DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2014/ED-12(MT)

December 10, 2014

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OFC. OF ENVIRONMENTAL QUALITY CONTROL

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DEC 23 2014

Ms. Jessica Wooley, Director
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

Dear Ms. Wooley:

SUBJECT:	Chapter 343 Hawaii Revised Statutes Act 172-12 Environmental Impact Statement Preparation Notice
Project:	PVT Integrated Solid Waste Management Facility
Applicant:	PVT Land Company, Ltd.
Agent:	LYON Associates Inc. - Karl Bromwell
Location:	87-2020 Farrington Highway - Waianae
Tax Map Key:	8-7-9: 25 and 8-7-21: 26
Proposal:	Expand recycling and materials recovery operation, increase capacity of landfill by about 4.5 million cubic yards and installation of a gasification unit and/or photovoltaic panels to power its recycling operation.

We respectfully request publication of the Act 172-12 Environmental Impact Statement Preparation Notice (EISPN) in the next edition of The Environmental Notice on **December 23, 2014**. One hard copy of the Act 172-12 EISPN and the Publication Form and one disc containing both aforementioned documents are enclosed. The Publication Form, including project summary, was also sent via electronic mail to your office.

Should you have any questions, please contact Mark Taylor of our Land Use Approval Branch at 768-8020.

Very truly yours,

for George I. Atta, FAICP
Director

Enclosures: One hard copy of Act 172-12 EISPN
One hard copy of OEQC Publication Form
One disc containing OEQC Publication Form and Act 172-12 EISPN

APPLICANT ACTIONS
SECTION 343-5(C), HRS
PUBLICATION FORM (JANUARY 2013 REVISION)

Project Name:	Expanded Recycling, Landfill Grading and Renewable Energy Project
Island:	Oahu
District:	Waianae
TMK:	(1) 8-7-009:025 and (1) 8-7-021:026
Permits:	City and County of Honolulu Conditional Use Permit; The State of Hawaii Department of Health Solid Waste Management Permit; Notice of General Permit Coverage National Pollutant Discharge Elimination System Permit for Stormwater Associated with Industrial Activities; Air Pollution Control Covered and Noncovered Source Permits
Approving Agency: (*Address, Contact Person, Telephone*)	City and County of Honolulu, Department of Planning and Permitting 7th Floor, 650 South King Street Honolulu, Hawaii 96813 Mark Taylor Tel: (808) 768-8020
Applicant: (*Address, Contact Person, Telephone*)	PVT Land Company, Ltd. Stephen E. Joseph Vice President and Operations Manager 87-2020 Farrington Highway Waianae, Hawaii 96792 Tel: (808) 668-4561
Consultant: (*Address, Contact Person, Telephone*)	LYON Associates Inc. Karl Bromwell Director of Environmental Services 45 North King Street, Suite 501 Honolulu, Hawaii 96817 Tel: (808) 536-6621

Status (check one only):

__DEA-AFNSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of DEA, a completed OEQC publication form, along with an electronic word processing summary and a PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day comment period ensues upon publication in the periodic bulletin.
__FEA-FONSI	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and a PDF copy (send both summary and PDF to oeqchawaii@doh.hawaii.gov; no comment period ensues upon publication in the periodic bulletin.
__FEA-EISPN	Submit the approving agency notice of determination/transmittal on agency letterhead, a hard copy of the FEA, an OEQC publication form, along with an electronic word processing summary and PDF copy (you may send both summary and PDF to oeqchawaii@doh.hawaii.gov; a 30-day consultation period ensues upon publication in the periodic bulletin.
_X_ Act 172-12 EISPN	Submit the approving agency notice of determination on agency letterhead, an OEQC publication form, and an electronic word processing summary (you may send the summary to oeqchawaii@doh.hawaii.gov. NO environmental assessment is required and a 30-day consultation period upon publication in the periodic bulletin.
__DEIS	The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the DEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the DEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); a 45-day comment period ensues upon publication in the periodic bulletin.

__FEIS	The applicant simultaneously transmits to both the OEQC and the approving agency, a hard copy of the FEIS, a completed OEQC publication form, a distribution list, along with an electronic word processing summary and PDF copy of the FEIS (you may send both the summary and PDF to oeqc@doh.hawaii.gov); no comment period ensues upon publication in the periodic bulletin.
__ Section 11-200-23 Determination	The approving agency simultaneous transmits its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS to both OEQC and the applicant. No comment period ensues upon publication in the periodic bulletin.
__Statutory hammer Acceptance	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it failed to timely make a determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and that the applicant's FEIS is deemed accepted as a matter of law.
__Section 11-200-27 Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is not required. No EA is required and no comment period ensues upon publication in the periodic bulletin.
__Withdrawal (explain)	

Summary (Provide proposed action and purpose/need in less than 200 words. Please keep the summary brief and on this one page)**:**

The PVT Land Company (PVT) Integrated Solid Waste Management Facility is the only construction and demolition (C&D) debris facility on Oahu. Operations include: recycling and materials recovery and a C&D landfill with asbestos disposal and liquids solidification areas. The purpose of the proposed project is to: (1) expand PVT recycling and materials recovery operations; (2) to allow the site grade to reach a maximum elevation of up to 255 ft. above mean sea level at the mauka portion of the site; and (3) to install renewable energy capabilities to provide power to recycling operations. This project will enable PVT to continue to provide essential services to Oahu's construction industry during a period of extended activity. With expanded recycling operations, which include equipment to support renewable energy providers, PVT will be able to process up to 1,500 tons of feedstock per day, enough to supply 20,000 homes with electricity. The proposed grading of the project site will provide additional landfill capacity of approximately 4,500,000 cubic yards over the remaining life of the landfill as well as space for recycling and materials recovery. Supporting renewable energy, PVT plans to install a gasification unit and/or photovoltaic panels to power its recycling operations.

