

Learning & Development TRAINING COURSE

The New Headworks Facility Project is a multi-million dollar project, part of the San Francisco Public Utilities Commission's multi-billion dollar, 20-year Capital Improvement Program. These critical investments in our city's infrastructure are an investment in the local people and businesses that make our region so special.

Sundt/Walsh, the joint venture CM/GC on Headworks, is providing this course so that local, small businesses can learn about contracting opportunities on the project and technical elements of the construction industry so that firms can better participate, compete and succeed.

FREE 6 Week Course

November 8 - December 20, 2018

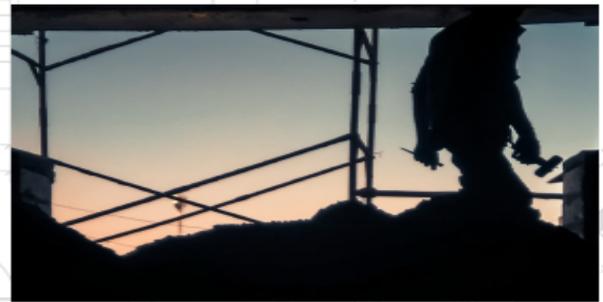
(no class on November 22, 2018)

This course will cover the major aspects of:

- **Contracts** — Thursday 11/8
- **Estimating** — Thursday 11/15
- **Project Management** — Thursday 11/29
- **Financial Management** — Thursday 12/6
- **Software** — Thursday 12/13
- **Business Intangibles** — Thursday 12/20

Learn More & Register:

headworksclass.eventbrite.com



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Services of the San Francisco
Public Utilities Commission

**SEWER
SYSTEM**
IMPROVEMENT PROGRAM
Grey. Green. Clean.

Project Management Course Syllabus

- *2 Hours (Interactive)*
- *Introduction & Overview to Project Management*
- *Review Templates*
- *Review Sundt Templates for Headworks Project*

Introduction to Project Management

- *Scope Management*
- *Time Management*
- *Cost Management*
- *Quality Management*
- *Human Resources*
- *Communications*
- *Risk Management*
- *Procurement Management*
- *Safety Management*
- *Environmental Management*
- *Finance Management*
- *Claims Management*

Scope Management

- *Scope Management*
 - *Define Scope Baseline*
 - *Establish Baseline Documents*
 - *Establish WBS*
 - *Work Packages*
 - *Scope Control (Change)*
 - *Verify Scope (Acceptance)*
- *Project Scope Management includes the processes required to ensure that the project includes all the work required, and only the work required, to complete the project successfully. Managing the project scope is primarily concerned with defining and controlling what is and is not included in the project.*

Time Management

- *Time Management*
 - *Time Management Plan*
 - *Activity Definition*
 - *Sequence Activities*
 - *Constraints*
 - *Activity Durations*
 - *Resource Loading*
 - *Cost Loading*
 - *Control of Schedule*
 - *Recovery Schedules*
 - *Change Management*
- *Project Time Management includes the processes required to manage the timely completion of the project.*

Cost Management

- *Cost Management*
 - *Planning*
 - *Estimating*
 - *Establish Budget*
 - *Control Project Cost*
 - *Payments*
 - *Billings*
 - *Taxes*
 - *Forecasting Cost*
 - *Margin Recognition*
- *Project Cost Management includes the processes involved in planning, estimating, budgeting, managing, disbursing and controlling costs so that the project can be completed within the approved budget. Includes Life Cycle, Value Engineering and Constructability Analysis.*

Quality Management

- *Quality Management*
 - *Plan Quality Management*
 - *Authorities Having Jurisdiction*
 - *Construction Permits*
 - *Perform Quality Assurance*
 - *Control Project Quality*
- *Project Quality Management... consists primarily of ensuring that the conditions of the contract (and those contained in project technical specifications) are carried out and satisfied within the agreed-upon schedule and budget.*

Human Resources Management

- *Human Resources Management*
 - *HR Management Planning*
 - *Responsibility & Authority*
 - *Labor Compliance*
 - *Labor Relations*
 - *Acquire Project Team*
 - *Organization*
 - *Craft Hiring*
 - *Develop Project Team*
 - *Manage Project Team*
 - *Close Project Team*
- *Project Human Resource Management includes the processes that organize, manage, and lead and close the project team. This process covers both administrative and craft workforces.*

Communications Management

- *Human Resources Management*
 - *Stakeholder Identification*
 - *Stakeholder Management*
 - *Communications Management Plan*
 - *Meetings*
 - *Requests for Information*
 - *Reporting*
 - *Distribute Project Information*
 - *Media Relations*
- *Project Communications Management includes the processes that are required to ensure timely and appropriate planning, collection, creation, distribution, storage, retrieval, management, control, monitoring, and the ultimate disposition of project information to all stakeholders.*

