



**Waste Management Plan for the
California Terraces Planning Area 61 Project
San Diego, California**

Prepared for

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A handwritten signature in black ink, appearing to read "Morgan Weintraub".

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1:	City of San Diego 2021 Construction & Demolition (C&D) Recycling Facility Directory
2:	City of San Diego Waste Generation Factors – Occupancy Phase

Acronyms and Abbreviations

AB	Assembly Bill
ADC	alternative daily cover
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
City	City of San Diego
ESD	Environmental Services Department
project	California Terraces Planning Area 61 Project
SB	Senate Bill
SWMC	Solid Waste Management Coordinator
WMP	Waste Management Plan

1.0 Introduction

The purpose of this Waste Management Plan (WMP) for the California Terraces Planning Area (PA) 61 project (project) is to identify potential solid waste impacts that could be generated by construction and operation of the project and propose measures to reduce those impacts.

This WMP addresses all four phases of site development, including the demolition phase, grading phase, construction phase, and the occupancy (post-construction) phase. This WMP also addresses the amount of waste that could be generated by project activities during each phase; waste reduction goals; and the recommended techniques to achieve the waste reduction goals. More specifically, for each phase, this WMP includes the following:

- tons of waste anticipated to be generated;
- material/type and amount of waste anticipated to be diverted;
- project features that would reduce the amount of waste generated;
- project features that would divert or limit the generation of waste;
- source separation techniques for waste generated;
- how materials shall be reused on-site; and
- name and location of recycling, reuse, or landfill facilities where waste shall be taken.

2.0 Existing Conditions

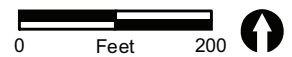
The project site is located north of State Route 905, southeast of the intersection of Otay Mesa Road and Ocean View Hills Parkway/Caliente Avenue in the Otay Mesa Community Plan area, in the city of San Diego, California. Figure 1 shows the regional location. An aerial photograph of the project site and vicinity is shown in Figure 2. The project site is bounded by multi-family uses to the north, State Route 905 and open space to the south, San Ysidro High School to the southwest, and vacant land to the east and west. The project site is currently undeveloped but has been mass graded in conjunction with the grading permit issued for Final Map Number 16413.

3.0 Proposed Conditions

The project proposes the construction of 190,314 square feet of multi-family residential use (79 multi-family residential condominium units) and 4,134 square feet of recreational space within Lot 1 of Map 16413. Figure 3 shows the proposed Site Plan.



