

EXHIBIT E
COST ANALYSIS

ROCHA SITE WITH 2-WAY CONVEYOR SYSTEM (modified project)

Off-Site Soil Storage Volume (Rocha): 1,050,000 cubic yards

684

Excavation & Stockpiling

Heavy Equipment/Labor¹

	units	hourly rate	est. hours/day
Scrape?	3	\$ 230.00	8.0
Motorgrader	1	\$ 76.00	1.0
Dozer	2	\$ 152.00	8.0
Loader	1	\$ 123.00	1.0
Water Truck	1	\$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	33 cubic yards
Total yards/day	5,400 cubic yards/day
Working days required	194 days
Months (6 days/wk + 10% weather delay)	8.3 months

Heavy Equipment/Labor C o s t s³

Scraper	\$ 1,073,333
Motorgrader	\$ 14,778
Dozer	\$ 472,889
Loader	\$ 23,917
Water Truck	\$ 79,333
Contractor mark-up (15%)	\$ 249,638
Equipment/Labor Totals:	\$ 1,913,888

Capital/O&M Costs

Land acquisition ⁴	\$ 700,000
Land resale value ⁵	\$ (1,040,000)
Conveyor bridge	\$ 235,000
Conveyor bridge resale value (10%)	\$ (23,500)
Conveyor purchase ⁶	\$ 504,000
Conveyor O&M (\$0.01 /lf/hour of operation) ⁷	\$ 31,998
Conveyor power costs (est. \$250/day)	\$ 48,611
Biotic mitigation (\$1 00,000/acre x 2.4 acres)	\$ 240,000 (recalculated acreage)
Biotic monitoring (\$15,000/yr x 5 yrs)	\$ 75,000
Irrigation (mitigation/erosion control)	\$ 60,000
Agricultural mitigation (\$8000/acre)	\$ 240,000 (30 acres)
Noise Mitigation	n/a
Site improvements	\$ 410,000
Contractor mark-up (15%)	\$ 246,750
Capital Costs Total:	\$ 1,727,859

Total Excavation/Stockpile Costs: \$ 3,641,746

ROCHA SITE WITH 2-WAY CONVEYOR SYSTEM (modified project)

685

Soil Return to Landfill

<u>Heavy Equipment/Labor⁸</u>	<u>units</u>	<u>hourly rate</u>	<u>est. hours/day</u>
Scraper	1	\$ 160.00	1.1
Motorgrader	1	\$ 76.00	0.5
Dozer	1	\$ 152.00	0.5
Loader	1	\$ 123.00	0.5
Water Truck	1	\$ 51.00	1.1

Load Cycles

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	1.1 hours
Working days to remove stockpile ⁹	5,833 days

Heavy Equipment/Labor C o s t s¹¹

Scraper	\$ 1,003,758
Motorgrader	\$ 221,667
Dozer	\$ 443,333
Loader	\$ 358,750
Water Truck	\$ 327,250
Equipment Totals:	\$ 2,354,758

Soil Return O&M Costs

One time cost to reverse conveyor system ¹²	\$ 80,000
Conveyor O&M (\$0.01 1/lf/hour of operation) ¹³	\$ 129,046
Conveyor power costs (est. \$30/day)	\$ 175,000
O&M Totals:	\$ 384,046

TOTAL ESTIMATED PROJECT COST: \$ 6,380,550 [ROCHA SITE WITH CONVEYOR]

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1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
 2. Limit to 3 scrapers per project EIR analysis.
 3. Assume contracted services.
 4. Rocha appraisal update 10/16/98.
 5. Per BVCA recommendation, assume appreciated resale value of land over 20 years at 2% annually.
 6. \$280 per foot average cost (\$1,800,000 / 6,500' WLF conveyor purchase)
 7. \$0.01 1/lf/hour of operation based on manufacturers estimate and 1,870 lf of conveyor.
 8. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
 9. Average round trip haul distance may be slightly shorter in practice dependent upon delivery location on landfill.
 10. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
 11. No mark-up, assume County crews.
 12. Reverse all idler arms, move drive trains to opposite end of each section, change elevations at all transer points, and move loadout pit