Risk Management

- *Risk Management*
 - *Risk Management Structure*
 - *Risk Probability & Impact*
 - *Risk Classification*
 - *Risk Assessment*
 - *Risk Mitigation Planning*
 - *Risk Monitoring & Control*
 - *Insurance*
 - *Bonding*
- *Project Risk Management includes the processes of conducting risk management planning, identification, analysis, response planning, and controlling risk on a project.*

Procurement Management

- *Procurement Management*
 - *Purchasing Plan*
 - *Contracting*
 - *Administer Contracts*
 - *Change Order*
- *Project Procurement Management includes the processes required to acquire construction-related goods and services including the contract management and change control processes required to develop and administer contracts and purchase orders.*

Safety Management

- *Safety Management*
 - *Safety Planning*
 - *Assure Project Safety*
 - *Control Project Safety*
- *Project Safety Management processes include all activities of the project sponsor/owner and the performing organization which determine safety policies, objectives, and, responsibilities so the project is planned and executed in a manner that prevents accidents.*

Environmental Management

- *Environmental Management*
 - *Environmental Control Process*
 - *Ecological*
 - *Hazardous Materials*
 - *Waste Management*
 - *Sustainability*
 - *Reporting*
 - *Environmental Training*
 - *Emergency Responses*
- *Project environmental management includes identifying the environmental characteristics surrounding a construction site and the potential impact which the construction may have on the environment; planning how to prevent environmental impacts; achieving environmental conservation and improvement, if possible; auditing the plan and controlling the results; and inspecting environmental conditions.*

Finance Management

- *Finance Management*
 - *Financial Planning*
 - *Cost of Financing*
 - *Financial Control*
 - *Cash Flow*
 - *JV Financial Controls*
 - *Financial Administration*
 - *Funds Availability*
 - *Security*
 - *Reporting*
- *Financial management includes. the processes to acquire and manage the financial resources for the project and, compared to cost management, is more concerned with revenue sources and monitoring net cash flows for the construction project than with managing day-to-day costs.*

Claims Management

- *Claims Management*
 - *Claim Identification*
 - *Notice*
 - *Claim Quantification*
 - *Entitlement*
 - *Documentation*
 - *Claim Prevention*
 - *Claim Resolution*
- *Claim management describes the processes required to prevent construction claims, to mitigate the effects of those that do occur, and to handle claims quickly and effectively.*

Templates

Construction Estimator Template



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Item Estimates	Items in Estimate	Tasks	Remarks	Prime Cost / Prov. Sum	Allowance	Quantity	RATE	Unit of Measure	Item Totals
CONSTRUCTION ESTIMATES	-							Estimate Total	\$8,515.00
GENERAL REQUIREMENTS									
		Plans & Specifications				25.00	\$ 75.00	Hour	\$1,875.00
		Plan Review				8.00	\$ 75.00	Hour	\$600.00
		Permits: Zoning, Building, Environmental, Other				1.00	\$5,000.00	Each	\$5,000.00
		Survey				2,000.00	\$ 0.50	Sq. Ft.	\$1,000.00
		Impact Fee							\$0.00
		Administrative Costs							\$0.00
		Financing Costs							\$0.00
		Legal Fees							\$0.00
		Engineering Fees							\$0.00
SITE PREP									
		Demolition (Remodel)				1	\$ 20.00	Each	\$20.00
		Jacking & Shoring (Remodel)							\$0.00
		Dust control, Surface Protection							\$0.00
		Job-Site Access							\$0.00
		Job-Site Security							\$0.00
		Dumpster & Removal							\$0.00
		Clear Lot							\$0.00
		Storage On Site							\$0.00
		Portable Toilet							\$0.00
		Temporary Power							\$0.00
		Temporary Heat							\$0.00
		Scaffolding Rental							\$0.00
		Tool/Equipment Rental							\$0.00
		Other							\$0.00
EXCAVATION & EARTHWORK									
	TRUE	Cut & Fill				1	\$ 20.00	Each	\$20.00
		Blasting							\$0.00
	TRUE	Removal of Stone/Dirt							\$0.00
		Rough Grading							\$0.00
		Trenching For Utility Hookups							\$0.00
		Foundation Excavation							\$0.00
		Foundation Footing Drains							\$0.00
		Curtain Drains							\$0.00
		Culverts							\$0.00
		Swales							\$0.00
		Retaining Walls							\$0.00
		Ponds							\$0.00
		Other Site Drainage							\$0.00
		Backfill							\$0.00
		Compaction							\$0.00
		Top Soil							\$0.00
		Finish Grading							\$0.00
		Seeding/Sod							\$0.00
		Other							\$0.00



