double-digit experienced construction professional to do? Keep learning, of course!

In years past, many construction estimators relied on membership and participation in professional trade associations, where new knowledge could be gained just by reading the monthly newsletter, or perhaps by attending the occasional meeting. For many reasons, not excluding the pandemic years, trade association memberships seem to have less esteem than they enjoyed 15 or 20 years ago.

Getting the most out of those experiences requires more than a little effort, but for me they've always been the best way to keep up to date on industry trends, new materials and software, and business opportunities. There are literal dues to pay; travel and lodging expenses for attending out of town conferences; and, for many, a time commitment that faces keen competition from other human endeavors, like being a spouse, a parent, a caregiver, a friend, or even just a person who could use a little downtime (who couldn't use more of that?).

A lot of these trade associations offer one or more opportunities for certification and other forms of credentialing. Obtaining these almost always requires a higher level of effort, expense, and time — they usually require studying for and passing an exam or two and writing a paper or some other form of peer review in order to attain those initials after your name and job title on a business card or email signature. Are these pursuits worthy of the effort? That answer is as variable as there are people on the planet, so all I can do is offer my own experiences as an example.

I work in an industry where no license or even college degree is required to practice — I am a construction cost estimator, but I work alongside degreed and licensed professionals on a daily basis, many of whom are my clients.

For me, it is mandatory that I achieve and maintain credentials (I do have an AAS degree in civil engineering technology and LCPE and CDT certifications from ASPE and CSI, respectively, on top of my 30 years of experience as an estimator, including 26 as a self-employed estimator). These credentials give my clients and others confidence that I am capable of speaking their language, understanding and using their work output, and making a positive contribution to the project.

Delivering accurate, correct, and thorough cost estimates and providing other technical services is where the rubber hits the road, because that's where the proof is that anybody is good at what they do. For me though, it's more of an idea that I can always be better that drives me, even if my job doesn't depend on it. Anybody with a legal pad and calculator can call themselves an estimator, but not everybody can prove their competency at it, and that's motivation enough for me.

There are other motivations as well: more money comes to mind immediately, but a bigger salary really comes from the value a person brings to their employer or clients. Credentials can open doors, get you a second look, and quietly provide assurance to those considering doing business with you or your firm. A value adder to potential clients include knowing that your company is staffed with smart, thoughtful people who do more than the minimum to stay good at their job. These value adders aren't only measured in dollars: professional esteem and peer recognition are awfully nice as well, as is the self-satisfaction and confidence that can arise from achieving professional credentialing.

Outside of trade association memberships and the certification opportunities that come with them, there are many other ways to keep learning and getting better. I've always been a fan of trade mags, like DCD, ENR, and many others. Reading these is one way to learn. Teaching a class is another — and it may be the most underrated method of learning, as knowledge transfer is usually a two-way street.

My newest (and maybe favorite) way to learn these days is the very modern (and somewhat hip!) method of watching YouTube videos on a wide variety of topics. There are many channels that focus on engineering and construction, and many manufacturers, suppliers, and vendors have videos on how to use their products and services.

I will often watch videos of construction crews in action just to get an idea of crew composition for a particular installation and the equipment they're using. This is freely available and useful information that can help me in my job. I've become a better estimator just by watching these videos. My favorite channel is, by far, Practical Engineering (and its sister channel Practical Construction), both produced and hosted by Texas-based civil engineer Grady Hillhouse.

I don't think I'd go so far as to mention on my CV that I am an avid reader of trade publications or watcher of YouTube videos, but that doesn't preclude their usefulness as professional development tools. The bottom line for me is to never assume I am finished learning. I'm old enough now that I need to re-learn all the stuff I forgot!

About the Author: *Daniel Frondorf, CPE, CDT is a Cincinnati-based civil construction cost estimator; he operates DG Frondorf and Associates, a civil cost estimating consulting firm, and is a member of ASPE, CERT, CSI, and AACE.*

For more information, visit **dgfrondorf.com**

San Diego Airport First Floor Restroom Remodel

San Diego, California

General Contractor

JXR Constructors, Inc.

The San Diego County Regional Airport Authority awarded JXR Constructors, Inc. the Terminal 2 West Restroom Remodel Project.

The project involved two large men's and women's restrooms and an all gender restroom. Work was broken out into two phases.

The initial challenge was making sure that no passengers would be affected through construction. The restrooms were in a high visibility area and were overdue for a makeover. After working on a previous set of restrooms, Atkins Global's lead architect made more design adjustments to make these restrooms truly the best the airport had to offer.

Due to the high traffic location of the restrooms within the airport, the work was scheduled to be performed from 8pm to 5am to reduce impact to passengers and operations. Additional challenges included airport security and accessing secure areas to connect utilities.

Prior to commencing work, metal containment walls were fabricated and installed to separate the public from the work area. JXR Constructors, Inc. teamed up with McCain wall manufacturers to build the temporary aluminum walls. The airport personnel were so impressed with the walls that they started using them on subsequent projects.

Direct work in each phase involved complete interior demolition. Remodel began with rough-in of new HVAC duct and, concurrently, the installation of structural steel support for the sinks and countertops. After HVAC duct was installed, the ceiling was ready for framing and drywall. The next step was rough-in for new plumbing and electrical conduit. This was followed by new wall framing, drywall, and insulation. After that, drywall was installed on the ceilings and walls. The desired wall tile patterns were then installed.

Wall and floor tile activities took five weeks for each restroom. The large 2'×2' white and black composite floor tiles went in faster. After the tile, the countertops, toilet partitions and accessories were installed; plumbing finishes, lighting fixtures, and new HVAC grilles followed.

Work on each phase was completed and accepted by the Airport Authority prior to beginning the next phase. The project was completed on schedule, within budget, and with zero accidents reported.

Product Information

Flooring: Wausau



Completed women's bathroom.



Men's bathroom reflecting modern bathroom standards.



Temporary aluminum wall barriers.

Photos Courtesy: JXR Constructors, Inc

General Contractor

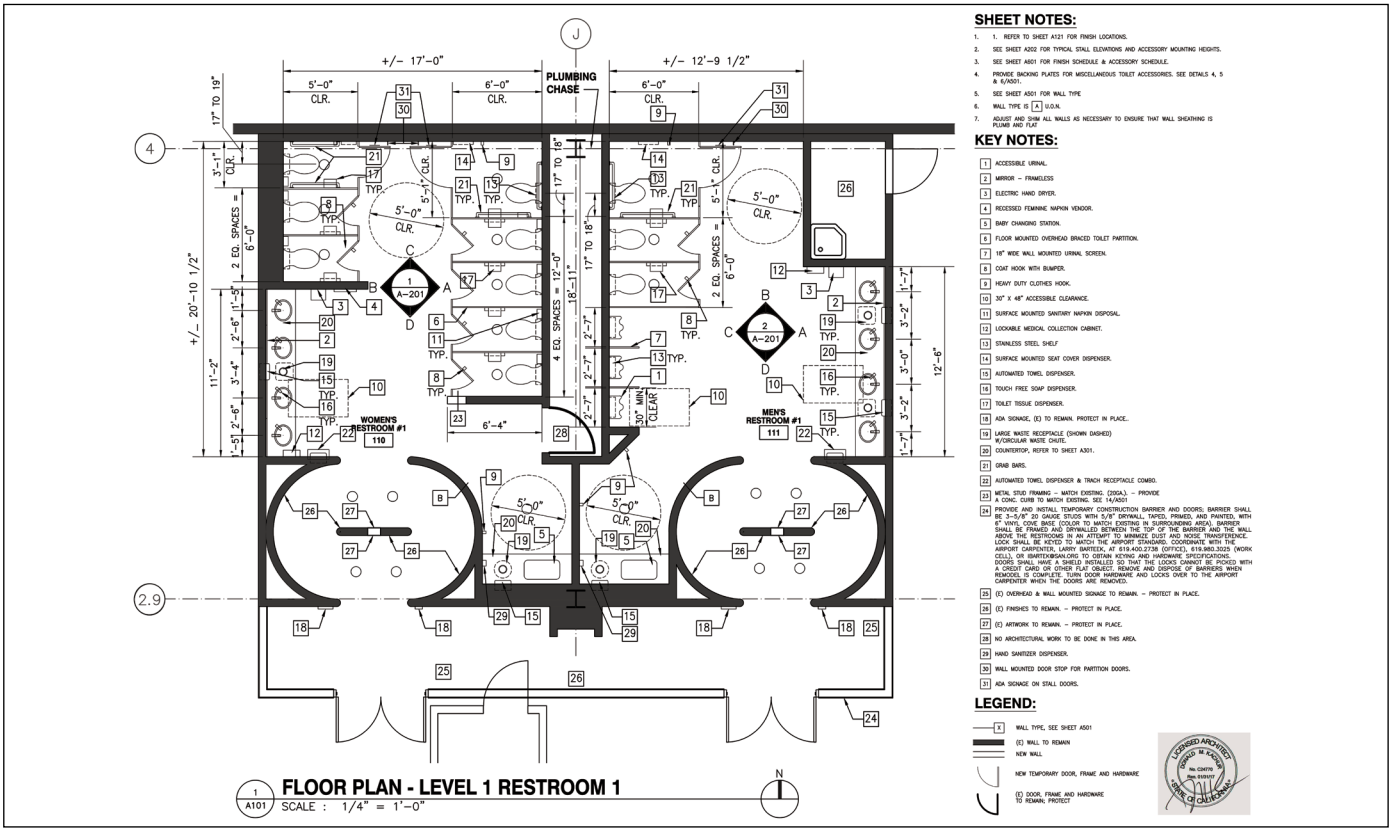
JXR Constructors, Inc.
4550 Kearny Villa Road, #207, San Diego, CA 92123
www.jxrconstructors.com

Project Team

Architect
Atkins N.A.
3570 Carmel Mountain Road, #300
San Diego, CA 92130

Project General Description

Location: San Diego, California
Date Bid: Jun 2016
Construction Period: Sep 2016 to May 2017
Total Square Feet: 2,710 **Number of Buildings:** One.
Building Sizes: First floor, 2,710; total, 2,710 square feet.
Building Height: First floor, 10'; total, 10'.
Basic Construction Type: Interior Renovation.
Foundation: Reinforced concrete.
Floors: Concrete. **Interior Walls:** Metal stud drywall.



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	65,000	5.12	23.99	—
GENERAL REQUIREMENTS	257,665	20.29	95.08	—
CONCRETE	25,000	1.97	9.23	Cast decks & underlayment.
METALS	185,773	14.63	68.55	Structural metal framing, cold-formed metal framing, fabrications, decorative.
OPENINGS	2,500	0.20	0.92	Doors & frames.
FINISHES	316,300	24.90	116.72	Metal framing, gypsum board, tiling, painting & coating.
SPECIALTIES	89,049	7.01	32.86	Toilet compartments & accessories.
FURNISHINGS	20,630	1.62	7.61	Simulated stone countertops.
FIRE SUPPRESSION	5,000	0.39	1.85	Water-based fire-suppression systems.
PLUMBING	95,105	7.49	35.09	Piping & pumps, equipment, fixtures.
HVAC	73,150	5.76	26.99	Diffusers, registers, grilles.
ELECTRICAL	135,000	10.62	49.81	Medium-voltage distribution, low-voltage transmission, lighting.
TOTAL BUILDING COSTS	**1,270,172**	**100%**	**$468.70**	
EXISTING CONDITIONS	77,325			Selective demolition.
TOTAL PROJECT COST	**1,347,497**			

UPDATED ESTIMATE TO AUGUST 2025: $765.13 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$544.67	$1,476,057	**Dallas, TX**	$544.67	$1,476,057	**Los Angeles, CA**	$778.10	$2,108,653
Pittsburgh, PA	$661.39	$1,792,355	**Kansas City, KS**	$674.35	$1,827,499	**Las Vegas, NV**	$748.68	$2,020,792
New York, NY	$894.82	$2,424,950	**Chicago, IL**	$771.62	$2,091,081	**Seattle, WA**	$748.68	$2,020,792

For more information on this project and similar projects visit www.dcd.com



Photo courtesy: elements.envato.com

Metal Estimation – A Guide for Accuracy & Efficiency

By Ambreen

You can't just guess how much steel or aluminum you'll need while building a skyscraper. That's where total metal estimation comes in, accurately calculating the amount of metal required for a project before any cutting, welding, or construction begins.

Metal estimation is fundamental in construction and fabrication. If your estimate is too low, you might run out of materials halfway through, causing delays and extra costs. If your estimate is too high, you waste money on unnecessary metal. Either way, mistakes can make a project more expensive than planned.

A thorough and clear understanding of metal estimation enables engineers and builders to save time, money, and effort — while creating strong and stable structures.

What is Metal Estimation?

Metal estimation determines how much metal is needed for a project before construction or fabrication begins. You need to know the amount of metal required to avoid wasting material or running short. In large-scale projects like skyscrapers, bridges, or even car manufacturing, metal estimation ensures that builders and engineers use the right amount of metal without wasting money or resources.

This process is not guesswork. It involves calculations, planning, and sometimes even special software to get precise numbers. Every project, big or small, relies on metal estimation to keep things efficient and cost-effective.

Factors Influencing Metal Estimation

Several factors affect how much metal a project will need. One of the biggest factors is the design. A simple metal staircase will need far less material than a complex spiral staircase with detailed railings.

The type of metal also plays a role. Steel, aluminum, and copper all have different weights and strengths, so engineers must choose the right one based on the project's requirements.

Another thing is waste and cutting loss. Workers who cut metal sheets or beams might not use every piece. Some parts become scrap, so estimators must add extra material to their calculations to cover this loss.

Weather conditions can also matter, especially in outdoor projects where metal expands or contracts due to temperature changes.

The Difference Between Structural Steel and Fabrication Metal

Structural steel and fabrication metal are both used in construction and manufacturing, but they serve different purposes.

