



GRAND OAKS HIGH SCHOOL
REVIEW
&
LESSONS LEARNED

May 8, 2019

Overview of Timeline

Construction Manager Process Started

Jan 2015

April
2015

District Contracted with Durotech, Inc.
as the Construction Manager at Risk
with a Guaranteed Maximum Price

District Contracted with R. L. Townsend
and Associates

June
2015

June -
Current

Ongoing Review of Construction
Documents

Grand Oaks High School opens for use

August
2018

Contract Definitions/Example

Cost of Work (COW)

- the building, materials and labor required that remains with CISD.

Examples

- The tangible building items.
- dirt, concrete, bricks, steel, wood, windows, doors, flooring, accessories, equipment, elevators, plumbing, HVAC, Electrical etc...

Contract Definitions/Examples

General Conditions

- the onsite management team, Superintendent, Project Manager, The job trailer, temporary toilets, plan reproductions, insurances etc...

Examples

- items necessary for the construction to take place, but not necessarily tangible property that CISD holds at the completion.

Contract Information

Fixed Construction
Managers (CM) Fee

1.97% of the
Cost of Work
(COW)

PLUS: 1.97%
on additive or
deductive
change orders

The CM Fee will not be applied to any self-performed work

General Conditions
(GC)

Shall not
exceed

4.04% of COW

GC are items necessary for the construction to take place, but not necessarily tangible property that CISD holds at the completion.

Contract Information

Guaranteed Maximum Price	Amount
GMP – Phase 1	\$ 2,413,211
GMP – Phase 2	\$ 134,395,408
Total Original GMP	\$ 136,808,619
Owner Change Order – savings derived from project allowances	(\$ 2,018,000)
Total GMP	\$ 134,790,619

GMP includes general conditions, insurance and fee.

All savings will go to the District at the end of the project.

Purpose of Continuous Monitoring Review

1st

Live Review

Real time review vs.
once project completed

GOHS selected
due to:

Use of new bond money

Cost to build the high
school

New Director of Planning
and Construction

Director was a prior
employee of Durotech

Objective and Scope of the Continuous Monitoring Review

Objective

verify the accuracy of the General Contractor's billings

evaluate the appropriateness of the approved change orders.

Scope

To review:

GMP Contract

GMP detail

Subcontract Bids

Lump Sum Subcontractor Contracts

Subcontractor Change Orders

Subcontractor Payment Applications

Contractor Payment Applications

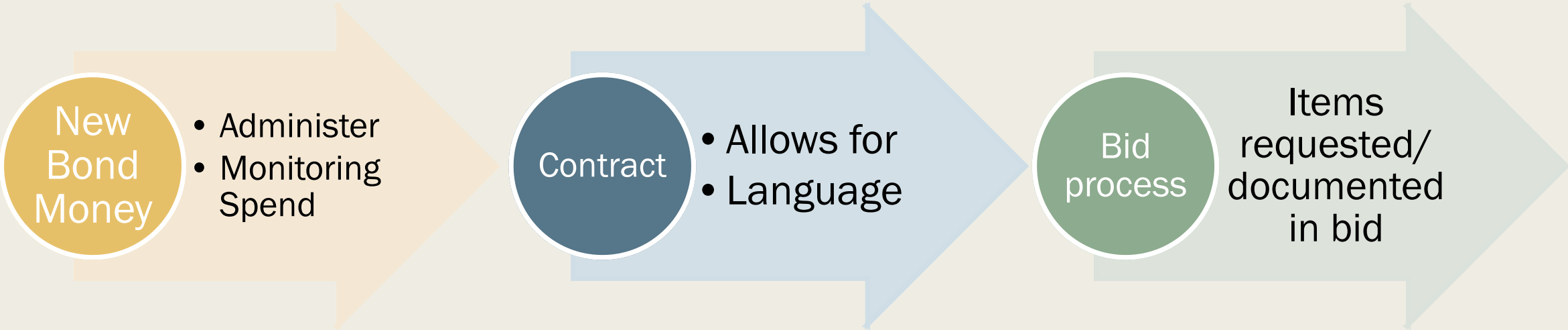
Contractor Job Cost Accounting Records

Contractor Owner Change Orders with supporting documentation

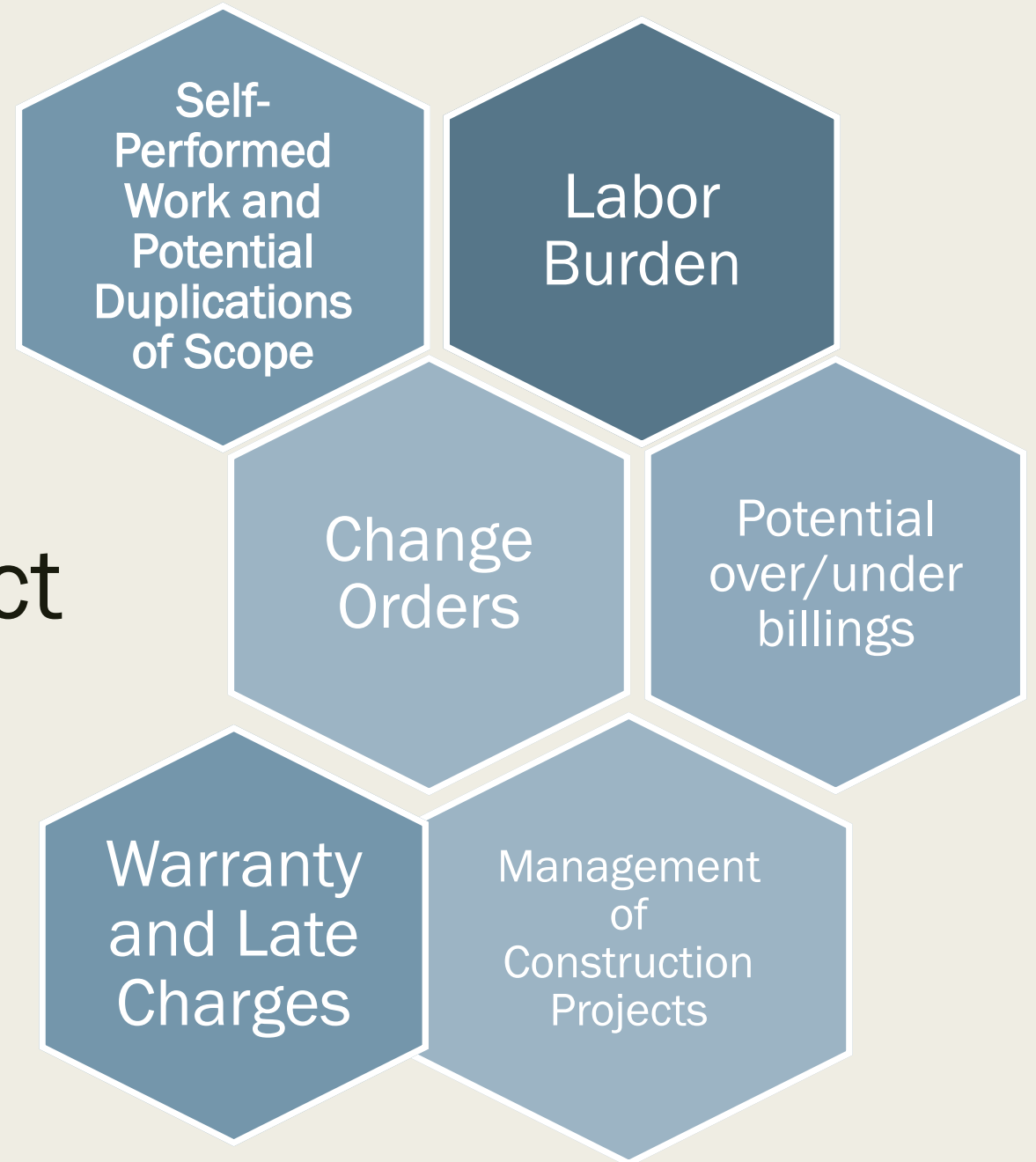
Equipment (Rented & Purchased)

Material Purchased

Shift in culture



Areas Identified; Defined by the District



Items Identified in Townsend reports

Self-Performed Work and Potential Duplications of Scope

- *Self-Performed work by Durotech*
- *Potential Duplications of Scope:*
 - *Backfill*
 - *SWPPP*
 - *Miscellaneous Steel*
 - *Stair Nosing*
 - *Temporary Fencing*
 - *Final Grading*
 - *Haul off Utility Spoils*
 - *Haul off Concrete Spoils*
 - *Irrigation Sleeves*
 - *Installation of Safety Railings*
 - *Unload/Inventory Doors/Hardware*
 - *Firestopping*
 - *Setting anchor bolts and lintels*

Labor Burden

- *Labor Burden on Hourly Overtime may be Excessive / Labor rates / Labor Burden Reviews/Adjustments/ Golden West Plastering overtime rate*