Microsoft Excel
Worksheet

Bid Tabulation Template



Company Name:		Project No.:											
Project Name:													
Location:													
Architect:													
Bid Date:				Engineer's Estimate		CONTRACTOR A		CONTRATOR B		CONTRACTOR C			
BID QUANTITIES													
Ref #	Bid Item #	Item Description	Qty.	UNIT	UNIT AMOUNT	BID	UNIT AMOUNT	BID	UNIT AMOUNT	BID	UNIT AMOUNT	BID	
1	1.001	Cut & Fill	1	LS	500	\$500.00	500	\$500.00		\$0.00		\$0.00	
2	1.002	Removal of Stone/Dirt	1	LS	1000	\$1,000.00	1000	\$1,000.00		\$0.00		\$0.00	
3	1.003	Trenching For Utility Hookups	1	LS	600	\$600.00	600	\$600.00		\$0.00		\$0.00	
4	1.004	Foundation Excavation	1	LS	210	\$210.00	200	\$200.00		\$0.00		\$0.00	
5	1.005	Foundation Footing Drains	1	LS	200	\$200.00	200	\$200.00		\$0.00		\$0.00	
6	1.006	Curtain Drains	10	EA	4.5	\$45.00	5	\$50.00		\$0.00		\$0.00	
7	1.007	Culverts	10	EA	5	\$50.00	6	\$60.00		\$0.00		\$0.00	
8	1.008	Swales	10	EA	6	\$60.00	5	\$50.00		\$0.00		\$0.00	
9	1.009	Backfill	200	CY	1.4	\$280.00	1.5	\$300.00		\$0.00		\$0.00	
10	1.010	Compaction	1	LS	500	\$500.00	500	\$500.00		\$0.00		\$0.00	
11	1.011	Top Soil	200	CY	1.25	\$250.00	1.25	\$250.00		\$0.00		\$0.00	
12	1.012	Finish Grading	1	LS	590	\$590.00	600	\$600.00		\$0.00		\$0.00	
13	1.013	Seeding/Sod	100	CY	1	\$100.00	2	\$200.00		\$0.00		\$0.00	
14	2.001	Footings/Pads	4	EA	1	\$4.00	2	\$8.00		\$0.00		\$0.00	
15	2.002	Foundation walls/stem walls/grade beams	4	EA	1	\$4.00	2	\$8.00		\$0.00		\$0.00	
16	2.003	Slabs - Foundation, Basement, Garage	3	EA	1	\$3.00	2	\$6.00		\$0.00		\$0.00	
17	2.004	Steel Reinforcing	1	LS	1	\$1.00	2	\$2.00		\$0.00		\$0.00	
18	2.005	Anchor Bolts, Hold Downs	16	EA	1	\$16.00	2	\$32.00		\$0.00		\$0.00	
19	2.006	BuLkheads	5	EA	1	\$5.00	2	\$10.00		\$0.00		\$0.00	
20	2.007	Sub-Slab Vapor Barrier	100	LF	1	\$100.00	2	\$200.00		\$0.00		\$0.00	
21	2.008	Sump Pump	1	LS	1	\$1.00	2	\$2.00		\$0.00		\$0.00	
22	2.009	Crawlspace Vapor Barrier	100	LF	1	\$100.00	2	\$200.00		\$0.00		\$0.00	
23	2.010	Crawlspace Vents	5	EA	1	\$5.00	2	\$10.00		\$0.00		\$0.00	
24	2.011	Foundation Windows	5	EA	1	\$5.00	2	\$10.00		\$0.00		\$0.00	
25	2.012	Damproofing, Water-proofing	1	LS	1	\$1.00	2	\$2.00		\$0.00		\$0.00	
26	2.013	Foundation Drain Board	1	LS	1	\$1.00	2	\$2.00		\$0.00		\$0.00	
27	2.014	Slab insulation: Edge/Blow				\$0.00		\$0.00		\$0.00		\$0.00	
28	2.015	Exterior Foundation Insulation				\$0.00		\$0.00		\$0.00		\$0.00	
29	2.016	Exterior Insulation Coating/ Protection				\$0.00		\$0.00		\$0.00		\$0.00	
30	3.001	Patios				\$0.00		\$0.00		\$0.00		\$0.00	
31	3.002	Exterior Stairs				\$0.00		\$0.00		\$0.00		\$0.00	
32	3.003	Masonry Chimneys				\$0.00		\$0.00		\$0.00		\$0.00	
33	3.004	Fireplaces/Hearths				\$0.00		\$0.00		\$0.00		\$0.00	
34	3.005	Driveway				\$0.00		\$0.00		\$0.00		\$0.00	
35	3.006	Walkways				\$0.00		\$0.00		\$0.00		\$0.00	
36	4.001	Sill & Seal				\$0.00		\$0.00		\$0.00		\$0.00	
37	4.002	Steel/Wood Carrying Beam, Lolly Columns				\$0.00		\$0.00		\$0.00		\$0.00	
38	4.003	Floor Framing				\$0.00		\$0.00		\$0.00		\$0.00	
39	4.004	Exterior & Interior Walls, Rough Stairs				\$0.00		\$0.00		\$0.00		\$0.00	
40	4.005	Sheathing, Subflooring				\$0.00		\$0.00		\$0.00		\$0.00	
41	4.006	Roof Framing/Trusses				\$0.00		\$0.00		\$0.00		\$0.00	
42	4.007	Subfascia				\$0.00		\$0.00		\$0.00		\$0.00	
43	4.008	Steel Framing Connectors				\$0.00		\$0.00		\$0.00		\$0.00	
44	4.009	Nails, Screws, Fasteners				\$0.00		\$0.00		\$0.00		\$0.00	
45	4.010	Prep for Plaster, Drywall				\$0.00		\$0.00		\$0.00		\$0.00	
46	4.011	Rough Framing - Labor Only				\$0.00		\$0.00		\$0.00		\$0.00	
47	5.001	Exterior Foam Sheathing				\$0.00		\$0.00		\$0.00		\$0.00	
48	5.002	Weather Barrier (Tyvek, etc.)				\$0.00		\$0.00		\$0.00		\$0.00	
49	5.003	Membrane & Flashing				\$0.00		\$0.00		\$0.00		\$0.00	
50	5.004	Vinyl or Composite Siding				\$0.00		\$0.00		\$0.00		\$0.00	
51	5.005	Wood Siding				\$0.00		\$0.00		\$0.00		\$0.00	
52	5.006	Brick Veneer				\$0.00		\$0.00		\$0.00		\$0.00	
53	5.007	Stone Veneer				\$0.00		\$0.00		\$0.00		\$0.00	
54	5.008	Stucco				\$0.00		\$0.00		\$0.00		\$0.00	
55	5.009	Fascia, Frieze, Corner Boards, Water Table				\$0.00		\$0.00		\$0.00		\$0.00	
56	5.010	Soffit/Gable Vents				\$0.00		\$0.00		\$0.00		\$0.00	