Structural steel is a pre-engineered, standardized material used in buildings, bridges, and large structures. It comes in specific shapes like I-beams, H-beams, channels, and angles designed to support heavy loads. This steel follows strict industry standards for strength and durability, ensuring safety in construction.

Fabrication metal refers to custom-made metal components created by cutting, bending, and welding raw materials into specific shapes. Unlike structural steel, it is not pre-standardized but is made to fit unique project needs. It contains steel, aluminum, stainless steel, and other alloys.

The Importance of Blueprints and Engineering Drawings

If you've ever built anything using instructions, you know how vital a clear plan is. The same applies to metal estimation, only more so. Blueprints and engineering drawings are like instruction manuals for construction projects. They show the exact dimensions, thickness, and placement of metal parts, helping estimators calculate the needed material.

Without blueprints, metal estimation would be a guessing game. Engineers rely on these drawings to measure lengths, angles, and connections. This ensures that every metal piece fits perfectly and supports the structure safely. Even a slight mistake in reading blueprints can lead to ordering the wrong amount of metal, which can delay a project or increase costs.

How to Estimate Metal

Metal estimation follows a sequential procedure to ensure accuracy and efficiency. Let's break it down.

1. Review Project Specifications

Before estimating metal, engineers and builders review project specifications. These detailed documents explain what needs to be built, what materials to use, and how everything should be assembled.

(Continued on page 43)



Construction Cost Index: 1st Quarter 2025

Non-Residential Construction Outlook Reflects Measured Start to 2025 Amid Evolving Global Trade Shifts

Mortenson, a leading national builder and developer, recently released its Q1 2025 Construction Cost Index report for Minneapolis and other major U.S. markets.

The outlook for nonresidential construction in early 2025 remains steady, with modest cost increases across all regions and continued stability in labor and material availability. That said, emerging shifts in global trade policy and evolving tariff measures are beginning to ripple through the supply chain. While most markets reported improved sourcing and fewer constraints, we anticipate cost volatility in select material categories as trade partners adjust to the new landscape. Elevated planning activity and firm demand in several regions continue to support a balanced start to the year.

Nationally, nonresidential construction costs tracked by the Mortenson Quarterly Cost Index for the 1st Quarter of 2025 rose by +2.24% over the past quarter and +3.91% over the previous twelve months. All Mortenson regional offices reported cost increases this quarter. Salt Lake City reported the smallest increase at +1.00%, while Seattle led with a +2.60% rise. Other offices showed comparable growth: Milwaukee at +2.58%, Chicago at +2.55%, Minneapolis at +2.52%, Denver at +2.24%, Portland at +2.19%, and Phoenix at +2.07%.

After a period of softening prices, construction material costs bounced back this quarter, increasing by 3.8% year-over-year. This shift appears driven in part by the evolving tariff environment, which is influencing aluminum glazing systems and, indirectly, structural steel pricing. While the full impact remains uncertain, most trade partners report a cautious wait-and-see approach as vendors provide updated pricing guidance.

Despite the bump in material prices, overall supply chains remain steady. Most regions report no major concerns regarding material availability, and logistics continue to normalize after past disruptions. Notably, Minneapolis and Phoenix trade partners cited improved confidence in sourcing even as re-bids and delayed project awards continue to characterize the early-year pipeline.

Labor markets remained relatively stable. While national labor costs have risen 4.6% year-over-year, most trades reported little to no concern with labor availability. Only limited trade shortages were mentioned as contractors work regional megaprojects. Minneapolis cited a lack of rod busters and pipefitters due to a large data center project, and Chicago likewise noted data center work straining local electrician availability.

Top material cost increases this quarter include Structural Steel and Metal Decking Material (+6.0%), Aluminum Storefronts (+4.0%), Plumbing (+3.5%), and Reinforcing Steel Material (+3.5%). Cost declines were limited but included Resilient Flooring and Carpeting (-2.1%) and Wood Doors (-1.0%). Costs for Floor and Wall Tile remained flat.

Trade partner work increased 1.4% this quarter, contributing to a +4.5% year-over-year rise. In Minneapolis, Denver, and Seattle, heightened competition among trade partners has led to more aggressive pricing, putting downward pressure on select scopes.

While down year over year, construction starts were up 3% in March to a seasonally adjusted annual rate of $1.1 trillion, according to Dodge Construction Network, with both nonresidential building starts (+6%), and nonbuilding starts (+9%) seeing gains as residential starts decreased 5%.

The Dodge Momentum Index, a measure of nonresidential projects entering the planning stage, showed elevated activity in Q1 2025 — advancing 5.6% in January to land 26% higher than a year earlier, fueled in part by a surge in data center developments. While the index dipped 6.9% in March amid rising uncertainty around material prices and fiscal policy, Dodge's Sarah Martin noted that "activity remains considerably higher than year-ago levels and still suggests steady construction activity" through mid-2026.

The Mortenson Construction Cost Index reflects a moderate cost increase for the 1st Quarter of 2025. While pricing has stabilized across most categories, we are closely monitoring potential fluctuations as the global supply environment responds to policy changes and new tariffs. With planning activity elevated and labor conditions stable, we expect overall nonresidential construction activity to remain steady through the first half of the year. We continue to advise customers to approach project starts with a measured mindset, balancing opportunity with preparedness for ongoing change.

Mortenson tracks and reports on eight metropolitan areas in the U.S. including Chicago, Denver, Milwaukee, Minneapolis, Phoenix, Portland, Salt Lake City, and Seattle. The Mortenson Construction Cost Index is calculated quarterly by pricing representative non-residential construction projects in various metropolitan areas. It is part of a portfolio of industry insights and market studies provided by Mortenson.

For nationwide construction cost index data visit:
Mortenson.com/Cost-Index.
Download the Q1 2025 Construction Cost Index report for your region:
•Chicago •Denver •Milwaukee •Minneapolis •Phoenix •Portland •Salt Lake City •Seattle

Early Childhood Education Center

Novi, Michigan

Architect

TMP Architecture, Inc.



Photos Courtesy: Christopher Lark Photography

The playground features a central synthetic turf hill.

Meeting the needs of children aged three to five in an invigorating environment, the new Early Childhood Education Center is the result of interactive visioning with the community and district.

In order to provide an intimate, smaller school setting that fosters collaboration, the design team attended a national early childhood conference to learn more about how facilities can positively impact social and academic development.

The 39,000-square-foot school includes 18 classrooms, a cafeteria, a multi-purpose room, and offices for Community Education and Enrollment Services. Also included is a dedicated space for children with special needs, a secure welcome center, and an adventure playground.

The innovative design includes porch entries that offer home-like first impressions as children arrive, allowing parents to walk children directly into school and interact with teachers. Learning studios offer open and stimulating environments that are accented with color and natural light.

Modern learning was integral to the design of this center. It is rich with technology and features flexible furniture. Keeping young learners in mind, designers



Designers incorporated multiple spaces for indoor play.



Designers also incorporated multiple outdoor play areas.



The main circulation spine denotes class neighborhoods.



Classrooms are filled with brightly colored flexible furniture.

utilized all available surfaces; the floors are used as often as the tables. Three collaboration areas within the main circulation spine denote class neighborhoods, a gross motor development center, and the dining commons. Display walls in these areas feature student work and announcements. The students and their work take center stage in this facility.

Knowing how important free play is to mental development, designers also incorporated multiple spaces for indoor play and a large outdoor playground to enhance teaching and learning. The playground features multiple play areas, including a popular, central synthetic turf hill. As an added bonus, the playground is open to the community for after-hours use.

Previously, the early childhood program was dispersed at multiple locations throughout the district at the Community Education Building, in a portable classroom at the middle school, at an elementary school, and at the high school. The parent-funded, tuition-based program had more applicants than their facilities could accommodate.

The new facility expanded the district's program to accommodate an additional 50 to 100 students. In addition to the Early Childhood program, offices for Community Education and Enrollment Services were relocated to the new building. This building has allowed all of these functions to come together under one roof and serve as the District's first point of contact for new families.

The district and team had the advantage of history for this project, having worked on multiple projects together and utilizing a tried-and-true process. Past successful projects helped designers learn which products and processes the client preferred.

Close collaboration between the design team, construction manager, and program manager kept the project on budget and on schedule. An accelerated design schedule allowed for adequate bid times, allowing the district to take advantage of an optimal bidding climate. Schedule adjustments allowed for a reduction of the construction cost.

Thanks to a solid team effort, this unique learning facility is already making a big difference for the students and the community. It has been a welcoming front door to the district and is nearly at capacity.

Architect

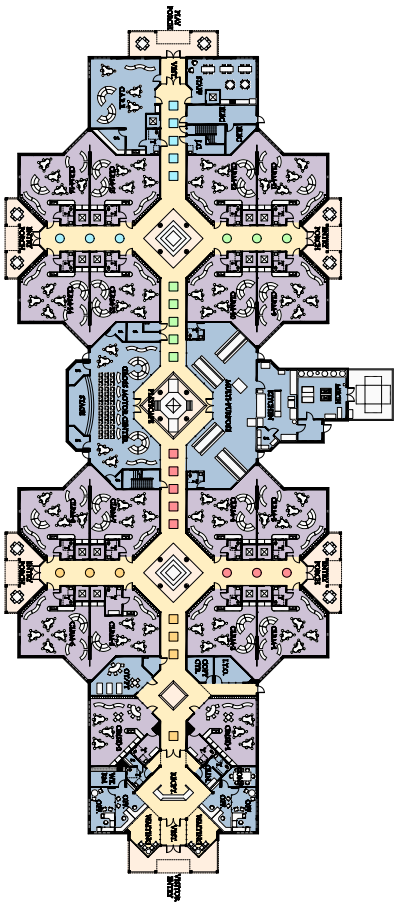
TMP Architecture, Inc.
1191 West Square Lake Road, Bloomfield Hills, MI 48302
www.tmp-architecture.com

Project Team

Structural Engineer
Penhale & Yates, Inc.
29200 Southfield Road, #207, Southfield, MI 48076
Mechanical & Electrical Engineer
Peter Basso Associates, Inc.
5145 Livernois Road, #100, Troy, MI 48098
Construction Managers
McCarthy & Smith, Inc.
24317 Indoplex Circle, Farmington Hills, MI 48335
Food Service
E.F. Whitney, Inc.
1000 S. Old Woodward Avenue, #105, Birmingham, MI 48009

Project General Description

Location: Novi, Michigan
Date Bid: May 2015
Construction Period: May 2015 to Sep 2016
Total Square Feet: 39,507
Site: 4.3 acres.
Number of Buildings: One; 18 classrooms, seating capacity for 288.
Building Sizes: First floor, 39,507; total, 39,507 square feet.
Building Height: First floor, 29'4"; total, 29'4".
Basic Construction Type: New/Steel Frame.
Foundation: Cast-in-place, slab-on-grade.
Exterior Walls: CMU, brick, cement fiber lap siding.
Roof: Asphalt shingles, membrane.
Floors: Concrete.
Interior Walls: CMU, metal stud drywall.



DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	31,122	0.35	0.79	—
GENERAL REQUIREMENTS	622,680	6.98	15.76	—
CONCRETE	512,653	5.75	12.98	Forming & accessories, reinforcing, cast-in-place, grouting.
MASONRY	206,712	2.32	5.23	Unit.
METALS	532,474	5.97	13.48	Structural metal framing, joists, decking, cold-formed metal framing, fabrications.
WOOD, PLASTICS & COMPOSITES	965,543	10.83	24.44	Rough carpentry, finish carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	449,039	5.04	11.37	Membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, joint protection.
OPENINGS	214,555	2.41	5.43	Doors & frames, windows, hardware, glazing, louvers & vents.
FINISHES	1,805,994	20.26	45.71	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, painting & coating.
SPECIALTIES	45,221	0.51	1.14	Visual display board, signage, flag pole.
EQUIPMENT	243,712	2.73	6.17	Food service, playground.
FURNISHINGS	137,247	1.54	3.47	Casework, window treatment, countertop.
FIRE SUPPRESSION	78,580	0.88	1.99	Water-based fire-suppression systems, fire-extinguishing systems.
PLUMBING	353,091	3.96	8.94	Piping & pumps, equipment, fixtures.
HVAC	1,751,940	19.65	44.35	Piping & pumps, air distribution, central heating equipment, central cooling equipment, decentralized HVAC equipment.
ELECTRICAL	964,301	10.82	24.42	Medium-voltage distribution, low-voltage transmission, lighting.
TOTAL BUILDING COSTS	**8,914,864**	**100%**	**$225.65**	
EARTHWORK	943,215			Site clearing, earth moving, water, sanitary sewerage, storm drainage, electrical & communications utilities.
EXTERIOR IMPROVEMENTS	686,492			Bases, bollards & paving, site improvements, wetlands, irrigation, landscaping, fencing.
TOTAL PROJECT COST	**10,544,571**			

UPDATED ESTIMATE TO AUGUST 2025: $378.98 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$338.66	$13,379,395	**Dallas, TX**	$338.66	$13,379,395	**Los Angeles, CA**	$483.80	$19,113,422
Pittsburgh, PA	$411.23	$16,246,409	**Kansas City, KS**	$419.29	$16,564,966	**Las Vegas, NV**	$463.64	$18,317,029
New York, NY	$556.37	$21,980,435	**Chicago, IL**	$479.77	$18,954,143	**Seattle, WA**	$463.64	$18,317,029

For more information on this project and similar projects visit www.dcd.com



Photo courtesy: elements.envato.com

New Construction Offers a Boost in Home Affordability, but Tariffs May Stall Progress

New homes are offering an affordability edge in today's challenging housing market, according to the ***Realtor.com***® New Construction Quarterly Report. In the first quarter of 2025, the median list price for newly built homes fell slightly year-over-year to $448,393, reducing the price gap with existing homes to its lowest first-quarter level in five years. This, combined with builders building smaller homes, and lower mortgage rates for new home buyers, is making newly built homes a more accessible pathway to homeownership, at least for now.

