

# 2024 Annual Infrastructure Construction Cost Inflation Estimate



October 16, 2023

# Overview

**The Annual Infrastructure Construction Cost Inflation Estimate is the projected rate of construction cost escalation** for the upcoming calendar year.

The rate is used to:

- Forecast costs for the 2-Year Capital Budget & 10-Year Capital Plan
- Update Facility Resource Renewal Model (FRRM) and other city forecasting tools
- Departments will use this for next calendar year estimates, unless they provide evidence of a different escalation rate

**Today's action item:** Adopt rate for CY 2024

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# 2024 SF Experts Projected Escalation

Organization	2021 Estimate	2022 Estimate	2023 Estimate	2024 Estimate
<b>Public Institutions</b>				
SFO	2-3	6-9	5	6
SFPUC	4-5	6	6	5
<b>Builders</b>				
Pankow	3-4	5-10	5	2-3
Cumming Construction	3	5.6	4.8	5
Clark Construction	3-4	4.5-5.5	5.5	3.5-4
Jacobs	5	6-10	8	7-8
<b>Market Consultants</b>				
TBD Construction Consultants	3.5-4	4-5	6-7	6
Saylor Consulting Group	4	5	7	3-5
Martin Lee Corporation	5	8	8	5
Sightlines/Gordian	3.6	3.8	5.88	6.27
<b>Average*</b>	<b>3.8</b>	<b>6.0</b>	<b>6.3</b>	<b>5.1</b>

# National cost indices



# U.S. Construction Cost Indices

*Year-on-year annual change, using June of each year*

	Description	2019	2020	2021	2022	2023
<b>National Indices</b>						
<b>BLS New Construction PPI</b>	Change in bid price for new non-residential construction	5.5%	2.5%	3.2%	18.8%	11.6%
<b>BLS Maintenance Contractor PPI</b>	Change in bid price for work done to maintain and repair non-residential buildings only	2.5%	0.4%	4.4%	13.9%	2.5%
<b>Turner Building Cost Index</b>	Change in costs of non-residential building construction nationwide	5.5%	2.4%	0.9%	8.1%	6.4%
<b>ENR Indices</b>						
<b>ENR BCI</b>	Change in skilled labor and structural steel, portland cement, and lumber	1.9%	2.1%	10.1%	14.8%	2.6%
<b>ENR CCI</b>	Change in common labor and structural steel, portland cement, and lumber	1.8%	1.5%	5.9%	8.2%	2.4%

BLS = Bureau of Labor Statistics

PPI = Producer Price Index, measures the average change of selling prices

# Construction Site Materials Changes

*Change in index between annual average*

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Concrete and related products	11.03	11.08	12.69	33.09	40.81
Asphalt and tar paving mixtures	4.71	-0.18	-0.26	16.24	13.93
Gypsum building materials	-17.79	0.22	43.44	56.22	34.12
Lumber, softwood	-26.5	64.9	117.38	-12.79	-109.45
Sheet metal products	5.55	-1.23	42.5	54.06	14.8
Construction machinery	9.56	3.93	11.55	26.33	26.26
Steel for buildings	-1.67	-0.08	44.72	42.51	4.49
Plastic construction products	3.31	4.03	52.03	66.39	13.06
Diesel fuel	-25.98	-45.68	140.216	208.34	-22.55

# S.F. metro construction market





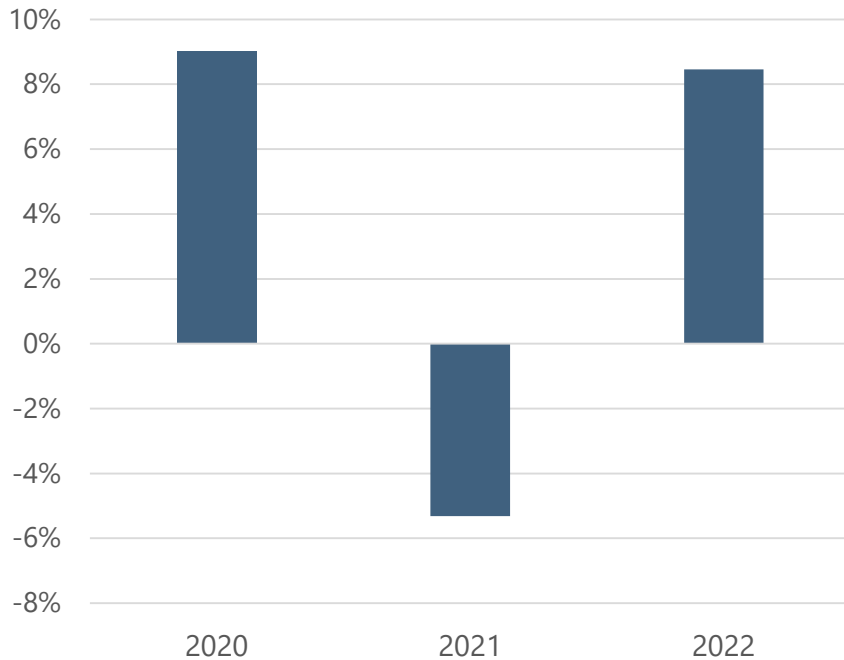
# Local Economic and Construction Indices

