

THOMAS L. BOLICH
DIRECTOR OF PUBLIC WORKS

County of Santa Cruz

0395

DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 95060-4070
(831) 454-2160 FAX (831) 454-2385 TDD (831) 454-2123

AGENDA: NOVEMBER 7, 2000
October 31, 2000

SANTA CRUZ COUNTY BOARD OF SUPERVISORS
701 Ocean Street
Santa Cruz, California 95060

SUBJECT: BUENA VISTA LANDFILL SOIL MANAGEMENT PROJECT

Members of the Board:

On October 3, 2000, your Board considered a report and staff presentation outlining project options for the Buena Vista Landfill Soil Management Project. Upon conclusion of deliberations on this matter, your Board directed Public Works to seek the opinion of local Coastal Commission staff on the most preferable project option and report our findings to your Board. On October 17, 2000, Public Works requested deferral of the report back on the Buena Vista Landfill Soil Management Project at the request of the Buena Vista Community Association (BVCA) to provide an additional opportunity for them to review the project options before your Board. Requested information was provided to BVCA and a meeting was held on October 27, 2000, to discuss the project options with the City of Watsonville staff, Coastal Commission staff, BVCA representatives and Public Works.

On October 3, 2000, your Board directed Public Works to focus discussions with the Coastal Commission on the three project options considered most feasible and cost effective.

1. Watsonville/Imazio Properties: Move soil to the Watsonville Landfill expansion site and adjacent farm property southwest of the Buena Vista Landfill, via a mile long conveyor belt system.
2. Rocha Property: Move soil to the adjacent farm property west of the Buena Vista Landfill via an 1,800 foot overhead conveyor system, as originally proposed and permitted.
3. Miyashita/Love Properties: Use the Miyashita and Love properties immediately north of the Buena Vista Landfill, as previously recommended by the Buena Vista Community Association members.

Public Works was also given additional direction to seek Coastal Commission opinion relative to emission impacts for each project option. Coastal Commission staff indicated that air quality was not addressed in any detail within the Coastal Act and therefore is not a significant concern for the Coastal Commission. Their position is that air quality issues are better

addressed by other agencies, such as the local air district, through the environmental review process. For your Board's reference, we are providing a brief discussion of the qualitative differences between the project options relative to air quality impacts.

Air Quality

Emissions for this project come in two forms, dust from soil movement and equipment travel on dirt roads, and engine emissions from heavy equipment. While timing has not allowed for a formal air quality analysis of these alternatives, we can provide some qualitative opinion of the air quality impacts from these three project options.

The Monterey Bay Unified Air Pollution Control District (MBUAPCD) only considers permits for stationary (non-mobile) emission sources. In the case of these three project options, the conveyor systems are the only activities requiring permitting and the only constituent of concern is dust, as the conveyor systems are proposed to be electric powered. The **Miyashita/Love** project is the only project option of the three that would not require MBUAPCD permitting. Overall, the **Watsonville/Imazio** project would be slightly higher in dust emissions than the **Rocha** or **Miyashita/Love** projects, due solely to the longer conveyor system and increased number of soil transfer points along the conveyor that would generate dust.

Engine emissions from heavy earth moving equipment and trucks also have bearing on the comparative environmental impacts of these project options even though they do not require air district permitting. Engine emissions will be somewhat higher on the two conveyor based project options as heavy equipment will be necessary at both ends of the conveyor system for excavation and stockpiling activities. Earthmovers known as "scrapers" will be used to excavate soil and move it to the conveyor loading area. At the other end of the conveyor system, the soil is deposited on the ground, then pushed and compacted into the stockpile area by two bulldozers. The **Miyashita/Love** project option only requires the use of scrapers that will haul the soil directly to the stockpile area. No additional earthmoving equipment is needed with the **Miyashita/Love** project. As a result, one or two fewer pieces of large heavy equipment will be needed under this option, reducing the overall engine emissions.

Coastal Commission Staff Opinion

On Tuesday, October 10, 2000, Public Works staff met with Dr. Charles Lester, District Manager, and Mr. Rick Hyman, Senior Project Manager of the Coastal Commission to discuss the Buena Vista Landfill Soil Management Project options, as directed by your Board. As a preface to our discussions, we reconfirmed the Coastal Commission's general ranking of priorities regarding protection of coastal resources.

1. Biotic Resources
2. Agricultural Resources
3. Scenic Resources

Based upon these priorities and the Coastal Commission staffs general knowledge of these project options, their opinion was the **Miyashita/Love** project appeared to have the least amount of impact to coastal resources. This opinion is based upon data from a site visit to the

Miyashita/Love properties conducted by a California Department of Fish and Game biologist and a preliminary biotic survey conducted by the County's environmental review consultant. Both parties categorized the site as having limited habitat value and no apparent presence of plant or animal species of concern. This opinion was tempered with the need for a formal and thorough biotic review of the site to confirm these preliminary findings and provide a more thorough comparison of biotic resource values for all three project options. Coastal Commission staff also indicated that due to the long history of the **Miyashita/Love** sites being fallow, agricultural value also appears to be less than that of the other sites that are currently in agricultural production. However, they did express some concern over the loss of the greenhouse facilities which also have agricultural use value. Acquisition of buffer space north of the Love property could allow for reconfiguration of the stockpile to avoid removal of the greenhouses.

The **Miyashita/Love** project may also be advantageous if the formal biological survey confirms Coastal Commission staffs opinion that no significant or protected habitats exist on-site. If this proves to be the case, the County would likely avoid several time-consuming permitting processes with California Fish and Game, Army Corps of Engineers and U.S. Fish and Wildlife Service.