Microsoft Excel
Worksheet

Construction Doc Tracker Template



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PROJECT DOCUMENTATION TRACKER									
Project				Project No.					
Prime Contractor				Contract No.					
Architect									
Project Manager									
Required Documentaiton	Spec. Reference	Requested By	Quantity Needed	Date Requested	Date Needed	Assigned To	Received	Date Received	Location
Prior to Pre-Construction Meeting:									
Drawings									
Specifications									
Contract Documentation									
Overall Project Schedule									
Prior to Beginning Work:									
Submittals									
Requests to Sublet									
Building Permits									
Requests for Approval of Materials									
Equipment lists									
Weekly basis:									
Weekly Poject Schedule									
Daily/Weekly Inspection Reports									
Weekly Payroll Reports									
Weekly Status Meeting Minutes									
Monthly basis:									
Progress Payment Documentation									
Monthly Project Schedule									
Prior to Project Completion:									
Punch lists									



Microsoft Excel
Worksheet

Subcontractor Documentation Template



Sub ID	Phase	Subcontractor Company Name	Project Foreman	Phone	Email	Scope of Work	Duration of Work	Contract Amount	Insurance Received	Contract Executed	Notice to Proceed Issued	License Verified	Schedule of Work Received	Shop Drawings Provided	Punchlist Complete	Other Required Documentation (ie Request to Sublet, Statement of Intent, Certified Payroll etc.)
1	Electrical	Subcontractor A	Jim	455-5198	jim@subcontractora.com	Provide & install all electrical conduits to ensure interior lights work according to plans and specification	15 working days	\$15,000.00	10/15/15	10/15/15	10/16/15	TRUE	TRUE			



Microsoft Excel
Worksheet

Change Order Log Template

CHANGE ORDER LOG								
Project No.			Contract No.					
Project			Contractor					
Project Manager			Base Contract Amount	30000				
Architect								
C.O. No.	C.P. No.	COR #	Approved By	Description	Time Ext. (# Days)	CO (\$ Amount)	CUM (\$ Amount)	CUM Contract (\$ Amount)
1				Original Contract Amount and # Days	60		0	\$0.00
							0	\$0.00
							0	\$0.00
							0	\$0.00
							0	\$0.00
							0	\$0.00
							0	\$0.00
							0	\$0.00



Microsoft Excel
Worksheet

Sundt/Walsh Templates

RFI Template

REQUEST FOR INFORMATION

Project:

Number: **Subject:**

Importance: **Category:** **Discipline:**

Author Company: **To Company:**

Author Contact: **To Contact:**

Date Created:

Date Required:

Question

Cost Impact?
Amount:

Schedule Impact?
Days:

Drawing Impact?
Yes/No:



Additional Questions