 Project Location



 Project Boundary

FIGURE 2
Project Location on Aerial Photograph

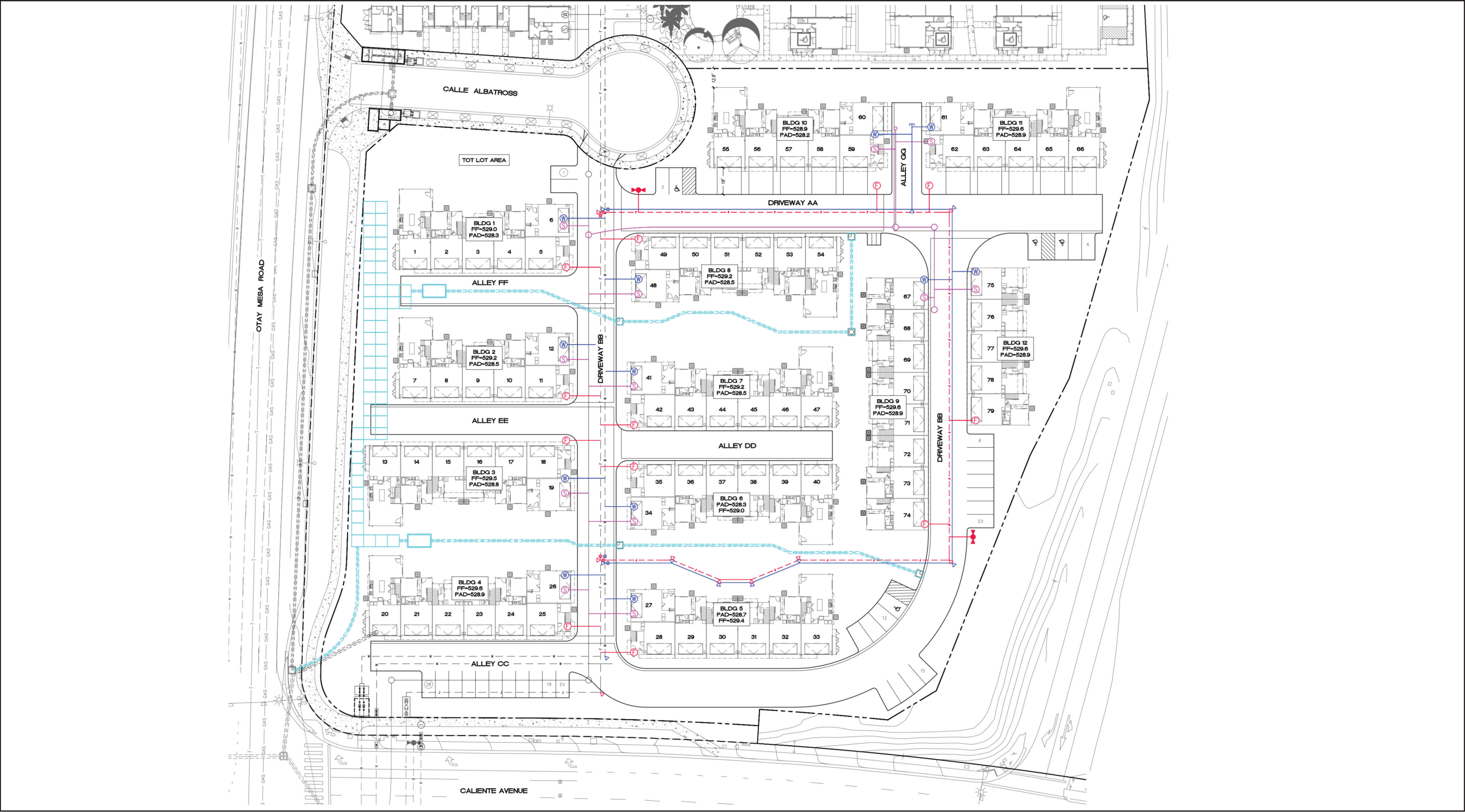


FIGURE 3
Project Site Plan

The project's development summary is shown in Table 1.

Table 1 Site Development Summary		
Land Use	Acres	Square Feet
Multi-Family Residential	4.36	190,314
Recreational Space	0.095	4,134
Total	4.46	194,448

4.0 Regulatory Framework

4.1 State Regulations

4.1.1 California Integrated Waste Management Act (AB 939)

The California Integrated Waste Management Act was enacted by the California Legislature in 1989 with the goal of reducing dependence on landfills for the disposal of solid waste and to ensure an effective and coordinated system for the safe management of all solid waste generated within the state. Assembly Bill (AB) 939 mandated a reduction in the amount of solid waste disposed of by jurisdictions and required diversion goals of 25 percent by 1995 and 50 percent by the year 2000. The Integrated Waste Management Act established a hierarchy of preferred waste management practices, which include (1) source reduction, (2) recycling and composting, and (3) environmentally safe disposal by transformation or landfilling. It addresses all aspects related to solid waste regulation, including the details regarding the lead enforcement agency's requirements and responsibilities; the permit process, including inspections and denials of permits; enforcement; and site clean-up and maintenance. It requires that each county prepare a countywide integrated waste management plan that is reviewed at least once every five years to ensure that waste management practices remain consistent with the practices defined in the California Public Resources Code. In 2013, AB 341 increased the waste diversion target to 75 percent by 2020.

4.1.2 Waste Management (AB 1594)

"Alternative daily cover" (ADC) is cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging. The California Department of Resources Recycling and Recovery (CalRecycle) has approved 11 ADC material types that can currently be reported as diversion: ash and cement kiln dust, treated auto shredder waste, construction and demolition waste, compost, green material, contaminated sediment, sludge, and shredded tires. Generally, these materials must be processed so that they do not allow gaps in the exposed landfill face.