Change Orders

- *Deanco CO#3*
- *CFI CO #4*
- *M Contractor CO #2 - Stockpile spoils on site*
- *CO to Myrex for deleting the installation of miscellaneous steel*
- *Deanco P&P bond in change orders 5, 12 and 14*
- *Change Order #1 - Durotech Fee*

Items Identified in Townsend reports

Potential under/Over Billings

- *Potential Billings in Excess of % of Completion*
- *General Conditions Billing Terms*
- *Overbilling of General Liability and Umbrella Insurance*
- *Overbilling of Contract Administration*
- *Potential Overbilling of CFI P&P Bond*

Warranty and Late Charges

- *Warranty and Late Costs*


Management of Construction Projects

- *Use of Buyout Savings*
- *Punch list Budget*
- *Contingency & Allowance Log may not be Complete*
- *Missing CO documentation*
- *Missing Verizon documentation*
- *Legal Charges / Legal fees in job cost report*
- *Sub Bids and Bid Tabulation*
- *Retainage on Deanco*
- *CPR Log and Details*
- *Subcontract and Purchase Orders for Buyout*
- *Additional Subcontractor Allowances*
- *Change in Masonry Schedule of Value in Pay Apps*
- *Audit Prep Cost*
- *Issuing Change Orders for Work Already Covered in GMP*
- *Allowing Subcontractor Material Price Increases*
- *Deposit for water meter*
- *Purchased equipment*
- *AQ log*
- *LECS NECA Rating*
- *Back Charges Between Subs*
- *Weekly Clean-up Cost*
- *Flush of chilled waterlines*
- *Replacing damaged ceiling fan*
- *Restacking of retaining wall B*
- *Replacement cost for lost materials*
- *Quality Control/Safety Inspection Cost*
- *Replacement of damage chiller control panel*