"America is short, approximately, four million homes, and new construction is stepping in to fill the affordability gap left by a tight existing home market," said Danielle Hale, Chief Economist at ***Realtor.com***®. "Builders are delivering smaller homes at lower prices, and often offering financial incentives that make monthly payments more manageable. But looming tariffs on key building materials could limit this much-needed progress and create new cost pressures in the months ahead."

New Home Construction Offers a Slight Mortgage Rate Relief to Buyers

New construction continues to offer a financial edge beyond list prices. Buyers of newly built homes are securing mortgage rates approximately 0.5 percentage points lower than those buying existing homes, 6.1% vs. 6.6% in 2024. On a median-priced new home, given today's mortgage rates, a half-percentage point difference translates to more than $160 in monthly savings. Builders' ability to offer rate buydowns — whether via in-house financing or close relationships with lenders — helps make these deals possible. This financial edge adds further appeal to new builds, especially in a high-rate environment where every percentage point can impact buying power.

New Construction Premium Shrinks

In the first quarter of 2025, the premium on newly built homes dropped to 13.5%, the lowest level for any first quarter since Realtor.com began tracking in 2020. This trend is a result of falling new home prices, which have declined 1.3% since the first quarter of 2023, while existing home prices have continued to rise. Even as resale inventory catches up, newly built homes now make up 18.5% of active listings, which is still higher than levels seen in the first quarter of the pandemic-era years, 2020–2022. And compared to the first quarter of 2020, the number of new construction listings is 27.4% higher whereas existing listings were still 6.9% lower.

The market's shift reflects builders' response to affordability challenges by building smaller homes and scaling down cost, especially in regions where demand is strong and land is more readily available, such as the South and West.

Builders Deliver Smaller, More Affordable Homes in Key Metros

Among the 100 largest U.S. metropolitan areas, 26 markets posted year-over-year declines in both the median listing price and square footage of newly built homes, highlighting where smaller and more affordable construction is gaining ground. The sharpest declines were concentrated in the South, including metros such as Atlanta and Nashville.

Little Rock, Arkansas recorded the largest year-over-year drop in the median listing price for new construction, down 12.9%. Cities with less recent new construction activity, including Philadelphia and Chicago, also appeared on the list, which is a promising sign for affordability in regions that have historically seen slower builder investment. Out West, some of the most notable shifts occurred in Colorado Springs, Colorado where new home sizes fell 13.8%, and Oxnard, California, where new home prices dropped 11.6%.

Tariff Threat Looms

Despite the progress, looming tariffs could threaten the affordability gains made in recent quarters. A proposed hike in duties on Canadian lumber, from 14% to 34%, as well as tariffs on drywall and other construction materials from Mexico and China, may raise builder costs significantly. These increases could force home prices upward, once again putting affordable new construction out of reach for many.

For more insights on new construction visit ***realtor.com/research***.

Belden Brick Introduces Luminescent: A Smart Resource Strategy with Premium Aesthetics

New face brick delivers high-end iridescent finish while reducing installation costs and long-term maintenance expenses

To elevate premium building designs that also respect budget realities, The Belden Brick Company has introduced Luminescent, an innovative face brick that delivers exceptional aesthetic impact plus practical cost advantages. This new offering features an iridescent finish that transforms architectural surfaces throughout the day while providing key value-engineering benefits.

Luminescent, the latest addition to Belden Brick's proven Clay Coated series, is available in four sophisticated cool tones: Aluminum, Frost, Morning Mist, and Twilight Coarse Velour. Each provides dynamic light interaction while maintaining design integrity from dawn to dusk.

Design Without Compromise while Using Resources Strategically

Luminescent integrates next-generation manufacturing methods with practical architectural solutions. Developed at Belden Brick's specialized Plant 8 facility in Sugarcreek, Ohio, the product features a proprietary coarse velour texture that delivers both distinctive aesthetics and cost-effective implementation:

- *Advanced Iridescent Finish:* Creates dynamic light refraction while maintaining structural integrity
- *Reliable Mortar Adhesion:* Eliminates specialized installation methods and associated labor costs
- *Three-Sided Application:* Eliminates separate quoin ordering — reducing material costs and simplifying inventory management
- *Factory-Controlled Quality:* Ensures consistent results across large-scale projects
- *Comprehensive Sizing Options:* Offers flexibility while standardizing the specification process

"We developed Luminescent to give architects and builders an affordable path to creating distinctive facades," explained Robert T. Belden, CEO and VP of Operations at Belden Brick. "By optimizing both the manufacturing process and installation requirements, we've created a premium product that delivers excellent long-term value while providing the visual impact that high-end projects demand."







Photo Courtesy: The Belden Brick Company

The product offers extensive sizing flexibility to accommodate diverse project requirements: Modular, Norman, Ambassador, Economo Modular, Utility, and Monarch standard sizes, with thin brick options available in Modular, Norman, Economo Modular, and Utility ⅝" Flat Back.

Luminescent is now available for specification, providing architects, builders, and cost estimators with a high-value facade solution that balances premium aesthetics with practical implementation costs. For more information about this innovative building material, find a Belden Brick distributor near you, ***The Belden Brick Company | Distributor Locator***

About The Belden Brick Company: *The Belden Brick Company, a long-standing pillar in the brick industry, is the largest family-owned brick manufacturer in the United States. Expanding brick's creative versatility while maintaining the material's traditional strengths is something Belden prides itself on. Belden continues to meet the changing needs of the construction market by manufacturing over 20 different face brick and clay paver sizes, more than 500 colors, 13 different textures, and endless designs of special shapes. The superior quality of Belden's raw materials leads to the structural integrity and outstanding appearance of its line of world-class architectural brick. Each brick becomes part of a legacy that has set The Standard of Comparison since 1885. Learn more at* ***www.beldenbrick.com****.*

Accurately Estimating Construction Projects

Accurate construction estimating relies on a combination of detailed data collection, software utilization, and careful consideration of various costs. Key take-aways include understanding the project scope, conducting thorough quantity takeoffs, staying updated on pricing and market trends, and utilizing construction estimating software. Here's a more detailed look at effective construction estimating practices:

Understanding the Project Scope

Thorough Review: Carefully examine project plans, drawings, and specifications to fully grasp the scope of work.

Scope Clarity: Ensure a clear understanding of all project requirements, including potential change orders and inspection fees.

Site Visit: Conduct a site visit to assess site conditions, access limitations, and potential challenges.

Data Collection and Analysis

Material Takeoff: Precisely measure and quantify all materials required for the project, including major components and smaller items.

Pricing: Solicit pricing from suppliers and vendors to obtain accurate material costs.

Labor Rates: Research and account for labor costs, considering worker experience and productivity.

Equipment Costs: Include the cost of equipment rental, fuel, and maintenance.

Overhead and Indirect Costs: Account for all business overhead, including insurance, bonding, and other indirect expenses.

Software and Technology

Construction Estimating Software: Utilize specialized software to streamline the estimating process, improve accuracy, and automate tasks.

Cloud-Based Tools: Embrace cloud-based estimation tools for collaborative work and data sharing.

Automated Takeoffs: Consider automated takeoff software for faster and more accurate quantity calculations.

Cost Management and Contingency

Contingency Fund: Set aside a contingency fund to cover unexpected expenses and potential risks.

Risk Assessment: Identify potential risks and develop backup plans to mitigate potential issues.

Profit Margin: Include a realistic profit margin in your estimate to ensure profitability.

Review and Refinement

Regular Review: Continuously review and adjust estimates as needed, considering market trends and changing project requirements.

Trend Analysis: Compare actual project costs against estimates to identify areas for improvement in future estimates.

Cross-Checks: Develop pricing cross-checks to ensure the accuracy of your estimates.

By implementing these tips, construction estimators can significantly improve the accuracy and efficiency of their work, leading to more profitable projects and stronger client relationships.

Cost Ranges Across Building Divisions:
A Breakdown for Construction Projects
Exploring Division 09: Finishes

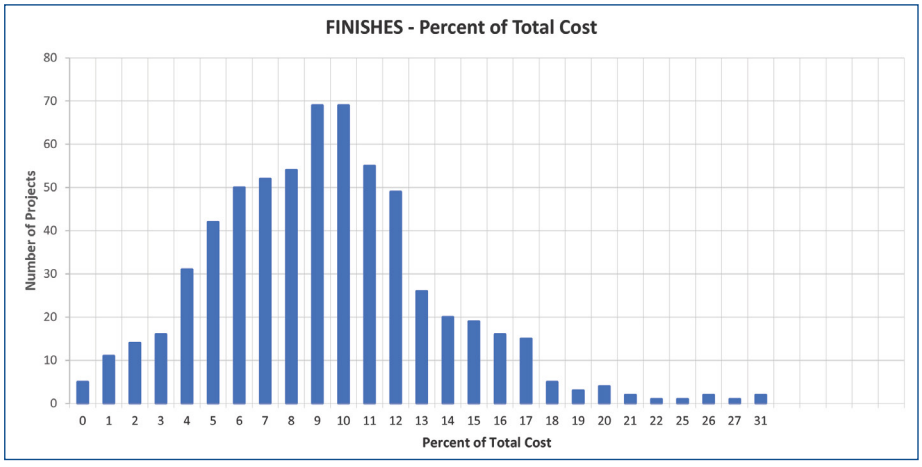
At BNi DATA, we collaborate with a vast network of suppliers, contractors, government agencies, and industry experts to provide deep insights into the true costs of construction. Our comprehensive analyses cover everything from labor rates and productivity levels to material prices, commodity costs, and actual project expenditures — offering you a 360-degree view of cost dynamics in today's construction landscape.

Leveraging over 60 years of industry experience and real-world data, we've established precise cost benchmarks across all CSI building divisions. These benchmarks are broken down into high, medium, and low percentage ranges, giving you a practical framework for estimating project expenses based on your unique requirements.

This bar chart focuses on Division 9: Finishes, serving as a visual guide to where your project costs might fall. The center of the chart highlights the most typical estimates, while the ends illustrate the potential low and high extremes. Remember, your final costs can vary significantly depending on specific project demands and site conditions.

This entry is the ninth in our series exploring cost percentage ranges across each CSI Division. Our goal is to make complex estimating data clear, actionable, and easy to apply to your work.

Division 09 – FINISHES - Percent of Total Cost
Low 4.50% Average 8.17% High 14.25.75%



By choosing BNi DATA, you'll be prepared to navigate today's construction challenges—rising labor costs, workforce shortages, and fluctuating material prices—with greater confidence and precision. Our data solutions come in multiple formats and platforms, ensuring seamless integration into your current tools and workflows. For more in-depth cost estimating resources, explore the BNi Square Foot Costbooks at **www.bnibooks.com**.

About BNi DATA: *We provide a comprehensive suite of data services to empower your construction projects. From detailed cost estimating tools to trusted reference materials, BNi DATA delivers accurate, reliable, and tailored solutions to help you plan with confidence.*

Daniel H. Lopez Chemistry Building, New Mexico Tech

Socorro, New Mexico

Architect

Van H. Gilbert Architect, P.C.



Photos Courtesy of Patrick Coulie Photography, Inc

The state-of-the-art teaching and research facility in its new two-story building.

Often referred to as the central science, chemistry brings together physics and mathematics, biology and medicine, and the earth and environmental sciences – exactly the kind of scientific discipline best supported by a modern academic environment.

When New Mexico Tech sought a replacement for its aging chemistry department that had been housed in two separate buildings, they turned to Van H. Gilbert Architect (VHGA), who was also the architect for Tech's new Geology Building.

The Daniel H. Lopez Chemistry Building, which opened September 2017, not only delivers a state-of-the-art teaching and research facility hub devoted to chemistry, it also enhances the university's ability to compete academically with programs across the country.

Given Tech's commitment to leading-edge research and its expanding enrollment, the new two-story, 40,000-square-foot chemistry building



The lobby is built with an emphasis on energy efficiency and sustainability.



The building was designed with collaboration and dynamic learning in mind.



The sophisticated HVAC system exhausts large volumes of air efficiently.

was designed with an emphasis on collaboration, dynamic learning, laboratory and infrastructure flexibility, technological sophistication, and a focus on energy efficiency and sustainability.

The building's efficient spatial layout allows natural light to flood into each room. High performance glazing at all exterior walls and a large clerestory over a central atrium welcomes sunlight into the interior. LED lighting with occupancy sensor technology and low-flow fixtures reduces energy costs and minimizes water usage. The building envelope uses an Exterior Insulation Finish System (EIFS) as a continuous insulation method, along with batt fiberglass insulation, double-thick walls, and set-back windows – all of which contribute to the high energy-savings performance.

Building materials are primarily locally sourced and specified with durability and ease of serviceability in mind. Multiple materials have pre-consumer and post-consumer recycled content in them. The building is expected to achieve LEED® Silver certification.

The building features 19 labs with multiple fume hoods in each lab, classroom space, staff offices, a chemical storage and stockroom, common areas, lounges, and a staff conference room. At the heart of the building, the atrium functions as a series of breakout spaces, providing students and faculty an informal meeting place.

Due to the numerous fume hoods in the labs and the subsequent safety concerns for the occupants, the building is equipped with a sophisticated HVAC system that exhausts large volumes of air and replaces them with clean tempered air in an energy efficient manner. The system also communicates parameters and operating data to a central facility management system – a New Mexico Tech requirement.

Commons spaces, with seating areas and softer finishes, allow for one-to-one collaboration, yet are sized for large gatherings. Directly adjacent to the commons are separate lounges for staff and students.

Wireless access is available throughout the building, including access in the courtyards. Wired network outlets are also located throughout the building.

Dr. Michael Heagy, Chemistry Department Chair, says the new chemistry building has already had an impact on current students. "We are joining a higher tier of research," he said. "This is the big league – when you have a single discipline in one facility. We are honoring the investment by the state and upping our game."