Pursuant to California Public Resources Code Section 41781.3 and AB 1594, beginning January 1, 2020, the use of green material as ADC will not constitute diversion through recycling and will be

considered disposal. "Green material" is defined as any plant material that is either separated at the point of generation, or separated at a centralized facility that employs methods to minimize contamination. Green material includes, but is not limited to, yard trimmings, untreated wood wastes, paper products, and natural fiber products. Green material does not include treated wood waste, mixed demolition or mixed construction debris, or manure and plant waste from the food processing industry, alone or blended with soil. As of August 1, 2018, local jurisdictions are required to include information in an annual report on how the local jurisdiction intends to address the diversion requirements and divert green material that is being used as ADC. A jurisdiction that does not meet certain diversion requirements as a result of not being able to claim diversion for the use of green material as ADC would be required to identify and address, in an annual report, barriers to recycling green material and, if sufficient capacity at facilities that recycle green material is not expected to be operational before a certain date, to include a plan to address those barriers.

4.1.3 California Solid Waste: Diversion (AB 341)

AB 341, adopted in 2011, amended AB 939 by making a legislative declaration that it is the policy goal of the State of California that not less than 75 percent of solid waste generated be reduced, recycled, or composted by the year 2020. While a policy goal may not be legally enforceable, city and/or county ordinances and other mechanisms make AB 341 provisions enforceable within their jurisdictions. AB 341 also required a business (defined to include a commercial or public entity) that generates more than 8 cubic yards of commercial solid waste per week or is a multi-family residential dwelling of five units or more to arrange for recycling services, starting July 1, 2012.

4.1.4 Mandatory Organics Recycling (AB 1826)

The mandatory Commercial Organic Waste Recycling Law—AB 1826 became effective on January 1, 2016 and requires businesses and multi-family complexes (with five or more units) that generate specified amounts of organic waste (compost) to arrange for organics collection services. This includes schools, hospitals, stores, restaurants, for-profit or nonprofit organizations, as well as multi-family dwellings with over five units.

4.1.5 Short-Lived Climate Pollutants: Organic Waste Methane Emissions Reductions (SB 1383)

In September 2016, Governor Brown signed into law Senate Bill (SB) 1383 (Lara, Chapter 395, Statutes of 2016), establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. The new law codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605 (Lara, Chapter 523, Statutes of 2014), to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment.

As it pertains to CalRecycle, SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction

by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

4.2 City of San Diego Requirements

All landfills within the San Diego region are approaching capacity and are due to close within the next 3 to 20 years. In compliance with the state policies, the City of San Diego (City) Environmental Services Department (ESD) developed the Source Reduction and Recycling Element, which describes local waste management policies and programs. The City's Recycling Ordinance, adopted November 2007, requires on-site recyclable collection for residential and commercial uses (City of San Diego 2007a). The ordinance requires recycling of plastic and glass bottles and jars, paper, newspaper, metal containers, and cardboard. The focus of the ordinance is on education, with responsibility shared between the ESD, haulers, and building owners and managers. On-site technical assistance, educational materials, templates, and service provider lists are provided by the ESD. Property owners and managers provide on-site recycling services and educational materials annually and to new tenants. Strategies for compliance are discussed in Section 6.2, Waste Reduction Measures.

The City's Refuse and Recyclable Materials Storage Regulations, adopted December 2007, addresses the minimum exterior refuse and recyclable material storage areas required at residential and commercial properties (City of San Diego 2007b). These are intended to provide permanent, adequate, and convenient space for the storage and collection of refuse and recyclable materials; encourage recycling of solid waste to reduce the amount of waste material entering landfills; and meet the recycling goals established by the City Council and mandated by the State of California. These regulations are discussed further in Section 6.3, Exterior Storage.

In July 2008, the Construction and Demolition (C&D) Debris Deposit Ordinance was adopted by the City (City of San Diego 2008). The ordinance, which was updated in July 2016, requires that the majority of construction, demolition, and remodeling projects requiring building, combination, or demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 65 percent of their waste by recycling, reusing, or donating reusable materials. The ordinance is designed to keep C&D materials out of local landfills. Requirements are discussed further in Section 5.4.1, Contractor Education and Responsibilities.

