

MSE Wall F Quantities

ESTIMATED QUANTITIES					CALC BY:	CBY	6/3/2023
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	20000	815	CY	EMBANKMENT			
203	35110	1,614	CY	GRANULAR MATERIAL, TYPE B			
SPECIAL	20365000	4	EACH	SPECIAL - SETTLEMENT PLATFORM			
503	11101	LUMP		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN			
512	10101	388	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN			
516	13600	247	SF	1" PREFORMED EXPANSION JOINT FILLER			
601	21000	37	SY	CONCRETE SLOPE PROTECTION			
SPECIAL	69098400	LUMP		SPECIAL - TEMPORARY SURCHARGE			
840	20001	4,235	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN			
840	21000	1,387	CY	WALL EXCAVATION			
840	22000	793	SY	FOUNDATION PREPARATION			
840	23000	3,276	CY	SELECT GRANULAR BACKFILL			
840	23050	37	CY	NATURAL SOIL			
840	25010	625	FT	6" DRAINAGE PIPE, PERFORATED			
840	25020	10	FT	6" DRAINAGE PIPE, NON-PERFORATED			
840	26000	299	FT	CONCRETE COPING			
840	26050	3,647	SF	AESTHETIC SURFACE TREATMENT			
840	27000	1	DAY	ON-SITE ASSISTANCE			
867	00100	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F1)			
867	00100	LUMP		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL (WALL F2)			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	20000	815	CY	EMBANKMENT			
	RA	21.25	ft	soil reinforcement length + 2 ft offset			
		1.50	ft	MSE wall to footing toe			
		7.00	ft	abutment footing width			
		8.50	ft	limit width			
		530.50	ft	bottom of footing elev			
		521.00	ft	estimated top of ex. ground			
		1.00	ft	distance from bottom of footing to top of limits			
		10.50	ft	height			
		246.31	ft	abutment length			
		21983.39	cf	total WALL F			
		815.00	cy	total WALL F			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
203	35110	1614	CY	GRANULAR MATERIAL, TYPE B			
		530.50	ft	bottom of footing elev			
		2.00	ft	bottom of footing to bottom of limits			
		541.70	ft	elevation on top of approach slab (ave)			
		17.00	in	approach slab depth			
		7.78	ft	fill height			
		19.25	ft	soil reinforcement length			
		2.00	ft	length from end of soil reinforcement to limits			
		21.25	ft	fill width			
		2.25	ft	footing heel width			
		3.00	ft	abutment height			
		6.78	ft	height over heel			
		2.25	ft	footing heel width			
		2.31	ft	depth of approach slab at RF of abutment			
triangular		0.90	ft	depth of approach slab at RF of abutment- approach slab depth			
approach slab		1.79	ft	2:1 slope for width			
subtract		197.67	cf				
		246.31	ft	abutment length			
		44286.26	cf	total			
left wingwall		2.73	ft	height - approach slab height			
triangular		13.71	ft	length			
subtract		21.25	ft	width			
		398.11	cf	total			
right wingwall		2.77	ft	height - approach slab height			
triangular		10.79	ft	length			
subtract		21.25	ft	width			
		317.42	cf	total			
		43570.73	cf	total WALL F			
		1614.00	cy	total WALL F			