Coastal Commission staff did not have a strong opinion on scenic resource impacts other than to indicate the **Miyashita/Love** project appears to be more sheltered from roadside view and therefore less of a visual impact than the Imazio and/or Watsonville project sites which sit on a hilltop within coastal and scenic view sheds.

Cost Impacts

In our October 3, 2000, report to your Board, we also provided you with cost estimates for the three project options.

Rocha:	\$6,400,000 - \$7,100,000
Miyashita/Love:	\$6,500,000
Watsonville/Imazio:	\$8,500,000

However, the **Miyashita/Love** project cost estimate was qualified as not including expenses related to impact mitigation on adjacent residents or businesses. During deliberations, your Board inquired about these expenses and impacts to adjacent property. Based on an October 1998 letter to your Board from American Sporthorse (adjacent property) regarding the use of the **Miyashita/Love** properties for our soil storage project, they estimated that the cost of relocating their business would range from \$1,235,000 to \$1,935,000. While this information has not been confirmed, it does provide a benchmark for your reference. We also discussed this information with Coastal Commission staff and they indicated that project cost is not a significant factor in their charge to protect coastal resources.

Joint Agency/BVCA Meeting

As directed, Public Works staff met with representatives from the City of Watsonville, California Coastal Commission and BVCA on October 27, 2000. The purpose of this meeting was to provide all the interested parties with an opportunity to **further** discuss the project

options your Board may wish to consider. BVCA's representative was provided all current project information in advance of this meeting and also discussed the various project options at length with Public Works staff several days prior to the meeting.

BVCA and their legal counsel had on numerous occasions provided your Board with documentation and correspondence regarding their preferred project option on the **Miyashita/Love** property. While they still support use of the **Miyashita** property, they are also interested in seeing the project developed on the Watsonville Landfill expansion site if possible. Our discussions focused primarily on the issues surrounding the use of the Watsonville site and another alternative proposed by BVCA that combined the use of both these properties.

In previous correspondence, we provided your Board with an outline of the problems associated with placing the entire soil storage project on the Watsonville Landfill expansion site. We informed you that a successful project had previously been developed entirely on the Watsonville site, but in April 2000 Watsonville staff informed us that they had updated their landfill life calculations. The result of these changes was that Watsonville's projected landfill expansion would have to occur sooner than originally anticipated, resulting in a series of conflicts with the soil storage project and both our jurisdictions' landfill development plans. For your reference, Attachment 1 is a summary of the issues associated with using the Watsonville Landfill site for the entire soil storage project.

A meeting was held with City **staff** and Supervisor Campos to discuss options for salvaging the project in light of the operational conflicts associated with the changes in Watsonville's landfill development schedule. An alternative project layout was offered by City staff and Supervisor Campos that would combine a portion of the Watsonville site with several acres of adjacent farm land. This project option would eliminate the operational and construction conflicts, avoid the need for exchanging landfill capacity, allow the maximum available time for siting a new solid waste facility, and offer a reasonable amount of flexibility to accommodate any unanticipated **future** changes in wastestream volumes. Public Works presented this project option to your Board on October 3, 2000, along with design and cost information for the soil conveyor system and a biotic evaluation and wetlands delineation report for the Watsonville property.

As we stated above, BVCA's representative, Mr. David Barlow, has suggested an alternative project structure utilizing a portion of the Watsonville Landfill expansion site and the **Miyashita** property. Attachment 2 is a summary of BVCA's proposed project structure, including a cost estimate, for your consideration. The cost for this alternative project is estimated at \$9,000,000.

Summary

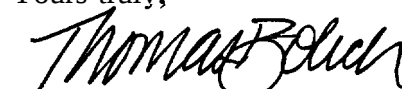
The Coastal Commission staff was able to provide us with their qualified opinion, but not a firm guarantee, that the **Miyashita/Love** project appears to be the most favorable project option. The potential impacts to adjacent residents/businesses and the additional County costs do not rank as high on their list of resource protection priorities. If the County elects to pursue the **Miyashita/Love** project or any variation utilizing these properties, the Coastal Commission's staff recommendation is to conduct the biological evaluation early in the environmental review process to allow the Coastal Commission staff and other resource agencies to conduct biotic **comparisons of**

all project options and provide firm directions on project development. Coastal Commission staff also recommends that your Board approve holding the active permit for the Rocha project in abeyance until a final project is completed. If either the **Miyashita/Love** or **Watsonville/Imazio** project does not come to fruition or your Board elects not to pursue these project options, the County will still need to retain the right to return the Rocha project option to the Coastal Commission for final deliberation and action.

It is therefore recommended that the Board of Supervisors take the following action:

1. Accept and file this report on the Buena Vista Landfill Soil Management Project.
2. Consider the **staff report** of October 3, 2000, and the information contained in this report and provide Public Works with direction on the Board of Supervisors' preferred project structure.
3. Direct Public Works and the Planning Department to initiate environmental review and take all actions necessary to expedite development of the Board of Supervisors' preferred project.
4. If the Rocha project is not being reconsidered at this time, direct Public Works on behalf of the Board of Supervisors to request the coastal zone permit for the Rocha project continue to be held in abeyance by the Coastal Commission until a final project is completed.