ARCHITECTURAL SITE PLAN
Scale: 1" = 100'-0"

LEED® Silver Pending

Product Information

Building Envelope: Tremco, Carlisle, Parex USA, BASF
Roofing: Boral, Carlisle
Windows, Entrances, Storefronts & Curtain Wall: Tubelite
Glazing: Vitro Architectural Glass
Flooring: Armstrong, Daltile, Roppe, Shaw
Interior: Sherwin Williams, Armstrong, National Gypsum
Lighting: Metalux, Corelite, Fallsaft, Atlantic, Surelites, US Architectural
Daylighting: Kalwall
Elevators: ThyssenKrupp

Architect

Van H. Gilbert Architect, P.C.
2428 Baylor Drive, S.E.
Albuquerque, NM 87106

Project Team

Structural Engineer
MacCornack Engineering
1776 Montano Road, N.W., #24 Los Ranchos, NM 87107

Mechanical & Electrical Engineer
Bridgers & Paxton Consulting Engineers
4600 Montgomery Boulevard, N.E., #C Albuquerque, NM 87109

Civil Engineer
Isaacson & Arfman Engineers
128 Monroe Street, N.E., Albuquerque, NM 87108

Cost Estimator
CRM Cost Consulting, Inc.
6120 87th Street, Lubbock, TX 79424

General Contractor
Bradbury Stamm Construction
7110 2nd Street, N.W., Albuquerque, NM 87107

Laboratory Design
Research Facilities Design
3965 5th Avenue, #400, San Diego, CA 92103

Project General Description

Location: Socorro, New Mexico

Date Bid: Nov 2015

Construction Period: Feb 2016 to Apr 2017

Total Square Feet: 41,532

Site: 3.45 acres.

Number of Buildings: One; 6 teaching labs, seating 24 each; 1 lecture hall, seating 50.

Building Sizes: Basement, 1,837; first floor, 19,013; second floor, 18,622; mechanical penthouse, 2,060; total, 41,532 square feet.

Building Height: Basement, 13'; first floor, 15'6"; second floor, 15'6"; mechanical penthouse, 15'; total, 49'3".

Basic Construction Type: New/II B.

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

Exterior Walls: Curtain wall, EIFS.

Roof: Membrane, concrete tile.

Floors: Concrete, composite deck.

Interior Walls: CMU, metal stud drywall.

KBTU/SF/yr: 57.96

DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	62,840	0.47	1.51	—
GENERAL REQUIREMENTS	2,413,143	18.15	58.10	—
CONCRETE	624,760	4.70	15.04	Forming & accessories, reinforcing, cast-in-place, precast, cast decks & underlayments, (concrete breakdown: cubic yards foundation, 215; cubic yards floors, 273 slab-on-grade, 293 slab on deck; cubic yards walls, 113).
MASONRY	54,190	0.41	1.30	Unit.
METALS	645,705	4.86	15.55	Structural metal framing, joists, decking, cold-formed metal framing, fabrications.
WOOD, PLASTICS & COMPOSITES	119,502	0.90	2.88	Rough carpentry, finish carpentry, architectural woodwork, plastic fabrications.
THERMAL & MOISTURE PROTECTION	616,812	4.64	14.85	Dampproofing & waterproofing, thermal protection, weather barriers, membrane roofing, flashing & sheet metal, fire & smoke protection, joint protection.
OPENINGS	397,493	2.99	9.57	Doors & frames, entrances, storefronts & curtain walls, windows, hardware, glazing, louvers & vents.
FINISHES	1,190,760	8.96	28.67	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	52,423	0.39	1.26	Toilet partitions & accessories, visual display boards, projection screen, signage, fire extinguishers.
EQUIPMENT	325,707	2.45	7.84	Laboratory, bio-safety, appliances, submittals.
FURNISHINGS	972,283	7.31	23.41	Casework, entrance mats, skateboard racks, window covering, other.
CONVEYING SYSTEMS	89,969	0.68	2.17	Elevator (1 passenger).
FIRE SUPPRESSION	188,200	1.42	4.53	Water-based fire-suppression systems, fire extinguishing systems.
PLUMBING	1,056,795	7.94	25.45	Piping & pumps, equipment, fixtures, gas & vacuum systems for laboratory & healthcare.
HVAC	3,056,411	22.98	73.59	Piping & pumps, air distribution, air cleaning devices, central heating equipment, central cooling equipment.
ELECTRICAL	1,417,373	10.65	34.12	Medium-voltage distribution, low-voltage transmission, facility electrical power generating & storing equipment, electrical & cathodic protection, lighting.
COMMUNICATIONS	12,694	0.10	0.31	Cabling, phone, data.
TOTAL BUILDING COSTS	**13,297,060**	**100%**	**$320.16**	
EXISTING CONDITIONS	4,449			Demolition.
EARTHWORK	393,860			Site clearing, earth moving, shoring & underpinning, special foundations & load bearing elements.
EXTERIOR IMPROVEMENTS	387,107			Bases, bollards & paving, landscaping, irrigation.
UTILITIES	29,645			Water, sanitary sewerage, storm drainage, electrical.
TOTAL PROJECT COST	**14,112,121**			

UPDATED ESTIMATE TO AUGUST 2025: $530.58 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$506.46	$21,034,218	**Dallas, TX**	$506.46	$21,034,218	**Los Angeles, CA**	$723.51	$30,048,883
Pittsburgh, PA	$614.98	$25,541,551	**Kansas City, KS**	$627.04	$26,042,365	**Las Vegas, NV**	$693.37	$28,796,846
New York, NY	$832.04	$34,556,215	**Chicago, IL**	$717.48	$29,798,476	**Seattle, WA**	$693.37	$28,796,846

For more information on this project and similar projects visit www.dcd.com

(Metal Estimation – A Guide for Accuracy & Efficiency continued from page 32)

Think of it like planning a giant LEGO set. You wouldn't just grab random bricks; you would check the instruction manual first. Similarly, construction teams study blueprints, material lists, and structural requirements to understand exactly how much and what kind of metal is needed and where it will be used.

2. Identify Metal Components

Once the specifications are clear, the next step is identifying all the metal parts required for the project. Different structures use different metal components, such as:

- *Beams:* Long, horizontal supports that hold up floors and roofs.
- *Columns:* Vertical supports that help distribute weight.
- *Reinforcements:* Extra metal bars or mesh used to strengthen concrete.
- *Plates and Sheets:* Flat metal surfaces used for walls, floors, or enclosures.

Each piece has a different size, thickness, and function, so engineers carefully list every metal component required. Missing even one part could lead to structural weaknesses or project delays.

3. Calculate Weight and Quantity

Once all the components are identified, the next step is to calculate the amount of metal. Metal weight depends on density, volume, and shape. Engineers use formulas to determine the weight of beams, plates, and bars based on their material type.

For example, the formula for calculating the weight of a metal beam is:

$$\text{Weight} = \text{Volume} \times \text{Density}$$

If a structure needs 100 steel beams weighing 50 kg, the total metal required is 5,000 kg (100 × 50). Since each metal has a different density, these calculations ensure that the correct amount is ordered.

4. Account for Waste and Overages

Not all metal ordered is used. Some metal is always wasted during cutting, welding, and shaping. This is why estimators add extra material to their measurements to avoid shortages.

For example, some small leftover pieces cannot be used when cutting metal sheets. If a company requires 500 kg of metal, they might order 550 kg to cover waste and mistakes. This prevents a last-minute shortage that could delay the project.

Metal Estimation for Custom Fabrication Projects

Not all metal projects are the same. Some follow standard designs with predictable material needs. However, custom fabrication projects — such as staircases, metal sculptures, or unique machine parts — require a different approach to metal estimation. Since every custom project is unique, builders must carefully determine costs to avoid losing money or overcharging customers. The evaluating criteria is the same as described above.

In metal fabrication, workers need to be paid, and machines need to be maintained. Labor costs include the wages of welders, cutters, and machine operators. A job taking several days to complete will incur higher labor costs than a quick project.

Overhead costs cover everything necessary to run a fabrication shop: electricity for machines, workshop rent, safety gear, and welding gas. Since these costs apply to all projects, they are divided among different jobs.

To find the total labor and overhead cost, businesses divide their total expenses by the number of working hours.

For example, if a shop spends $5,000 monthly on rent, electricity, and maintenance, and its workers work 500 hours, the overhead cost per hour is $10. Adding this to labor costs helps businesses determine how much to charge per project.

Pricing Strategies for Metal Fabrication

Fabrication shops use different methods to set their prices. One standard method is cost-plus pricing, where they calculate the total material and labor costs and then add a percentage for profit.

Another approach is competitive pricing, where businesses set prices based on competitors' charges. If a company prices its services too high, customers might go elsewhere. If its prices are too low, it might not make enough profit. Finding the right balance is key.

Some custom projects have fixed pricing for standard items, like metal doors or railings. At the same time, more complex designs require detailed quotes. By carefully estimating materials, labor, and overhead costs, metal fabrication businesses can set fair prices while staying profitable.

Mistakes to Avoid in Metal Estimation

Even experienced professionals make mistakes in metal estimation. These errors are preventable.

Underestimating Material Requirements: Ordering too little metal can halt a project while waiting for more supplies, leading to delays and extra shipping costs. This mistake happens when calculations are rushed or key components overlooked. To prevent this, estimators should review every detail and double-check calculations before ordering.

Ignoring Waste Percentages: Cutting, welding, and shaping metal creates inevitable waste. If an estimator only calculates the exact amount needed, shortages can occur. To avoid this, professionals add a waste percentage — typically 5% to 10%, or more for complex designs. This ensures that enough material is available without unnecessary reorders.

Incorrect Metal Grade Selection: Not all metals are the same. Choosing the wrong type can lead to structural weaknesses or unnecessary expenses. Engineers match metal types to project necessities by checking blueprints, load requirements, and environmental conditions to avoid this. If a structure faces moisture exposure, corrosion-resistant stainless steel is smarter than regular steel.

Industry Standards and Best Practices

Every industry follows specific standards to ensure accurate and reliable metal estimation. Organizations like the ***American Institute of Steel Construction*** (AISC) and the ***International Organization for Standardization*** (ISO) provide guidelines on how metal should be measured, cut, and used in construction.

Best practices include double-checking calculations, considering safety margins, and keeping track of waste percentages. Professionals also review previous projects to learn from past mistakes and improve future estimates. By following these industry standards, engineers ensure projects are cost-effective, safe, and well-planned.

About Construct Estimates: *Construct Estimates is a leading construction estimating firm whose mission is to make the journey from bid to project success as seamless as possible for contractors and builders. With years of experience in the industry and a track record of over 8,000 completed projects, they have established themselves as trusted experts in accurate cost estimates and material takeoffs. For more information, see* ***constructestimates.com***

Key Takeaways

1. Metal estimation confirms that projects have the right material, preventing waste and delays.
2. Blueprints and specifications are essential for valid calculations.
3. Mistakes include underestimating material, ignoring waste, and choosing the wrong metal grade.
4. Exact metal estimation saves money, reduces waste, and ensures structural safety.

AGC's Construction Employment

Construction Sector Adds 4,000 Jobs in May

Wages Rise and Firms Retain Workers, But Market Uncertainty Has Led to a Slowdown in Hiring

Increases in nonresidential construction employment were tempered by declines in residential construction jobs; average hourly earnings up 4.7 percent as unemployment rate falls to 3.5 percent. ***Association*** officials noted that the industry has been adding jobs each month for over a year, but the increases have slowed amid recent market uncertainty.

"Nonresidential construction firms added employees in May for the 13th month in a row," said Ken Simonson, the association's chief economist. "However, constant changes in tariffs and other policies that are affecting the cost and demand for construction have led to a significant slowdown in hiring."

Construction employment in May totaled 8,314,000, seasonally adjusted — an increase of 4,000 from April. Headcount rose by 126,000 jobs or 1.5 percent during the past 12 months, topping the 1.1 percent growth rate in total nonfarm payroll employment. However, the sector's rate of growth was markedly slower than the 2.8 percent increase in construction employment recorded a year earlier.

Nonresidential construction firms added 11,300 workers in May, including 4,500 among specialty trade contractors, 3,100 in nonresidential building construction, and 3,700 in heavy and civil engineering construction. Residential construction employment offset those gains, declining by 7,400 jobs, as residential specialty trade contractors lost 11,000 positions while homebuilders and other residential building construction firms added 3,600 workers.

Average hourly earnings for production and nonsupervisory employees in construction — including most onsite craft workers and many office staff — increased 4.7 percent over the year to $37.13. That gain exceeded the 4 percent rise in pay for such workers in the overall private sector.

The unemployment rate among workers with recent construction experience fell to 3.5 percent in May, down from 3.9 percent a year earlier. A separate BLS report released showed the job openings rate in construction declined to 2.9 percent in April, the lowest April level since 2020. The hiring rate inched up to 4.2 percent, while the layoff rate rose slightly to 2.1 percent. The data suggest that contractors are holding onto existing workers even as they scale back on new hiring, Simonson noted.

Association officials said the more federal officials can do to provide certainty about tariff rates, tax levels and federal spending priorities, the more developers are likely to proceed with stalled projects. They urged the administration to continue negotiating trade deals to eliminate tariff uncertainty, and for the Senate to pass the tax bill, noting that both would help ease investor and developer concerns.

"Construction firms continue to hire and boost wages, but the pace of growth has slowed as demand for certain types of projects cools," said Jeffrey D. Shoaf, the association's chief executive officer. "As federal officials provide more certainty about tariffs, taxes and investment levels, demand for projects is likely to rebound."

Building Expansion Incorporates Area's Scenic Surroundings

The ***Catherine Dickson Hofman (CDH) Branch of the Warren County Public Library*** has welcomed the community back with a ribbon-cutting ceremony and re-opening preview of its newly renovated and expanded 9,800-square-foot space, which included a 5,800-square-foot addition. The sweeping +$7M in upgrades, designed and reimagined by ***DIGroup Architecture (DIG)***, address long-needed renovations for the county's busiest library branch as well as enhanced offerings for northern Warren County area residents of all ages.

