From Contract to Closeout:
Managing and Auditing Construction Costs With Confidence

Presented by:
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R. L. TOWNSEND
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Rich Townsend is Co-Owner of the consulting firm R. L. Townsend & Associates, LLC. The firm provides construction audit and construction cost control advisory services to a wide variety of organizations throughout the United States. He currently serves on the advisory board for The National Association of Construction Auditors. Since 2008, he has been providing professional development training seminars through Construction Audit & Cost Control Institute, Inc. His experience in construction auditing covers a wide range of industries such as public and private universities, school districts, hospitals/healthcare, industrial, real estate development, airport infrastructure, and airport terminal and infrastructure construction.

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Ashley Humphries is a Senior Construction Auditor at R. L. Townsend & Associates, LLC. She is a Certified Internal Auditor (CIA) and a Certified Construction Auditor (CCA), and a Certified Fraud Examiner (CFE). She has worked for the firm for the last ten years and has extensive experience working on construction audits of major construction projects for private and public universities, university healthcare organizations, public school districts, industrial, and real estate development. She has been part of the instructor team for the Construction Audit & Cost Control Institute for the last several years. She has also participated in presentations at the National Association of Construction Auditors annual conferences.

Categories

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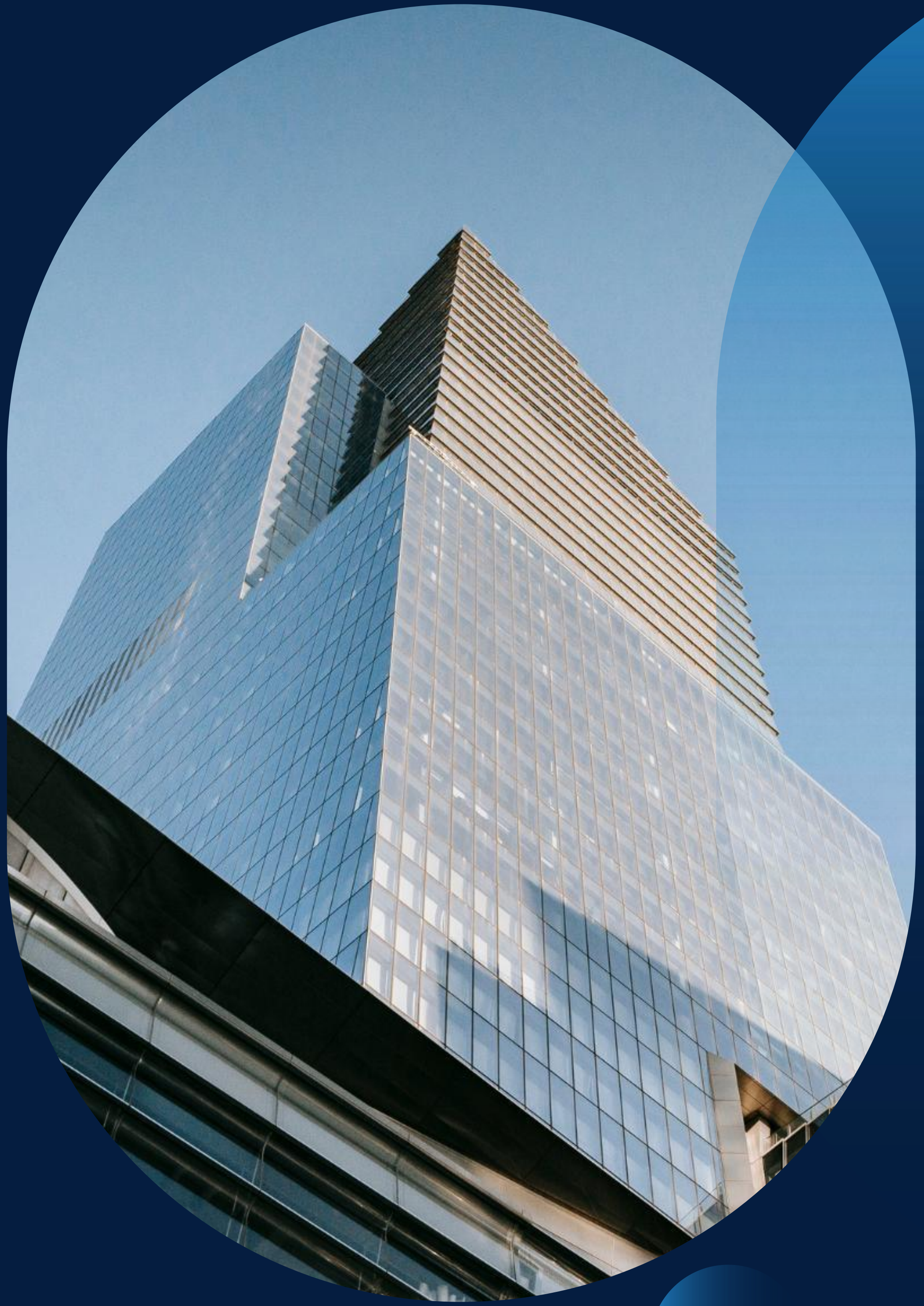

Managing the Contract

Contract Areas That Need Defined with a Design-Build or CMAR (Construction Management Entity with a GMP)

- General Conditions - Is it Lump-Sum or Cost-Plus NTE?
- Cost of Work - Define what is reimbursable and what is covered by markup
- CM Labor - Is it auditable? If fixed, has it been pre-audited to see if it aligns with the contract?
- Change Orders - Define what is reimbursable and what is covered by markup
- Right of Audit Clause - Does it give the Owner full access to records with a flow-down clause
- Insurances – Is it actual cost, is it a Not-To-Exceed %, how is it to be calculated?
- Self-Performed Work – Is SPW on a cost-plus basis? Competitively bid? How is the fee determined?