Environmental Impact Statement Preparation Notice

Prepared in Accordance with Chapter 343, Hawaii Revised Statutes and
Title 11, Chapter 200, Hawaii Administrative Rules

PVT Integrated Solid Waste Management Facility - Expanded Recycling, Landfill Grading and Renewable Energy Project

Island of Oahu, State of Hawaii
TMKs: (1) 8-7-009:025 and (1) 8-7-021:026

December 11, 2014

Prepared For:

87-2020 Farrington Highway
Waianae, Hawaii 96792

Prepared By:

45 North King Street, Suite 501
Honolulu, Hawaii 96817

TABLE OF CONTENTS

TABLE OF CONTENTS 1
Section 1 - Introduction 2
Section 2 - Project Site Description 3
Section 3 - Purpose and Need for the Proposed Action 4
Section 4 - Assessment of Physical Environment, Potential Impacts, and Mitigation Measures ... 5
4.1 Climate and Rainfall 6
4.2 Geology and Soils 6
4.3 Natural Hazards 6
4.4 Surface and Ground Water Quality 7
4.5 Air Quality 8
4.6 Litter 9
4.7 Noise 9
4.8 Biological Resources 10
Section 5 - Assessment of Socio-Economic Environment, Potential Impacts, and Mitigation Measures 10
5.1 Socio-Economic and Land Use Characteristics 10
5.2 Historic, Archeological and Cultural Resources 11
5.3 Scenic Resources 11
5.4 Public Facilities and Services 12
Section 6 - Other Potential Impacts and Issues 13
6.1 Cumulative Impacts 13
6.2 Irreversible and Irretrievable Commitment of Resources 13
6.3 Relationship Between Local Short-Term Uses of Humanity's Environment and the Maintenance and Enhancement of Long-Term Productivity 13
Section 7 - Alternatives to the Proposal Action 14
7.1 Introduction 14
7.2 Project Objectives 14
7.3 Alternatives Considered 15
REFERENCES 16
FIGURES 17

Section 1 - Introduction

This Environmental Impact Statement Preparation Notice (EISPN) is filed by PVT Land Company (the Applicant) in support of the expanded recycling, landfill grading and renewable energy project (Proposed Project) at its Integrated Solid Waste Management Facility (ISWMF) in Nanakuli, Oahu. Established in 1985, the PVT Land Company (PVT) ISWMF is the only construction and demolition (C&D) debris management facility on Oahu. PVT's Solid Waste Management Permit authorizes both a C&D landfill and C&D recycling and materials recovery operations. PVT's Conditional Use Permit (CUP), as modified, also authorizes both recycling and the disposal of C&D debris. Currently grading at the landfill follows the contours of the site, ranging from 5 to 40 feet (ft.) above mean sea level (amsl) at the makai boundary of the site to a maximum of 135 ft. amsl at the mauka portion of the site. PVT is requesting approvals to expand its recycling program, to increase the elevation at the mauka portion of the landfill by up to 120 ft., and to use renewable energy (gasification and/or solar energy) to provide power to the ISWMF. No changes in the horizontal boundaries of the landfill or to ongoing landfill operations are proposed.

Under the Hawaii Environmental Policy Act (HEPA), the Proposed Project may have a significant effect on the environment. Portions of the Proposed Project require amendment of the site's existing Conditional Use Permit (85/CUP-6) and/or its Solid Waste Management Permit (LF-0152-09). An Environmental Impact Statement (EIS), is being prepared for the Proposed Project in accordance with the Hawaii Revised Statutes (HRS) Chapter 343 Environmental Impact Statements (HRS Chapter 343, 2013) and the Hawaii Administrative Rules (HAR) Title 11, Chapter 200 Environmental Impact Statement Rules (HAR Chapter 11-200, 2013).

This EISPN is a formal notification that PVT has begun preparation of an EIS for the Proposed Project. It provides pertinent information on the potential impacts of the Proposed Project on the environment as well as the economic and social welfare of the community. Upon publication, agencies, groups, and individuals are encouraged to comment on the EISPN (HAR Chapter 11-200-15, 2013). All Federal, State and City and County agencies listed in Exhibit 4-1 of the OEQC Guidebook have received a copy and/or a notice of the availability of the EISPN online and have been formally invited to be consulted as part of the EIS process (OEQC, 2012, p. 26-34).

Additionally, early consultation for the Proposed Project began in December 2014, when the Applicant met with community and agency leaders. The purpose of these meetings was to inform the community and relevant agencies of the Proposed Project and identify concerns and issues about the Proposed Project. PVT has also requested to present PVT's ongoing and proposed activities at the Waianae and Nanakuli Neighborhood Board meetings. Consultation also will be

part of the socio economic assessment and Cultural Impact Assessment. The results of these studies will be provided in the DEIS.

Section 2 - Project Site Description

The PVT ISWMF is a C&D debris management facility located in the community of Nanakuli, in the Waianae District of Oahu (Figure 1). The facility property begins approximately 1,600 ft. northeast of the intersection of Farrington Highway and Lualualei Naval Road and extends northerly approximately one mile along Lualualei Naval Road. The PVT ISWMF property covers approximately 200 acres (Project Site). Phase I of the landfill consists of 49 acres and received debris prior to October 9, 1993. Phase II of the landfill consists of 104 acres.
As shown in Figure 2, the neighboring properties to the Project Site (TMK 8-7-009:025 and 8-7-021:026) include the following:

- North: The Pine Ridge Farms, Inc. trucking, concrete and asphalt recycling, and concrete production facility is adjacent to the northern boundary of the Project Site (TMK 8-7-021:035).
- East: To the east, on the opposite side of Lualualei Naval Road, is 179 acres of undeveloped land owned by Leeward Land Company. This property is currently used for soil borrow, water supply and drainage control (TMK 8-7-009:007).
- South: Commercial and residential developments of the Nanakuli community are located south and southeast of the Project Site. The nearest of these residences is approximately 750 ft. from the southernmost end of the Phase I disposal area.
- West: Low-density residential and agricultural properties are located to the west, beyond the Ulehawa Stream, which runs along the western border of the Project Site.

