

# Construction Change Management

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DECEMBER 1, 2022



# MBTA Construction Change Order Management

- Who Can Initiate a Change
- Typical Causes of Change Orders
- Change Order Review Process
- Change Orders: 2020 to 2022
- Review of Contractor's Costs
- Recent Improvements and Change Order Mitigation

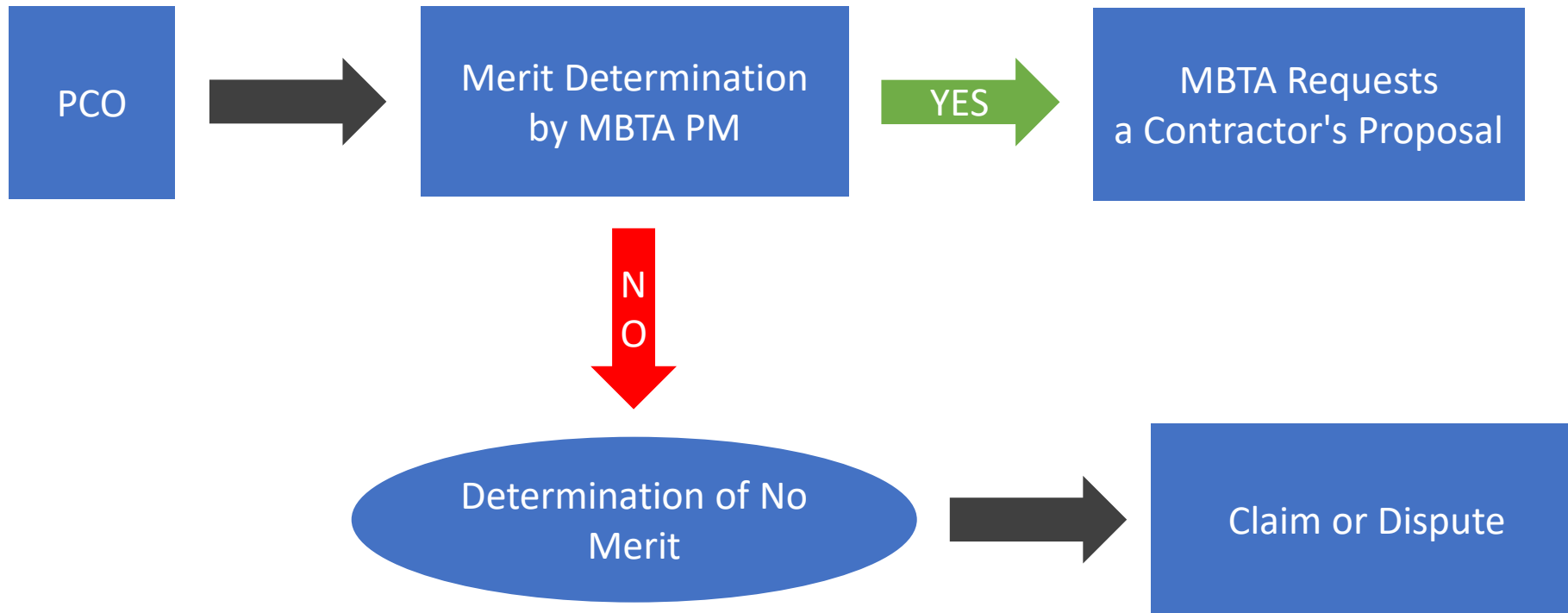
# Who Can Initiate a Change Order?

- The MBTA
  - MBTA Request
  - Designer Recommendation
  - Builder Inspector or Fire Department Request
  - Other Stakeholders
- The Contractor

# Typical Causes of a Change Order

- Design Plans or Specification Changes (DCR)
- Differing Site Conditions (DSC)
- Errors/Omissions (E&O)
- Schedule Milestone Changes
- 3rd Party Interference or Constraints/Utility Companies
- Acceleration/Surges/Diversions
- Force Majeure/Weather/Acts of God
- Change in Laws or Regulations

# Change Order Review Process



# Change Orders: 2020 to 2022

## Total Number of Change Orders per Calendar Year

2020	128 Change Orders	\$117M
2021	280 Change Orders	\$98M
2022	265 Change Orders	\$98M

## Dollar Distribution

< \$25K	23%
\$25K - \$100K	25%
\$100K - \$1M	42%
\$1M - \$5M	9%
\$5M - \$10M	1%
> \$10M	1 Change Order [\$13M]



48% < \$100K

# Review of Contractor's Costs

## Labor

- Breakdown of Labor by Trade and Scope of Work
- Labor Rate Sheet

## Equipment

- Equipment Hours with Rates and Subcontract Costs
- Owned Equipment Priced Using Published Blue Book Operating Rates [Fuel is Included]
- Cost of Rental Equipment Supported with Invoices [Fuel is Additional]

## Materials

- Materials with Quantities and Unit Prices
- Documentation of Materials [Paid Invoices; Submitted Invoices; Vendor Quotes; Invoices From Previous Jobs; Published Catalog Prices]

## Profit

## Rigorous Review of Contractor's Costs

- PM Develops an ICE [Independent Cost Estimate]
- ICE Developed Prior to Review of Contractor's Costs
- Change Order Analyst Performs a Detailed Review of the Cost Proposal and Develops a Strainer
- ICE and Strainer are Used by the PM to Negotiate
- The Change Order Analyst, and, if necessary, The Director of Change Order Management, Assist in the Negotiation

# Recent Improvements and Change Order Mitigation

- Improvements
  - Small Dollar Change Order Process [ $< \$25K$ ]
  - PCO Process/Identifying the Cause
  - Sworn Statement of Account
- Mitigation
  - Negotiate a Complex Scope of Design Services [PS Negotiation Matrix]
  - Improved Technical Review of Design Development Submittals
  - Discipline Related to Owner Requested Changes
  - ACEC Training – Quality Management