Yours truly,

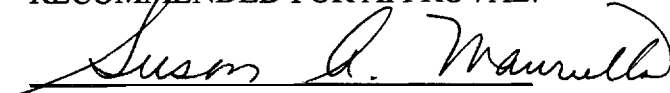


THOMAS L. BOLICH
Director of Public Works

RPM:bbs

Attachments

RECOMMENDED FOR APPROVAL:



County Administrative Officer

copy to: Rick Hyman, California Coastal Commission
 Brian Hunter, CA Department of Fish and Game
 David Koch, City of Watsonville Public Works
 Mark Janay, CH2M Hill
 Kim Tschantz, Planning Department
 Jonathan Wittwer
 Art Higaki
 Rosemarie Imazio
 Alexandra Howard
 David Miyashita
 Walter Love
 Timothy Silva
 Carl Cole
 David Barlow
 Public Works

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SOIB

SUMMARY OF ISSUES REGARDING ONLY USING WATSONVILLE LANDFILL EXPANSION SITE FOR SOIL MANAGEMENT AREA

0400

Terminology:

Phase IV	Watsonville Landfill's next expansion site, scheduled for 2008
Phase V	Watsonville Landfill's second expansion site, scheduled for 20 12
SMA	Soil Management Area for storage of the Buena Vista Landfill's excavated soils, this area sits on top of Watsonville's Phase IV and V landfill expansion site
BVLF	Buena Vista Landfill
WLES	Watsonville Landfill Expansion Site
Waste Exchange	If the city of Watsonville utilizes capacity in the Buena Vista Landfill, they will provide us with a comparable amount of capacity in their landfill at a later date
Closure	The Buena Vista Landfill is projected to reach final capacity and stop accepting refuse in 20 18

Background:

- Proposed SMA would encompass most of the WLES
- The WLES consists of two construction phases, Phase IV and Phase V
- The SMA was designed to place as much soil as possible on the last landfill area to be developed, Phase V, while still maintaining the required noise setback from an adjacent residence
- The SMA was designed to hold a maximum volume of 1,080,000 cubic yards with approximately 400,000 cubic yards placed on WLES Phase IV and 680,000 cubic yards placed on WLES Phase V
- WLES, Phase IV is projected to be constructed in 2008, Phase V is projected to be constructed in 20 12
- Watsonville Landfill's disposal rate (34,000 tons/yr) is approximately 25% BVLF's disposal rate (140,000 tons/yr)
- Soil balance spreadsheet, by year, is attached for reference
- Original project design with SMA on WLES only is attached for reference

<u>ISSUE</u>	<u>RESOLUTION</u>	<u>IMPACT</u>
When Watsonville needs to construct their Phase IV landfill expansion in 2008, approximately 180,000 cubic yards of soil will still remain in the Phase IV SMA	Allow the city of Watsonville to dispose of their refuse at the BVLF for approximately 4 years as the remaining soil is removed for BVLF operations	Landfill operations are impacted by 25% increase in waste volumes, BVLF closes approximately 1 year earlier, and waste exchange with Watsonville occurs after BVLF closure
When Watsonville needs to construct their Phase V landfill expansion in 2012 (2016 if the above waste exchange occurs), approximately 570,000 cubic yards of soil will still remain in the Phase V area	Allow the city of Watsonville to dispose of their refuse at the BVLF for approximately 4 additional years as the remaining soil is removed for BVLF operations and final closure	Landfill operations are impacted by 25% increase in waste volumes, BVLF closes approximately 1 additional year earlier, and waste exchange with Watsonville occurs after BVLF closure

<u>ISSUE</u>	<u>RESOLUTION</u>	<u>IMPACT</u>
Watsonville's landfill is too small and not permitted to handle all the County refuse/recycling traffic for the 2 year waste exchange period after BVLf closes, and does not have facilities for the wide range of public recycling services required by the County	County only sends franchise refuse trucks to the Watsonville Landfill during the waste exchange period and has new solid waste and recycling facility in place 2 years earlier for public self-haul refuse and recycling services	Siting of a new solid waste facility must be moved up 2 years
Storage of soil needed after closure for landfill capping, including imported clay and top soil (20-30% of SMA area) will require use of the WLES Phase V area for up to 2 years after BVLf closes	County has new solid waste and recycling facility in place 2 years earlier for public self-haul refuse and recycling services and Watsonville utilizes this facility until all soil is removed from their site	Siting of a new solid waste facility must be moved up 2 years
BVLf life is extended through, new recycling/waste reduction opportunities, new compaction technology, or vertical expansion	Waste exchange period with Watsonville would need to be extended for additional years to allow for extended storage of soil on the WLES	Landfill operations impacts would be extended, BVLf's extended life would be reduced some, and waste exchange with Watsonville would occur for a longer period after BVLf closure
An unforeseen increase in waste volumes, such as a natural disaster, would push all these time frames up further	Move soil to another site to free up landfill capacity to accommodate increased landfill fill rates and premature closure	Siting of a new solid waste facility must be moved up further
Allow maximum potential time frame for development of a new solid waste facility to replace BVLf and flexibility to manage any unforeseen changes in the disposal wastestream	Locate a portion of the SMA on an adjacent agricultural parcel and a portion on the WLES to provide operational flexibility and avoid all of the above issues and impacts	Temporary removal of up to 10 acres of productive agricultural land for 18 years

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BUENA VISTA LANDFILL
SOIL BALANCE