PVT ISWMF operations include: (1) a C&D landfill with asbestos disposal and liquids solidification areas; and (2) recycling and materials recovery operations. Figure 3 shows the general location of the major facilities and operations as of July 2, 2014.

The C&D landfill is comprised of Phase I and Phase II. Phase I consists of a landfill area and asbestos disposal area. C&D debris disposal operations in Phase I had low compaction densities, producing a fill that contains substantial amounts of void spaces. As a result, this historic area of landfill has been prone to subsurface fires due to the intrusion of oxygen into the void space. In response, PVT is authorized by its Solid Waste Management Permit to: (1) remove previously buried debris; (2) process the debris to recover recyclable materials; and (3) replace any unrecyclable materials in the landfill. An estimated 1.5 million cubic yards of material will be excavated and processed for recycling and/or landfilling.

The Phase II disposal area consists of a series of cells numbered Cell 1 through Cell 9 as shown in Figure 3. To date, Cells 1 through 9A are constructed and Cell 9B, the last remaining permitted disposal area, is partly occupied by the recycling and material recovery operation and the liquid waste solidification area The Phase II landfill cells are constructed with impermeable liners and a leachate collection and removal system (LCRS). PVT also maintains state-of-the-art stormwater and leachate management systems to prevent excessive runoff and sedimentation, minimize erosion and maintain roads and other ancillary facilities in useable condition under all weather conditions (A-Mehr, 2014, p. 4-3).

In addition, PVT operates a six acre recycling and materials recovery facility to recover, reuse and recycle both previously landfilled debris and incoming debris. An excavator sorts incoming C&D debris, diverting large pieces of plastic, wood and metal for separate processing and off-site recycling. Concrete is also separated, crushed and reused as cover on roads. The remaining debris is processed through a series of a system of taper screens, magnetic separators and manual sorting to create feedstock for off-site fuel production. The existing recycling system can process approximately 1,775 of debris per day and provides 15 local jobs for westside residents.

Section 3 - Purpose and Need for the Proposed Action

PVT is the only C&D landfill and recycling facility on Oahu. All of the building and construction companies on Oahu depend entirely on the PVT landfill and recycling facility to meet their disposal needs, to provide and to continue construction activity. Without a C&D landfill, the problem of illegal dumping in rural areas would be exacerbated. In addition, the PVT ISWMF is an integral part of the City and County of Honolulu's disaster relief plan as a location to dispose of disaster debris.

The purpose of the Proposed Project is to: (1) expand its reuse, recycling and materials recovery operation; (2) allow the site grade to reach a maximum elevation of up to 250 ft. amsl at the mauka portion of the Site; and (3) use renewable energy (a gasification unit and/or photovoltaic panels) to provide power to the ISWMF. The Proposed Project will allow PVT to continue to provide essential disposal services to the construction industry, to participate in the City's disaster response efforts, provide recycled products and fuel to other businesses, and to be energy self-sufficient.

The Proposed Project includes an expanded recycling operation, started in the summer of 2014, to increase the facility's processing capacity. PVT recycles and/or reuses up to 80% of the C&D debris that is brought to the landfill. The material is reused for roads, recycled as scrap metal and processed into feedstock to generate fuel and electricity. The expanded recycling operation will also include equipment needed to process and/or store reclaimed combustible material for feedstock, including but not limited to pellitizers and silos for storage. With expanded

operations, including new equipment to support renewable energy providers, PVT will be able to increase recycling processing up to 3,000 tons per day. This would yield approximately 1,500 tons of feedstock per day, enough to supply 20,000 homes with electricity.

The proposed use of renewable energy sources will be designed to make the ISWMF energy self-sufficient. PVT has already installed PV panels over its parking spaces which provide power to its offices. The Proposed Project would install renewable energy near the recycling operation to provide power for it. A small gasification unit that uses the processed feedstock and/or photovoltaic panels over closed portions of the landfill are proposed.

The proposed grading will also provide additional landfill capacity of approximately 4,500,000 cubic yards over the remaining life of the landfill. The additional capacity will provide PVT with necessary flexibility to expand the reuse, recycling and material recovery operation and ensure that the reclamation of materials from the Phase I area can be completed.

The Proposed Project is largely located in Mauka portion of the site, away from residential areas. Figure 4 illustrates the approximate location of the proposed activities, including:

- (1) Expanded Recycling and Materials Recovery: Proposed location is at the far north section of the site on the existing Materials Recovery Area.
- (2) Proposed Grading: Located in the northern half of the project site in the highlighted area of Figure 4. The highlighted area shows where the grades will be higher than the currently permitted height of 135 ft. amsl.
- (3a) Renewable Energy – Gasification: Proposed location is at the far north section of the site on the existing Materials Recovery Area; and/or
- (3b) Renewable Energy – Photovoltaic: Proposed location is on the south and south west facing slopes on the lower portion of the closed landfill.

Section 4 - Assessment of Physical Environment, Potential Impacts, and Mitigation Measures

This section provides a preliminary analysis of the potential impacts of the proposed action on the physical environment at and in the vicinity of the Project Site. Climate and rainfall, geology and soils, surface water quality, groundwater quality, air quality, litter, noise, and biological resources are discussed below. The EIS will evaluate both the short-term and long-term impacts on these resources and provide mitigation as appropriate and feasible.

4.1 Climate and Rainfall

Nanakuli's climate is relatively dry and temperate. The Nanakuli area receives an average of approximately 14 inches of rainfall per year, primarily between October and April. During these months, rainfall averages one to two inches per month, with generally less than one inch per month falling during the rest of the year (Mountain Edge Environmental, Inc., 2004). The average wind speed is between four to six mph, with peak wind speeds ranging from 40 to 50 mph.