	Description	2019	2020	2021	2022	2023
<b>Economic Indicators</b>						
<b>BLS SF Metro CPI</b>	Change in cost of local consumer goods	3.2%	1.6%	3.2%	6.8%	2.9%
<b>BLS Local Area Unemployment</b>	Percent of unemployed labor force in San Jose-San Francisco-Oakland area	3.0%	9.1%	5.8%	3.2%	4.2%
<b>BLS SF Metro Employment Cost Index</b>	Change in employment cost (wages/salaries & benefits)	2.6%	2.9%	3.1%	4.5%	4.3%
<b>Construction Indices</b>						
<b>ENR BCI – San Francisco</b>	Change in skilled labor and structural steel, portland cement, and lumber	4.9%	6.5%	5.7%	23.2%	5.5%
<b>ENR CCI – San Francisco</b>	Change in common labor and structural steel, portland cement, and lumber	2.8%	5.4%	3.4%	14.1%	0.07%
<b>TBD Consultants Bid Index</b>	Change in construction bid cost for an indexed new construction project in SF	10.4%	2.6%	3.6%	17.2%	4.9%
<b>AICCIE</b>		5.8%	6.0%	5.5%	3.5%	6.0%

# Labor and wages

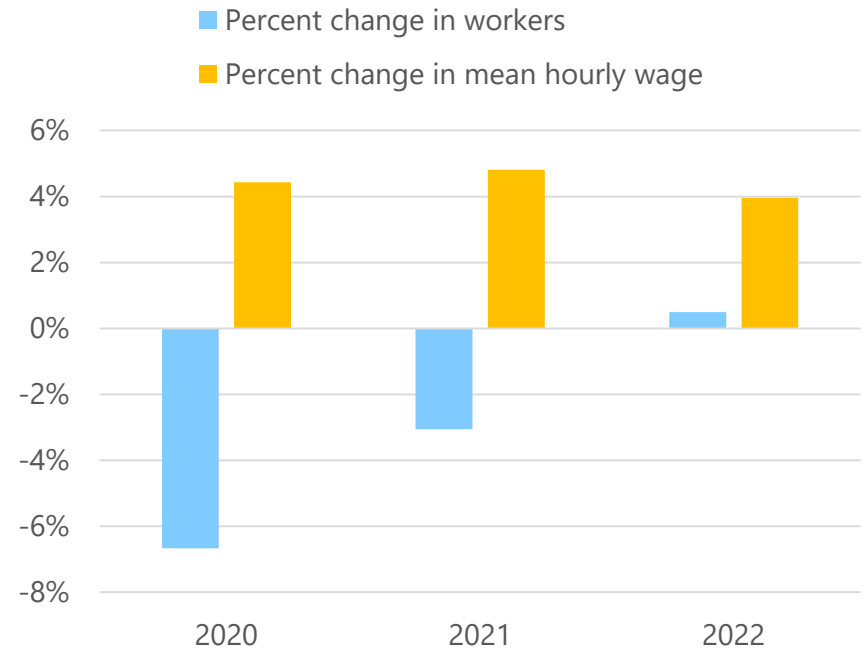
- ❑ Stable construction wage growth
- ❑ Skilled labor shortages
- ❑ Worker layoffs

Private Industry Wages and Salaries Change



Source: Bureau of Labor Statistics, Employer Costs, San Jose-San Francisco-Oakland, CA

Construction Employment and Wages



Source: Bureau of Labor Statistics, Occupational Employment and Wage Statistics, San Francisco-Oakland-Hayward, CA 2019 – 2022 estimates

# Bid Environment

- DPW received an **average of 3.8 bids and a median of 4 bids** (out of 25 projects)
- Winning bids were an average of 1.05x above engineer's estimates