Year	Buena Vista Soil Use				Granite Export	BVLf Soil Volume	BVLf Excavation	SMA Volume	Comments
	Daily/Inter. Cover ¹	Operations Liner	Final Cover	Watsonville Cover ²					
1999						1,478,000			BV: End of year soil balance estimate
2000	39,000				25,000	1,414,000			BV: Excavates daily cover from Module 4 area W: Excavates daily cover from their Phase V area
2001	39,780	44,000				444,220	886,000	886,000	BV: Module 4 excavation/construction, Module 6 full W: Begins using soil from SMA for daily cover
2002	40,576	6,500	20,000	9,696		377,144		876,304	BV: Filling Module 4, excavate Module 5 for daily/interim cover, Module 6 final foundation cover
2003	41,387	6,500		9,793		329,257		866,511	
2004	42,215	6,500		9,891		280,542		856,620	
2005	43,059	23,000	20,000	9,990		0	194,483	1,041,113	BV: Module 4 full, Module 5 excavation/construction, Module 4 final foundation cover
2006	43,920	6,500		10,090				980,603	BV: Filling Module 5, begin returning soil from SMA
2007	44,799	6,500		10,191				919,114	
2008	45,695	6,500		10,292				856,627	W: Phase IV construction
2009	46,609			10,395				799,623	
2010	47,541			10,499				741,583	
2011	48,492		53,000	10,604				629,487	BV: Final foundation cover Module 3 SMA: Phase IV expansion area cleared of all SMA activities
2012	49,461			10,710				569,315	W: Phase V construction
2013	50,451			10,818				508,047	
2014	51,460			10,926				445,661	
2015	52,489			11,035				382,137	
2016	53,539			11,145				317,453	
2017	54,609			11,257				251,587	
2018	55,702			11,369				184,516	BV: All Modules filled to final elevation
2019			186,000	11,483				-12,967	BV: Final Cover construction, remove excess soil from SMA
2020									SMA: Phase V expansion area is cleared of all SMA activity

Watsonville needs to construct Phase IV in 2008, SMA activities will not be completed in this area until 2011

Watsonville needs to construct Phase V in 2012, SMA activities will not be completed in this area until 2020

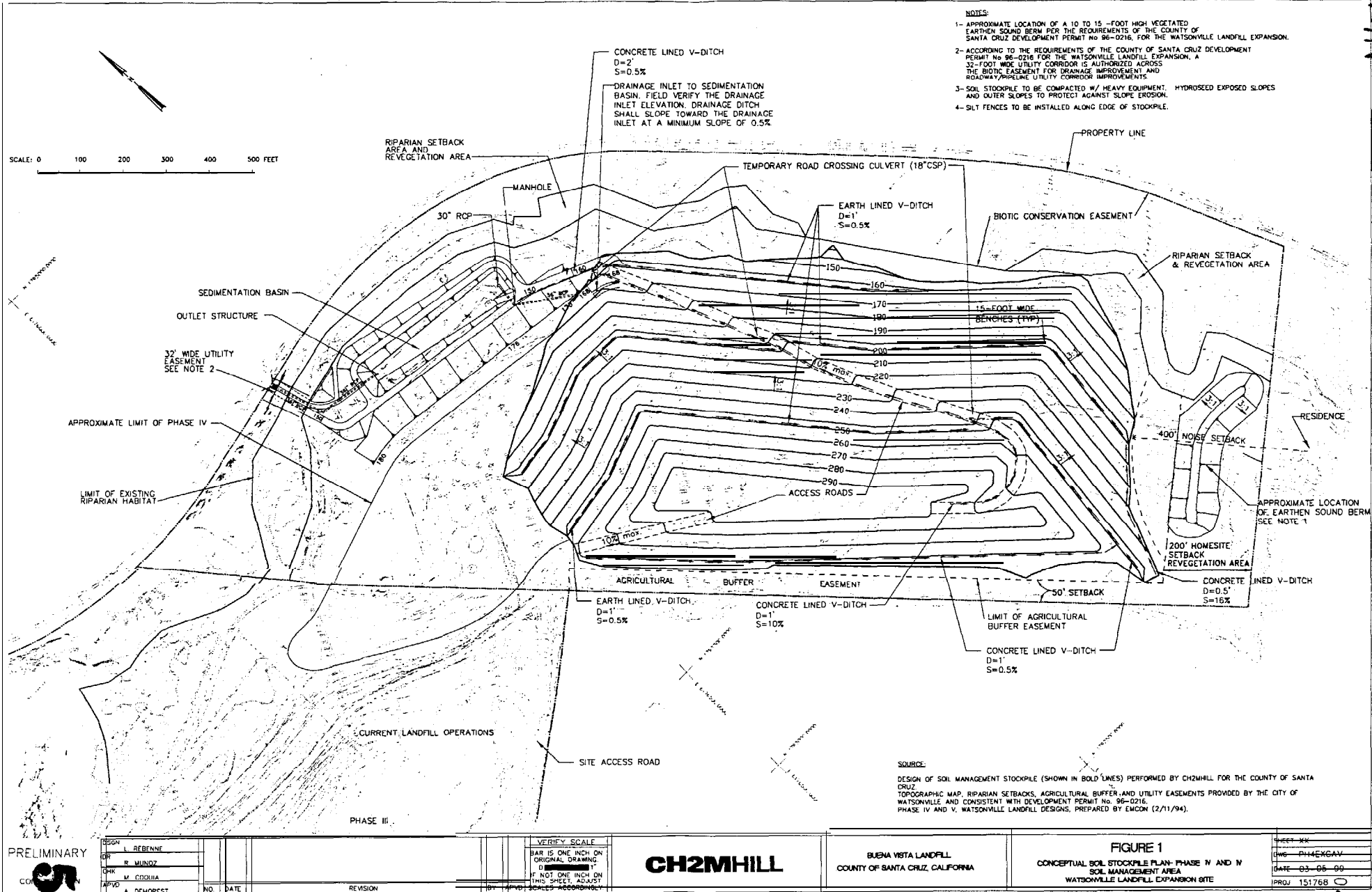
1. Assume daily cover use increases by 2% per year. (County projection)
2. Assume daily cover use increases by 1% per year. (City projection)

Watsonville Phase IV area holds approx. 400,000 cubic yards of soil
Watsonville Phase V area holds approx. 680,000 cubic yards of soil