Managing the Contract

Working with Audit or Management

- Assess contract for ‘undefined gray’ areas and areas for potential hidden profit
- Propose contract language that is well-defined and mitigates risk
- Review other documents to make sure they align with the contract language

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Managing the RFP

The RFP should align with your contract

The RFP that goes out to bidders should do the following:

- Follow the Contract
- Define the allowable cost categories within Preconstruction, General Conditions, and General Requirements
- Recommended to have a format that breaks down allowable cost

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Managing the RFP

The RFP should align with your contract

Cost Type	Total Estimated Costs for Preconstruction, General Conditions and General Requirements (Add or Delete Rows as Necessary) - Refer to A133 Agreement for Definition of Reimbursable and Non-Reimbursable Costs	Designate the line items below where applicable to Precon, General Conditions or General Requirements.	Estimated Months	Estimated Hours Per Month for Labor or Equipment	Labor Rate (Fully Burdened per Hourly Labor Rate Breakdown Tab)	Estimated Labor Costs (**Adjusted to Allowable Cos**	Estimated Material Cos	Contractual Limits on Monthly Rates and Overall Cap at 50% of FMV of Equipment	Other Costs	Subcontract Costs	Total Proposed NTE Cost (Note: These are not Line Item Maximums
Labor	Preconstruction Manager	GC									$ -
Labor	Estimator I	GC									$ -
Labor	Business Compliance Manager	GC									$ -
Labor	VDC Manager	GC									$ -
Labor	Scheduler	GC									$ -
Labor	Project Engineer	GC									$ -
Labor	Project Accountant	GC									$ -
Other	Data Cabling for Project Office	GC									$ -
Other	Move-In Expense	GC									$ -
Other	Office Internet Services	GC									$ -
Equipment	Staff Mobile Phones	GC									$ -
Equipment	Office Security System/Monitoring	GC									$ -
Other	Water/Coffee Service for Office	GC									$ -
Other	Construction Staff Project Software	GC									$ -
Other	Textura Payment Management Services	GC									$ -
Equipment	Construction Project Hardware	GC									$ -
Equipment	Jobsite Computers w/Large Screen TV	GC									$ -
Other	Office Supplies	GC									$ -
Other	Postage/Courier	GC									$ -
Other	Project Photos (Progress)	GC									$ -
Other	Project Photos (Final)	GC									$ -
Other	Printing & Extra Plans	GC									$ -
Equipment	Project Copier	GC									$ -
Other	Office Equipment & Furniture	GC									$ -
Equipment	Pick-up Trucks/Maint (SUPT 2-7)	GC									$ -
Equipment	Pick-up Trucks/Maint (FE 3-6)	GC									$ -
Equipment	Pick-up Trucks/Maint (SAF 3-6)	GC									$ -

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Managing the RFP

The RFP should align with your contract

Proposed Reimbursable Labor Position/Function(Add Rows as Necessary)	Name of Proposed Key Personnel (or TBD If Name Not Known)	Actual Estimated Effective Burden Subject to Contractual max of 40% Burden on Taxable Wages (Per Individual) - Use 40% or Less	Current Annual Salary Base Wages Based on 2,080 hours per year (not including any incentive compensation)	Actual Estimated Effective Labor Burden (all payroll taxes, Insurance and benefits) Subject 40% to Contractual max (Per Individual) -	Add Total Taxable Vehicle Allowance Included in Employee Payroll	Add Estimated FICA and Medicare Tax on the Cost of Taxable Vehicle Allowance included in Employee Payroll (Est. 7.65%	Estimated Total Annual Costs for Employee Base Wages, Payroll Taxes and Insurance Plus Annual Costs of Vehicle Allowances	Estimated Reimbursable 2026 Hourly Rate (Total Annual Reimbursable Costs divided by 2,080 (Note: PTO time will be covered by allowable labor burden and is not to be billed to the	Estimated Hourly Rate for 2027 (Est at 2026 Escalated by 5%) (Note: PTO time will be covered by allowable labor burden and is not to be billed to the project.
Senior Project Manager	TBD	30%	$ 200,000.00	$ 60,000.00	$ 12,000.00	$ 174.00	$ 272,174.30	$ 130.85	$ 137.40
Project Manager	TBD	35%	$ 175,000.00	$ 61,250.00	$ 10,800.00	$ 826.20	$ 247,876.55	$ 119.17	$ 125.13
Project Superintendent	TBD	35%	$ 175,000.00	$ 61,250.00	$ 14,400.00	$ 1,101.60	$ 251,751.95	$ 121.03	$ 127.09
Assistant Project Manager	TBD	40%	$ 125,000.00	$ 50,000.00	$ 9,000.00	$ 688.50	$ 184,688.90	$ 88.79	$ 93.23
Project Engineer	TBD	40%	$ 80,000.00	$ 32,000.00	$ -	$ -	$ 112,000.40	$ 53.85	$ 56.54
Field Engineer	TBD	40%	$ 80,000.00	$ 32,000.00	$ -	$ -	$ 112,000.40	$ 53.85	$ 56.54
On-site Clerical Assistance	TBD	40%	$ 50,000.00	$ 20,000.00	$ -	$ -	$ 70,000.40	$ 33.65	$ 35.34

Managing the GMP

Guaranteed Maximum Price Proposal Review

Work with Construction Audit before GMP is Approved

What Management Can Do:

- Attend bid openings and negotiation meetings
- Determine if the bidding is competitive
- Confirm pricing is reasonable with independent estimates - especially if sole-sourced or lack of competitive bidding (or consider making subcontract cost plus with GMP)
- Get subcontractor proposals as backup