The proposed scale, characteristics, and duration of the Proposed Project are not sufficient to influence climate. C&D landfills contain little organic content, and thus generate negligible amounts of greenhouse gases (GHG). Additionally, the expanded recycling operations would divert organic wastes from the landfill to generate clean, renewable energy. Thus, the project may potentially reduce PVT's overall GHG footprint. This and other potential impacts on climate and rainfall will be evaluated in the EIS.

4.2 Geology and Soils

The Project Site has been an active C&D landfill since 1985. Prior to development, portions of the Project Site were used as a quarry for coral rock and aggregate products. Geologic materials underlying the Project Site consist of lava flows of the Waianae Volcanic Series and consolidated calcareous marine sediments, partly overlayed by consolidated non-calcareous deposits (older alluvium). The Project Site is not located in an unstable area.

The Proposed Project will be an extension of the current design features, operational controls, and mitigation measures such that detrimental effects due to geologic and soil conditions will not occur. The potential for soil erosion and landfill slope failure with the Proposed Project will be avoided by the proper placement and compaction of debris that cannot be reused or recycled and properly designed landfill systems (i.e., stormwater, liner leachate, and landfill gas management systems).

4.3 Natural Hazards

Seismic hazards related to ground shaking could potentially occur at the Project Site. The U.S. Geological Survey (USGS) has classified Oahu in Uniform Building Code (UBC) Seismic Zone 2a (scale from 0-4, 0 being the lowest potential seismic ground movement). UBC 2a is defined as having a 10 percent probability of exceeding a peak round acceleration of 0.15 g (gravitational force) in 50 years. Therefore, the Project Site is located within a seismic impact zone.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map identifies the Project Site as lying within Zone X, Zone AE and a floodway (Hawaii National Flood Insurance Program [NFIP], 2014). According to the NFIP, the landfill component of the Project Site is located approximately one-third of a mile from the shoreline and outside of the evacuation boundary for tsunamis (NFIP, 2014).

The Proposed Project is not anticipated to have significant direct or secondary effects related to natural hazards, including those related to seismicity, flooding, hurricanes and tsunamis. PVT ISWMF provides for appropriate design features, operational controls, and mitigation measures such that detrimental effects due to extreme weather events will not occur, including: (1) properly engineered landfill cells that can withstand the maximum horizontal acceleration due to an earthquake; (2) operational systems to control stormwater runoff per NPDES and SWMP regulations; (3) utilization of climate forecasts from the NOAA's Climate Prediction Center to predict and mitigate flood losses (Keener, 2011); and (4) an emergency management plan to ensure an appropriate emergency response at the facility (A-Mehr, 2014, p. 5-11). Furthermore, no facilities or structures will be placed in the FEMA Zone AE or floodway. The EIS will evaluate the impacts of Natural Hazards on the Proposed Project.

4.4 Surface and Ground Water Quality

Surface water from the PVT ISWMF is managed by controlled grading on the surface of the landfill and by an engineered system of drainage ditches, channels, pipes and a series of six sedimentation/ retention basins (A-F) that have been designed to contain a 100 year flood (Figure 3). The basins are equipped with floating skimmers that slowly drain water from the surface of the basins during major storm events. This maximizes sediment settlement before water is discharged to Ulehawa Stream, and before it drains into the Pacific Ocean approximately 0.4 mile southwest of the Project Site (A-Mehr, 2014, p. 4-3). PVT ISWMF has received approval from the DOH to discharge stormwater to the Ulehawa Stream under the NPDES General Permit (R50B941.FNL.08). Rainfall less than one and a half inches and all stormwater is contained in the stormwater basins and net released to the stream.

The Project Site is located over two aquifers. The aquifers are non-potable, are not ecologically important and have moderate salinity with chloride concentrations 1,000 to 5,000 mg/l. The upper aquifer is currently used for irrigation and industrial purposes, while the lower aquifer is not currently used. Three PVT monitoring wells (MW-1B, MW-1C, and MW-2) and an operational well (used for dust control at PVT ISWMF) are also located on the Project Site and regularly monitored per required regulations. No drinking water wells are located on, downgradient or within one mile of the site.

Leachate, a by-product of excess water within a landfill, can potentially migrate into surface and ground water. Rainwater may result in leachate if it causes the moisture content of the waste to exceed the absorptive and/or retentive ability of the landfill refuse. Leachate, as it passes through landfill waste, may collect a variety of organic and inorganic contaminants. Operational practices and stormwater management control at the recycling area and the landfill are continuously implemented to minimize leachate generation (A-Mehr, 2014, p. 4-12). Phase 1 of the PVT landfill was established in previously quarried areas of the site. The dense coralline sediments underlying this area provide a natural barrier to impede leachate from migrating to groundwater. Phase 2, where the landfill and recycling area is located, is equipped with an impermeable liner and leachate collection system. Groundwater monitoring results from 1998 to present indicate no impact to groundwater from the landfill or recycling operations.

In sum, the Proposed Project is not expected to have significant direct or secondary impacts on ground and surface water quality. All by-products of these operations will be disposed of in accordance with State and City regulations.

4.5 Air Quality

Present air quality in the project area is mostly affected by air pollutants from motor vehicles, industrial sources, agricultural operations, and, to a lesser extent, by natural sources. As a C&D management facility handling primarily inert debris, PVT ISWMF generates very little odor or landfill gas. Per PVT's Operations Plan, any noticeable odor is investigated to determine its source and dealt with accordingly. Furthermore, a 2011 Nanakuli Dust Study concluded that dust generated by PVT activities presents a nuisance for the residents of Nanakuli, but does not pose a health concern (Tetra Tech Em, Inc., 2011, p. 22).