SMA: Soil Management Area Activities
BV: Buena Vista Landfill Activities
W: Watsonville Landfill Operations and Expansion Activities

Attachment

Attachment



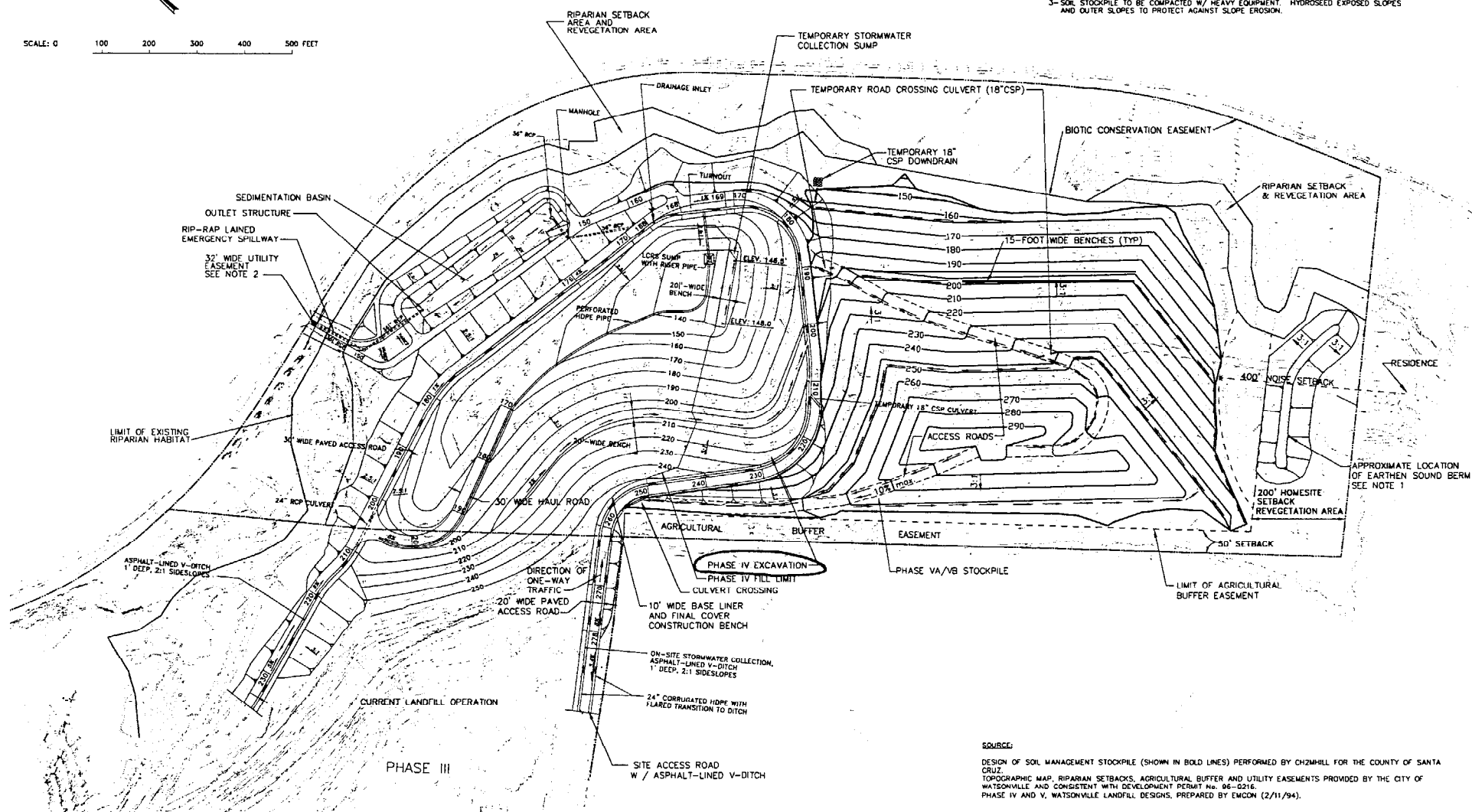
REUSE OF DOCUMENTS: THIS DOCUMENT AND THE IDEAS AND DESIGNS INCORPORATED HEREIN, AS AN INSTRUMENT OF PROFESSIONAL SERVICE, IS THE PROPERTY OF CH2MHILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CH2MHILL.

0403

Attachment

- NOTES:
- 1- APPROXIMATE LOCATION OF A 10 TO 15 -FOOT HIGH VEGETATED EARTHEN SOUND BERM PER THE REQUIREMENTS OF THE COUNTY OF SANTA CRUZ DEVELOPMENT PERMIT NO. 96-0216, FOR THE WATSONVILLE LANDFILL EXPANSION.
 - 2- ACCORDING TO THE REQUIREMENTS OF THE COUNTY OF SANTA CRUZ DEVELOPMENT PERMIT NO. 96-0216 FOR THE WATSONVILLE LANDFILL EXPANSION, A 32-FOOT WIDE UTILITY CORRIDOR IS AUTHORIZED ACROSS THE BIOTIC EASEMENT FOR DRAINAGE IMPROVEMENT AND ROADWAY/PIPELINE UTILITY CORRIDOR IMPROVEMENTS.
 - 3- SOIL STOCKPILE TO BE COMPACTED W/ HEAVY EQUIPMENT. HYDROSEED EXPOSED SLOPES AND OUTER SLOPES TO PROTECT AGAINST SLOPE EROSION.