Managing the GMP

Guaranteed Maximum Price Proposal Review

Work with Construction Audit before GMP is Approved

What Audit Can Do:

- Rebuild the GMP mathematically
- Identify any clarifications that change the contract terms
- Pre-Audit contractor labor and labor burden
- Identify and address any bid-leveling concerns
- Verify that gc’s/gr’s, insurances, fees, etc. align with the contract language

Managing the GMP

Guaranteed Maximum Price Proposal Review

What Management Can Do:

Upon finalization of the Final Drawings and Specifications, the Construction Manager shall bid the Project to subcontractors and the Owner shall have the right to participate in the bidding and negotiations with subcontractors. The Construction Manager shall obtain no less than three (3) bids for all components of the Work, unless the Owner expressly authorizes less bids for any specific components. In addition, the Construction Manager shall provide the Owner with copies of the bid tabulation sheets and the actual, original bid day quotes without adjustments, for all subcontractors. The Construction Manager shall use his best efforts to obtain the most cost-effective bids for the completion of the Project. In no event shall the Construction Manager enter into any subcontracts unless previously approved in writing by the Owner. Upon completion of the bid process, the Construction Manager shall provide a comprehensive updated Control Estimate and schedule of values for Owner's review and approval, within ten (10) days following completion of the bid process and the Owner's written approval of all subcontracts. The Construction Manager shall also provide the Owner with a copy of all executed subcontracts and scopes of work for all subcontractors. The Construction Manager shall receive no rebate, credit, kick-back or other remuneration whatsoever from any subcontractor, laborer or materialmen, unless the Construction Manager passes to the Owner the full amount of such rebate, credit, kick-back or other cost savings.

The Construction Manager shall provide the Owner with the right to participate in all negotiations with the subcontractor pertaining to subcontractor contracts, as set forth above. In connection therewith, the Construction Manager shall provide the Owner with advance notice of any meetings or discussions with a subcontractor, thereby providing the Owner with the opportunity to participate in such communications as well as negotiations. It is further understood that any and all information provided by the subcontractors to the Construction Manager shall be shared with the Owner and provided to the Owner in ample time for review and comment. The Construction Manager shall also ensure that in all subcontracts, the subcontractors are responsible for the satisfaction of any portion of any representation or warranty of the Construction Manager given to the Owner under the terms of this Contract.

Managing the GMP

Example of GMP Review Success

- **Analysis of Contractor Proposed Language in Clarifications Section of the GMP**

The GMP is qualified to include the use of a Contractor-Controlled Insurance Program, which will provide the General Liability and Workers Compensation for subcontracted work at a Fixed Percentage Rate of 3.70%, a Builder's Risk policy at a Fixed Percentage Rate of 0.28%, a Payment and Performance Bond or Insurance Program at a Fixed Percentage Rate of 0.80%, a Subcontractor Default Insurance Program for subcontracted work at a Fixed Percentage Rate of 1.50%, and General Liability Gap Insurance for subcontracted work at a Fixed Percentage Rate of 0.50%. We have included each of these premiums as Fixed Lump Sum Percentage Rates and are calculated **on total contract volume.** These amounts will be invoiced as evidence of coverages is provided. **Insurance deductible costs shall be considered as cost of work.**

Managing the GMP

Results of Working with Audit to Negotiate with the Contractor for REASONABLE insurance fees that are FAIR to both Owner and Contractor

Savings on Project by Reviewing the GMP before Approval on a New High School

- Reduced SDI Insurance by $140,000
- Reduced Builder's Risk Insurance by $120,000
- Reduced CCIP for a savings of $1,400,000
- P&P Bond reduced by $175,000

By doing a GMP review pre-approval this resulted in a savings of over -$1,800,000 to the project.

Managing the Construction Phase

Ways to Control Costs during Construction

- Get backup for every Payment Application including
  backup for costs billed in GC/GR's including labor
  subcontractor pay apps
- Are the insurance and fees being billed according to the contract?
- Get backup for costs billed to contingency
- Internal Change Orders – have contract language that gives you visibility

Managing the Construction Phase

Subcontractors – Subcontracts, Proposals, and Bid Tabs

Perform an analysis of what is included in the subcontract amount. Are there hidden costs?

Risks of hidden subcontract costs:

Lack of transparency

- Costs could be billed to Owner and then back charged to subcontractors
  - i.e. back charge via invoices to subs
  - i.e. backcharge via deduction from unpaid amounts due the sub
- Duplicate costs could be in gc's/gr's or non-subcontract costs
- Possible duplicate scope that Owner is getting billed for somewhere else

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Managing the Construction Phase

Subcontractors – Subcontracts, Proposals, and Bid Tabs

Contractor shall not be entitled to invoice directly from the Contract Contingency, but shall instead request approval from Owner to transfer funds out of the Construction Contingency to other Schedule of Values lien items in order to cover those costs identified in subsections (i) through (vii) above. All such requests shall be made in writing and specifically identify: (a) the basis for the request; (b) the amount of funds requested to be allocated from the Contract Contingency, and (c) the specific Schedule of Values line item(s) to which the allocated funds will be transferred. In no case will the Contract Contingency be used to cover costs arising from Contractor's failure to perform the Work in accordance with the Contract Documents or otherwise arising from a breach of contract, negligence, willful misconduct or omission, nor shall such funds be used to increase the Contractor's Fee or General Conditions Costs. All unused Contract Contingency at the time of Contractor's request for Final Payment shall be remitted to Owner in the form of a deductive Change Order. Contractor understands and agrees that the Contract Contingency shall be Contractor's sole recourse of cost overruns due to the unanticipated Costs of the Work identified in this Paragraph 4(c), and that upon the exhaustion of the Contract Contingency, Contractor shall bear the sole risk of all additional such costs. Contractor further understands and agrees that the Contract Contingency shall not be increased, except as provided in Section 4(g)(vii) from Buyout Savings, if any.