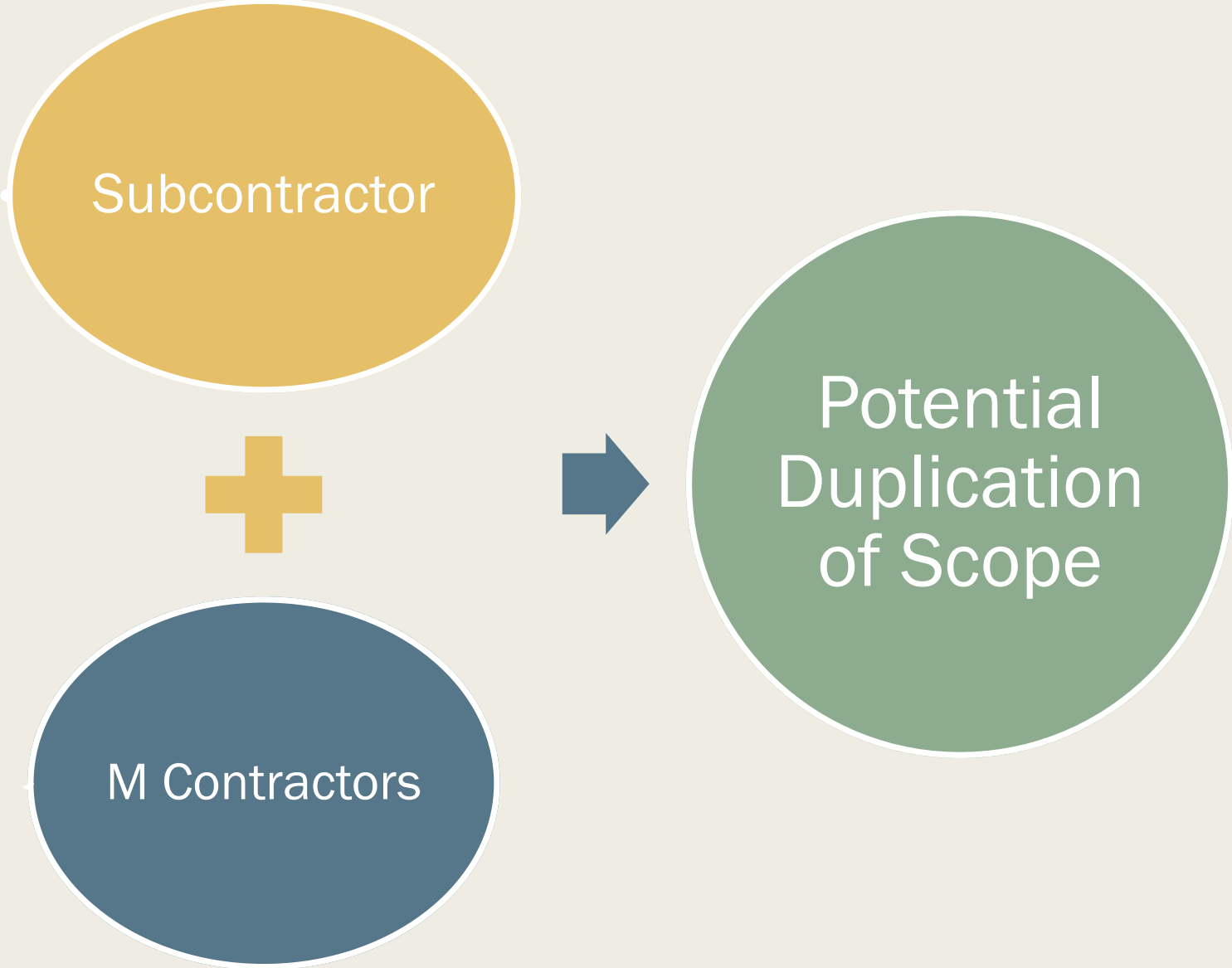
Self-Performed Work

The lead general contractor on a project completes certain construction activities with its own skilled labor force.



Examples: concrete, carpentry, framing work, or another specialty

Self-Performed Work



Self-Performed Work Best Practice

Require the general contractor to provide the same level of documentation as subcontractors

Submit a defined scope of work with inclusions and exclusions

Allow for additional transparency

Self-performed work should have its own subcontract

Duplication of Scope

Project Scope

- a written statement that describes the work needed in a construction project

Duplication of Scope

- When two or more contractors perform overlapping work on the project that was not previously defined in their contracts

Potential Duplications of Scope

Potential Duplication of Scope	Duplication of scope noted	\$ amount of duplication	Resolution
Backfilling behind curbs	No	-	-
SWPPP devices	No	-	-
Installation of Miscellaneous Steel	No	-	-
Stair Nosing	No	-	-
Temporary Fencing	No	-	-
Final Grading	No	-	-
Haul off Utility Spoils	No	-	-
Haul off Concrete Spoils	No	-	-
Irrigation Sleeves	Partial	\$ 3,168	A deductive change order was issued to the subcontractor for the amount noted in the duplication of scope
Installation of Safety Railings	No	-	-
Unload/Inventory Doors/Hardware	Partial	\$ 113,373	A portion of the work was duplicated under the self-performed work performed by M-Contractors. A deductive change order was issued for the amount noted in the duplication of scope.
Firestopping	No	-	-
Setting anchor bolts and lintels	No	-	-

Duplication of Scope Best Practice

Eliminating any potential duplication of scopes starts on bid day and continues throughout the entire construction project