SCALE: 0 100 200 300 400 500 FEET



SOURCE:
DESIGN OF SOIL MANAGEMENT STOCKPILE (SHOWN IN BOLD LINES) PERFORMED BY CH2MHILL FOR THE COUNTY OF SANTA CRUZ.
TOPOGRAPHIC MAP, RIPARIAN SETBACKS, AGRICULTURAL BUFFER AND UTILITY EASEMENTS PROVIDED BY THE CITY OF WATSONVILLE AND CONSISTENT WITH DEVELOPMENT PERMIT NO. 96-0216.
PHASE IV AND V, WATSONVILLE LANDFILL DESIGNS, PREPARED BY EMCOR (2/11/94).

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGN	REBENNE	NO.	DATE	REVISION	BY	APPROVED
DR	R. MUNOZ					
CHK	M. COGUA					
APPROVED	A. DEMOREST					

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING.
IF NOT ONE INCH ON
THIS SHEET, ADJUST
SCALES ACCORDINGLY.

CH2MHILL

BUENA VISTA LANDFILL
COUNTY OF SANTA CRUZ, CALIFORNIA

FIGURE 2
CONCEPTUAL SOIL STOCKPILE PLAN - PHASE V
SOIL MANAGEMENT AREA
WATSONVILLE LANDFILL EXPANSION SITE

SHEET XX
DWG PH4EXCAV
DATE 03-05-99
PROJ 151768

**ALTERNATIVE SOIL STORAGE PROJECT
PROPOSED BY BVCA REPRESENTATIVE DAVID BARLOW**

0405

- Use only Phase V area of Watsonville Landfill Expansion site for soil storage with a capacity of 680,000 cubic yards, per attached drawing
- Store balance of soil (400,000 cubic yards) on Miyashita property only, avoiding the impacts to equestrian operation on leased Love property, per attached drawing
- Approximately 330,000 cubic yards of soil would be retained on the Buena Vista Landfill
- Off-site storage volumes could be reduced further if the project permitting process is expedited, thus avoiding further landfilling on top of Modules 2 and 3 and preserving additional soil storage capacity
- Stockpile on Miyashita property could be designed with a landscaped berm to act as a noise and visual barrier to existing Buena Vista Landfill operations, per attached drawing
- Only one or two of the older greenhouses on the Miyashita property would need to be removed, keeping the newer glass and steel greenhouse for continued operation and preserving more of the property value for future resale
- Stockpile on the Miyashita property would not need to be used for about 14 years

N 1.792.500
E 6.177.000

City of Watsonville Landfill
Expansion Areas IV & V
(OVER)

50'-WIDE AGRICULTURAL
BUFFER EASEMENT

Soil Storage Site
Capacity 686,360 cys.
Expansion Area IV
Scale $\frac{1}{2}'' = 100'$

292'el.

250'el.

135'el.