Managing the Construction Phase

Subcontractors – Subcontracts, Proposals, and Bid Tabs

Perform an analysis of what is included in the subcontract amount. Are there hidden costs?

Contract Summary:

PLUMBING:		
	Preconstruction	$86,921
	Construction	$2,232,197
	Contingency	$100,000
HVAC:		
	Preconstruction	$143,960
	Construction	$6,797,901
	Contingency	$495,000
FIRE PROTECTION:		
	Construction	$444,495
	Contingency	$58,689
ADDENDA:		
	Addendum #02	$20,922
	Addendum #03	$14,005
	Addendum #04	$0
Total Contract Amount:		**$10,394,090**

Voltage Feeders to Existing Hospital	$32,344
Telecommunications	$404,372
Access Control, Security	$623,327
Vendor Safety Systems	$120,000
General Requirements	$1,469,500
Contingency	$550,000
Total Contract Amount:	**$9,579,542**

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Managing Change Orders

Should this even be a Change Order?

If the determination is made that there is change order entitlement –

Require backup for all change orders

- Breakdown of quantity, size, unit cost, and labor factor for all commodity material
- Quotes/invoices for all quoted materials
- Labor costs broken out by rate and hours billed
- Details by year, make, and model for all contractor owned equipment rentals

Managing Change Orders

Ask for Detail - get detailed backup demonstrating how subcontractor arrived at these amounts

Cost Type Recap:		Mark up	Amount
1 Labor		0.00%	95,255.31
2 Materials		0.00%	173,323.66
3 Subcontractor		0.00%	43,350.00
5 Equipment-Owned		0.00%	21,924.18
7 Other		0.00%	5,000.00
	Subtotal Item		338,853.15

BOND		1.50%	5,115.31
MBE		0.00%	0.00
SUB-CONTRACT		5.00%	2,167.50
PACKAGE MATERIALS		6.00%	0.00
PROFIT AND OVERHEAD		15.00%	51,920.39
	Requested Total For Item	1	398,056.35

Managing the Change Orders

Pay Attention to Detail

Takeoff Report: 29 Oct 2024 7:50:12

Phase: DISTRIBUTION EQUIPMENT

Item #	Qty	U/M	Q/M	Size	Description	Material Unit	Material Result	Labor Unit	Labor Result
20751	8.00	EA	M	2	EMT 90-ELBOW	48.4128	387.30	0.7500	6.00
70043	560.00	FT	M	3/0	THHN/THWN CU (STR)	44.6720	25,016.31	0.0390	21.84
70152	140.00	FT	M	3.	GREEN THHN CU (GRD 400A)	16.8275	2,355.85	0.0225	3.15
30543	18.00	EA	M	2	EMT STEEL-COMP COUPLING	34.3193	617.75	0.4500	8.10
630171	17.00	EA	M	2	CABLE/CONDUIT 1-PIECE STRUT CLAMP	3.3952	57.72	0.0600	1.02
30689	16.00	EA	M	2	EMT STEEL COMP IN-THRT CONN	92.1550	1,474.48	0.7800	12.48
40237	16.00	EA	M	2	PLASTIC BUSHING	2.4673	39.48	0.4160	6.66
					EMT ON SURFACE STRUT Totals:	*1,234.4873*	***30,862.18***	*2.8498*	***71.25***
TITLE	25.00	EA	M	2 1/2	EMT ON SURFACE STRUT	0.0000	0.00	0.0000	0.00
10059	75.00	FT	M	2 1/2	EMT	13.9040	1,042.80	0.1420	10.65
20752	6.00	EA	M	2 1/2	EMT 90-ELBOW	100.7256	604.35	0.9000	5.40
70048	420.00	FT	M	350	THHN/THWN CU (STR)	90.7324	38,107.62	0.0570	23.94
70154	105.00	FT	M	1.	GREEN THHN CU (GRD 600A)	23.4704	2,464.39	0.0285	2.99
30544	14.00	EA	M	2 1/2	EMT STEEL-COMP COUPLING	160.4308	2,246.03	0.6000	8.40
630173	13.00	EA	M	2 1/2	CABLE/CONDUIT 1-PIECE STRUT CLAMP	5.7150	74.30	0.0750	0.98
30690	12.00	EA	M	2 1/2	EMT STEEL COMP IN-THRT CONN	381.5891	4,579.07	0.9360	11.23
40238	12.00	EA	M	2 1/2	PLASTIC BUSHING	4.9259	59.11	0.5200	6.24
					EMT ON SURFACE STRUT Totals:	*1,967.1070*	***49,177.67***	*2.7932*	***69.83***

Managing Change Orders

Working With Audit before Change Order is Approved

Per Subcontractor - Before Audit	
Labor	$ 95,255.31
Materials	$ 173,323.66
Subcontractor	$ 43,350.00
Equipment - Owned	$ 26,924.16
Subtotal	**$ 338,853.13**
Bond - 1.50%	$ 5,115.31
Sub-Contract - 5 %	$ 2,167.50
Profit & Overhead - 15%	$ 51,920.39
Total	**$ 398,056.33**

After Audit	
Labor	$ 81,394.11
Materials	$ 91,880.23
Subcontractor	$ 19,200.00
Equipment - Owned	$ 23,320.76
Subtotal	**$ 215,795.10**
Bond - 1.50%	$ 3,236.93
Sub-Contract - 5%	$ 960.00
Profit & Overhead - 5%	$ 10,999.60
Total	**$ 230,991.63**

