

Estimated Quantities RIC-30-9.13

RETAINING WALL 7B - CIP CANTILEVER ON PILE FOUNDATION

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING
503	21101	413	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN
507	00500	3,710	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
507	00550	3,975	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
509	10000	21,696	LB	EPOXY COATED REINFORCING STEEL
511	46012	84	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING
511	46510	155	CY	CLASS QC1 CONCRETE, FOOTING
512	10100	141	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
512	33000	16	SY	TYPE 2 WATERPROOFING
516	13600	45	SF	1" PREFORMED EXPANSION JOINT FILLER
518	21200	85	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
518	40000	122	FT	6" PERFORATED CORRUGATED PLASTIC PIPE
518	40010	28	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS
523	20000	1	EACH	DYNAMIC LOAD TESTING
503	21101	413	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN
3-PILE SECTION		12.25	FT	Average Height
		14	FT	Footing width plus 2 ft
		62.21	FT	FOOTING LENGTH
		10669	CU FT	Cut Volume
2-PILE SECTION		9.25	FT	FOOTING HEIGHT

		11	FT	FOOTING WIDTH
		48.5	FT	FOOTING LENGTH
		4935	CU FT	FOOTING VOLUME
		15604	CU FT	TOTAL STEM VOLUME
		578	CY	WALL VOLUME
		11131	CU FT	CALCLUATION CONSIDERING EXISTING GROUND CONTOURS
		412	CY	WALL VOLUME
507	00500	3710	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN
		70	FT	long, each
		53	EA	number of piles
		3710	FT	total
507	00550	3975	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED
		75	FT	long, each
		53	EA	number of piles
		3975	FT	total
509	10000	21696	LB	EPOXY COATED REINFORCING STEEL
		32265	LBS	ASSUME 135 # PER CY OF CONCRETE
		21696	LBS	CALCULATED FROM REBAR SPEARDSHET
511	46012	84	CY	CLASS QC1 CONCRETE WITH QC/QA, RETAINING/WINGWALL NOT INCLUDING FOOTING
STEM 1		16.2	FT	STEM HEIGHT
		1.75	FT	STEM WIDTH
		30	FT	STEM LENGTH
		11.81	CU FT	DEDUCT VOLUME (NOTCH AT BEGINNING)
		838.69	CU FT	STEM VOLUME
STEM 2		14.2	FT	STEM HEIGHT
		1.75	FT	STEM WIDTH
		20	FT	STEM LENGTH

		497	CU FT	STEM VOLUME
STEM 3		11.8	FT	STEM HEIGHT
		1.75	FT	STEM WIDTH
		10	FT	STEM LENGTH
		206.5	CU FT	STEM VOLUME
STEM 4		12.2	FT	STEM HEIGHT
		1.5	FT	STEM WIDTH
		10	FT	STEM LENGTH
		183	CU FT	STEM VOLUME
STEM 5		9.8	FT	STEM HEIGHT
		1.5	FT	STEM WIDTH
		20	FT	STEM LENGTH
		294	CU FT	STEM VOLUME
STEM 6		7.6	FT	STEM HEIGHT
		1.5	FT	STEM WIDTH
		20.71	FT	STEM LENGTH
		236	CU FT	STEM VOLUME
		2255	CU FT	TOTAL STEM VOLUME
		84	CU YD	WALL VOLUME
511	46510	155	CY	CLASS QC1 CONCRETE, FOOTING
3-PILE SECTION		3	FT	FOOTING HEIGHT
		12	FT	FOOTING WIDTH
		62.21	FT	FOOTING LENGTH
		2240	CU FT	FOOTING VOLUME
2-PILE SECTION		3	FT	FOOTING HEIGHT
		9.25	FT	FOOTING WIDTH
		48.5	FT	FOOTING LENGTH