ROCHA SITE WITH CONVEYOR SYSTEM (Board approved project)

Off-Site Soil Storage Volume (Rocha): 1,050,000 cubic yards

686

Excavation & Stockpiling

Heavv Equipment/Labor¹

	units	hourly rate	est. hours/day
Scraper'	3	\$ 230.00	8.0
Motorgrader	1	\$ 76.00	1.0
Dozer	2	\$ 152.00	8.0
Loader	1	\$ 123.00	1.0
Water Truck	1	\$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	33 cubic yards
Total yards/day	5,400 cubic yards/day
Working days required	194 days
Months (6 days/wk + 10% weather delay)	8.3 months

Heavv Equipment/Labor Costs³

Scraper	\$ 1,073,333
Motorgrader	\$ 14,778
Dozer	\$ 472,889
Loader	\$ 23,917
Water Truck	\$ 79,333
Contractor mark-up (15%)	\$ 249,638
Equipment/Labor Totals:	\$ 1,913,888

Capital/O&M Costs

Land acquisition ⁴	\$ 700,000
Land resale value ⁵	\$ (1,040,000)
Conveyor bridge	\$ 235,000
Conveyor bridge resale value (50%)	\$ (117,500)
Conveyor lease (\$18,000/mo x 12 mo) ⁶	\$ 216,000
Conveyor O&M (\$0.01 1/lf/hour of operation) ⁷	\$ 31,998
Conveyor power costs (est. \$250/day)	\$ 48,611
Biotic mitigation (\$100,000/acre x 2.4 acres)	\$ 240,000 (acreage recalculated)
Biotic monitoring (\$15,000/yr x 5 yrs)	\$ 75,000
Irrigation (mitigation/erosion control)	\$ 60,000
Agricultural mitigation (\$8000/acre)	\$ 240,000 (30 acres)
Noise Mitigation	n/a
Site improvements	\$ 410,000
Contractor mark-up (15%)	246,750
Capital Costs Total:	\$ 1,345,859

Total Excavation/Stockpile Costs: \$ 3,259,746

ROCHA SITE WITH CONVEYOR SYSTEM (Board approved project)

687

Soil Return to Landfill

<u>Heavy Equipment/Labor⁸</u>	units	hourly rate	est. hours/day
Dump Truck	1	\$ 70.00	1.7
Motorgrader	1	\$ 76.00	0.5
Loader	1	\$ 123.00	1.7
Dozer	1	\$ 152.00	1.7
Water Truck	1	\$ 51.00	0.5

Load Cycles

Dump truck round trip (incl. load cycle)	8.7 minutes
Bank yards per/dump truck load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	1.7 hours
Working days to remove stockpile	5,833 days

Heavy Equipment/Labor Costs¹¹

Dump Truck	\$ 709,386
Motorgrader	\$ 221,667
Loader	\$ 1,246,493
Dozer	\$ 1,540,382
Water Truck	\$ 148,750
Equipment Totals:	\$ 3,866,678

Total Soil Return Costs: \$ 3,866,678

TOTAL ESTIMATED PROJECT COST: \$ 7,126,424 [ROCHA SITE WITH CONVEYOR]

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1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
 2. Limit to 3 scrapers per project EIR analysis.
 3. Assume contracted services.
 4. Rocha appraisal update 10/16/98.
 5. Per BVCA recommendation, assume appreciated resale value of land over 20 years at 2% annually.
 6. Assume 12 months for conveyor lease to allow some flexibility for operational conditions.
 7. \$0.01 1/lf/hour of operation based on manufacturers estimate and 1,870 lf of conveyor.
 8. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
 9. Average round trip haul distance may be slightly shorter in practice dependent upon delivery location on landfill.
 10. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
 11. No mark-up, assume County crews.