Managing the Change Orders

Subcontractor Labor Rates – should be auditable by contract language

Any contract language that makes subcontractor labor rates auditable and defines what is allowable needs to go out with the trade packages when bidding the project

Audit subcontractor labor rates with first major change order – require a labor rate breakdown form to be turned in as backup with change

(See Notes)	Description of Labor Cost Component	% of Wages if Applicable	Straight Time Price Per Hour	Time and 1/2 Price Per Hour	Premium Time Price Only
Base Wage	Direct Labor Rate (Actual for Individual or Average Rate for Classification)		$ -	$ -	$ -
Payroll Taxes (1)	State Unemployment Taxes (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes (2)	Federal Unemployment Taxes (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes (3)	Social Security Tax (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes	Medicare Payroll Tax	1.45%	$ -	$ -	$ -
Benefits	Vacation, sick, holiday and other personal time	0.00%	$ -	$ -	$ -
Insurance (4)	Worker's Compensation Insurance (N/A on field labor- if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Insurance (4)	Liability Insurance (N/A on field labor if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Insurance	Any other required Insurance, if applicable.	0.00%	$ -	$ -	$ -
Other	Describe as applicable.	0.00%	$ -	$ -	$ -
Benefits	Pension Plan, 401K and retirement contributions	0.00%	$ -	$ -	$ -
Benefits	Health and dental Insurance	0.00%	$ -	$ -	$ -
Benefits	Long Term Disability and life Insurance	0.00%	$ -	$ -	$ -
Benefits (5) (Add rows and Itemize if necess	Union Benefits/applicable contributions (if a union employee)	0.00%	$ -	$ -	$ -
	Totals	**1.45%**	**$ -**	**$ -**	**$ -**

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Managing the Change Orders

Subcontractor Labor Rates – should be auditable by contract language

LABOR RATE PER HOUR - COST ESTIMATE					
Owner:	**Project Name:**	**0**			
Subcontractor:	0		**(Highlighted in this color represents auto fill cells)**		
Employee Name - If Applicable:					
Labor Classification:	Foreman				
Worker's Compensation Code:					
Local Union # (If Applicable)					
Effective Date:	1/1/2025				
To:	12/31/2025				
(See Notes)	**Description of Labor Cost Component**	**% of Wages if Applicable**	**Straight Time Price Per Hour**	**Time and 1/2 Price Per Hour**	**Premium Time Price Only**
Base Wage	Direct Labor Rate (Actual for Individual or Average Rate for Classification)		$ -	$ -	$ -
Payroll Taxes (1)	State Unemployment Taxes (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes (2)	Federal Unemployment Taxes (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes (3)	Social Security Tax (recognizing annual cap)	0.00%	$ -	$ -	$ -
Payroll Taxes	Medicare Payroll Tax	1.45%	$ -	$ -	$ -
Benefits	Vacation, sick, holiday and other personal time	0.00%	$ -	$ -	$ -
Insurance (4)	Worker's Compensation Insurance (N/A on field labor- if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Insurance (4)	Liability Insurance (N/A on field labor if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Insurance	Any other required Insurance, if applicable.	0.00%	$ -	$ -	$ -
Other	Describe as applicable.	0.00%	$ -	$ -	$ -
Benefits	Pension Plan, 401K and retirement contributions	0.00%	$ -	$ -	$ -
Benefits	Health and dental Insurance	0.00%	$ -	$ -	$ -
Benefits	Long Term Disability and life Insurance	0.00%	$ -	$ -	$ -
Benefits (5) (Add rows and Itemize if necess	Union Benefits/applicable contributions (if a union employee)	0.00%	$ -	$ -	$ -
	Totals	**1.45%**	**$ -**	**$ -**	**$ -**

Managing the Cost of Change Orders

Subcontractor Labor Rates – Example of Audited Rates

Per Contractor

Description of Labor Cost Component	% of Wages if Applicable	Straight Time Price Per Hour	Time and 1/2 Price Per Hour	Premium Time Price Only
Direct Labor Rate (Actual for Individual or Average Rate for Classification)		$ 56.29	$ 84.44	$ 28.15
State Unemployment Taxes (recognizing annual cap)	10.20%	$ 5.74	$ 8.61	$ 2.87
Federal Unemployment Taxes (recognizing annual cap)	0.60%	$ 0.34	$ 0.51	$ 0.17
Social Security Tax (recognizing annual cap)	6.20%	$ 3.49	$ 5.23	$ 1.74
Medicare Payroll Tax	1.45%	$ 0.82	$ 1.22	$ 0.41
Vacation, sick, holiday and other personal time	0.00%	$ -	$ -	$ -
Worker's Compensation Insurance (N/A on field labor- if Covered by CCIP or OC	12.67%	$ 7.13	$ -	$ -
Liability Insurance (N/A on field labor if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Any other required Insurance, if applicable.	0.00%	$ -	$ -	$ -
Training	4.39%	$ 2.47	$ -	$ -
Employee Incentive	13.02%	$ 7.33	$ -	$ -
Pension Plan, 401K and retirement contributions	14.99%	$ 8.44	$ -	$ -
Health and dental Insurance	7.53%	$ 4.24	$ -	$ -
Long Term Disability and life Insurance	1.78%	$ 1.00	$ -	$ -
Union Benefits/applicable contributions (if a union employee)	0.00%	$ -	$ -	$ -
Totals	**72.83%**	**$ 97.29**	**$ 100.01**	**$ 33.34**
10% Markup	10.00%	$ 9.73	$ -	$ (9.73)
Totals		$ 107.02	$ 100.01	$ 23.61