The potential air quality impacts of the expanded recycling, grading and renewable energy construction activities are wind borne dust, and to a lesser extent, odor. Potential impacts from the expanded recycling operation will be minimized by placement of the recycling activities at the mauka portion of the Project Site away from residences. The renewable energy will also be installed at the mauka portion of the Project Site. Impacts from the grading changes and continued operation of the landfill will be minimized at PVT by operational practices required by the Solid Waste Management Permit, including covering of debris, special handling requirements for odorous materials and rigorous application of dust control measures. These mitigation measures, combined with the maintenance of a 750 foot buffer zone between the makai property line and debris disposal, are expected to reduce dust and odor impacts to neighbors (A-Mehr, 2014, p.5-5, 5-9).

The Proposed Project is not anticipated to significantly increase the generation of odor, gas or dust. It will, however, expose operations to slightly higher wind velocity due to the increased

elevation. The EIS will evaluate this effect on potential dust emissions and propose appropriate mitigation measures if necessary to reduce any adverse impacts related to dust control. Site operations will continue dust control programs as needed to maintain compliance with permit conditions relative to dust. Available measures include water truck spraying and use of portable windbreak screens upwind of the active disposal area.

4.6 Litter

The C&D debris received at PVT ISWMF contains relatively small amounts of paper and plastic materials, which often create litter problems at municipal landfills. PVT's current litter control program includes: (1) daily litter sweeps; (2) installation and maintenance of litter fencing along the downwind; and (3) interim covering of active landfill cells (A-Mehr, 2014, p.5-8).

Debris disposed at higher elevations will be exposed to slightly higher wind speeds than at present and could result in litter off-site from lightweight refuse or improperly secured refuse loads from vehicles transiting to and within PVT ISWMF. PVT site operations will include litter control programs to maintain compliance with permit conditions relative to litter. Available measures include litter screens, water truck spraying, and use of portable windbreak screens upwind of the active disposal area. With appropriate measures in place, the Proposed Project is not expected to result in significant nuisances from litter.

4.7 Noise

Landfill operations generate noise from the use of various types of heavy equipment and machinery. PVT ISWMF is within a Class C "Industrial" zoning district, of which the maximum permissible sound level at the property line is 70 dBA for both daytime and nighttime conditions (HAR Chapter 11-46, 1996, p. 46-7). Existing noise sources near the Project Site include motor vehicles traveling on Farrington Highway and Lualualei Naval Road as well as industrial activities. Other sources of noise include wind and animals (dogs, birds, etc.).

An acoustical study will be conducted to assess the existing noise levels in the vicinity of the PVT ISWMF and potential sources of excess noise during the construction and operation of the Proposed Project. Noise generated from new heavy equipment (i.e. pelletizer) will also be assessed and mitigated, as necessary.

The Proposed Project is not expected to have adverse noise impacts. The expanded recycling, grading and renewable energy improvements are all located in the mauka portion of the Project Site away from residences. Furthermore, the Proposed Project will be a continuation of PVT's existing design features and operational controls that potential impacts, including: (1) use of vehicles and internal combustion powered machinery that are properly muffled with noise

attenuation equipment in good operating condition; (2) use of heavy equipment only during normal operational hours; and (3) location of equipment and materials storage areas as far away as practicable from residences.

4.8 Biological Resources

Vegetation on the Project Site is generally controlled through regular landscaping and maintenance and is typical of dry climates. The well-drained soils found on the Project Site support buffelgrass, Guinea grass, small herbaceous species and small shrubs, which are sporadically found throughout the PVT ISWMF. PVT also uses a vegetation layer of soil planted with native grasses and shrubs for erosion control (A-Mehr, 2014, p. 5-8). No sensitive or otherwise regulated habitats (e.g. Wetlands) are found on the Project Site (U.S. Fish and Wildlife Service, 2014).

The Proposed Project is not expected to have any significant impacts on biological resources in or near the Project Site. However, a Biological Survey of the Project Site will be conducted as part of the EIS process to fully assess the existing fauna and flora. The EIS will also identify appropriate minimization measures, if necessary.

Section 5 - Assessment of Socio-Economic Environment, Potential Impacts, and Mitigation Measures

This section provides a preliminary analysis of the potential impacts of the proposed action on the socio-economic environment at and in the vicinity of the Project Site. The topics of historical, archeological and cultural resources, scenic resources, and public facilities and services are discussed below. The EIS will evaluate the effects of the Proposed Project on the socio-economic environment and public facilities and services of the community.

5.1 Socio-Economic and Land Use Characteristics

The Waianae Coast is a rural, agricultural community that has experienced the growth patterns of a rapidly suburbanizing district. As of the 2010 U.S. Census, the population of the Waianae District was 13,177 persons, 1.38 percent of Oahu's total population (U.S. Census Bureau, 2014). When compared to the total Oahu population, the Waianae District has a larger proportion of Native Hawaiians or other Pacific Islanders (62.2%) and persons below poverty level (19.2%). The average household size is 4 persons per household, which is greater than the Oahu average, and the median household income is $65,568 (U.S. Census Bureau, 2014). The geographic distance from the Waianae Coast to Oahu's primary employment centers also imposes longer

commute times on workers living there. In 2010, the mean travel time for work was 41.4 minutes compared to 27 minutes for all of Oahu's resident population.

The EIS will evaluate the effects of the Proposed Project upon residents of Nanakuli and other residents of the Waianae Coast. The social assessment will examine potential concerns toward the Proposed Project, as well as the potential impact of the project on land uses in the vicinity. Such effects may be related to altered upslope and shoreline views, increased background noise levels, increased dust/litter generation, and other resident concerns. While existing mitigation measures are already in place to control these potential impacts, the adequacy of these measures will be assessed and modified as needed to address potential effects from the Proposed Action. The economic assessment will quantify the economic value of the existing facility and the Proposed Project. The assessment will include a discussion of the problem posed by illegal dumping in the absence of C&D recycling and disposal. It will also evaluate the role of the facility in support of the construction industry and the City's disaster relief plans. This assessment will determine the significance of direct, indirect, and induced benefits to Oahu's economy.