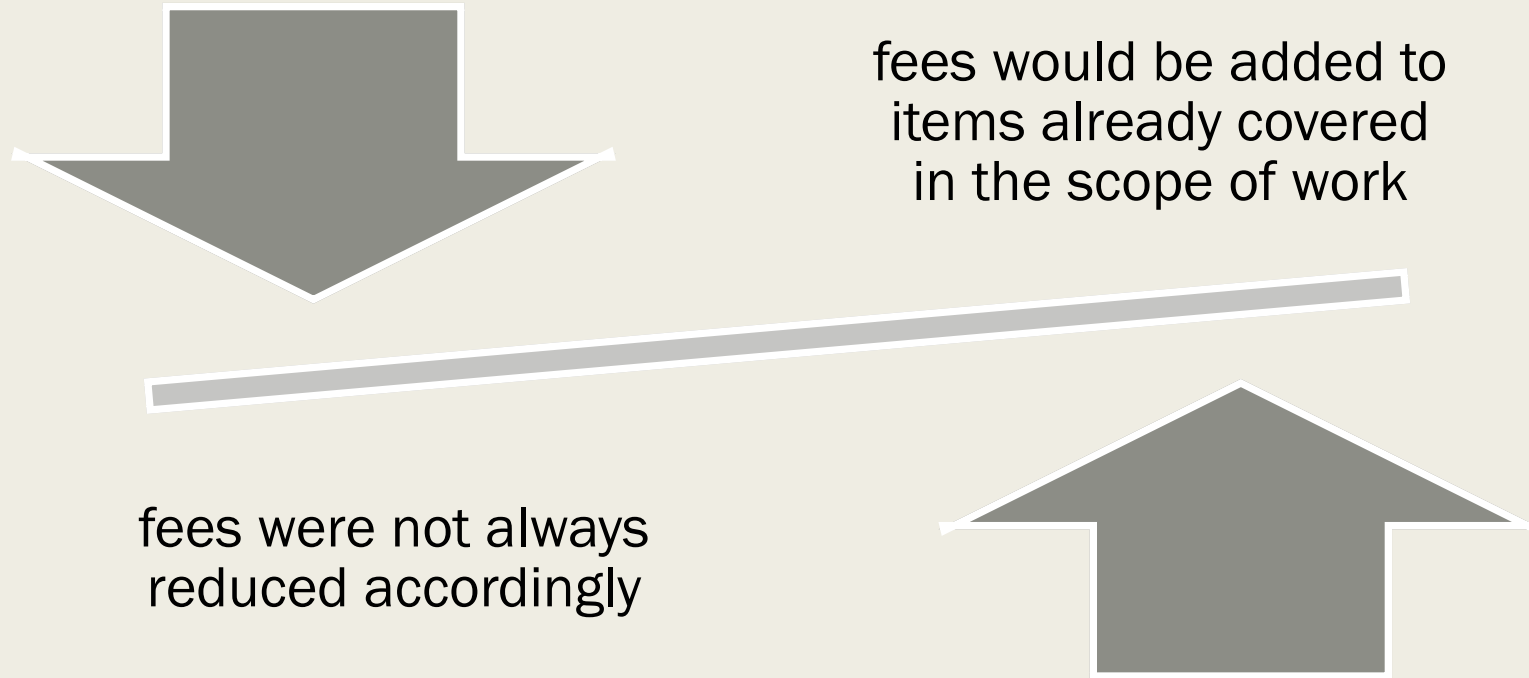
Reconcile the contract to all subcontracts issued

Ensure that the project scope is clearly defined and explicitly state all inclusions and exclusions

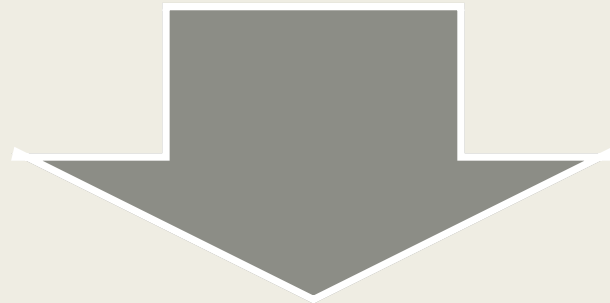
Change orders will be reconciled to the contract and the subcontract

Actively monitor all contracts and changes to contract

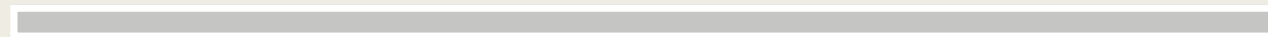
Change Orders – application of fees not consistently applied



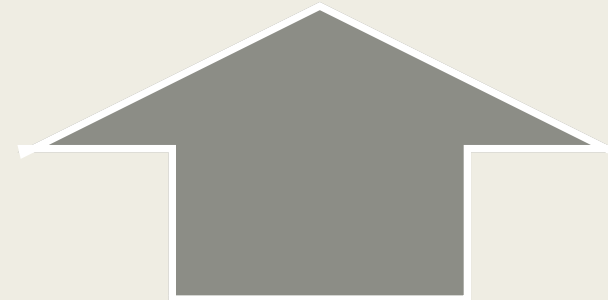
Change Orders – application of fees corrected