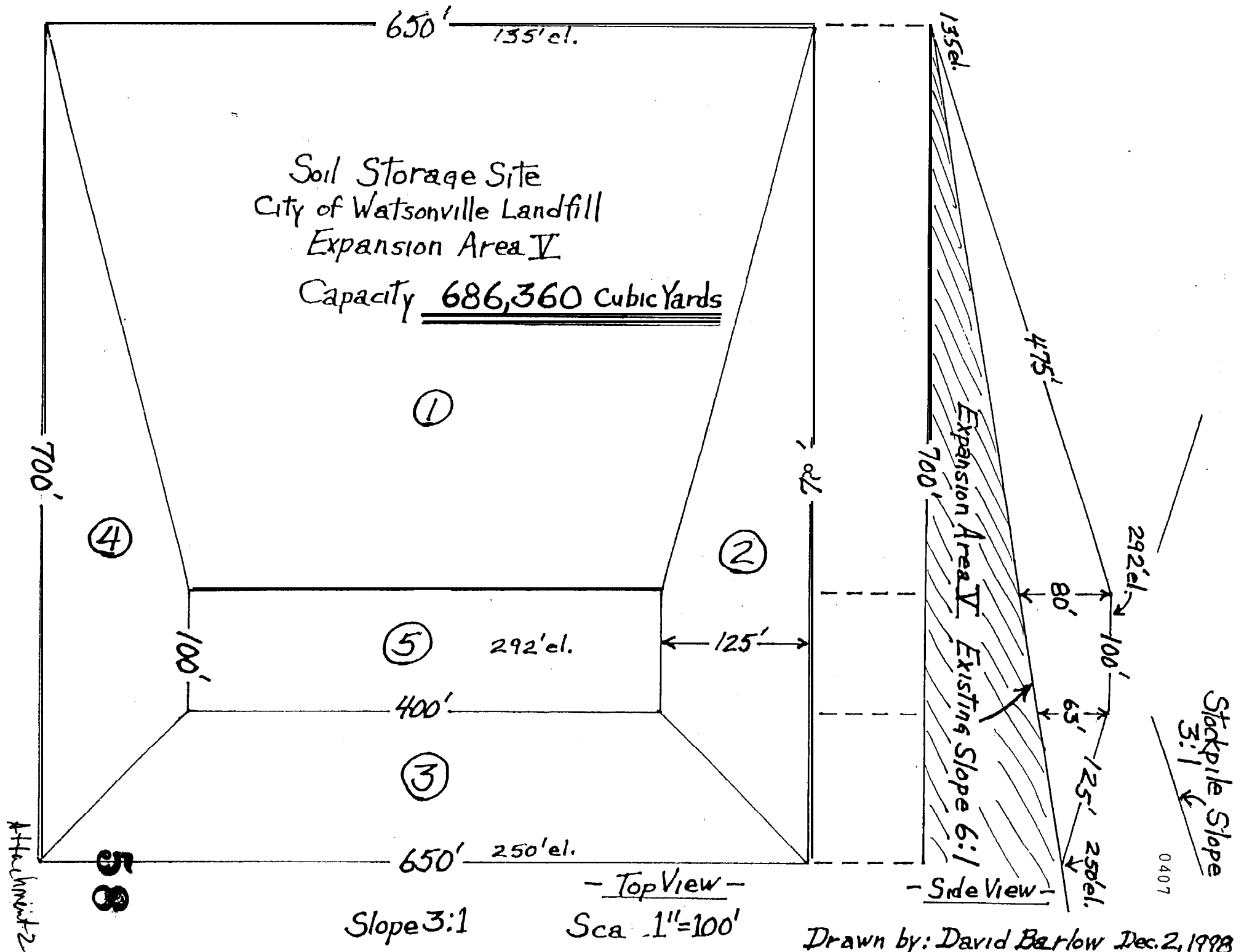
FUTURE
PHASES

PHASE II
SOIL
STOCKPILE
AREA

Expansion
Area IV

SOIL
STOCKPILE
AREA

Soil Storage Site
 City of Watsonville Landfill
 Expansion Area V
 Capacity 686,360 Cubic Yards

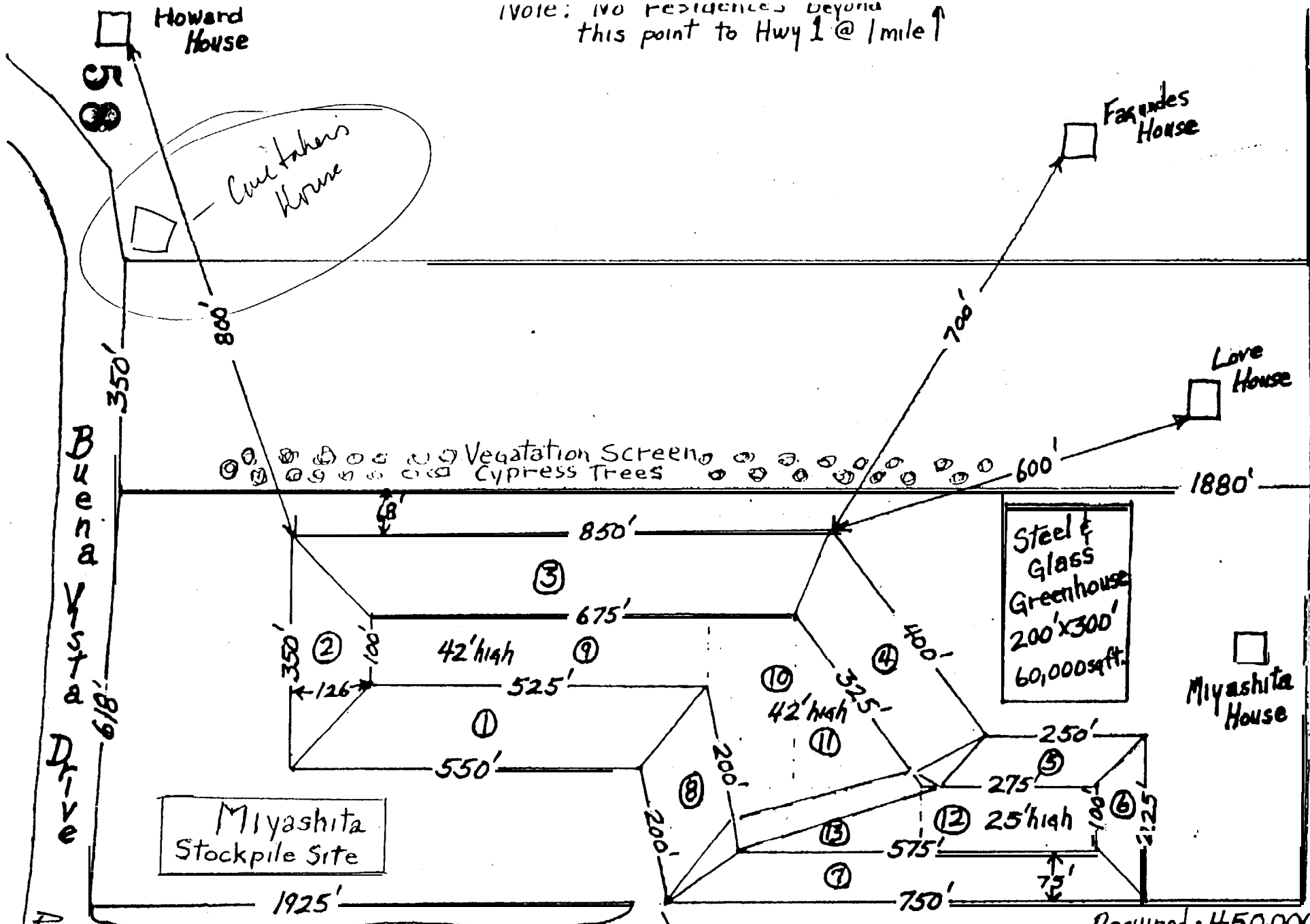


- Top View -
 Sca 1"=100'

- Side View -

Drawn by: David Barlow Dec. 2, 1998

NOTE: NO RESIDENCES BEYOND
this point to Hwy 1 @ 1 mile ↑



Miyashita
Stockpile Site

Steel &
Glass
Greenhouse
200'x300'
60,000sqft.

Miyashita
House

Harkins Slough Road

Buena Vista Landfill

Module 5 500,000cyds | Module 4 1,000,000cyds

Required: 450,000cyds.

Designed by:
David Barlow 10-18-88

Capacity
489,280cyds.