5.2 Historic, Archeological and Cultural Resources

In preparation of the EIS, PVT is conducting a Cultural Impact Assessment (CIA) to gather information on the traditional cultural practices and beliefs in the Lualualei ahupuaa. As part of this process, PVT will consult with Hawaiian cultural organizations, government agencies, and individuals who have knowledge of and/or concerns about traditional cultural practices. The CIA will include discussions of specific aspects of traditional Hawaiian culture gathered during background research, as well as interviews and "talk story" sessions. The natural, prehistorical and historical settings and settlement patterns for Lualualei will also be researched and identified.

The EIS will also evaluate the effects of the Proposed Action on historic and archaeological resources associated with the Lualualei ahupuaa. The Proposed Action is not anticipated to affect historic and archeological resources as the expanded recycling, grading and renewable energy project will take place at an operating C&D debris facility.

5.3 Scenic Resources

The EIS will evaluate the existing visual characteristics of the PVT ISWMF from accessible surrounding locations and produce visual renderings of the Project Site based on the proposed grading increase. These renderings will include visual representations of the Project Site in: (1) existing conditions; (2) an intermediate phase where unvegetated landfill slopes will be visible during the last 10 to 12 foot cell lift; and (3) a post-project phase after the landfill cells are

covered and vegetated. For illustrative purposes, Figures 5 and 6 provides a current photograph and an example visual rendering of Site A, located at the stop sign approximately 200 ft. northeast of the Farrington Highway and Lualualei Naval Road intersection.

The proposed increase in landfill height due to grading will be a noticeable change in the facility's appearance when viewed from residential and other coastal areas to the south and west of the Project Site. It is not anticipated that the recycling operations or the renewable energy installation will be visible from most accessible locations. The study will address changes related to scenic features in the Nanakuli area and evaluate potential measures to reduce adverse visual impacts.

5.4 Public Facilities and Services

The existing PVT ISWMF is designed and operated for the sustainable use of public facilities and services. The issues of traffic and roadways, solid waste, wastewater, water supply, power and communications, emergency facilities, schools and recreational resources will be evaluated in the EIS. Additionally, a comprehensive traffic study is being prepared to fully evaluate traffic in relation to the expanded recycling program, the continued operation of the landfill and renewable energy associated with the project. Appropriate mitigation measures will be proposed, if necessary, to reduce any adverse effects on these services.

The Proposed Project will increase the capacity and thus life-span of the facility, but it will not result in a change in the volume or type of C&D debris brought to the landfill on a daily basis. No portion of the Proposed Project is expected to result in population growth. Therefore, there will be little, if any, change in traffic volume or routes associated with the operation of the recycling or disposal operations. There will also be little or no increased demand for police and fire services, schools, and recreational resources.

Both potable water and irrigation water will continue to be needed on site. The volume of water required by the expanded recycling and grading project will be determined in an investigation of the water needs and the adequacy of existing water supply and facilities to serve the project will be evaluated in the EIS. Wastewater will be disposed of through an existing on-site septic system. The renewable energy planned as part of the Project will provide power for the expanded recycling operation.

Section 6 - Other Potential Impacts and Issues

This section addresses other impact categories and issues that will be further evaluated in the EIS including: cumulative impacts, irreversible and irretrievable commitment of resources, and the relationship between local short-term uses of humanity's environment and the maintenance and enhancement of long-term productivity.

6.1 Cumulative Impacts

Cumulative impacts on the environment result from the incremental effects of the Proposed Project when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. The EIS will assess direct and indirect impacts of the expanded recycling, the lengthened life span of the landfill, and the installation of renewable energy in conjunction with the proposed development projects in the region, including: traffic congestion, wear on roads, use of public services, changes in natural drainage and stormwater runoff and changes in local scenery.

6.2 Irreversible and Irretrievable Commitment of Resources

The Proposed Project will not require the commitment of any additional land nor will it further limit the number of feasible uses of the land upon closure. The Proposed Project will require the irreversible and irretrievable commitment of fiscal, local manpower and material (including topsoil), potable water and energy resources for operations and maintenance. Expenditure of these resources will mostly not be recoverable, but will not involve the use of public funds. These will be fully detailed in the EIS and any potential mitigation measures identified.

6.3 Relationship Between Local Short-Term Uses of Humanity’s Environment and the Maintenance and Enhancement of Long-Term Productivity

At present, the entire island of Oahu depends on PVT ISWMF to manage C&D debris, whether by reuse, recycling or disposal. Continued recycling and additional landfill capacity is needed to manage C&D debris on the island, to reduce illegal dumping in rural areas, to support the construction industry, the handle disaster debris, to separate recoverable materials for reuse or recycling, to process feedstock for use as fuel and to reduce dependence on fossil fuels. PVT ISWMF currently reuses or recycles 80% of the incoming C&D debris. Metal is recycled, concrete and soil are reused onsite, and combustible material is processed into feedstock. The

renewable energy to be installed may use this feedstock. The remaining 20% continues to be landfilled as there are no alternate uses or technologies that can completely eliminate the need for C&D landfill capacity.

The Proposed Project will increase the lifespan of PVT ISWMF. However, once the facility is closed, the Project Site will be available for other uses. Additionally, the Proposed Project will not narrow the range of beneficial uses of the environment, as the Project Site is located on developed private land, nor will it significantly detract from the function or use of the surrounding environment.

Section 7 - Alternatives to the Proposal Action

7.1 Introduction

A range of alternatives to the proposed action will be developed and analyzed in the EIS in accordance with HAR § 11-200-17. Alternatives identified and evaluated will include those that could attain the objectives of the Proposed Project, regardless of cost, and the analysis will be in sufficient detail to explain why any alternatives were rejected. Particular attention will be given to alternatives that may enhance environmental quality or avoid, reduce, or minimize some or all of the adverse environmental effects of the Proposed Project. The alternatives may include, but would not be limited to, the no action alternative, alternative grading plan(s), and new recycling and landfill location(s). An analysis of the comparative merits of the alternatives and the proposed action will be provided.