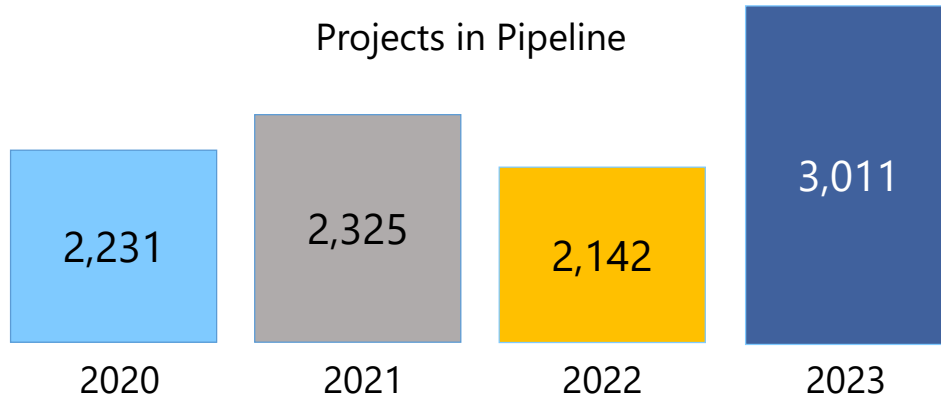
# of Bids	% Differential (estimate vs. bid)
1	+25% to 50%
2-3	+10% to 25%
4-5	0% to 10%
6-7	0% to -10%
8 – 10	-10% to -20%

Source: Saylor Consulting Market Conditions SF Bay Area 4Q 2023

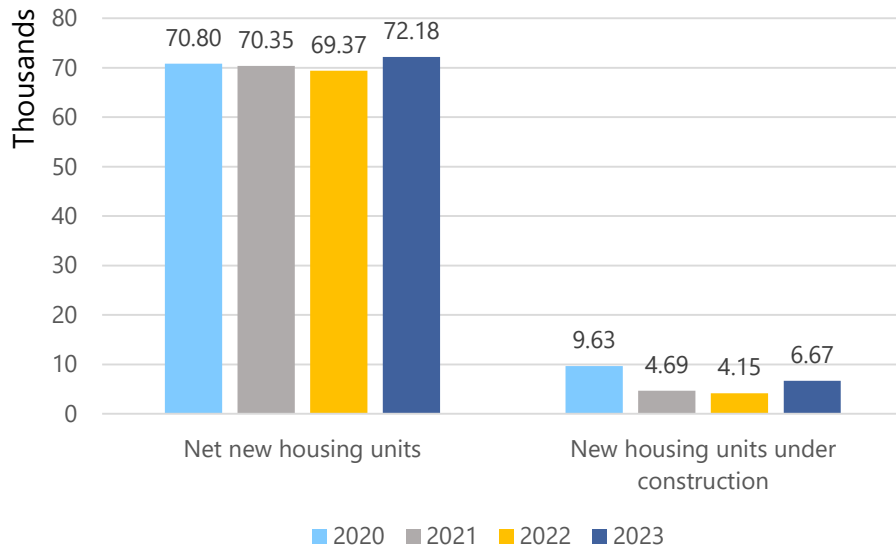
# of Bids	Low Bid Deviation From Estimate
1	1.15
2	1.11
3	1.07
4	1.01
5	0.95
6	0.91
7	0.89
8	0.88

Source: Cumming Construction Economic Forecast; from: Carr, Paul G., P.E., M.ASCE, "Investigation of Bid Price Competition Measured through Prebid Project Estimates, Actual Bid Prices, and Number of Bidders", Journal of Construction Engineering and Management, 2005