The event included local mayors and county officials, as well as the efforts of the county's newly-named Library Director, Jill Butcher, and members of the Library Commission. A special congressional recognition also commemorated the grand opening.

"DIG's design team took inspiration for the library's new addition from the natural landscape of the New Jersey Highlands Region," said Paul Graebener, DIG senior project manager. "The area's rolling hills, valleys, and forests are incorporated throughout the interior, from the custom wall coverings depicting the landscape, wood circulation desk, and striking exposed wood beams, to the sloping roof in the lobby, young adult, and children's areas. The addition of windows and clerestory glazing further emphasizes this connection, drawing in natural light and offering views of the scenic surroundings."

DIG also transformed the former space with new lighting, finishes, and tailored spaces such as a fireside reading area as well as new meeting rooms and a community room with a kitchenette. The addition of a maker space and recording studio also enhances the library's offerings.

In addition to DIG, the project team included Finelli Consulting Engineers and DeSapio Construction Group.

The project, which received funding through New Jersey's Library Construction Bond Act, reflects a commitment to rethinking the role of libraries as well as other cultural spaces across local communities. In addition to the Catherine Dickson Hofman Branch of the Warren County Public Library, DIG spearheaded the renovation of the Long Branch Free Public Library as well as two Carnegie-funded libraries in Philadelphia — the Paschalville (circa 1915) Library Branch and the Blanche A. Nixon Cobbs Creek (circa 1925) Library.

About DIGroup Architecture LLC: *DIGroup Architecture LLC is an award-winning MBE, SBE and DBE architecture, interior design and graphics, signage and wayfinding design firm headquartered in New Brunswick, New Jersey, with offices in Philadelphia, Pennsylvania, and Queens, New York. Formed in 2006, DIG specializes in the education, healthcare, senior living, civic, higher education and transportation sectors.*

The Rise of Construction Technologists

A Construction Technologist is a professional who integrates construction knowledge with technological competence to improve construction processes and outcomes. They are responsible for researching, implementing, and optimizing various technologies on construction sites, bridging the gap between technology and the construction industry.

Key Responsibilities

Research and Evaluation: Identify and evaluate emerging construction technologies that can improve efficiency, safety, and collaboration on projects.

Integration and Implementation: Integrate new technologies into existing workflows, including software like BIM (Building Information Modeling), VR (Virtual Reality), AR (Augmented Reality), and drones.

Training and Support: Provide training and support to project teams on using new technologies, ensuring they are comfortable and confident in their application.

Troubleshooting and Solutions: Address technical issues and find solutions to ensure smooth implementation and operation of technologies.

Collaboration: Work with architects, engineers, and project managers to optimize technology usage and ensure it aligns with project goals.

Documentation and Analysis: Maintain accurate records of technology implementation, usage, and performance, and continuously assess the effectiveness of implemented solutions.

How Construction Technologists Help the Industry

Increased Productivity: By implementing advanced technologies, Construction Technologists help streamline processes, improve efficiency, and increase productivity on projects.

Improved Safety: Technologies like drones and VR can help identify potential safety hazards and improve site safety.

Enhanced Collaboration: Tools like BIM promote better communication and collaboration between different stakeholders on a project.

Cost Reduction: By optimizing processes and reducing errors, Construction Technologists can help reduce project costs.

Innovation and Advancement: They are at the forefront of adopting new technologies, pushing the boundaries of what's possible in the construction industry.

In essence, a Construction Technologist is a valuable asset to any construction company, helping them navigate the evolving landscape of technology and leverage it to achieve better project outcomes.

How to Become a Construction Technologist

To become a Construction Technologist, you typically need to pursue an educational path involving vocational training or an Associate's Degree In Construction Technology, followed by gaining practical experience in the field. Some positions may require a Bachelor's degree or specialized certifications, depending on the specific role and employer requirements.

Here's a more detailed breakdown:

1. Education and Training:

Vocational Training: Consider attending technical colleges, training academies, or participating in quick-start programs that provide hands-on training and practical application of construction technology principles.

Associate's degree: Earn an Associate of Applied Science (AAS) or a related degree in Construction Technology from a community college or technical school.

Bachelor's degree: A Bachelor's degree in Construction Technology or a related field, such as Civil Engineering or Building Construction, can enhance your career prospects and increase earning potential.

2. Gaining Experience:

Apprenticeships: Participate in construction apprenticeships to gain practical experience and learn from experienced professionals.

Internships: Seek internships with construction companies to gain on-the-job training and build your resume.

Entry-Level Positions: Start with entry-level positions in the construction field, such as construction laborer or site technician, to gain experience and build a foundation for your career.

3. Specialized Certifications:

NCCER: The ***National Center for Construction Education and Research (NCCER)*** offers various certifications in construction trades, which can enhance your skills and qualifications.

Other Certifications: Explore certifications in specific areas of construction technology, such as building inspection, project management, or software applications.

4. Skills and Qualities:

Technical Skills: Develop strong technical skills in areas like blueprint reading, construction mathematics, building codes, and software applications used in the construction industry.

Problem-Solving: Hone your problem-solving skills to address challenges on the job site and find innovative solutions.

Communication: Improve your communication skills to effectively collaborate with other construction professionals.

Organization: Develop strong organizational skills to manage projects, materials, and schedules.

5. Career Paths:

Construction Technologist: Work on construction sites, applying technology to improve efficiency, safety, and quality.

Building Inspector: Inspect construction projects to ensure compliance with building codes and regulations.

Construction Manager: Oversee construction projects, manage budgets, and ensure timely completion.

Trades Supervisor: Supervise tradespeople and ensure projects are completed according to plans.

Estimator: Estimate costs for construction projects and manage project budgets.

6. Career Outlook:

- Construction and excavation occupations are projected to grow, offering promising career opportunities in the field.
- Construction technology is a growing field with increasing demand for professionals who can apply technology to improve construction processes.

By combining education, training, and practical experience, you can build a successful career as a Construction Technologist.

Heartland Credit Union

Springfield, Illinois

Architect

John Shafer & Associates, Inc.



Photos Courtesy: John Shafer & Associates, Inc.

The building's design is intended to reflect the financial strength of the credit union, featuring brick, limestone, and standing-seam metal roofing.

Heartland Credit Union has been voted Springfield's best credit union for 10 years in a row. In 2016, they decided to add another branch facility to target a new area of the city for expansion. John Shafer and Associates, Inc. was selected to design the project.

The building's design is intended to reflect the financial strength of the credit union. The project features brick, limestone, and standing-seam metal roofing. Two large masonry piers and planters flank the main entry, while a cantilevered roof protects the front. Large, north-facing windows provide daylight to the banking hall beyond. There are three drive-through lanes and one ATM lane.

Interior areas include the banking hall, teller area, offices, work area, and break room. An alternate bid was accepted to add "back of house" support space for present and future growth. Interior materials include carpet tile, porcelain tile, custom woodworking and wood trim throughout the banking hall. Offices feature custom sidelights for transparency.

Product Information

Building Envelope: Endicott Brick
Roofing: Petersen Aluminum PAC-CLAD
Windows, Entrances & Storefronts: OldCastle BuildingEnvelope®
Flooring: Patcraft, Shaw, Johnsonite, Crossville
Lighting: Lithonia, Finelite
Daylighting/Skylights: Solatube



The custom woodwork accents the design, while custom sidelights offer transparency for the offices.

The structure is a wood-framed bearing wall with wood roof trusses on a slab-on-grade. Structural steel was used for the cantilevered roof. The mechanical system utilizes high-efficiency split systems. Custom light fixtures were used in the banking hall, and LED lights were used throughout the building. The design team used common sense design features and passive technologies to reduce energy consumption.

The original project goals of efficiency, safety, and brand image have been successfully incorporated into the project. The building has exceeded the owner's expectations.

Architect

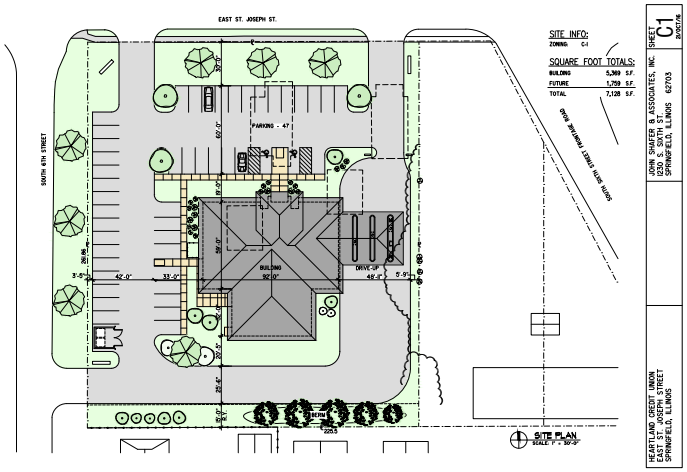
John Shafer & Associates, Inc.
1230 S. 6th Street Springfield, IL 62703
www.shaferarch.com

Project Team

Structural Engineer
Fehr Graham Engineering & Environmental
2060 W. Iles Avenue, Springfield, IL 62704
Mechanical & Electrical Engineer
Johnson Engineering, P.C.
1 N. Old State Capitol Plaza, #310, Springfield, IL 62701
General Contractor
O'Shea Builders
3401 Constitution Drive, Springfield, IL 62711

Project General Description

Location: Springfield, Illinois
Date Bid: Feb 2017
Construction Period: Mar 2017 to Oct 2017
Total Square Feet: 7,128
Site: 1.35+/- acres.
Number of Buildings: One.
Building Sizes: First floor, 7,128; total, 7,128 square feet.
Building Height: First floor, 11'6"; total, 25'6".
Basic Construction Type: New.
Foundation: Cast-in-place, reinforced concrete, slab-on-grade.
Exterior Walls: Brick, load-bearing wood stud.
Roof: Metal.
Floors: Concrete.
Interior Walls: Metal stud drywall.





DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
GENERAL REQUIREMENTS	291,223	16.50	40.86	—
CONCRETE	111,100	6.29	15.59	Forming & accessories, reinforcing, cast-in-place, grouting.
MASONRY	162,395	9.20	22.78	Unit, stone assemblies.
METALS	26,068	1.48	3.66	Structural metal framing, cold-formed metal framing, fabrications.
WOOD, PLASTICS & COMPOSITES	156,563	8.87	21.96	Rough carpentry, finish carpentry, architectural woodwork.
THERMAL & MOISTURE PROTECTION	260,462	14.76	36.54	Damproofing & waterproofing, thermal protection, weather barriers, roofing & siding panels, membrane roofing, flashing & sheet metal, roof & wall specialties & accessories, fire & smoke protection, joint protection.
OPENINGS	95,895	5.43	13.45	Doors & frames, entrances & storefronts, windows, roof windows, hardware, glazing, louvers & vents.
FINISHES	199,636	11.31	28.01	Plaster & gypsum board, tiling, ceilings, flooring, wall finishes, acoustic treatment, painting & coating.
SPECIALTIES	24,925	1.41	3.50	Toilet partitions & accessories, wall & corner guards, flag pole, signage, fire extinguishers.
FURNISHINGS	61,110	3.46	8.57	Casework.
PLUMBING	73,814	4.18	10.36	Piping & pumps, equipment, fixtures.
HVAC	103,750	5.88	14.55	Piping & pumps, air distribution, air cleaning devices, central heating equipment, central cooling equipment, central HVAC equipment.
ELECTRICAL	198,200	11.23	27.80	Lighting, communications, data.
TOTAL BUILDING COSTS	**1,765,141**	**100%**	**$247.63**	
EXISTING CONDITIONS	4,187			Demolition.
EARTHWORK	65,416			Erosion control, earthwork.
EXTERIOR IMPROVEMENTS	251,752			Bases, bollards & paving, striping, signage, fence.
UTILITIES	29,899			Storm, sewer.
TOTAL PROJECT COST	**2,116,395**			

UPDATED ESTIMATE TO AUGUST 2025: $401.26 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$337.06	$2,402,553	**Dallas, TX**	$337.06	$2,402,553	**Los Angeles, CA**	$481.51	$3,432,219
Pittsburgh, PA	$409.29	$2,917,386	**Kansas City, KS**	$417.31	$2,974,589	**Las Vegas, NV**	$461.45	$3,289,210
New York, NY	$553.74	$3,947,051	**Chicago, IL**	$477.50	$3,403,617	**Seattle, WA**	$461.45	$3,289,210

For more information on this project and similar projects visit www.dcd.com



Photo courtesy: elements.envato.com

Common Questions about Construction Estimating

By Dave Chapman

Estimating is a core feature of any project, vital for ensuring that the job is profitable. All construction companies should have an in-depth understanding of how estimating works — and why it is important. However, construction estimating is a complex process, so it's not uncommon for professionals to get confused. This article answers some of the biggest bidding questions to help clarify.

What is the Process of Construction Estimating?

Construction cost estimating identifies all costs related to the scope of a project. This includes direct costs (materials, cost of labor and equipment) and indirect costs, such as overhead and insurance. Through cost analysis, estimators can create a construction cost estimate that can be used to bid on new projects. The more accurate and fast this estimate is, the more likely a contractor will win the bid.

Why is Understanding Construction Estimating Vital?

Accurate estimating is crucial for the success of a construction project. It plays a critical role in determining the feasibility of a project by calculating all project-related costs. This also helps to maintain structure when unforeseen costs surface.

With the rising costs of construction materials, it is important that construction cost estimators know how to formulate reasonable estimates. An estimator needs to be aware of material cost trends and know when pricing data is outdated.

Calculating all project costs is also necessary to create a budget, which acts as the roadmap to profitability. Any inaccuracies in the construction estimating process can lead to a project going over budget with forced cost cutting potentially needing to be implemented.

What Types of Estimating Techniques are There?

There are a few main techniques for estimating a project. Each method relies on its own process and has a different set of benefits and drawbacks.

Analogous estimating: Also known as "top-down" estimating, this method looks at a project's big picture, comparing to historical data to determine costs on similar projects that have been completed. This method is fast and most useful only when general information is available, but tends to be less accurate than other techniques.

