



April 19, 2019

Mr. Neal Imada
Hawaii Community Development Authority
547 Queen Street
Honolulu, Hawaii 96813

Subject: Soil Stockpile Management – ROM Cost Estimate Summary
Kalaeloa Heritage and Legacy Foundation Park
Southwest of the Intersection of Coral Sea Road and Long Island Street
Kapolei, Hawaii 96707
TMK: (1) 9-1-013-067 (portion) and (1) 9-1-013-069 (portion)

Dear Mr. Imada:

Tetra Tech, Inc. is pleased to provide the enclosed submittal regarding the rough order of magnitude (ROM) cost estimate summary for potential pending soil stockpile management services to be performed at the proposed Kalaeloa Heritage and Legacy Foundation Park site described above.

Please note that this is for preliminary discussion/evaluation purposes only. The final option selected and related firm pricing will require inspection of the stockpiles by contractors to provide scopes of work and related bids.

Please feel free to contact us if you should have any questions or comments regarding this submittal.

Sincerely,

Tetra Tech, Inc.

A handwritten signature in black ink, appearing to read 'Scott Duzan'.

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A handwritten signature in black ink, appearing to read 'Eric M. Jensen'.

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1 Site Location

Kalaeloa Heritage and Legacy Foundation Park
Southwest of the Intersection of Coral Sea Road and Long Island Street (no formal street address)
Kapolei, Hawaii 96707
Tax Map Key: (1) 9-1-013-067 (portion) and (1) 9-1-013-069 (portion)

2 Stockpile Management Options:

Based on our discussions with the Hawaii Community Development Authority (HCDA), we have identified three (3) potential stockpile management options for the three (3) existing stockpiles at the Site. The following subsections provide an overview of each management option and a rough order of magnitude (ROM) cost estimate table.

2.1 Option A – 50% On-Site Beneficial Re-Use As “Acceptable Fill Material” / “Inert Fill Material” & 50% Off-Site Disposal

Under this option, 50% of the stockpiled material will remain at the Site after screening where it will be re-used as fill material, and the remaining 50% will be disposed of as mixed soil and construction and demolition (C&D) waste at the PVT Land Company (PVT) landfill facility in Waianae, Hawaii. A brief overview of the proposed scope of work for this option is listed below:

- » Obtain necessary regulatory agency approvals for proposed stockpile management activities.
- » Mobilize an earthwork contractor to the Site with necessary equipment and materials.
- » Perform segregating and screening of the three (3) existing stockpiles to remove the C&D waste, debris, and solid waste that is currently co-mingled with the soil.
 - The screened materials shall be segregated into new piles as follows:
 - **Pile A1:** Soil approved for on-site beneficial re-use as “acceptable fill material” / “inert fill material” per applicable Hawaii Department of Health (HDOH) regulations (assume 2,200 cubic yards [CY]).
 - **Pile A2:** Materials slated for disposal at the PVT landfill in Waianae (assume 2,200 CY).
- » Utilize the material from Pile A1 on-site as “acceptable fill material” / “inert fill material” by placing it in 1-foot thick lifts at the designated area(s) within the Site boundaries.
 - HCDA will be responsible for selecting the designated area(s) for placement.
 - Earthwork contractor will compact the lifts to a generally uniform elevation.
- » Perform loading and hauling for Pile A2 to transport the materials to their final off-site location.
 - Earthwork contractor will provide the necessary transportation documents, manifests, lift tickets, etc. for Tetra Tech to accurately document the loading and hauling activities from cradle to grave.
- » Demobilize from the Site.

See the table below for rough order of magnitude (ROM) cost estimate for Option A.

Task #	Task Descriptions	Quantity	Price Basis	Unit Price ¹	Total Price ¹
1.1	Environmental Consulting Services – Project Management / Planning/ Agency Consultation	1	Lump	\$12,000	\$12,000
1.2	Environmental Consulting Services – Field Work ²	5	Weekly Rate	\$8,000	\$40,000
1.3	Environmental Consulting Services – Reporting & Disposal Documentation Tracking	1	Lump	\$10,000	\$10,000
2.1	Earthwork Services – Sort & Screen Existing Stockpiles ³	4,400	Cubic Yard	\$43	\$189,200
2.2	Earthwork Services – Placement, Compacting, & Grading of Pile A1 at Selected On-Site Location ⁴	2,200	Cubic Yard	\$61	\$134,200
2.3	Earthwork Services – Load, Haul, & Dump Pile A2 at PVT Landfill ⁴	2,200	Cubic Yard	\$186	\$409,200
TOTAL					\$794,600
Notes:					
1 = Hawaii General Excise Tax is factored into the ROM pricing.					
2 = A total of 5-weeks of field work is anticipated using the standard production rates assumed for Tasks 2.1 to 2.3.					
3= Estimated duration for Task 2.1 is 1-week.					
4 = Estimated duration for Task 2.2 and Task 2.3 is 2-weeks for each.					