7.2 Project Objectives

The objectives of the Proposed Project are as follows:

- Expand recycling operations to beneficially reuse and recycle incoming C&D debris, C&D debris from the older sections of the landfill and source-separated loads of tires, mattresses and furniture.
- Expand recycling operations with additional equipment to handle the recycled feedstock to be used as a fuel by alternate energy producers and reduce the State's dependence on fossil fuel.
- Reduce the volume of C&D debris that is disposed of in the onsite landfill through recycling and reclamation, thereby maximizing the operational life of the landfill in support of the construction industry and disaster preparedness.
- Increase the capacity of the facility, while meeting State (HAR Title 11) regulations.

- Use renewable energy to provide power to the recycling operations to reduce dependence on fossil fuel.
- Operate the proposed facility in a sustainable, financially feasible manner to ensure that the life of the landfill is maximized.

7.3 Alternatives Considered

7.3.1 No Action Alternative

A “no action alternative” will be considered as a baseline against which potential actions can be measured. While no action may avoid the potential for adverse environmental impacts associated with the proposed action, it would also not meet any of the primary objectives of the Proposed Project or provide the benefits of the Proposed Project. The potential impacts associated with the no action alternative will be fully evaluated in the EIS.

7.3.2 Alternative Technologies

The City, in a recent EIS for the proposed horizontal expansion of Waimanalo Gulch, reviewed a range of possible alternative technologies for refuse disposal. However, they concluded that while alternatives could divert some waste that is landfilled, there are no alternative technologies which can completely eliminate the need for landfill capacity on Oahu (R.M. Towill Corporation, 2008). The EIS will evaluate the potential impacts of alternative technologies, although increased recycling and reuse of C&D debris is an integral part of the Proposed Project.

7.3.3 Alternative Site Location

In 2008, Leeward Land Company submitted an EISPN to construct and operate a composting and municipal solid waste facility at the 179 acre Nanakuli B site (Leeward Land Company, 2008). The Nanakuli B Site is a parcel of undeveloped land owned by Leeward Land Company and is located adjacent to the Project Site. The Nanakuli B facility could accept a maximum of 1,500 tons per day of waste, equal to a disposal capacity of approximately 15 to 20 years. The EIS will examine use of the Nanakuli B site as a C&D recycling and disposal facility. The potential impacts associated with the alternative site location will be fully evaluated in the EIS.

7.3.4 Alternative Grading Scenario

An alternative grading plan with a height increase of 80 ft. could meet the project’s objectives and could potentially reduce impacts to the environment. However, a height increase of 80 ft. would not provide the full benefits of the continued use of the facility.

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FIGURES

Figure 1 Location Map

Figure 2 Parcel Map

Figure 3 Site Plan

Figure 4 Location of Proposed Project

Figure 5 Existing View of PVT ISWMF from Site A

Figure 6 Scenic Rendering of PVT ISWMF from Site A after Proposed Grading

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Figure 1
Location Map
PVT Expanded Recycling, Landfill Grading, and Renewable Energy Project

LYON

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Figure 2
Parcel Map
PVT Expanded Recycling, Landfill Grading, and Renewable Energy Project

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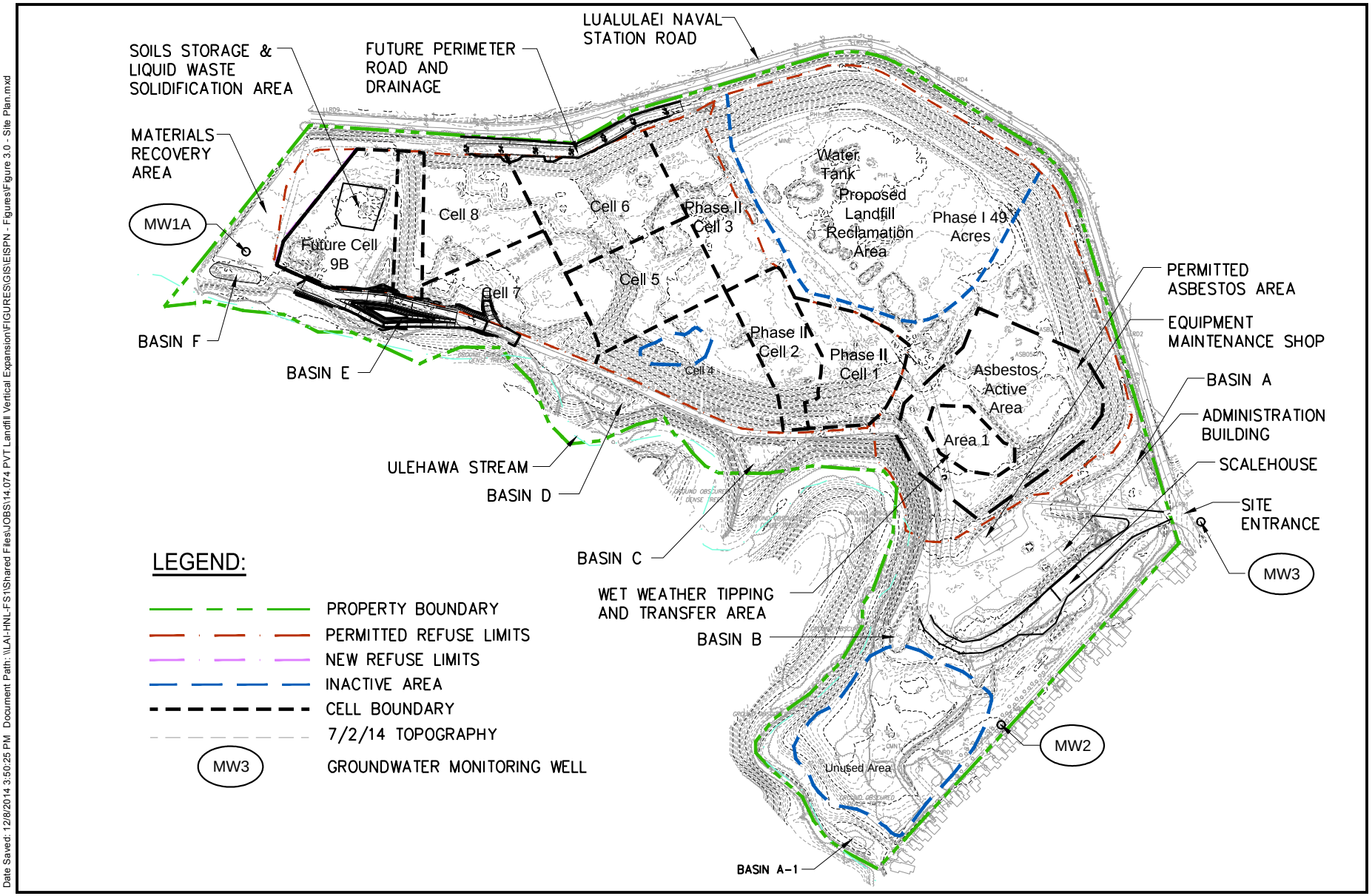