Per Audit

Description of Labor Cost Component	% of Wages if Applicable	Straight Time Price Per Hour	Time and 1/2 Price Per Hour	Premium Time Price Only
Direct Labor Rate (Actual for Individual or Average Rate for Classification)		$ 38.00	$ 57.00	$ 19.00
State Unemployment Taxes (recognizing annual cap)	10.20%	$ 0.42	$ 0.42	$ -
Federal Unemployment Taxes (recognizing annual cap)	0.60%	$ 0.02	$ 0.02	$ -
Social Security Tax (recognizing annual cap)	6.20%	$ 3.49	$ 5.23	$ 1.74
Medicare Payroll Tax	1.45%	$ 0.82	$ 1.22	$ 0.41
Vacation, sick, holiday and other personal time	0.00%	$ -	$ -	$ -
Worker's Compensation Insurance (N/A on field labor- if Covered by CCIP or OC	12.67%	$ -	$ -	$ -
Liability Insurance (N/A on field labor if Covered by CCIP or OCIP)	0.00%	$ -	$ -	$ -
Any other required Insurance, if applicable.	0.00%	$ -	$ -	$ -
Training	0.00%	$ -	$ -	$ -
Employee Incentive	0.00%	$ -	$ -	$ -
Pension Plan, 401K and retirement contributions	22.21%	$ 8.44	$ -	$ -
Health and dental Insurance	11.16%	$ 4.24	$ -	$ -
Long Term Disability and life Insurance	2.63%	$ 1.00	$ -	$ -
Union Benefits/applicable contributions (if a union employee)	0.00%	$ -	$ -	$ -
Totals	**67.12%**	**$ 56.43**	**$ 63.90**	**$ 21.15**
10% Markup	10.00%	$ -	$ -	$ -
Totals		$ 56.43	$ 63.90	$ 21.15
Difference		$ (50.59)		

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Managing Change Orders

Who is on Working on Your Project Compared to How Change Orders are Priced

Total Material		**2,996,185.61**
JOURNEYMAN	(5,140.78 Hrs @ $100.59)	517,111.06
FOREMAN @ 25%	(1,285.20 Hrs @ $105.40)	135,460.08
GENERAL FOREMAN @ 12%	(616.89 Hrs @ $119.03)	73,428.42
SAFETY @ 3.5%	(179.93 Hrs @ $100.59)	18,099.16
CLEAN UP @ 2.0%	(102.82 Hrs @ $100.59)	10,342.66
GUARANTEE @ 3.0%	(154.22 Hrs @ $100.59)	15,512.99
MATERIAL HANDLING @ 2%	(102.82 Hrs @ $100.59)	10,342.66
SITE ACCESS @ 2%	(102.82 Hrs @ $100.59)	10,342.66
TOOL & VEHICLE @ 2%	(102.82 Hrs @ $100.59)	10,342.66
QAQC@ 2%	(102.82 Hrs @ $100.59)	10,342.66
COMPOSITE CLEANUP	(288.00 Hrs @ $100.59)	28,969.92
Total Labor		**840,294.93**
Equipment		57,092.73
Subtotal		**3,893,573.27**
BIM SERVICES	($216,836.00 + 0.000 % + 0.000 % + 5.000 %)	227,677.80
Subtotal		**4,121,251.07**
Bond	(@ 0.525 %)	21,628.85
Final Adjustment		0.08
Final Amount		**$4,142,880.00**

Change Order Labor Costs

Ask for a payroll report – have the contractual rights to ask for all documents that verify cost

Crew billed on Pay App	Ratio	Hours
Gen Foreman	0%	-
Foreman	17%	785.50
Journeyman	24%	1,063.00
Apprentice & Lower (CE/CW)	59%	2,639.00
	100%	4,487.50

CE/CW: A construction wiremen is an entry-level position but not a part of the apprenticeship. A construction wireman has less than 8,000 hours of experience. A construction electrician also is not part of the union. Both make lower pay and are offered little benefits.

Managing the Closeout

Final Reconciliation – Perform a Closeout Audit

Working together with Audit

- Ask for job cost and perform a final cost reconciliation
- Reconcile Allowances
- Reconcile Contingency Spend
- Perform any remaining labor rate audits for General Conditions labor
- Perform a final reconciliation on all insurance costs and fees

Important NOTE

Construction contract provisions have important legal consequences, and the suggestions in this presentation are not intended as a substitute for competent professional legal services and advice.

Suggestions for contract provisions included in this presentation must be reviewed and adapted to meet your project-specific needs. Federal, State and Local laws may vary with respect to the applicability or enforceability of specific provisions in this document.

Contract Language

Truth-in-Negotiation. The Construction Manager certifies that the wage rates and other factual unit costs supporting the compensation are accurate, complete and current at the time of execution of each Project of which this certificate is a part. The original price and any additions thereto shall be adjusted to exclude any sums by which the Owner determines the Project amount was increased due to inaccurate, incomplete or non-current wage rates, labor burden rates and other factual unit costs (including wage rates and labor burden rates that include amounts that are not considered reimbursable under the terms of the Agreement) and that such original Project adjustments shall be made within one year following the end of the Agreement.

Contract Language

Contract language should require the contractor, CM, design-builder, or consultant to certify that:

All wage rates, unit costs, labor burdens, equipment rates, material unit costs, and factual cost data are accurate, complete, and current as of the pricing date.

The public owner may adjust the contract, GMP, amendment, or change order to remove significant overstated amounts caused by inaccurate, incomplete, or noncurrent data.

The certification applies not only to the original agreement, but also to GMP amendments, sub-project authorizations, change orders, supplemental agreements, and subcontractor pass-through pricing.