Detailed estimating: Also known as "bottom-up" estimating, this method acts as the reverse of analogous, where estimators look at the fine details of a project, identifying costs for each item to come up with a full construction estimate. This method is very accurate but takes a long time, and requires very detailed project data.

Parametric estimating: Used for larger projects, this method looks at statistical models for cost predictions. These models use historical data and variable parameters like size, location, and materials to calculate a construction cost estimate. This is a highly accurate method of estimating, but requires both comprehensive data and powerful construction estimating software.

Assembly estimating: This method separates each "system" of construction (i.e. foundation, framing, roofing, etc.) and estimates costs for each individually. Once costs are determined for each system, they are combined to create the total project cost. This allows for more accurate estimating detail, but takes more time and expertise to complete.

Unit cost estimating: The simplest and most common method, unit cost estimating calculates costs through standard units of measurement (e.g. square foot, cubic yards, tons). It is useful for fast rough estimates but should not be used for large or complex projects.

3-point estimating: This method creates three possible scenarios for a project estimate: best guess or average, worst-case (pessimistic), and best-case (optimistic). It helps give a range of estimating expectations, but is time consuming and can be unreliable, depending on the data used.

What are the Different Variations of the Cost Estimating Process?

The process for cost estimating may vary depending on the method a construction estimator chooses. Generally, it will follow these major steps:

1. *Bid package review:* Provided by the client, the bid includes all relevant information related to the project, including the construction scope and timeline of the work. An estimator will use these documents to determine all material and equipment needs for the project.
2. *Construction site visit:* To assess site conditions: for example, if the site needs to be adjusted for construction or environmental regulations.
3. *Construction takeoff:* The provided blueprints are used to measure and calculate all quantities of materials, labor, and equipment needed for the project.
4. *Cost analysis:* Used to break down and price quantities of materials and equipment usage and mobility. Skilled estimators must solicit prices and compare them with potential suppliers to find accurate and reasonable prices.
5. *Evaluate Labor:* Needed to break down quantity, role, and hours for workers on the project. Skill level, productivity on previous projects, and worker costs (wages, taxes, overtime, insurance, etc.) must be accounted for.
6. *Insurance/Bonds:* Contractors must be covered while working on a project. If additional coverage is needed, it must be factored into the estimate.
7. *Overhead calculations:* This includes rent, permits and utilities. These indirect costs will not typically be visible within the original project bid.
8. *Profit and contingency planning:* A contractor must be able to identify how much they can make from the project. Contingency should account for 5-10% of total project costs and be set aside for covering unforeseen costs.
9. *Finalization/submittal:* All costs must be thoroughly reviewed to ensure no discrepancies were missed. This will be submitted to the client and used for construction.

Because the estimating process is long and complex, it is important that every step is as accurate as possible, benefiting both the client and the contractor financially.

What are Some Avoidable Cost Estimating Mistakes?

When estimating a construction project there are always opportunities for errors. However, many of these are entirely avoidable if you are aware of them. These include:

- Labor cost inaccuracies
- Inaccurate pricing for materials/supplies
- No risk assessment
- Failing to include overhead costs
- No contingency planning (including weather plans)
- Using generic items/assemblies for specific trades

Many of these common mistakes can be avoided with construction estimating software, where the risk of human error through manual record-keeping and calculation is reduced.

What has the Most Effect on Cost Estimating?

Even though the process of estimating involves many different moving parts, there are a few critical elements that really affect the time, cost and effort of a project estimate:

- An ambiguous project scope can be tough to estimate without solid details. If you don't know everything about the scope, you can't account for everything.
- The quality of data or the information used to create the estimate can lead to errors or omissions if the data is poor. Outdated data, such as old pricing for materials, can halt progress and raise costs, straining your construction budget.
- Depending on how complex a project is, the cost may need to rise for required skill levels for estimators as well as the length of time and energy that they will have to spend.
- The method of estimating can also greatly affect the estimating and bidding process. Some methods, like manual bidding, might be less accurate or detailed, making assumptions that could lead to increased costs.

What Can I Do to Make My Cost Estimating More Accurate?

Estimating accuracy can be achieved in several practical ways, including:

- Compare historical project data on similar projects.
- Get detailed quotes from different suppliers to compare pricing options.
- Regularly update costs databases to have the most recent information available.
- When possible, use detailed techniques for estimating.
- Maintain communication with clients and collaborate with experienced professionals for assistance.

While all these tips are useful to keep estimating accurate, using construction estimating software is an easy and effective way to ensure estimating accuracy.

What Are the Advantages of Construction Estimating Software?

There are many advantages to using construction estimating software that can help streamline every step of the process. These include:

- Detailed reports that show project estimates com pared to real costs to help budgetary analysis
- Advanced automation that reduces time spent on tasks like cost calculations, data entry, and quantity takeoffs
- Change order management to help keep projects running smoothly even when changes are needed
- Trade-specific databases which can be used to promote fast and accurate construction estimates
- A built-in all-in-one system to coordinate estimating and takeoff so contractors don't have to double-input data
- Integration with accounting software
- Access to the cloud to view your detailed estimates anywhere

Combined, these features create a powerful system that contractors can leverage to their benefit when estimating a project. Using estimating software will result in faster, more accurate estimates that can help contractors increase their profit and win new projects.

How Do I Choose Which Estimating Software to Use?

When you are looking to implement estimating software into your construction business, it can be overwhelming to know how to decide. Start by first evaluating your company's needs. Make sure to consider:

- The types of work you perform
- Your business growth plan
- The building codes you deal with

The estimating software you decide on should have the essential construction estimating features needed for your work, such as:

- Trade-specific databases
- Automated reporting
- Change-order management
- Built-in digital takeoff
- Cloud-based access

An estimating provider should offer scalability to match your company's workload and growth, as well as the ability to integrate with other systems, such as accounting.

Look for high-quality software support that can be accessed at any time, with training courses for software use, as well as a positive and reliable history in the construction industry.

About Estimating Edge: *Estimating Edge, a Foundation Software company, has been a trusted provider of commercial construction takeoff and estimating software for the roofing, fireproofing, interior and exterior finishing trades for more than 30 years. For more information, visit* ***www.estimatingedge.com****.*

Builder Sentiment at Third Lowest Reading Since 2012

In a further sign of declining builder sentiment, the use of price incentives increased sharply in June as the housing market continues to soften.

Builder confidence in the market for newly built single-family homes was 32 in June, down two points from May, according to the National Association of Home Builders (NAHB)/Wells Fargo Housing Market Index (HMI) released recently. The index has only posted a lower reading twice since 2012 — in December 2022 when it hit 31 and in April 2020 at the start of the pandemic when it plunged more than 40 points to 30.

"Buyers are increasingly moving to the sidelines due to elevated mortgage rates and tariff and economic uncertainty," said NAHB Chairman Buddy Hughes, a home builder and developer from Lexington, North Carolina. "To help address affordability concerns and bring hesitant buyers off the fence, a growing number of builders are moving to cut prices."

Indeed, the latest HMI survey also revealed that 37% of builders reported cutting prices in June — the highest percentage since NAHB began tracking this figure on a monthly basis in 2022. This compares with 29% of builders who reported cutting prices in April and 34% who reported cutting prices in May. Meanwhile, the average price reduction was 5% in June, the same as it's been every month since last November. The use of sales incentives was 62% in June, up one percentage point from May.

"Rising inventory levels and prospective home buyers who are on hold waiting for affordability conditions to improve are resulting in weakening price growth in most markets and generating price declines for resales in a growing number of markets," said NAHB Chief Economist Robert Dietz. "Given current market conditions, NAHB is forecasting a decline in single-family starts for 2025."

Derived from a monthly survey that NAHB has been conducting for more than 35 years, the NAHB/Wells Fargo HMI gauges builder perceptions of current single-family home sales and sales expectations for the next six months as "good," "fair," or "poor." The survey also asks builders to rate traffic of prospective buyers as "high to very high," "average," or "low to very low." Scores for each component are then used to calculate a seasonally adjusted index where any number over 50 indicates that more builders view conditions as good than poor.

All three of the major HMI indices posted losses in June. The HMI index gauging current sales conditions fell two points in June to a level of 35, the component measuring sales expectations in the next six months dropped two points lower to 40, while the gauge charting traffic of prospective buyers posted a two-point decline to 21 — the lowest reading since November 2023.

Looking at the three-month moving averages for regional HMI scores, the Northeast fell one point to 43, the Midwest moved one point higher to 41, the South dropped three points to 33, and the West declined four points to 28.

*HMI tables can be found at **nahb.org/hmi**. More information on housing statistics is also available at **Housing Economics PLUS**.*

ESTIMATING ACADEMY

Check Out ASPE's New Estimating Classes

Upskill your estimating knowledge anytime, anywhere with convenient on-demand courses taught by industry experts!

- Introduction to Plumbing Estimating
- Introduction to Earthwork Estimating
- Conceptual Estimating



Certificate in Contruction Estimating

Level up your career with ASPE's Certificate in Construction Estimating! This comprehensive program equips you with the skills and knowledge to create accurate and competitive estimates, boosting your earning potential and professional credibility. Gain expertise in quantity takeoff, pricing, bid preparation, and blueprint reading through engaging online courses taught by industry veterans. Enroll today and become a sought-after estimating pro!

ASPEnational.org Natasha@aspenational.org



United States Construction Industry Report 2025

A $1.59 Trillion Market is Forecast by 2029

Photo courtesy: elements.envato.com

The U.S. construction market is set to expand at a robust 5.6% annually, reaching USD 1.27 trillion by 2025. With a CAGR of 4.4% anticipated from 2025-2029, the sector will grow from USD 1.20 trillion in 2024 to approximately USD 1.59 trillion by 2029. This comprehensive report offers over 100 KPIs, detailing growth dynamics and market opportunities across residential, commercial, industrial, and institutional construction. Key challenges include inflation, labor shortages, and regulatory hurdles, with digital innovation and sustainability driving sector trends.

The sector's expansion highlights significant opportunities in building and infrastructure industries, with emerging prospects in residential, commercial, industrial, and institutional construction.

Residential Construction is poised for growth due to advancements in digital innovation and sustainable design, despite challenges like inflation and labor shortages. Robust risk management is crucial as market players navigate potential interest rate hikes. Key projects in metropolitan areas like New York and Los Angeles are transforming urban landscapes with mixed-use developments that cater to diverse housing demands. Government support through policies such as the HOME Investment Partnerships Program is crucial in addressing housing shortages.

Commercial Construction is embracing flexible and technology-driven spaces, capitalizing on modern office and retail trends. Economic uncertainties pose challenges, but tenant demands drive the evolution of high-density urban projects. With major developments in Chicago and San Francisco, the market focuses on modernizing office spaces and integrating retail with community-centered amenities. Public-private partnerships and municipal support are pivotal in urban revitalization efforts.

Industrial Construction is benefiting from e-commerce and reshoring trends, with a strong focus on automation and infrastructure modernization. While inflation and supply chain issues present risks, strategic investments in high-tech manufacturing and distribution centers are pushing sector growth. Collaborative public-private initiatives and investor confidence are driving ongoing developments in logistics hubs.

Infrastructure Construction offers vast economic potential through modernization efforts underpinned by legislation like the Infrastructure Investment and Jobs Act. Although high capital requirements and regulatory complexities remain challenges, strategic investments in transportation, energy, and water systems are crucial. Major metropolitan projects aim to improve connectivity and operational efficiency, supported by federal and state government initiatives and financial incentives to attract private sector participation.

The construction market across the U.S. is leveraging new technologies like Building Information Modeling, smart systems, and sustainable construction practices to improve efficiency and reduce costs. With a robust investment pipeline, supported by both public funding and private investments, the construction industry is positioned for sustained growth, adapting to evolving technological and economic landscapes. This comprehensive analysis offers stakeholders data on growth dynamics, construction cost structures, and market opportunities. Key performance indicators cover over 40 segments, ensuring strategic insights for adapting to industry trends and managing construction projects effectively amid market pressures.

Market Data and Insights

This report provides market size and forecast across 40+ construction segments for ten years from 2020-2029 in United States.

KPIs covered include the following:

- Market size by value
- Market size by volume of construction
- Number of units

Report Scope

- United States Economic Indicators
- United States Top Cities Construction Data
- United States Residential Building Construction Coverage
- United States Residential Green Building Construction Coverage
- United States Commercial Building Construction Coverage
- United States Commercial Green Building Construction Coverage
- United States Industrial Green Building Construction Coverage
- United States Institutional Building Construction Coverage
- United States Institutional Green Building Construction Coverage
- United States Infrastructure Construction Sectors
- United States Green Infrastructure Construction
- United States Construction Cost Structure Analysis

For more information about this report from ResearchAndMarkets.com, visit ***www.researchandmarkets.com***

Lightspeed Technologies Interior Renovation

Kingston, Pennsylvania

General Contractor & Cost Estimator

A. Pickett Construction

The Lightspeed Technologies project was the interior renovation of an existing 12,100-square-foot space. The needs of the tenant for this project included large open areas for receiving and warehousing space, labs, and staging areas for computer equipment.

Most of the building is to be used as office space for employees; this includes standard grade finish in offices, planning rooms, open collaboration areas, game room, and whiteboard rooms. At the heart of this project is a modernized and improved entry / "core" area of the building that has an upgraded reception area, large conference room with interior storefront system, employees' café area, waiting room, and some open collaboration space that is visible to incoming visitors.

The original building was constructed in the late 1990s. When A. Pickett arrived on the project, they needed to gut the interior of the building, preserving only about 10 percent of the existing partitions. Additionally, they needed to provide structural steel support at one column line where a load bearing wall was removed. This work consisted of four columns, two beam pockets in the existing masonry walls, and five beams totaling about 60 linear feet in total length. The columns sat on shallow concrete spread footings. Existing slab-on-grade demolition and removal was required for these new foundations.