Fees removed for items
already covered in the
scope of work



fees were reduced
accordingly on
deductive change
orders



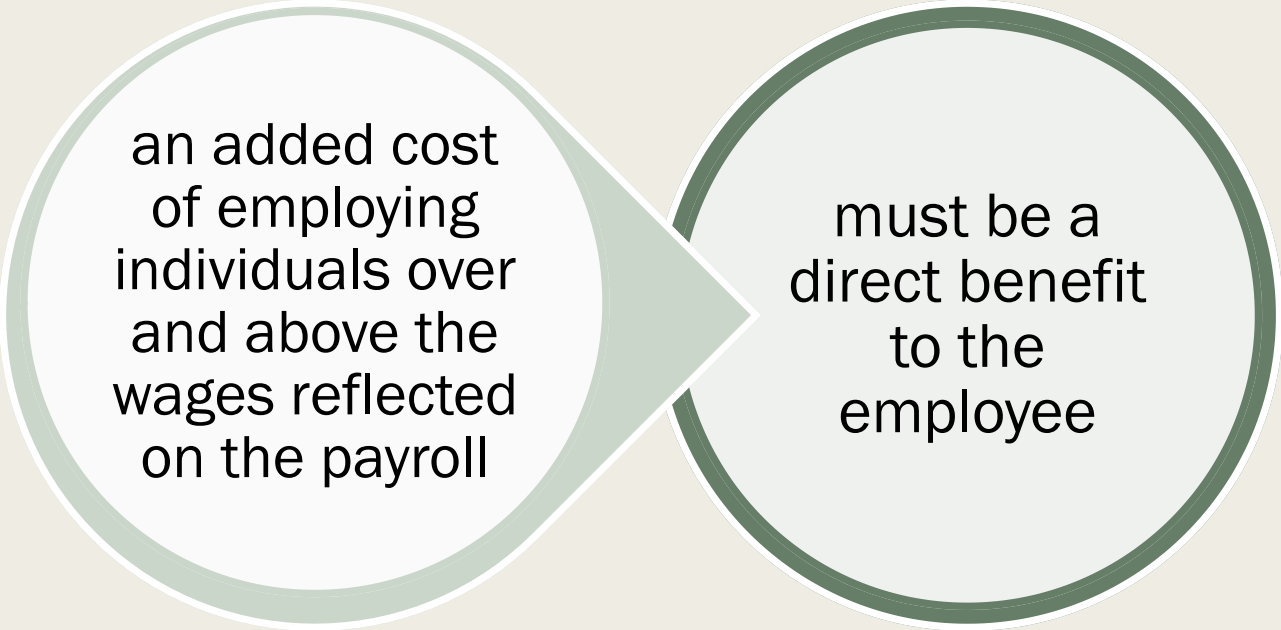
Change Order Best Practice

ProjectMates

A Standard Change Order form for subcontractor's change orders has been implemented to clearly show the contract compliance

Review change orders to ensure that they are in compliance with other contract documents and requirements

Labor Burden



an added cost
of employing
individuals over
and above the
wages reflected
on the payroll

must be a
direct benefit
to the
employee

Labor Burden

Many of the sub-contractors did not provide the labor burden rates up front as requested.

- One of the challenges was the length of the project (roughly almost three years).
- Several sub contractors did not begin their work until the later part of the project.

Sub-contractors do not want to commit to what their rates will be too far in advance.

Labor Burden Best Practice

Obtain the labor burden rates when executing the subcontractor's contract

When change orders include additional labor, the documentation should include the subcontractor's labor burden rates for both regular pay and premium pay, and the position's regular hourly rate.

Potential Over/Under Billings

Allowable Billable Items

contract
administration

general liability

umbrella
insurance

Billable amount

billable at a certain
rate, as stated in
the construction
contract.

General Conditions

Such items fall
under the general
conditions,
at the completion
of the project, the
general contractor
is allowed a certain
percentage to be
included in the
final billing of the
construction
project.