		1346	CU FT	FOOTING VOLUME
STEP 1		2	FT	FOOTING HEIGHT
		12	FT	FOOTING WIDTH
		4	FT	FOOTING LENGTH
		96	CU FT	FOOTING VOLUME
STEP 2		3	FT	FOOTING HEIGHT
		12	FT	FOOTING WIDTH
		4.5	FT	FOOTING LENGTH
		162	CU FT	FOOTING VOLUME
STEP 3		3	FT	FOOTING HEIGHT
		12	FT	FOOTING WIDTH
		3.5	FT	FOOTING LENGTH
		126	CU FT	FOOTING VOLUME
STEP 4		3	FT	FOOTING HEIGHT
		9.25	FT	FOOTING WIDTH
		3.5	FT	FOOTING LENGTH
		97.125	CU FT	FOOTING VOLUME
STEP 5		3	FT	FOOTING HEIGHT
		9.25	FT	FOOTING WIDTH
		3.5	FT	FOOTING LENGTH
		97.125	CU FT	FOOTING VOLUME
		4164	CU FT	TOTAL FOOTING VOLUME
		154	CU YD	FOOTING VOLUME
512	10101	141	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)
STEM 1		15.45	FT	Exposed Stem Ht plus Top
		30	FT	STEM LENGTH

		463.5	SQ FT	Sealing Area
STEM 2		13.45	FT	Exposed Stem Ht plus Top
		20	FT	STEM LENGTH
		269	SQ FT	Sealing Area
STEM 3		11.05	FT	Exposed Stem Ht plus Top
		10	FT	STEM LENGTH
		110.5	SQ FT	Sealing Area
STEM 4		11.2	FT	Exposed Stem Ht plus Top
		10	FT	STEM LENGTH
		112	SQ FT	Sealing Area
STEM 5		8.8	FT	Exposed Stem Ht plus Top
		20	FT	STEM LENGTH
		176	SQ FT	Sealing Area
STEM 6		6.6	FT	Exposed Stem Ht plus Top
		20.71	FT	STEM LENGTH
		137	SQ FT	Sealing Area
		1268	SQ FT	TOTAL SEALING AREA
		141	SY	SEALING AREA
512	33000	16	SY	TYPE 2 WATERPROOFING
		15.6	FT	Expansion Joint
		13.8	FT	Contraction Joint
		12	FT	Expansion Joint
		7.2	FT	Contraction Joint
		48.6	FT	Total Stem Height
		3	FT	Width
		145.8	SQ FT	Area

		16	SY	Area
516	13600	45	SF	1" PREFORMED EXPANSION JOINT FILLER
		15.6	FT	Expansion Joint
		1.75	FT	Width
		27.3	SQ FT	Area
		12	FT	Expansion Joint
		1.5	FT	Width
		18	SQ FT	Area
		45	SF	Total Area
518	21200	85	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC
STEM 1		14.2	FT	Height
		2	FT	Width
		30	FT	Length
		852	CU FT	Backfill Volume
STEM 2		12.2	FT	Height
		2	FT	Width
		20	FT	Length
		488	CU FT	Backfill Volume
STEM 3		9.8	FT	Height
		2	FT	Width
		10	FT	Length
		196	CU FT	Backfill Volume
STEM 4		10.2	FT	Height
		2	FT	Width
		10	FT	Length
		204	CU FT	Backfill Volume
STEM 5		7.8	FT	Height
		2	FT	Width

		20	FT	Length
		312	CU FT	Backfill Volume
STEM 6		5.6	FT	Height
		2	FT	Width
		20.71	FT	Length
		232	CU FT	Backfill Volume
		2284	CU FT	TOTAL BACKFILL VOLUME
		85	CU YD	BACKFILL VOLUME
518	40000	122	FT	6" PERFORATED CORRUGATED PLASTIC PIPE
		122	FT	Length of the wall plus 4 steps @ 3' tall
518	40010	28	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS
		28	FT	Two 12' outlet pipes