WATSONVILLE LANDFILL SITE - CONVEYOR & TRUCKING COMBO

Off-Site Soil Storage Volume: 1,050,000 cubic yards

688

Excavation & Stockpiling**Heavy Equipment/Labor¹**

	units	hourly rate	est. hours/day
Scraper ²	3	\$ 230.00	8.0
Motorgrader ³	1	\$ 76.00	1.5
Dozer	2	\$ 152.00	8.0
Loader ³	1	\$ 123.00	1.5
Water Truck	1	\$ 51.00	8.0

Load Cycles

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	33 cubic yards
Total yards/day	5,400 cubic yards/day
Working days required	194 days
Months (6 days/wk, 10% weather delay)	8.3 months

Heavy Equipment/Labor Costs⁴

Scraper	\$ 1,073,333
Motorgrader	\$ 22,167
Dozer	\$ 472,889
Loader	\$ 35,875
Water Truck	\$ 79,333
Contractor mark-up (15%)	\$ 252,540
Equipment Totals:	\$ 1,936,137

Capital/O&M

Land lease ⁵	\$ 400,000
Land resale value	n/a
Conveyor bridge (H. Slough) ⁶	\$ 200,000
Conveyor bridge resale (50%)	\$ (100,000)
Conveyor system lease (\$53,000/mo x 12 mo) ⁷	\$ 636,000
Conveyor O&M (\$0.01 1/lf/hour of operation) ⁸	\$ 90,689
Conveyor power costs (est. \$400/day)	\$ 77,778
Conveyor Purchase for soil return (400') ¹⁶	\$ 152,000
Railroad undercrossing	\$ 50,000 (could be higher, depending upon access requirement)
Railroad protective Liability Insurance (\$8/yr)	n/a
BCE mitigation (\$1 00,000/acre x 1.5 acres) ⁹	\$ 150,000
Landfill Mitigation (\$75,000/acre x 4.2 acres) ⁹	\$ 315,000
Biotic monitoring (\$6,000/yr x 20 yrs)	\$ 150,000 (includes habitat management plan implementation)
Irrigation (mitigation/erosion control)	\$ 30,000
Agricultural mitigation (\$8000/acre)	n/a
Noise mitigation ¹⁰	\$ 50,000 (Higaki berm)
Site improvements ¹¹	\$ 205,000
Re-engineering and supplemental EIR	\$ 210,000
County staff time for re-permitting	\$ 60,000
Contractor mark-up (15%)	\$ 190,650
Capital Costs Total:	\$ 2,867,117

Total Excavation/Stockpile Costs: \$ 4,803,253

WATSONVILLE LANDEILL SITE - CONVEYOR & TRUCKING COMBO.

689

Soil Return to Landfill

Heavy Equipment/Labor¹²

	<u>units</u>	<u>hourly rate</u>	<u>est. hours/day</u>
Scraper	1	\$ 160.00	1.1
Motorgrader	1	\$ 76.00	1.0
Dozer	1	\$ 152.00	0.5
Loader	1	\$ 123.00	0.5
Water Truck	1	\$ 51.00	2.9
Dump Truck	1	\$ 70.00	2.9

Load Cycles - Stockpile to Conveyor Hopper

Scraper round trip (incl. load cycle)	5.4 minutes
Bank yards per/scraper load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	1.1 hours
Working days to remove stockpile ¹³	5,833 days

Load Cycles - Conveyor Off-Load to Active Landfill

Dump truck round trip (incl. load cycle)	14.7 minutes
Bank yards per/dump truck load	15 cubic yards
Average yardage needed per day	180 cubic yards
Average load out time per day	2.9 hours
Working days to remove stockpile ¹³	5,833 days

Heavy Equipment/Labor Costs¹⁴

Scraper	\$ 1,003,758
Motorgrader	\$ 443,333
Dozer	\$ 443,333
Loader	\$ 358,750
Water Truck	\$ 873,117
Dump Truck	\$ 1,198,396
Equipment Totals:	\$ 4,320,688