The contractor must retain and provide supporting records sufficient to validate the certified cost data.

Contract Language

Right to Verify Change Order Pricing Information: Contractor, subcontractor and sub-sub-contractor agrees that any designated Owner's representative will have the right to examine (copy or scan) the records of the Contractor, subcontractor or sub-sub contractor's records (during the contract period and up to three years after final payment is made on the contract) to verify the accuracy and appropriateness of the pricing data used to price all change order proposals and/or claims.

Contractor agrees that if the Owner determines the cost and pricing data submitted (whether approved or not) was inaccurate, incomplete, not current, or not in compliance with the terms of the contract regarding pricing of change orders, an appropriate contract price adjustment will be made. Such post-approval contract price adjustments will apply to all levels of contractors and/or subcontractors and to all types of change order proposals specifically including lump sum change orders, unit price change orders, and cost-plus change orders.

Contract Language

Preconstruction Phase Services, General Conditions and General Requirements

All charges for preconstruction phase services, general conditions, and general requirements (i.e. costs to be reimbursed) shall be delineated separately in an Exhibit to this Agreement in the detailed format that was included in the Owner's RFP.

It is the intent of Owner that the approved estimated amounts of Preconstruction Services, General Conditions Costs, and General Requirements Costs will be a negotiated Not-To-Exceed amount approved by Owner when this Agreement and the GMP amendments are approved. It is agreed that the total agreed upon amounts for Preconstruction services, General Conditions, and General Requirements will treat as a Not-To-Exceed Limit and will not be treated as a Fixed price or Lump Sum amount.

It is expected that the Construction Manager will provide a detailed estimate in a format acceptable to Owner of the proposed Not-to-Exceed General Conditions costs. The approved Not-to-Exceed General Conditions amounts approved in the Exhibits to this Agreement will be incorporated into the approved GMP amendments.

in the event that the agreed upon schedule for preconstruction services and/or the project completion dates are extended, the Not-To-Exceed amount will be subject to equitable adjustment in accordance with the applicable provisions of this contract document.

Contract Language

Conventional Liability Insurance

The amount to be reimbursed to the Contractor for conventional contractually required liability insurance (professional liability, general liability, umbrella liability, excess liability, pollution liability, cyber liability, and auto liability will be actual costs of insurance premiums for insurance required to be carried by the contractor by the contract documents not to exceed an aggregate of .6% of the net reimbursable Cost of Work (not including liability insurance and not including fee. If the Contractor's cost of contractually required liability insurance is greater than the amount agreed to be reimbursed per this contract provision, the difference shall be considered to be covered by the Contractor's FEE. Deductibles are not reimbursable.

If the Owner elects to use an Owner Controlled Insurance program to provide liability and worker's compensation insurance for the prime contractor and all trade contractors, then the Prime Contractor shall NOT be allowed to charge any other liability insurance as reimbursable costs. Any such additional liability costs shall be considered covered by Contractor's FEE.

Contract Language

Contractor Controlled Insurance Program

- *In the event the Contractor proposed to utilize a Contractor Controlled Insurance Program (CCIP), the maximum to be considered reimbursable costs under this contract will be 2% of the final Cost of the Work (including general conditions costs) but not including Contractor Fee or CCIP charges. NOTE: The use of CCIP must be specifically approved by the Owner in advance of implementation of the program.)*
- *In the event that the Contractor does not provide CCIP insurance for any subcontractors working on the project, a reduction in the amount to be paid to the contractor for CCIP under the previous provision will be made that will be equal to the applicable cost of the insurance charged by the subcontractor(s) providing their own insurance, or the amount of the non-covered subcontract will be deducted from Cost of Work before calculating the amount to be paid for CCIP.*
- *This maximum 2% cost factor will cover all insurance required to be carried by the prime contractor and all applicable subcontractors covered by this agreement (specifically 1% for worker's compensation insurance, and 1 % total for auto liability, professional liability, pollution liability, cyber liability, general liability insurance, excess liability insurance, umbrella liability insurance combined). Any contractor costs incurred in connection with the contractor's elected CCIP program that exceeds the amount reimbursed by the Owner under the formula in this paragraph will be considered to be covered by the Contractor's FEE. Note: Contractor will not be reimbursed for any deductible stated in the CCIP policy. The deductible is considered covered by the CCIP % and/or the Contractor FEE.*

Contract Language

Owner Controlled Insurance Program

- In the event that the OWNER elects to utilize an Owner Controlled Insurance Program (OCIP) to provide liability insurance and worker’s compensation insurance for the prime contractor and all eligible subcontractors, no other prime contractor or subcontractor liability insurance or worker’s compensation insurance costs will be allowed to be billed to the project as a direct reimbursable cost. *Note: The only exception to this limitation will be the cost to provide worker’s compensation for off-site employees who cannot be covered by the OCIP program or the cost of insurance for subcontractors who cannot be covered by the OCIP policy.*

- The costs of any other insurance the prime contractor and/or the subcontractors elect to carry will be considered to be covered by the prime contractor’s Fee.

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Contract Language
Subcontractor Default Insurance (SDI)

In the event that the contractor elects to utilize a subcontractor default insurance program (sometimes referred to as SDI or SUBGUARD®), the maximum amount to be considered reimbursable costs under this contract will be .75% of the total final subcontract amounts for all subcontractors enrolled in such an insurance program. The 75% will not be paid on the cost of materials. Any contractor costs incurred in connection with the contractor's elected subcontractor default insurance program that exceeds the amount reimbursed by the Owner under the formula in this paragraph will be considered to be covered by the Contractor's FEE. In the event the Contractor elects to bond selected subcontractors rather than enroll them in the subcontractor default insurance program, the net cost to purchase any such bonds will be reimbursed in lieu of the .75%

Note: Contractor will not be reimbursed for any deductibles stated in the subcontractor default insurance policy. The increased cost of any subcontractor default and/or the cost of any deductible will be considered covered by the .75% and/or the Contractor FEE.