Stockpile
Height 25'-42'

1"=2')
Slope 3:1

4. WATSONVILLE AND MIYASHITA COMBINATION (BVCA Option)

Off-Site Soil Storage Volume (Watsonville): 680,000 cubic yards
Off-Site Soil Storage Volume (Miyashita): 400,000 cubic yards

0409

Excavation & Stockpiling

Heavy Equipment/Labor¹

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

Watsonville

Miyashita

Load Cycles

Scraper round trip (incl. load cycle)	6.0	9.4 minutes
Bank yards per/scraper load	33	33 cubic yards
Maximum total yards/day	7,884	5,042 cubic yards/day
Working days required	86	79 days
Months (6 days/wk + 10% weather delay)	3.7	3.4 months

Heavy Equipment/Labor Costs³

Scraper	\$ 476,094	\$ 437,929
Motorgrader	\$ 6,555	\$ 6,029
Dozer	\$ 209,757	\$ -
Loader	\$ 10,609	\$ 9,758
Water Truck	\$ 35,190	\$ 32,369
Contractor mark-up (15%)	\$ 110,731	\$ 72,913
Equipment/Labor Totals:	\$ 848,935	\$ 558,998

Capital/O&M Costs

Land acquisition ⁴	\$	\$ 2,000,000
Land Lease ⁵	\$ 150,000	\$ -
Conveyor system purchase (inc. bridging) ⁶	\$ 2,300,000	\$ -
Conveyor O&M (\$0.01 l/f/hour of operation) ⁷	\$ 39,467	\$ -
Conveyor power costs (\$500/day)	\$ 43,124	
Biotic mitigation (\$100,000/acre x 0.9 acres)	\$ 90,000	\$ -
Biotic monitoring (\$2,500/yr x 5 yrs)	\$ 12,500	\$ -
Erosion (mitigation/erosion control)	\$ 30,000	\$ 30,000
Agricultural mitigation (\$8000/acre)	\$ 56,000 (7 acres)	\$ -
Noise Mitigation (veg. sound berms)	\$ 20,000	\$ 20,000
Site improvements	\$ 90,000	\$ 120,000
Engineering and EIR	\$ 80,000	\$ 60,000
Contractor mark-up (15%)	\$ 376,500	\$ 22,500
Capital Costs Total:	\$ 3,287,592	\$ 2,252,500

Total Excavation/Stockpile Costs: \$ **4,136,526** = **\$ 6,948,025**

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Attachment 2

4. WATSONVILLE AND MIYASHITA COMBINATION (BVCA Option)

0410

Soil Return to Landfill

Heavy Equipment/Labor'	units	hourly rate	Watsonville	Miyashita
			est. hours/day	est. hours/day
Scraper	1	\$ 160.00	1.2	1.9
Motorgrader	1	\$ 76.00	0.5	0.5
Dozer	1	\$ 152.00	0.5	
Loader	1	\$ 123.00	0.5	0.5
Water Truck	1	\$ 51.00	1.2	1.9

	Watsonville	Miyashita
Load Cycles		
Scraper round trip (incl. load cycle)'	6.0	9.4 minutes
Bank yards per/scaper load	15	15 cubic yards
Average yardage needed per day	180	180 cubic yards
Average load out time per day	1.2	1.9 hours
Working days to remove stockpile'	3,778	2,222 days

Heavy Equipment/Labor Costs¹⁰

Scraper	\$ 728,630	\$ 670,222
Motorgrader	\$ 143,556	\$ 84,444
Dozer	\$ 287,111	\$ -
Loader	\$ 232,333	\$ 136,667
Water Truck	\$ 232,251	\$ 213,633
Equipment Totals:	\$ 1,623,881	\$ 1,104,967

Soil Return O&M Costs

One time cost to reverse conveyor system"	\$ 220,000	\$ -
conveyor O&M (\$0.01 1/lf/hour of operation)'	\$ 260,485	\$ -
Conveyor power costs (est. \$90/day)	\$ 340,000	\$ -
O&M Totals:	\$ 820,485	\$ -

Total Soil Return Costs: \$ 2,728,848 = \$ 1,104,967 = \$ 3,833,815

Project End Cost Recovery

Land resale value ¹²	\$	\$ (1,500,000)	
conveyor resale (20 yrs old, 10% orig. value)	\$ (230,000)	\$ -	
Total Project End Cost Recovery:	\$ (230,000)	\$ (1,500,000)	= \$ (1,730,000)

TOTAL ESTIMATED PROJECT COST: \$ 9,051,839 [4. WATSONVILLE/MIYASHITA/ COMBINED]

1. Hourly rate derived from combination of Cal Trans Equipment Rental Rate Schedule and Prevailing Wage Rate Schedule.
2. Limit to 3 scrapers per Rocha project EIR, assumes no increase in total vehicle miles traveled as compared to Rocha project.
3. Assume contracted services.
4. Miyashita market offer 2000, per D Barlow.
5. \$750/acre/yr, 10 acres, 20 years
6. Low-end conveyor estimate, up to \$3.3 million per manufacturer's quote
7. \$0.01 1/lf/hour of operation based on manufacturers estimate and 5,200 lf of conveyor.
8. Average round trip haul distance from Miyashita may be slightly shorter in practice dependent upon delivery location on landfill.
9. Does not reflect unknown amount of soil taken by Granite Construction through May 2002.
10. No mark-up, assume County crews.
11. Reverse all idler arms, move drive trains to opposite end of each section, change elevations at all transfer points, and move loadout pit to Watsonville site. \$20,000 per transfer point x 11
12. Does not assume appreciated resale value of land, only assumes loss of two old greenhouses @ \$250,000 each.

Attachment 2