2.2 Option B – 50% Off-Site Beneficial Re-Use As “Acceptable Fill Material” / “Inert Fill Material” & 50% Off-Site Disposal

Under this option none of the stockpiled material will remain at the Site after screening – 50% will be re-used as fill material at an off-site location, and 50% will be disposed of as mixed soil and C&D waste at the PVT landfill facility in Waianae, Hawaii. A brief overview of the proposed scope of work is listed below:

- » Obtain necessary regulatory agency approvals for proposed stockpile management activities.
- » Mobilize an earthwork contractor to the Site with necessary equipment and materials.
- » Perform segregating and screening of the three (3) existing stockpiles to remove the C&D waste, debris, and solid waste that is currently co-mingled with the soil.
 - The screened materials shall be segregated into new piles as follows:
 - **Pile B1:** Soil approved for off-site beneficial re-use as “acceptable fill material” / “inert fill material” per applicable HDOH regulations (assume 2,200 CY).
 - **Pile B2:** Materials slated for disposal at the PVT landfill in Waianae (assume 2,200 CY).
- » Perform loading and hauling for each of the new piles to transport the materials to their final off-site location.
 - We anticipate that multiple parties will be interested in accepting Pile B1 for beneficial re-use as fill material.
 - HCDA will be responsible for selecting which party will receive Pile B1.
 - At the current time, final off-site location for Pile B1 is unknown. For planning purposes, we assumed the final off-site location for Pile B1 was 50 miles roundtrip from the Site.
 - Earthwork contractor will provide the necessary transportation documents, manifests, lift tickets, etc. for Tetra Tech to accurately document the loading and hauling activities from cradle to grave.
- » Demobilize from the Site.
- » *Note: It is possible that some of the interested parties may arrange to load and/or haul the Pile B1 soils themselves; therefore, the Option B Task 2.2 costs (see table below) may be significantly reduced. Regardless of who performs the loading or hauling, the Pile B1 soils must be accurately tracked and the disposal location fully documented.*

See the table below for ROM cost estimate for Option B.

Task #	Task Descriptions	Quantity	Price Basis	Unit Price ¹	Total Price ¹
1.1	Environmental Consulting Services – Project Management / Planning/ Agency Consultation	1	Lump	\$12,000	\$12,000
1.2	Environmental Consulting Services – Field Work ²	5	Weekly Rate	\$8,000	\$40,000
1.3	Environmental Consulting Services – Reporting & Disposal Documentation Tracking	1	Lump	\$10,000	\$10,000
2.1	Earthwork Services – Sort and Screen Existing Stockpiles ³	4,400	Cubic Yard	\$43	\$189,200
2.2	Earthwork Services – Load, Haul, & Dump Pile B1 at Designated Off-Site Location ^{4,5}	2,200	Cubic Yard	\$44 ⁶	\$96,800 ⁶
2.3	Earthwork Services – Load, Haul, & Dump Pile B2 at PVT Landfill ⁴	2,200	Cubic Yard	\$186	\$409,200
TOTAL					\$757,200

Notes:

- 1 = Hawaii General Excise Tax is factored into the ROM pricing.
- 2 = A total of 5-weeks of field work is anticipated using the standard production rates assumed for Tasks 2.1 to 2.3.
- 3 = Estimated duration for Task 2.1 is 1-week.
- 4 = Estimated duration for Task 2.2 and Task 2.3 is 2-weeks for each.
- 5 = The off-site location designated for beneficial re-use is assumed to be a 50-mile roundtrip from the Site. Costs do not include any grading or grubbing of the material at the designated off-site location – only delivery.
- 6 = Per note from the discussion above, some of the interested parties may arrange to load and/or haul the Pile B1 soils themselves; therefore, the Option B Task 2.2 costs may be significantly reduced.

2.3 Option C – 100% Off-Site Disposal

Under this option all of the material in the three (3) existing stockpiles will be disposed of at the PVT landfill facility in Waianae, Hawaii as mixed soil and C&D waste. No screening will be performed as part of this option, and none of the material will remain at the Site upon completion. A brief overview of the proposed scope of work is listed below:

- » Obtain necessary regulatory agency approvals for proposed stockpile management activities.
- » Mobilize an earthwork contractor to the Site with necessary equipment and materials.
- » Perform loading and hauling for all 4,400 CY of material in the three (3) existing stockpiles and transport the materials to the PVT landfill in Waianae for disposal.
- » Earthwork contractor will provide the necessary transportation documents, manifests, lift tickets, etc. for Tetra Tech to accurately document the loading and hauling activities from cradle to grave.
- » Demobilize from the Site.

See the table below for ROM cost estimate for Option C.

Task #	Task Descriptions	Quantity	Price Basis	Unit Price ¹	Total Price ¹
1.1	Environmental Consulting Services – Project Management / Planning/ Agency Consultation	1	Lump	\$8,500	\$8,500
1.2	Environmental Consulting Services – Field Work ²	3	Weekly Rate	\$,000	\$24,000
1.3	Environmental Consulting Services – Reporting & Disposal Documentation Tracking	1	Lump	\$9,000	\$9,000
2.1	Earthwork Services – Load, Haul, & Dump Existing Stockpiles at PVT Landfill ³	4,400	Cubic Yard	\$186	\$818,400
TOTAL					\$859,900

Notes:

- 1 = Hawaii General Excise Tax is factored into the ROM pricing.
2 = A total of 3-weeks of field work is anticipated using the standard production rates assumed for Task 2.1.
3= Estimated duration for Task 2.1 is 3-weeks.

3 General Assumptions

The following general assumptions were utilized for preparing the ROM cost estimate summary.

- » Assume that access to the Site will be provided by and coordinated by HCDA and Tetra Tech prior to commencement of field work.
- » Assume that the Site will be vacant and unoccupied during the field work.
- » Assume that all gate combinations to enable access to the Site will be provided by Tetra Tech. No keys will be necessary to access the Site.
- » Assume that there is no active water or electricity service at the Site.
- » Assume that earthwork contractor can store equipment, vehicles, and materials on-site throughout the duration of field activities.
- » Tetra Tech will notify the HCDA two (2) weeks prior to any mobilization to the Site for field activities.
- » Assume that field work will be conducted during normal business hours, Monday through Friday (0700-1700 hours), excluding holidays and weekends.
- » Assume that all work must be completed by December 31, 2019.