Potential Over/Under Billings

Straight line Costs

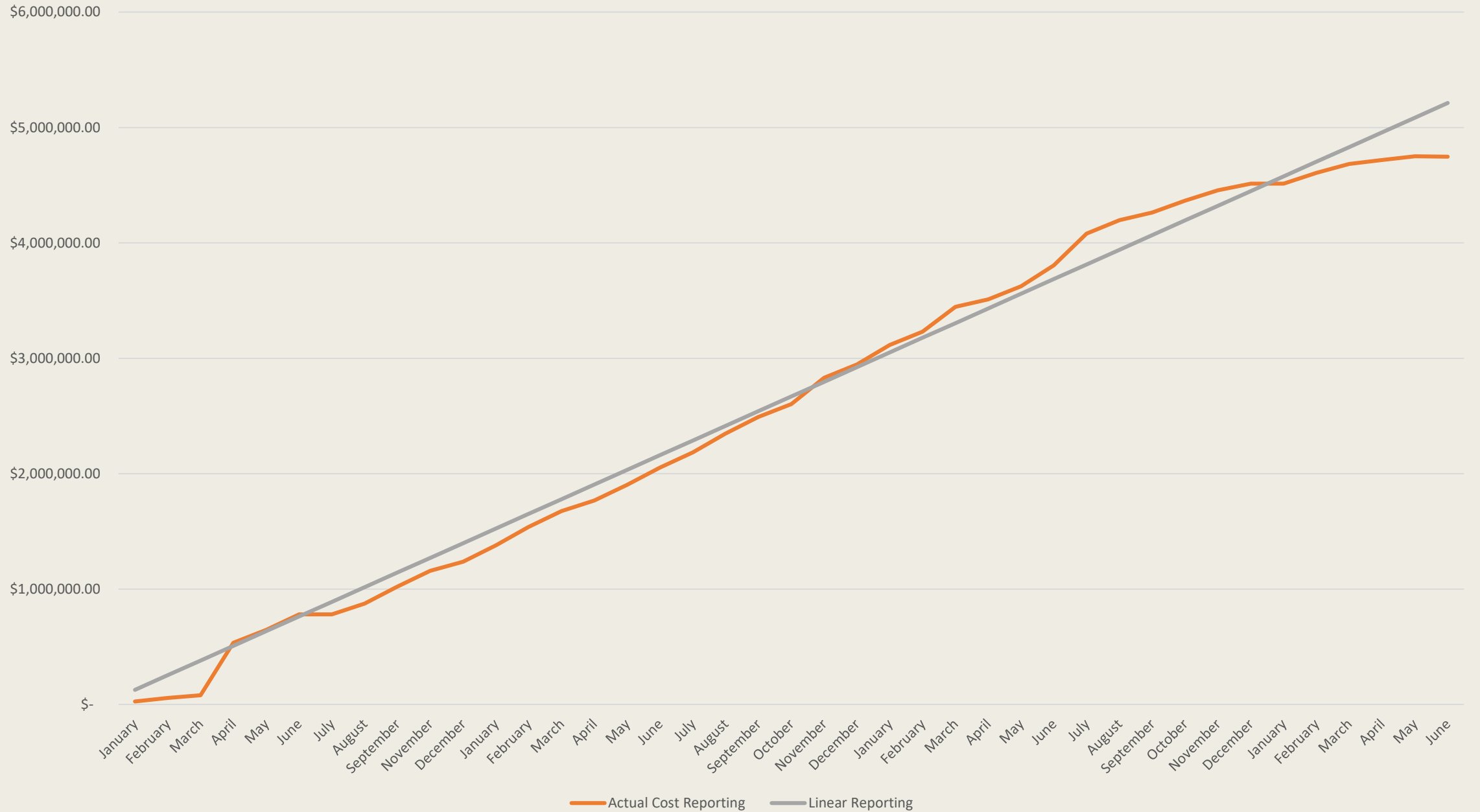
general contractor divided these costs by the total amount of months the project will take to complete

early in the project these items may appear as being overbilled.

at the completion of the project, the items will be reflected as the properly billed at 100% completion.

Percentage of completion

General Conditions Actual vs. Linear



Warranty and Late Charges

The Warranty and Late Cost

a code to allocate cost for warranty items after project completion.

The Warranty and Late Cost covers:

the cost of Durotech's warranty expeditor

any direct cost in researching a possible warranty claim and repairs that may be needed to be completed if not already covered by the subcontractors warranty obligations.

any miscellaneous invoices that come up after project close-out and Durotech's valid claims that need to be paid.

Warranty and Late Charges Best Practices

This project was bid during a transition of how we procured contracts

Any stated warranty costs must be separately stated in bid proposals and identified in contracts as an allowable general conditions cost.

Allowing the warranty and late costs as a general condition item, it puts the General Contractor at risk for costs and limits them to the allowable percentage for general conditions as stated in their contract

Management of Construction Projects

Vague Contract Language

- Potential discrepancies on the scope of work to be performed per the subcontractor's contract

Sub-contractor Contracts and Self-Performed work

- Needs more clear and defined wording that states the scope of work with inclusions and exclusions

Management of Construction Projects

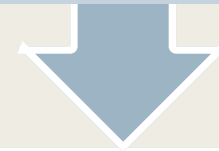
Clean-up Costs

Durotech spent more money than originally stated in the proposal

Estimated cost, which was under estimated.

The District elected not to use M Contractors as a labor force

Reduced appearance for duplications of scope



Maintain a clean site and keep the jobsite in a certain appearance.



Each subcontractor is responsible for their own clean-up costs.