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Figure 3
Site Plan
PVT Expanded Recycling, Landfill Grading, and Renewable Energy Project

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Service Layer Credits: A-Mehr, Inc., 2014

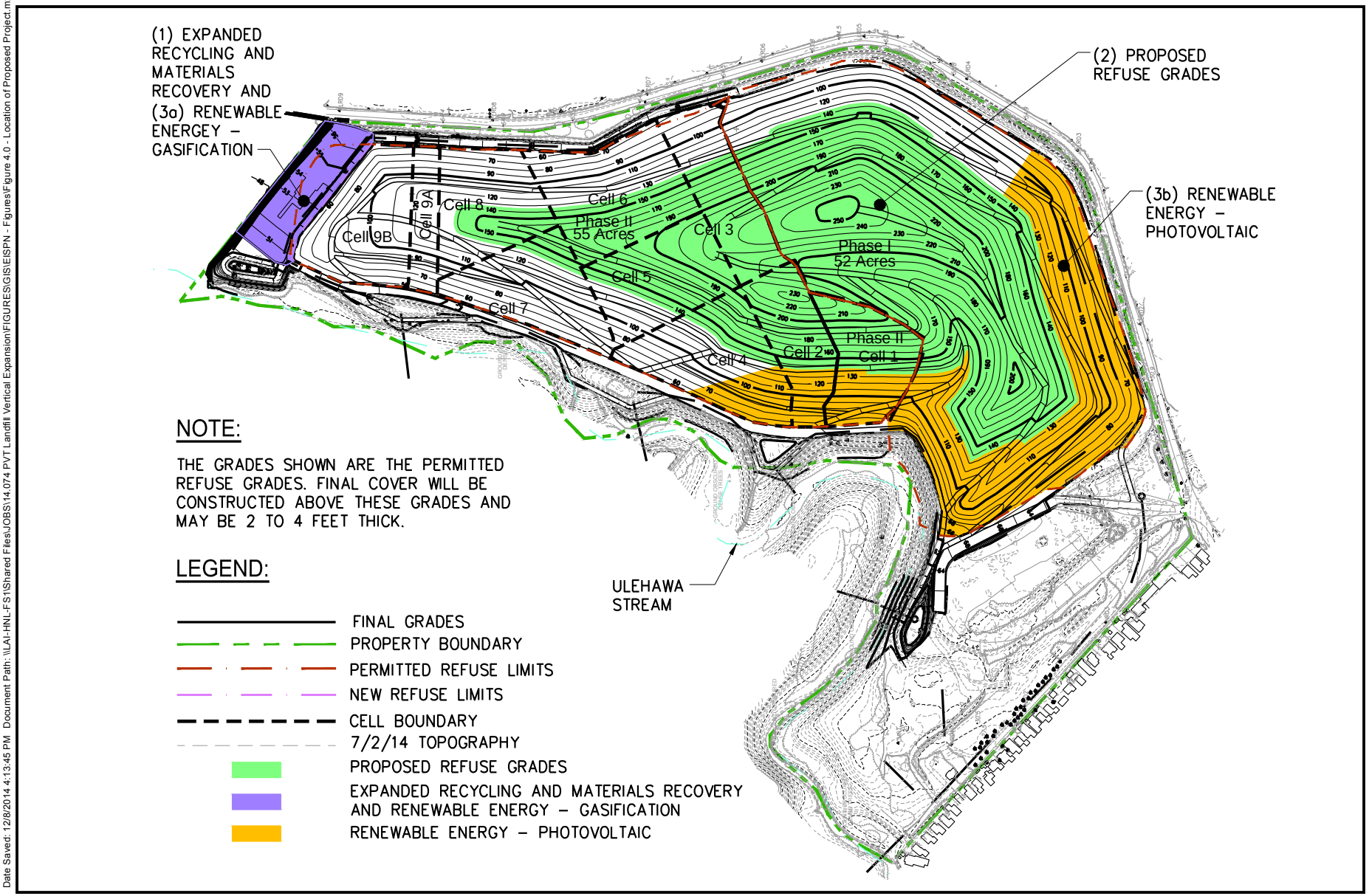

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Figure 4
Location of Proposed Project
PVT Expanded Recycling, Landfill Grading, and Renewable Energy Project

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Figure 5

Existing View of PVT ISWMF from Site A

PVT Expanded Recycling, Landfill Grading,
and Renewable Energy Project

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Figure 6

Scenic Rendering of PVT ISWMF from Site A after Proposed Grading

PVT Expanded Recycling, Landfill Grading,
and Renewable Energy Project

Service Layer Credits: Jeff Brink, Inc.

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