After all existing ceilings, floor finishes, window treatments, and other finishes were removed, construction started basically from a blank slate. The slab-on-grade foundation was removed at the restroom areas to accommodate new plumbing layouts and sanitary tie-ins to existing mains. New framing for partitions was non-load bearing metal stud construction with sound batt insulation and drywall finished ready for paint.

The staging areas, testing lab, and inventory area are finished with standard 2×4 suspended ceilings with painted drywall walls and ground and sealed floors.

In the core area of the building are solid surface countertops set on millwork with locally sourced reclaimed wood. In the café area, walls are painted drywall, and ceilings are a combination of suspended drywall ceiling clouds and open painted structure above.

The core area features built-in benches and planters that are clad in locally sourced reclaimed lumber and allow for an open collaboration space.

One of the other main features upon entry is the large conference room that is partitioned off partly with the slim line PK-30 engineered aluminum glazing framework. This allows full views into the conference room through the glass wall.



Built-in benches clad in locally-sourced re-claimed lumber promote collaboration.



Lighting strips offer the appearance of data flowing through a cable network.

Photos Courtesy: Candy Frye/A. Pickett Construction

Both the walls and the ceiling clouds in the core area are fitted with black accent strips of medium-density fiberboard (MDF), along with lineal lighting by PMC Lighting to offer the appearance of data flowing through a network cable.

The building was fitted with all-new plumbing fixtures in all four of the restrooms. New water supply lines were run throughout. Underground sanitary piping was modified and tied into existing waste lines wherever possible. The main lavatories include upgraded fixtures, while the two smaller employee restrooms have standard fixtures.

The HVAC system for the building used existing units, one of which was relocated. The ductwork was completely removed from the building during the demolition stages and was all rerun as part of the reconstruction. There is a combination of exposed and concealed ductwork, 25 percent of which is exposed, painted spiral duct.

The electrical service to the building was adequate for the building's new use. New electrical distribution throughout the building was roughed in as construction was ongoing. The existing troffer lights were removed, retrofitted for direct wire LED lighting, and replaced. All specialty lighting (i.e., hanging lights and linear) were purchased new for the project.

The building received a completely new fire alarm system that was purchased by the owner.



In the cafe area, ceilings are open painted structure.

Product Information

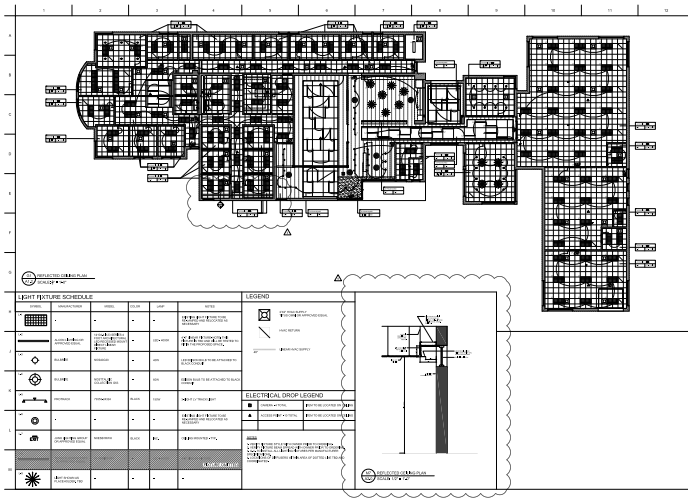
Windows: Trulite Glazing
Entrances: & Storefronts: Haas Door, Steelcraft Door with Mohawk Veneer Surface
Flooring: Bentley, American Olean, Mohawk, Roppe
Interior: Sherwin Williams, Custom Millwork, National, Armstrong
Lighting: Amerlux, Trac-Master

General Contractor & Cost Estimator

A. Pickett Construction
128 W. Vaughn Street, Kingston, PA 18704
www.apickett.com

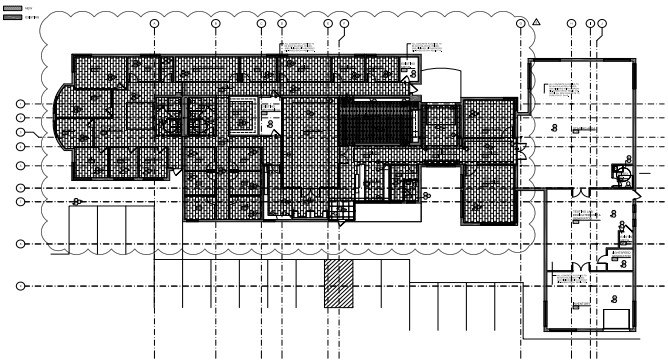
Project Team

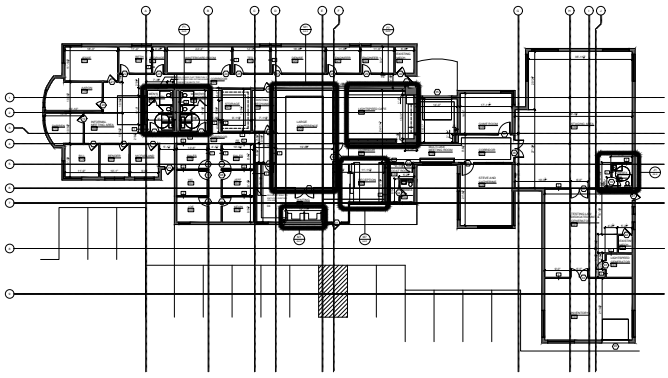
Architect
D.X. Dempsey Architecture, Design & Planning
321 Spruce Street, #407, Scranton, PA 18503
Structural Engineer
E.D. Pones & Associates, Inc.
70 S. Franklin Street, Wilkes Barre, PA 18701
Mechanical Engineer
Air Excellence
913 W. Main Street, Plymouth, PA 18651
Electrical Engineer
Delta Electrical Systems, Inc.
11 Garfield Street, Nanticoke, PA 18634
Owner
Mornington Commercial Properties, LLC
1167 N. Washington Street, Wilkes Barre, PA 18705



Project General Description

Location: Kingston, Pennsylvania
Date Bid: Mar 2017
Construction Period: Apr 2017 to Nov 2017
Total Square Feet: 12,100
Number of Buildings: One; one floor interior renovation.
Building Sizes: First floor, 12,100; total, 12,100 square feet.
Building Height: First floor, 16'; total, 16'.
Basic Construction Type: Interior Renovation.
Floors: Concrete.
Interior Walls: Metal stud drywall.





DIVISION	COST	% OF COST	SQ.FT. COST	SPECIFICATIONS
PROCUREMENT & CONTRACTING REQUIREMENTS	19,000	2.94	1.57	—
GENERAL REQUIREMENTS	94,967	14.70	7.85	—
CONCRETE	9,607	1.49	0.79	Forming & accessories, reinforcing, cast-in-place, cutting & boring.
METALS	8,700	1.35	0.72	Structural metal framing.
WOOD, PLASTICS & COMPOSITES	31,863	4.93	2.63	Rough carpentry, finish carpentry.
THERMAL & MOISTURE PROTECTION	4,131	0.64	0.34	Insulation.
OPENINGS	79,427	12.29	6.56	Doors & frames, specialty door, hardware, interior storefront system.
FINISHES	170,589	26.40	14.10	Drywall, floor & wall tile, ceilings, flooring, painting & wall covering.
SPECIALTIES	8,813	1.36	0.73	Bathroom accessories.
PLUMBING	23,750	3.68	1.96	Piping & pumps, fixtures.
HVAC	80,000	12.38	6.61	Air distribution.
ELECTRICAL	99,800	15.44	8.25	Medium-voltage distribution, lighting.
ELECTRONIC SAFETY & SECURITY	15,500	2.40	1.29	Fire alarm.
TOTAL BUILDING COSTS	**646,147**	**100%**	**$53.40**	
EXISTING CONDITIONS	19,007			Demolition.
TOTAL PROJECT COST	**665,154**			

UPDATED ESTIMATE TO AUGUST 2025: $86.37 PER SQUARE FOOT

Regional Cost Trends

This project, updated to August 2025 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	$72.55	$877,852	**Dallas, TX**	$72.55	$877,852	**Los Angeles, CA**	$103.64	$1,254,075
Pittsburgh, PA	$88.10	$1,065,963	**Kansas City, KS**	$89.82	$1,086,865	**Las Vegas, NV**	$99.32	$1,201,821
New York, NY	$119.19	$1,442,186	**Chicago, IL**	$102.78	$1,243,624	**Seattle, WA**	$99.32	$1,201,821

For more information on this project and similar projects visit www.dcd.com



Photo Courtesy: BNBuilders

Pacific Center, developed in phases, is a new life sciences campus.

BNBuilders Completes Pacific Center, A New Life Sciences Campus for Sterling Bay

BNBuilders, in partnership with Gensler, has completed Pacific Center, a major life sciences campus developed by Sterling Bay in San Diego's Sorrento Mesa neighborhood. The 690,000-square-foot project consists of four new buildings and substantial site improvements, delivering a modern, amenity-rich environment for research and innovation.

The project includes four distinct buildings:

- A six-story structural steel lab and office building
- A six-story architectural concrete building
- A 12-story post-tensioned parking structure
- And the jewel of the campus — a two-story mass timber amenity center

The amenity center is a standout feature both visually and functionally. A rare construction type for San Diego, the mass timber building houses a curated collection of chef-driven food programs and community-centered spaces including The Treehouse, a market and café, as well as a future sit-down restaurant called The Perca. The structure also includes AVNU Wellness Club, a fitness center featuring cutting-edge equipment, group classes, and wellness services such as physical therapy and personal training.

"Our goal was to build a space that not only meets the technical needs of life sciences tenants but also fosters connection and well-being for the entire community," explained Alessandra Lapadula, Project Executive at BNBuilders. "The use of mass timber brought both beauty and sustainability to the heart of the project."

BNBuilders self-performed concrete work on the architectural concrete building and drywall services across the entire campus, managing the site with precision and a commitment to safety and innovation throughout the multi-year construction effort. Built to support growth and adapt to the evolving needs of tenants, Pacific Center is set to become a key destination for San Diego's thriving life sciences community.

About BNBuilders: *BNBuilders is a 100% employee-owned general contractor with six offices, 1000+ employees, and a strong presence in the California, Colorado, and Washington construction markets. For more information about the Pacific Center, visit* ***pacificcenter.com****.*

Key West International Airport Ushers in the Future of Travel

Environmental, social, and economic impacts are key considerations for the $130 million airport modernization underway at the Key West International Airport (EYW). This generational project reached a significant milestone mid-May with the Grand Opening of Concourse A. The construction of the 48,802-square-foot concourse has been ongoing since late 2022. The ribbon-cutting ceremony was attended by Monroe County Commissioners and Key West International Airport executives and staff, along with consultants McFarland Johnson and Mead & Hunt who represent the design team.

"The Key West International Airport Concourse A transformation into the 21st century is an amazing upgrade for arriving and departing passengers. The floor-to-ceiling glass on the concourse, the glass jetways, and the first-class amenities make Key West's small airport a world class destination hub. We still have some finishing touches, but all who pass through this facility will be in awe of the results achieved by the team that made this happen," announced Monroe County Mayor Jim Scholl.

McFarland Johnson, the lead consultant providing planning, programming, engineering design, permitting, and construction administration/inspection services for the project, highlighted the unique challenges addressed throughout the transformation. "Reimagining the Key West Airport required us to focus on airport efficiencies and delivering a greatly improved customer experience while also addressing environmental impacts, long-term sustainability, and hurricane standards related to wind and storm surge," explained John Mafera, Vice President and Regional Director of Aviation for McFarland Johnson. "We had to deliver a building that performed well against several different, and often competing, measures."

The airport transformation includes features designed for resilience, such as building the entire facility 14½' above ground elevation, with reinforced structural columns to withstand storm surge and associated wave action. The terminal's 27'-high northside glass curtain wall consists of 446 panels rated for 200 mph impact-resistant wind code, creating an insulated high-performance envelope. The terminal curtain wall also incorporates electrochromic glass (a type of smart glass technology that can switch between transparent and tinted opaque states based on the location of the sun and the amount of radiant light). In collaboration with local wildlife organizations, the design specified impact-resistant glass with bird-safe glazing that features a pattern of small dots placed every two inches to help prevent birds from flying into the glass wall.

"Watching this project come together has been a testament to the hard work of many. Having McFarland Johnson as our lead consultant for design and construction oversight on the Concourse A and Terminal Improvements program has resulted in an outstanding new facility at Key West International Airport — one that will last well into the future and provide our passengers with the service and amenities they deserve," said Richard Strickland, Executive Director of Airports.

The second phase of construction has begun and includes additional upgrades to the existing facility. These improvements include a new pedestrian bridge, a new and expanded baggage claim and arrivals area, a new multiple-lane security checkpoint, and various support services. This construction is expected to be completed by the summer of 2026.



Photo Courtesy: McFarland Johnson

The Grand Opening of Concourse A of Key West International Airport (48,802 square feet) was in May 2025.

Key West International Airport has experienced record-breaking numbers in the last five years, with increases in both passengers and airlines. The airport served 1.5 million passengers in 2024.