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512	10101	388	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN			
	coping	299.00	ft	total length (from coping calc)			
		10.00	in	coping top			
		24.00	in	coping side			
		3.50	in	coping bottom max with 1" relief			
		3.13	ft	coping perimeter			
		934.38	sf	total coping			
	panel	2560.00	sf	area from profile			
		3495	sf	WALL F subtotal			
		388	sy	WALL F subtotal			
516	13600	247	SF	1" PREFORMED EXPANSION JOINT FILLER			
		0.5	ft	height			
		246.31	ft	length			
		2.00	ea	sides of slope protection			
		247	sf	TOTAL			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
601	21000	37	SY	CONCRETE SLOPE PROTECTION			
		1.33	ft	width minus 1" PEJF in front of abutment			
		213.48	ft	length (measured in plan view)			
		285	sf	subtotal			
		32	sy	subtotal			
		1.33	ft	width minus 1" PEJF in front of wingwalls			
		32.83	ft	length (measured in plan view)			
		44	sf	subtotal			
		5	sy	subtotal			
		37	sy	TOTAL			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	20001	4235	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN			
	Section 1	17.63	ft	length			
		6.25	ft	min height			
		15.02	ft	max height			
		187.44	sf	subtotal			
	Section 2	255.88	ft	length			
		15.02	ft	height			
		3844	sf	subtotal			
	Section 3	20.50	ft	length			
		4.82	ft	min height			
		15.02	ft	max height			
		203.36	sf	subtotal			
		4235.00	sf	WALL F subtotal			
840	21000	1387	CY	WALL EXCAVATION			
	RA	294.00	ft	length			
		24.25	ft	width			
		521.00	ft	estimated elevation of existing ground			
		515.75	ft	top of leveling pad elevation - 6 inch pad - 1 ft			
		5.25	ft	assumed average height			
		37429.88	cf	total			
		1387.00	cy	total			
840	22000	793	SY	FOUNDATION PREPARATION			
	RA	294.00	ft	length			
		24.25	ft	depth			
		7129.50	sf	subtotal			
		793	sy	TOTAL WALL F			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23000	3276	CY	SELECT GRANULAR BACKFILL			
	under	19.25	ft	soil reinforcement length			
	footing	2.00	ft	length from end of soil reinforcement to limits			
		21.25	ft	limit length			
		530.50	ft	bottom of footing elevation			
		516.75	ft	bottom of leveling pad elevation			
		13.75	ft	height under footing			
		292.19	sf	total under footing			
		2.00	ft	height behind footing			
		3.50	ft	width behind footing			
		7.00	sf	area behind footing			
		17.75	ft	length around anchored footing strap			
		1.00	ft	height around anchored footing strap			
		17.75	sf	area around anchored footing strap			
		10.00	in	leveling pad heel width			
		6.00	in	leveling pad height			
		0.42	sf	subtract for leveling pad heel			
		317.00	sf	cross sectional area			
		246.50	ft	length of footing			
		78140.50	cf	total			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23000	3276	CY	SELECT GRANULAR BACKFILL (CONT.)			
	left side	21.25	ft	limit width			
		17.63	ft	length			
		5.25	ft	min height minus 12" natural soil			
		14.02	ft	max height minus 12" natural soil			
		3608.61	cf	total			
		6.22	ft	length			
		14.02	ft	height minus 12" natural soil			
		21.25	ft	width			
		1853.09	cf	total			
		5461.70	cf	left side total			
	right side	21.25	ft	limit width			
		20.50	ft	length			
		3.82	ft	min height minus 12" natural soil			
		14.02	ft	max height minus 12" natural soil			
		3885.78	cf	total			
		3.17	ft	length			
		14.02	ft	height minus 12" natural soil			
		21.25	ft	width			
		944.42	cf	total			
		4830.20	cf	right side total			
		88432.40	cf	total WALL F			
		3276.00	cy	total WALL F			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	23050	37	CY	NATURAL SOIL			
	left side	22.28	ft	length from select granular backfill			
		1.00	ft	1' min			
		21.25	ft	width of soil reinforcement + 2 ft			
		473.48	cf				
		473	cf				
	right side	25.15	ft	length from select granular backfill			
		1.00	ft	1' min			
		21.25	ft	width of soil reinforcement + 2 ft			
		534.35	cf				
		534	cf				
		1008	cf	tota			
		37	CY	TOTAL			
840	25010	625	FT	6" DRAINAGE PIPE, PERFORATED			
		294.00	ft	front pipe behind MSE wall above leveling pad			
		294.00	ft	back pipe behind MSE wall			
		18.25	ft	left pipe connection (length of soil reinforcement minus 1 foot)			
		18.25	ft	right pipe connection (length of soil reinforcement minus 1 foot)			
		625	ft	total			

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ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	CHECKED BY:	PPA	6/9/2023
840	25020	10	FT	6" DRAINAGE PIPE, NON-PERFORATED			
		10	ft	length to outlet into existing catch in front of wall			
840	26000	299	FT	CONCRETE COPING			
		17.63	ft	left side angled length			
		8.77	ft	left side angled height			
		19.69	ft	total left side length			
		255.88	ft	middle length			
		20.50	ft	right side length			
		10.20	ft	right side height			
		22.90	ft	total right side length			
		299.00	ft	total length			
840	26050	3647	SF	AESTHETIC SURFACE TREATMENT			
WALL F		3647	sf	measured in microstation (top of leveling pad to bottom of coping)			