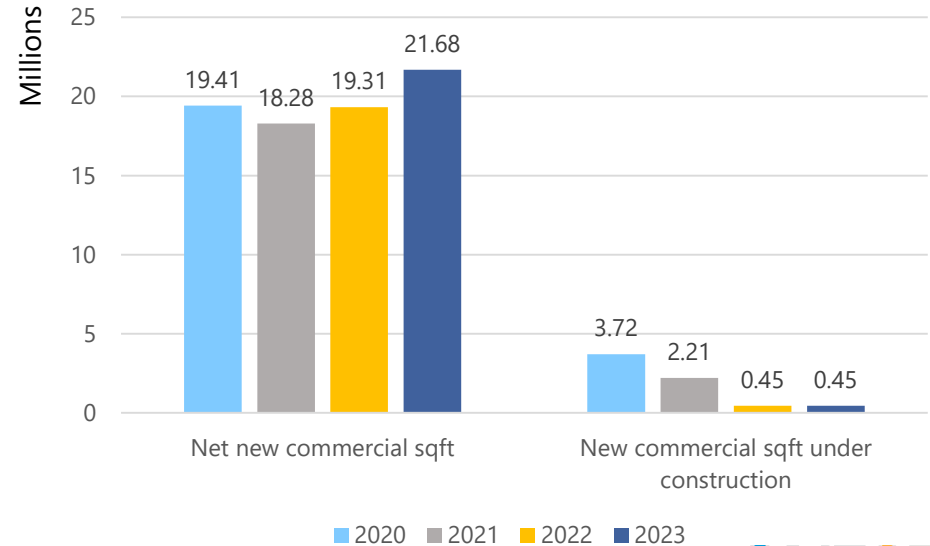
# Development in Pipeline



### Housing Units in Pipeline



### Commercial Square Footage in Pipeline



# Recommendation & Summary



Materials & Supply Chain



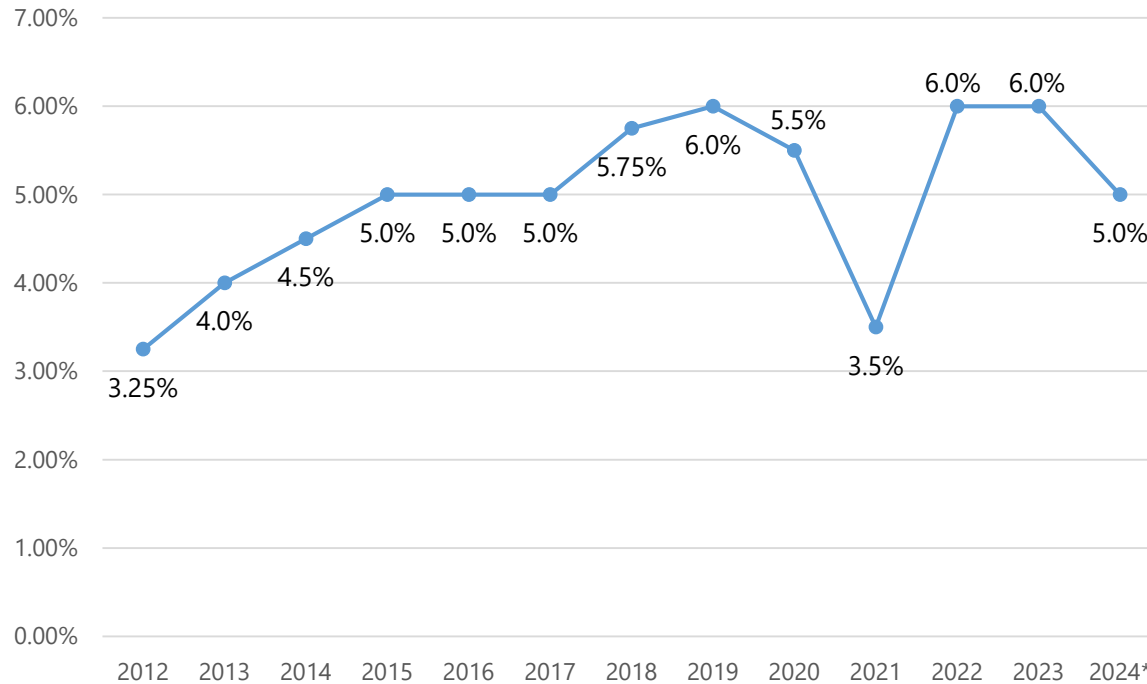
Labor Availability & Employment Cost



Economic & Business Environment

**= 5.0% for CY 2024**

AICCIE, 2012 - 2024



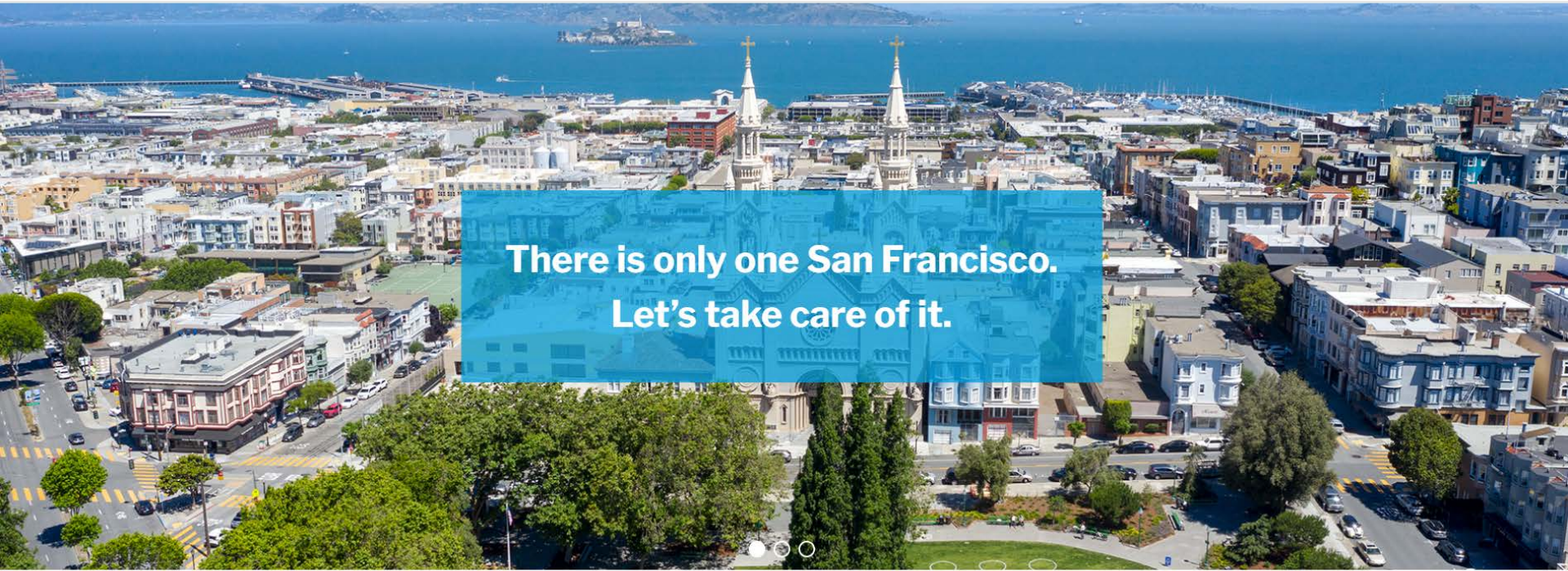
\*2024 rate pending CPC acceptance

# Thank You!

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# Appendix



# Methodology

## Review indices

- Bureau of Labor Statistics
- Engineering News-Record
- Turner Index
- TBD Bid index

## Interview local experts

- SF Gov departments
- Construction companies, other private experts

## Understand SF public construction market

- Bid competition & validity of engineer's estimate
- Materials costs
- Local labor considerations

## Contextualize with state, national and global market trends

- Resources:
  - Major construction and construction-related cost indices
  - Bureau of Labor Statistics (BLS) data
  - Market reports from industry experts
  - Conversations with project managers, construction consultants/economists, and those working in the field
  - Public reports of local construction activity