Soil Return O&M Costs

Conveyor O&M (\$0.01 1/lf/hour of operation) ¹⁵	\$ 27,603
Conveyor power costs (est. \$12/day)	\$ 70,000
Conveyor resale (20 yrs old, 10% orig. value)	\$ (1 5,200)
O&M Totals:	\$ 82,403

Total Soil Return Costs: \$ 4,403,091

TOTAL ESTIMATED PROJECT COST: \$ 9,206,345 [WATSONVILLE LANDEILL SITE CONVEYOR & TRUCKING COMBO]

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- Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
 - Limit to 3 scrapers per project EIR, assumes no increase in total vehicle miles traveled as compared to Rocha site.
 - Motorgrader and Loader hours of operations increased to account for added travel time. between sites.
 - Assume contracted services.
 - \$1,000/acre/yr, 20 acres, 20 years)
 - Assume similar bridging costs as Rocha, but without architectural coverings.
 - 5300' WLF conveyor/1 800' Rocha conveyor x \$18,000 per mo quote for 1800' conveyor = \$53,000 per mo lease estimate.
 - \$0.01 1/lf/hour of operation based on manufacturers estimate and 5,300 lf of conveyor.

9. Mitigation for estimated loss of 0.5 acres of riparian habitat (at 3:1 ratio per Coastal Commission) due to construction of conveyor access road and bridge undercrossing clearance cutback. No mitigation site defined, possible added cost to acquire.
Mitigation for Watsonville Landfill Development impacts = 4.2 acres @\$75,000/acre (minimal grading and site prep required)
10. Noise mitigation for Higaki property per BVCA recommendation, estimated cost for construction of 500' (l) x 100'(w) x 30'(h) berm.
includes landfill related drainage, BCE fencing, access road construction, stockpile drainage structures, and other related site improvements.
11. Site improvements for Watsonville are estimated to be 50% less than Rocha without sub-drain system, subject to geotechnical review,
12. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
13. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
14. No mark-up. County crews.
15. \$0.01 1/lf/hour of operation based on manufacturers estimate and 400 lf of conveyor.
16. \$280 per foot average cost (\$1,800,000 / 6,500' WLF conveyor purchase) + cost of drive-under hopper for loading dump trucks @ \$40,000.

EQUIPMENT CYCLES

Assumptions: Scraper & dump truck have similar speeds and accelerations

Loaded/downhill:	15 mph
Loaded/uphill:	7.5 mph
Empty/downhill:	20 mph
Empty/uphill:	10 mph
Efficiency Factor:	1.3 (accounts for speed variations due to terrain and road conditions)

Scraper cycle from borrow area to conveyor hopper & back

(same for Rocha conveyor and Watsonville conveyor at both ends)

Ave. travel distance:	600 ft. (one-way)				
Load time:				2.0	minutes
Loaded/downhill:	600 ft.	@	15 mph =	0.5	minutes
Loaded/uphill:	ft.	@	7.5 mph =		minutes
Unload time:				1.0	minutes
Empty/downhill:	ft.	@	20 mph =		minutes
Empty/uphill:	600 ft.	@	10 mph =	0.7	minutes
			Straight cycle time:	4.1	
			Efficiency factor:	1.3	
			Estimated cycle time:	5.4	minutes

Dump truck cycle from Rocha to center of landfill (mod. 3) & back

Ave. travel distance:	1600 ft. (one-way)				
Load time:				2.0	minutes
Loaded/downhill:	800 ft.	@	15 mph =	0.6	minutes
Loaded/uphill:	800 ft.	@	7.5 mph =	1.2	minutes
Unload time:				1.5	minutes
Empty/downhill:	800 ft.	@	20 mph =	0.5	minutes
Empty/uphill:	800 ft.	@	10 mph =	0.9	minutes
			Straight cycle time:	6.7	
			Efficiency factor:	1.3	
			Estimated cycle time:	8.7	minutes