In the event that the Contractor elects to provide SDI or Subguard® or a similar program of subcontractor default insurance, then the program and the coverage provided by the Contractor shall extend to any additional costs incurred for the Contractor to replace or supplement the forces of a subcontractor to provide the Work, and such circumstances shall include, but not be limited to, any partial or full termination of the contract of a subcontractor for convenience or otherwise, unless the Owner specifically directs the Contractor in writing to terminate the contract of a subcontractor for convenience.

Self Performed Work
Alternate Contract Language p. 1 of 2

For scope of work bid packages typically performed by subcontractors, Construction Manager or their teaming partner, or their joint venture partner, may "self-perform" such work on a cost-plus fee basis subject to an agreed upon guaranteed maximum price for the "self-performed work", where the Construction Manager will specify their self-performed work proposed percentage subcontract fee for the self-perform bid package scope of work with their bid submission.

The 'self-performed work' fee percentage will be limited to a percentage mutually agreed to by both parties when the Owner agreed to accept the Construction Manager's self-performed work as "best value" for the project. The Construction Manager must bid their proposed Work to be "self-performed" against at least three non-related party trade contractors submitting responsible bona fide bids and Owner will decide if such bid constitutes the "best value' for the District.

The Construction Manager's detailed bid for any Self-Performed Work Bid Package must be turned in to the Owner as a sealed bid 24 hours before the bids are due from any other bidders. Any subcontract for "self-performed work" will provide for payments in an amount equal to the Cost of the Work (as defined in the Agreement) plus the mutually agreed upon Construction Manager's self-performed work subcontract fee subject to the mutually agreed not-to-exceed "self-performed work" subcontract guaranteed maximum price.

Self Performed Work by CMAR
Alternate Contract Language p. 2 of 2

All terms and provisions of any subcontract for "self-performed work" will be consistent with the terms and conditions of the Agreement with the exception of the agreed upon subcontract Fee percentage.   All savings under any such subcontract for "self-performed work" shall be applied to reduce the Cost of the Work under the Agreement and the Guaranteed Maximum Price of the Agreement.

For purposes of defining "self-performed work" subject to this Contract provision, any division of Construction Manager, or any separate Construction Manager or subcontractor that is partially owned or wholly owned by the Construction Manager or any of their employees or employee's relatives will be considered a related party entity and not a non-interested trade contractor and will be subject to this provision regarding "self-performed work".

No self-performed work will be allowed to be performed on a lump sum basis.

Contract Language

Reimbursable Contractor Labor

§ 7.2 Labor Costs

§ 7.2.1 Wages or salaries of construction workers directly employed by the Construction Manager to perform any portion of the construction of the Work at the site or, with the Owner's prior written approval, at off-site workshops, to the extent allowed by Texas Government Code Sections 2269.255 or 2269.257.

§ 7.2.2 *Intentionally deleted.* Wages or salaries of the Construction Manager's supervisory and administrative personnel when performing Work at the site or are ~~and~~ stationed at a location other than the site, but only for that portion of time required for the Work and are directly attributable to and required for the Work, and are approved by the Owner in the Exhibits attached to this agreement.

Contract Language

Maximum % for Labor Burden

§ 7.2.4 Costs paid or incurred by the Construction Manager, as required by law or collective bargaining agreements, for employment-related taxes, insurance, contributions, assessments and benefits and, for personnel not covered by collective bargaining agreements, customary benefits such as sick leave, medical and health benefits, holidays, vacations and pensions, provided such costs are based on wages and salaries included in the Cost of the Work under Sections 7.2.1 through 7.2.3 Reimbursable labor and labor burden costs will be limited to the actual verifiable base wage costs of employees plus any applicable auto allowances paid directly to employees plus the actual allocable costs of payroll taxes, worker's compensation insurance, and the actual verifiable costs of benefits including paid time off. However, the maximum that will be considered reimbursable labor burden will be limited to 40% of the taxable base wages of each individual's reimbursable employee wages not including the taxable portion of any auto allowances and employer payroll taxes due on auto allowances paid to the employees.

Contract Language

Maximum Charges on Contractor Owned Equipment Rentals

§ 7.5 Costs of Other Materials and Equipment, Temporary Facilities and Related Items

§ 7.5.1 Costs of transportation, installation, dismantling, maintenance, and removal of materials, supplies, temporary facilities, machinery, equipment and hand tools not customarily owned by construction workers that are provided by the Construction Manager at the site and fully consumed in the performance of the Work. Costs of materials, supplies, temporary facilities, machinery, equipment, and tools, that are not fully consumed, shall be based on the cost or value of the item at the time it is first used on the Project site less the value of the item when it is no longer used at the Project site. Costs for items not fully consumed by the Construction Manager shall mean fair market value.

§ 7.5.2 Billable rental rates for Construction Manager owned equipment will be limited to a maximum of 75% of the applicable retail rental rates published by Equipment Watch (adjusted for Local Area) 75% of applicable local competitive local rental rates for any equipment not specifically listed by Equipment Watch. The maximum rental charges for Construction Manager or Trade Contractor Owned equipment will be 50% of the fair market value of the equipment when it was first used on the job. Once the rental charges reach 50% of the fair market value the equipment will remain on the job as long as needed with no further rental charges. The Construction Manager or applicable Trade Contractor will retain ownership of the equipment when it is no longer needed for the job.

THANK YOU !

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