# AICCIE Legislation Text

The AICCIE “shall be updated on an annual basis...in order to establish a reasonable estimate of construction cost inflation for the next calendar year for a mix of public infrastructure and facilities in San Francisco.”

“The Controller shall review the amount of each development fee established in this Article and shall adjust the dollar amount of any development fee on an annual basis every January based solely on the AICCIE...”

# Bond program spending in progress

- ❑ 2012 Clean & Safe Neighborhood Parks
- ❑ 2014 Earthquake Safety and Emergency Response
- ❑ 2014 Transportation and Road Improvement
- ❑ 2015 Affordable Housing
- ❑ 2016 Public Health and Safety
- ❑ 2016 Preservation and Seismic Safety
- ❑ 2018 Embarcadero Seawall Earthquake Safety
- ❑ 2019 Affordable Housing
- ❑ 2020 Health and Recovery

# Large development

## LAST YEAR'S MAJOR BAY AREA PROJECTS, by construction value

Related Santa Clara  
San Jose BART Extension  
High Speed Rail  
Google North  
The Rise Mixed Use  
Pacheco Reservoir Enlargement  
Mission Point Mixed Use  
UCSF Parnassus Heights Hospital  
Potrero Power Plant  
Dumbarton Rail Bridge

## CURRENT MAJOR BAY AREA PROJECTS, by construction value

Power Station  
Mission Rock  
UCSF Parnassus Heights Hospital  
Parcmerced Phase 1  
Balboa Reservoir Redevelopment  
India Basin Mixed-Use  
10 South Van Ness Mixed Use  
Pier 15 Mixed-Use  
Potrero Hope SF  
Piers 38 and 40