About McFarland Johnson, Inc.: *McFarland Johnson, Inc. is a 100% employee-owned leader in the planning, engineering, environmental, technology, and construction services of innovative aviation, transportation, civil/facilities, and environmental projects.*

For more information, visit ***https://www.mjinc.com***

LABOR RATES FOR MAJOR MIDWEST CITIES
JULY 2025



Image by David Mark from Pixabay

Trade	Wage	Fringe	Total
BRICKLAYER	43.00	27.02	70.02
CARPENTER	49.88	37.67	87.55
ELECTRICIAN	52.71	35.81	88.52
LABORER	47.76	33.16	80.92
OPERATOR	57.23	49.20	106.43
PAINTER	53.05	35.91	88.96
PLASTERER	42.25	26.65	68.90
PLUMBER	56.66	36.89	93.55
RODMAN	53.75	41.45	95.20
ROOFER	50.25	30.43	80.68
SHEET METAL	40.21	39.97	80.18



Image by Peter Mol from Pixabay

Trade	Wage	Fringe	Total
BRICKLAYER	36.58	21.94	58.52
CARPENTER	41.11	30.23	71.34
ELECTRICIAN	51.32	28.54	79.86
LABORER	31.70	14.22	45.92
OPERATOR	44.18	25.35	69.53
PAINTER	30.85	19.49	50.35
PLASTERER	30.63	14.07	44.70
PLUMBER	44.12	34.60	78.72
RODMAN	34.49	36.49	70.98
ROOFER	42.68	28.75	71.43
SHEET METAL	42.51	35.77	78.28



Image by David Mark from Pixabay

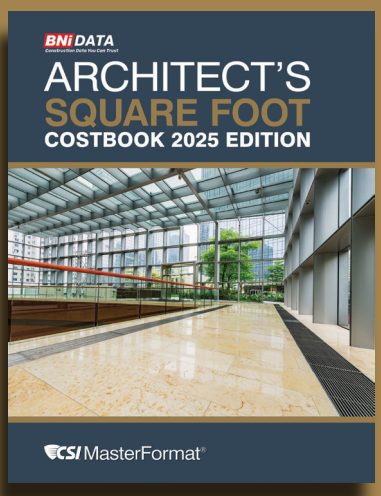
Trade	Wage	Fringe	Total
BRICKLAYER	43.28	26.02	69.30
CARPENTER	42.21	34.07	76.28
ELECTRICIAN	49.48	27.34	76.82
LABORER	38.13	22.25	60.38
OPERATOR	49.08	27.60	76.68
PAINTER	41.02	24.92	65.94
PLASTERER	40.98	26.79	67.77
PLUMBER	52.95	31.23	84.18
RODMAN	44.79	32.32	77.11
SHEET METAL	55.58	29.28	84.86

How to Use This Labor Rate Table

Labor rates shown here are current Davis-Bacon labor rates for Midwest cities. These will help you determine wage rates for your estimates and bids, especially for publicly-funded projects where the payment of locally prevailing wages and fringe benefits are required by law.

Davis-Bacon wage rates are required for contractors or subcontractors performing on federally funded or assisted contracts in excess of $2,000. These wage rates are based on up-to-date data from the Department of Labor.

The square-foot estimating guide created specifically for architects



Architect's Square Foot Costbook, 2025 Edition (print + pdf download)!

Download the digital eBook version NOW!

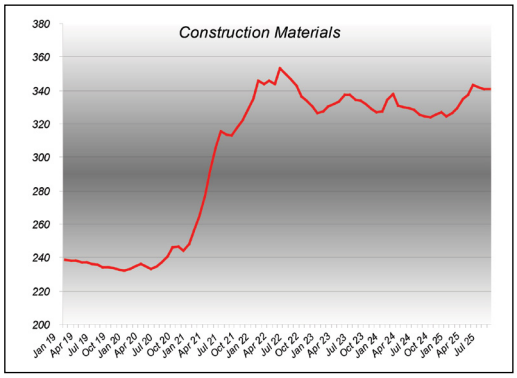
BNi Building News Construction Costs 2025

Source: US Department of Labor, Producer Price Index

The commercial construction sector continues to lose momentum, with performance largely flat or showing only modest gains year-to-date. Signals remain mixed across the board, but most sectors are trending below last year's levels. Public construction — once the star performer — has seen its growth rate cut in half compared to the previous year. As economic uncertainty increases, many companies are scaling back, adopting a cautious stance amid expectations of slower (but not catastrophically so) growth.

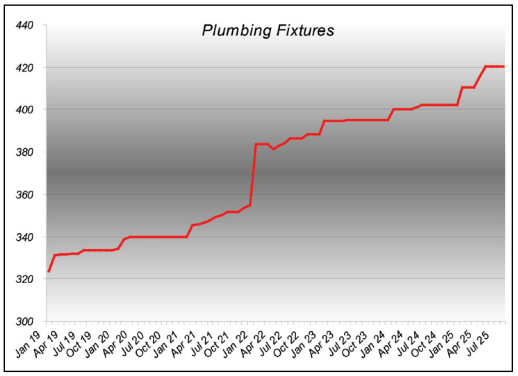
CONSTRUCTION MATERIALS

Material pricing remains volatile, with some costs rising by as much as 15% while others falling by the same margin — averaging out to a relatively flat trend. Uncertainty surrounding tariffs continues to loom large in strategic planning, and is keeping much of the industry on edge. While inflationary pressures seem to be softening, price variations across material categories suggest caution is still warranted. As highlighted in previous updates, volatility in this area makes close and continuous monitoring essential.



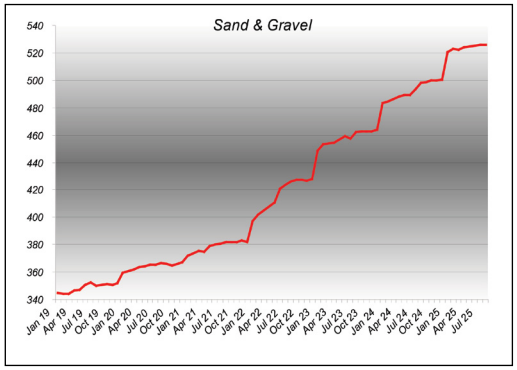
PLUMBING FIXTURES

After a brief period of easing last year, plumbing fixture prices are once again on the rise — now climbing at a rate of 5% year-over-year. This marks a return to the five-year average of 5% annual growth. It remains uncertain whether this renewed increase is directly tied to tariff impacts, but the trend merits attention..



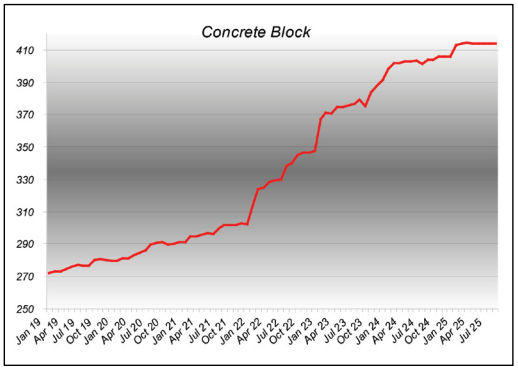
SAND & GRAVEL

Pricing for sand and gravel continues to show extreme variation among reporting agencies. Some data sources indicate gains of 20–45%, while others report more modest increases around 5%. These discrepancies likely reflect regional differences tied to quarry locations. Due to this unusual inconsistency, it's critical to check with local suppliers. This is definitely a category to keep a close eye on.



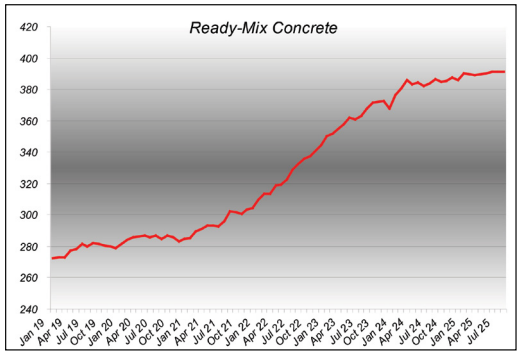
CONCRETE BLOCK (CMU)

Following five years of strong price increases — averaging over 8% annually and peaking at 17% in both 2022 and 2023 — concrete block prices appear to have stabilized. Over the last 12 months, they've risen just 2.5%. This is somewhat surprising given the sharp increase in portland cement costs, making CMU another material worth monitoring closely.



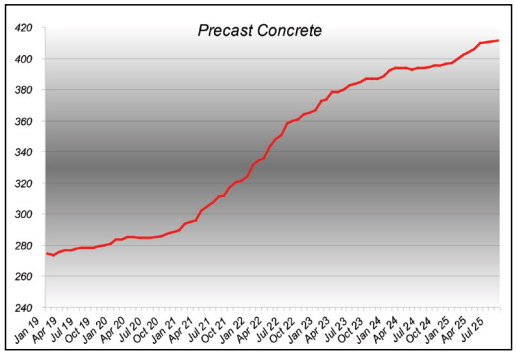
CONCRETE

Concrete prices have followed a stable trend since late 2020, with annual increases averaging around 7.5%. However, recent data shows a significant slowdown, with growth now limited to around 2% year-over-year. This marks a noteworthy shift from the patterns of the past five years.



PRECAST CONCRETE

Historically tracking closely with concrete block pricing, precast concrete experienced average annual gains of 9% from 2019 through 2023. In 2024, growth slowed to just 1%, despite rising costs in its component materials. Now in 2025, precast appears to be breaking out of that slump, posting a year-over-year gain of 4.5%.



The 2025 ENR Square Foot Costbook provides accurate square-foot costs, organized by CSI division, for a wide range of real building projects, right at your fingertips.



BNi DATA Construction Data You Can Trust

DESIGN COST DATA

BNi Building News

Call Toll FREE 1-888-264-2665 or order online @ www.bnibooks.com

DESIGN COST DATA
ADVERTISER INDEX

American Society of Professional Estimators
www.aspenational.org 50

Belden Brick Company
www.beldenbrick.com 2

Horton Automatic Doors
www.ispecifyit.hortondoors.com 5

Petersen Aluminum
www.pac-clad.com 7

Schweiss Doors
www.bifold.com 9

Vitro Architectural Glass
www.vitroglazings.com 3

DESIGN COST DATA
Digital Edition

Visit us at **www.dcd.com** and subscribe today!

DCD 2025 Cost Escalation Index Table

Use this index table along with the regional modifiers to customize case study costs to a projected date and location.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2001	289	290	292	294	296	297	298	299	299	300	300	300
2002	299	300	302	304	306	307	308	309	309	311	311	311
2003	311	312	314	316	318	320	321	320	322	324	325	325
2004	326	327	329	331	335	337	337	338	339	340	340	340
2005	356	357	357	358	360	361	360	365	368	370	371	376
2006	385	386	386	387	387	389	390	391	392	395	395	396
2007	400	401	402	401	402	405	410	415	415	420	421	422
2008	425	427	427	427	428	430	432	434	434	436	437	439
2009	440	442	442	443	444	446	447	449	449	450	451	453
2010	455	458	458	460	461	462	463	463	465	465	466	466
2011	467	467	467	471	472	473	473	475	476	476	476	477
2012	477	477	477	481	482	483	483	485	489	489	489	490
2013	490	490	490	494	495	496	496	498	498	499	499	499
2014	499	500	501	502	503	504	504	507	511	513	513	513
2015	515	517	518	519	521	522	524	525	527	528	528	528
2016	533	533	533	534	535	536	537	538	538	539	540	540
2017	540	540	541	541	542	543	543	544	545	545	546	546
2018	546	549	552	555	558	565	567	570	571	572	572	573
2019	573	575	578	582	586	586	587	590	592	593	595	595
2020	595	596	596	610	612	620	630	650	660	665	670	680
2021	680	680	670	670	690	700	710	715	720	730	740	750
2022	760	770	780	790	800	810	815	820	825	830	835	850
2023	850	850	850	855	860	865	865	870	880	870	875	880
2024	880	875	873	870	865	865	862	865	862	860	858	855
2025	856	860	865	868	868	870	873	875	874	878	880	885
2026	890	895	900	905	910	910	913	915	918	920	923	925

Select a Design Cost Data case study file, which is similar to a project you have in mind, for a "base." Using the index table, find the "base" index number. Determine a target date for which your project will go out to bid (or the average month of the construction period, for a target date if it is to be negotiated), and find the index number. Divide the "target" index number by the "base" index number to get a "multiplier." Multiply the cost per square foot by the multiplier to determine the updated cost per square foot. Multiply the updated cost per square foot by the total square feet of your project to get an updated estimated cost. (Use the regional modifier guide to determine the cost variations due to area differences.)

Please note: *Contact us if you are in need of cost models past December, 2026. One of our cost professionals will be happy to help. You can contact us at 800-533-5680.*

DCD 2025 Regional Modifiers

Use this regional modifier table along with the cost indices to customize case study costs to a projected date and location.

Eastern U.S.		Central U.S.		Western U.S.	
Connecticut	1.10	Alabama	0.83	Alaska	1.09
Delaware	1.07	Arkansas	0.80	Arizona	0.83
Florida	0.86	**Illinois**		**California**	
Georgia	0.84	Chicago	1.19	Los Angeles	1.20
Maine	0.83	Other	1.05	San Francisco	1.21
Maryland	0.89	Indiana	0.97	Other	1.20
Massachusetts	1.14	Iowa	0.93	Colorado	0.90
New Hampshire	0.89	Kansas	1.01	Hawaii	1.16
New Jersey	1.21	Kentucky	0.92	Idaho	0.88
New York		Louisiana	0.84	Montana	0.92
New York City	1.38	Michigan	0.94	Nevada	1.14
Other	1.11	Minnesota	1.07	New Mexico	0.88
North Carolina	0.79	Mississippi	0.82	Oregon	1.05
Pennsylvania		Missouri	1.00	Utah	0.86
Philadelphia	1.14	Nebraska	0.91	**Washington**	
Other	1.00	North Dakota	0.91	Other	1.06
Rhode Island	1.07	Ohio	0.95	Seattle	1.15
South Carolina	0.81	Oklahoma	0.87	Wyoming	0.83
Vermont	0.83	South Dakota	0.84		
Virginia	0.85	Tennessee	0.86		
West Virginia	1.09	Texas	0.84		
		Wisconsin	1.05		

Reproduced in cooperation with BNI Building News,® 2024

To calculate regional modifiers, multiply the "base cost" by the "target" modifier and divide it by the "base" modifier. Example: To adjust the updated cost of a "base" building in Mobile, AL, of $1,001,126 to Colorado Springs, CO, the calculation will be as follows: Select the regional modifier for each state or city (Colorado 0.90 and Alabama 0.80). $1,001,126 x 90 ÷ 80 = $1,126,266.75.