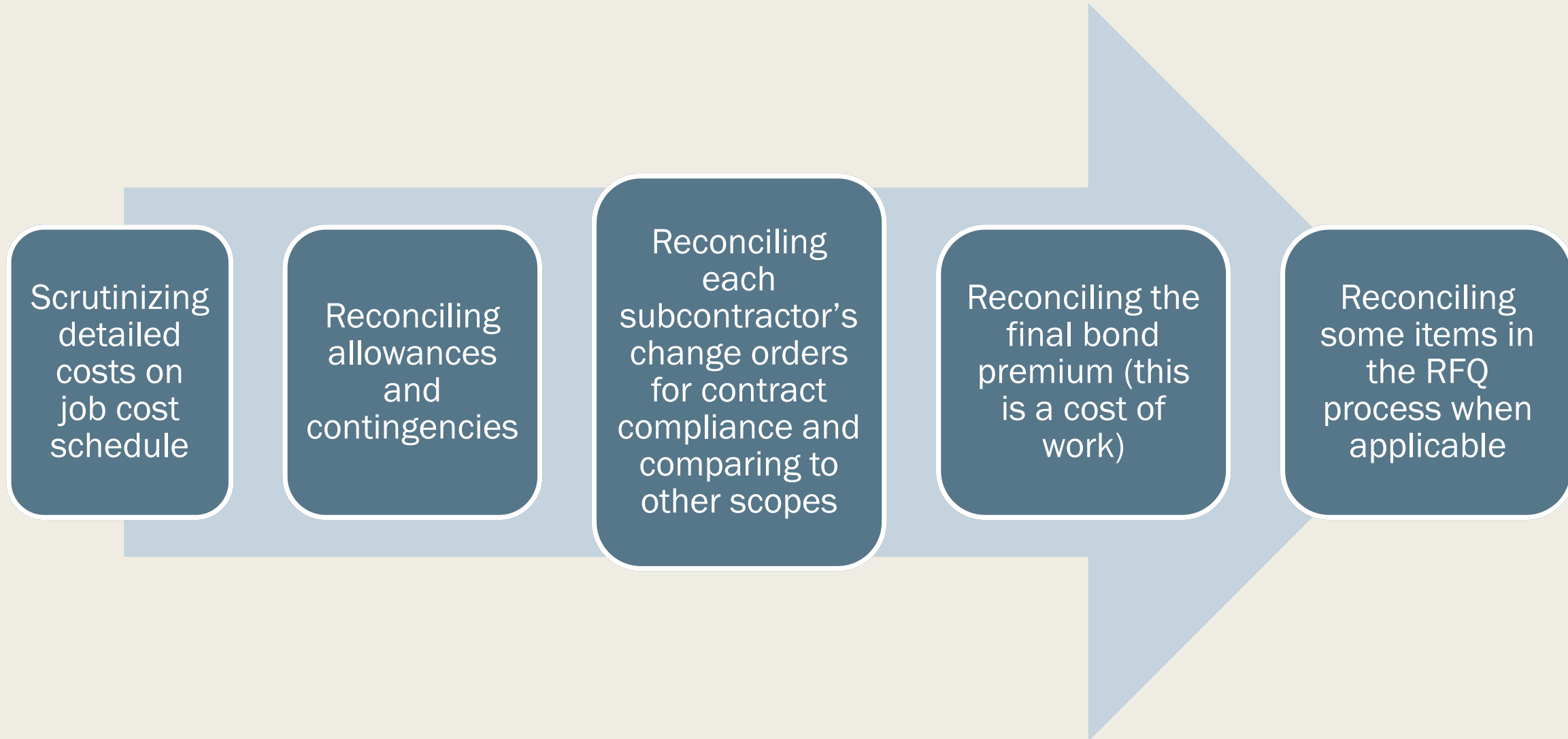
Subcontractors clean up material and debris related to scope of work

Leaving a discrepancy in definitions of clean and safe

GC estimates costs to account for discrepancy & District standards

Management of Construction Projects

Best Practices



Lessons Learned

Each general contractor has their own practices, procedures and way of doing things

Reputations are sensitive.
The general contractor wants to make money while the District wants to save money and spend less.

The General Contractor and the District must adapt to each other, work together and learn each other's language and procedures.

An on-going relationship with general contractors allows for the fine tuning to the relationships and how we work together.

Every general contractor has a profit center of some sort built into their contract.

Lessons Learned

There is nothing in this process and the CMAR contract that is in the general contractor's best interest to save the owner money

Establishing procedures, perspectives, document requests, timing and expectations at the beginning of the project goes a long way.

All parties can incur staffing changes throughout the project when it carries over multiple years, it is good to revisit and reaffirm perspectives, and reconfirm document requests, timing and expectations periodically.

All decisions made by the district was driven by what is best for the district and being fair to all parties involved.

Conclusion