Dump truck cycle from conveyor on closed landfill to center of landfill (mod 3) & back

Ave. travel distance:	4400 ft. (one-way)				
Load time:				1.0	minutes
Loaded/downhill:	2000 ft.	@	15 mph =	1.5	minutes
Loaded/uphill:	2400 ft.	@	7.5 mph =	3.6	minutes
Unload time:				1.5	minutes
Empty/downhill:	2400 ft.	@	20 mph =	1.4	minutes
Empty/uphill:	2000 ft.	@	10 mph =	2.3	minutes
			Straight cycle time:	11.3	
			Efficiency factor:	1.3	
			Estimated cycle time:	14.7	minutes

SANTA CRUZ COUNTY APPRAISAL SERVICE

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D.H. BRUMFIELD, IFAS

SENIOR MEMBER N.A.I.F.A.

P.O. BOX 932,
FREEDOM, CA 95019
PHONE (83 1) 728-054-1

ELVA BRUMFIELD

JIM BRUMFIELD

OCTOBER 16, 1998

MR. JOHN KRIEGSMAN
COUNTY OF SANTA CRUZ
PUBLIC WORKS DEPARTMENT,
701 OCEAN STREET
SANTA CRUZ, CA 95060

DEAR MR. KRIEGSMAN:

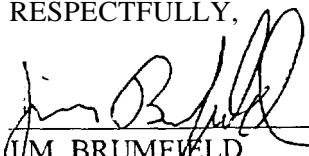
RE: UPDATE OF APPRAISAL OF 1232 BUENA VISTA DRIVE
FREEDOM, CA 95019, DATED JUNE 27, 1997
OWNER OF RECORD: (ROCHA, ETAL)

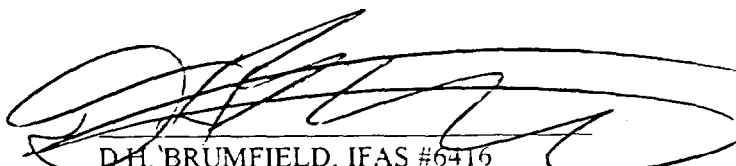
HERE IS THE UPDATE OF THE ABOVE REFERENCED APPRAISAL REQUESTED BY YOU. PLEASE BE ADVISED THAT THIS UPDATE IS NOT AN INDEPENDENT DOCUMENT BUT RELIES UPON AND IS ONLY TO BE USED IN CONJUNCTION WITH THE ORIGINAL APPRAISAL WHICH WAS COMPLETED BY D.H. BRUMFIELD (WHO HAS REVIEWED AND SIGNED THIS UPDATE); AND IS SUBJECT TO ALL OF THE TERMS, DEFINITION, CERTIFICATIONS, AND CONDITIONS DESCRIBED IN THE ORIGINAL APPRAISAL.

I HAVE GATHERED MARKET DATA WHICH YOU WILL FIND DEVELOPED IN THE FOLLOWING 16 PAGES AND, BASED UPON THIS INFORMATION, IT IS MY OPINION THAT THE MOST PROBABLE VALUE OF THE SUBJECT PROPERTY, AS OF THE DATE OF THE UPDATE, OCTOBER 12, 1998, IS **SIX HUNDRED NINETY THOUSAND AND NO/100 DOLLARS (\$ 690,000)**, ASSUMING ITS CONDITION IS ESSENTIALLY THE SAME AS IF WAS ON JUNE 27, 1997.

PLEASE CALL IF YOU HAVE ANY QUESTIONS OR REQUIRE ADDITIONAL INFORMATION.

RESPECTFULLY,


J.M. BRUMFIELD,
GENERAL CERTIFIED REAL
ESTATE APPRAISER #AGO04622
MY CERTIFICATION EXPIRES 9/29/2000


D.H. BRUMFIELD, IFAS #6416
GENERAL CERTIFIED REAL
ESTATE APPRAISER #AG004034
MY CERTIFICATION EXPIRES 2/16/01

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