

**Engineer's Estimate Checklist for Optimal Confidence**  
 MW Irving St. & I-405 Sewer Replacement

Project Name/Number: # E08345 Engineer: Terence Chan  
 Level of Effort to prepare this estimate: 110 hrs.  
 Items included in this estimate: All bid items  
 Items excluded in this estimate: \_\_\_\_\_

**Project Scope**

	<u>Yes</u>	<u>No</u>	<u>Not Applicable</u>
Is the project scope clearly understood and well defined?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are pay items identified according to project specifications?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are materials and quantities accurate for execution of the job?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is the extent of street resurfacing understood and accounted for?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is utility coordination and/or relocation, and potential project delay, understood and accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are environmental and soil conditions understood, and are the extent and methods of any required disposal accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has Traffic Control been estimated according to project-specific conditions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are project-specific mobilization costs understood and accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have known extra work items, or force account items, been accounted for?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: \_\_\_\_\_

**Project Schedule**

	<u>Yes</u>	<u>No</u>	<u>Not Applicable</u>
Have availability and delivery time of important materials and equipment been checked?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Has the contract time been determined with/by the Construction Manager?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have contract time cost impacts been accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have construction season cost impacts been accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are schedule constraints and/or schedule acceleration requirements understood, well defined, and accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have unusual work time requirements (ie 24 hr work or limited street closure times) been accounted for in this estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: \_\_\_\_\_

**Quality Assurance**

	<u>Yes</u>	<u>No</u>	<u>Not Applicable</u>
Are quantity take-off calculations and back-up information documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are unit prices verified with vendors and sources documented?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are historical unit costs adjusted (to midpoint of construction) from projects of similar scale, similar site and similar construction conditions?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have non-standard items been estimated "bottom-up"?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Is a contingency in this estimate? If so, describe: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are "plug" estimates used? If so, describe: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Was this estimate checked? (quantities and costs)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: \_\_\_\_\_

**Bidding Environment**

	<u>Yes</u>	<u>No</u>	<u>Not Applicable</u>
Is this project directed to the sheltered market and is this accounted for in this estimate?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Has the time/season of advertising been factored into the estimate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are circumstances known that would limit the bidding pool and is this accounted for?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments: This project requires contractor who has bore and jack experience.

**Implementation Procedures for Capital Projects**

	<u>Yes</u>	<u>No</u>	<u>Not Applicable</u>
Does the project construction estimate agree with the current budget?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If "No", has a Trend Alert been prepared?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments: \_\_\_\_\_

**CITY OF PORTLAND, OREGON  
BUREAU OF ENVIRONMENTAL SERVICES**

TO THE (PURCHASING AGENT OR COUNCIL) BUYER PICK ONE

The undersigned, having full knowledge of the quality of the material and labor to be performed, hereby proposes to perform all labor and furnish all materials necessary for the **NW Irving & I-405 Sewer Replacement Project** for the unit prices set opposite the different items of the material to be furnished and the work to be done as herein below stated:

\*(**BID NO**) *ENGINEER'S ESTIMATE*

NO.	ITEMS OF WORK AND MATERIALS	SPEC REFERENCE	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
1	MOBILIZATION	00210	1	LS	\$75,000.00	\$75,000.00
2	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE	00225	1	LS	\$20,000.00	\$20,000.00
3	EROSION CONTROL	00280	1	LS	\$6,000.00	\$6,000.00
4	CONTAMINATED MEDIA DISPOSAL	00291	295	TN	\$89.00	\$26,255.00
5	REMOVAL OF RAILROAD TRACK AND TIES	00310	50	FT	\$24.00	\$1,200.00
6	SALVAGING AND STOCKPILING OF COBBLESTONES	00310	132	SY	\$70.00	\$9,240.00
7	TRENCH EXCAVATION, COMMON	00405	1028	CY	\$36.00	\$37,008.00
8	EXCAVATION, POT HOLE	00405	15	EA	\$1,476.00	\$22,140.00
9	TRENCH BACKFILL, CLASS B	00405	655	CY	\$32.00	\$20,960.00
10	BORING AND JACKING	00406	250	FT	\$1,300.00	\$325,000.00
11	SUBSURFACE MONITORING POINT INSTALLATION	00406	1	EA	\$5,500.00	\$5,500.00
12	24" PIPE RCP ASTM 76 CLASS IV BEDDING TYPE: B	00445	330	FT	\$258.00	\$85,140.00
13	30" PIPE RCP ASTM 76 CLASS IV BEDDING TYPE: B	00445	261	FT	\$308.00	\$80,388.00
14	10" PIPE HDPE ASTM F714 SDR 26 BEDDING TYPE: D	00445	264	FT	\$143.00	\$37,752.00
15	12" PIPE HDPE ASTM F714 SDR 26 BEDDING TYPE: D	00445	15	FT	\$156.00	\$2,340.00
16	6" PIPE PVC ASTM D3034 SDR 35 BEDDING TYPE: D	00445	122	FT	\$136.00	\$16,592.00
17	8" PIPE PVC ASTM D3034 SDR 35 BEDDING TYPE: D	00445	23	FT	\$85.00	\$1,955.00
18	FIELD FABRICATED CONNECTIONS	00445	7	EA	\$796.00	\$5,572.00
19	TELEVISION INSPECTION	00445	1677	FT	\$25.00	\$41,925.00
20	CONCRETE MANHOLE, 48 INCH, 0-8 FT DEPTH	00470	4	EA	\$5,632.00	\$22,528.00
21	CONCRETE MANHOLE, 48 INCH, DEEPER THAN 8 FT	00470	15	FT	\$220.00	\$3,300.00

NO.	ITEMS OF WORK AND MATERIALS	SPEC REFERENCE	ESTIMATED QUANTITY	UNIT	UNIT PRICE	TOTAL AMOUNT
22	CONCRETE MANHOLE, 60 INCH, 0-8 FT DEPT	00470	3	EA	\$8,200.00	\$24,600.00
23	CONCRETE MANHOLE, 60 INCH, DEPT 8 FT	00470	10	FT	\$281.00	\$2,810.00
24	CONCRETE INLETS, TYPE SINGLE (BE S 4-30)	00470	11	EA	\$1,717.00	\$18,887.00
25	CONCRETE INLETS, TYPE DOUBLE (BE S 4-31)	00470	1	EA	\$2,031.00	\$2,031.00
26	CONNECT ON TO EXISTING STRUCTURES	00490	1	EA	\$4,358.00	\$4,358.00
27	FILLING ABANDONED STRUCTURES	00490	2	EA	\$2,565.00	\$5,130.00
28	RECONSTRUCT MANHOLE BASE	00490	1	EA	\$2,277.00	\$2,277.00
29	DIVERSION OF FLOW	00490	1	LS	\$8,000.00	\$8,000.00
30	CLIM FORM BASE IN TRENCH RESURFACING	00495	12	CY	\$220.00	\$2,640.00
31	TEMPORARY TRENCH RESURFACING, 2" THICK	00495	390	SY	\$32.00	\$12,480.00
32	TRENCH RESURFACING W/O BASE, MHMAC, 6" THICK	00495	336	SY	\$61.00	\$20,496.00
33	COLD PLANE PAVEMENT REMOVAL, 2" DEEP	00620	109	SY	\$25.00	\$2,725.00
34	AGGREGATE BASE, FOR MHMAC BASE	00640	77	CY	\$80.00	\$6,160.00
35	LIVEL 3, 1/2" DENSE, MHMAC MIXTURE 2" THICK	00744	109	SY	\$30.00	\$3,270.00
36	CONCRETE CURBS	00759	80	FT	\$86.00	\$6,880.00
37	CONCRETE WALKS	00759	100	SF	\$11.00	\$1,100.00
38	MONOLITHIC CURB AND SIDEWALKS	00759	100	SF	\$37.00	\$3,700.00
39	BELGIAN BLOCK PAVEMENT	00762	132	SY	\$200.00	\$26,400.00
BIDDER ACKNOWLEDGES ADDENDA					TOTAL BID	\$999,739.00