In December 2013, City Council adopted the Zero Waste Objective, implementing the 75 percent diversion of waste target goal from landfills by the year 2020 and zero waste by 2040. An additional City target of 90 percent diversion by 2035 is proposed in the City's Climate Action Plan.

In order to implement SB 1383, which requires the reduction of organic waste disposed of in landfills, starting in 2022, the City and City-certified private waste haulers are in the planning process to expand organic waste collection services for residents and businesses. Food and yard waste collected will be recycled using the following:

- Composting facilities that make soil amendments, materials that are added to soil to change and improve it.
- Anaerobic digestion facilities, technology and microorganisms break down organic waste in closed spaces where there is no oxygen and create renewable natural gas.

Implementation of these changes will require extensive City procedural changes and coordination amongst different stakeholders. The City is in the process of developing collection operations, adopting purchasing policies, amending the City's Municipal Recycling Code, enacting building requirements, preparing enforcement responsibilities and strategizing public education and outreach efforts. As a result of this enormous planning effort, changes to yard waste collection for City-serviced residences will not begin until the summer of 2022 (City of San Diego 2021).

Additional local regulation pertaining to solid waste management includes the City of San Diego's Municipal Code Ch.14 Art. 2 Div. 8: §142.0810, §142.0820, Ch. 6 Art. 6 Div. 7; §66.0706, §66.0709, §66.0710; and Ch. 6 Art. 6 Div. 6; §66.0711, §66.0604, §66.0606. These statutes designate refuse and recycling space allocation requirements for:

- on-site refuse and recyclable material storage requirements,
- diversion of construction and demolition debris regulations, and
- diversion of recyclable materials generated from residential facilities, businesses, commercial/institutional facilities, apartments, condominiums, and special events requiring a City permit.

The City of San Diego has established a threshold of 40,000 square feet of development as generating sufficient waste (60 tons) to have a potentially cumulatively significant impact on solid waste services. The El Camino Real Assisted Living Facility as proposed exceeds this threshold. The project will also require demand on service. The purpose of this WMP is to identify measures that would be implemented to reduce this potential solid waste impacts such that significant impacts are avoided. The project will comply with all applicable state and local laws related to solid waste, including AB 939, AB 1989, AB 1327, AB 341, SB 1383, the City of San Diego General Plan, the City of San Diego Zero Waste Plan, the City's "Whitebook," and the City's Municipal Code.

The City created the Whitebook (City of San Diego 2015c), a supplement which takes precedence over the specification language contained in the "Greenbook." Standard Specifications for Public Works Construction (Public Works Standards 2015), and addresses the unique conditions in the City that are not addressed in the Greenbook. Specifically, Part 1 – General Provisions (A), Section 7-21 addresses construction and demolition waste management.

5.0 Demolition, Grading, and Construction Waste

According to the Waste Composition Study prepared by the ESD, C&D waste constituted the largest single component of disposed waste in San Diego in 2000 (City of San Diego 2000). Of the almost 590,000 tons of waste disposed of that year, C&D waste was composed of 34 percent.

5.1 Demolition

As discussed in Section 2.0, Existing Conditions, the project site is currently undeveloped (see Figure 2). Therefore, no demolition would be involved, and no demolition waste would be generated.

5.2 Grading

The project site was graded consistent with approved grading plans associated with Project No. 605191, Final Map No. 16413 (recorded on August 27, 2020). Project construction could require additional grading for individual pad and roads which would generate green waste that would be source separated and recycled at the Miramar Greenery facility at 5180 Convoy Street. Goals for this phase will be communicated to grading contractors through contract documents, the California Environmental Quality Act document, project conditions of approval that require implementation of WMP measures, and the Solid Waste Management Coordinator (SWMC) for the project.

5.3 Construction

As described in Section 3.0, Proposed Conditions, the project would construct 190,314 square feet of multi-family residential use (79 multi-family residential condominium units) and 4,134 square feet of recreational space.

The U.S. Environmental Protection Agency (2009) provides an average generation rate of 4.39 pounds of construction waste per square foot for residential types of uses, which would apply to the project's 79-unit complex. The study also provides an average generation rate of 4.34 pounds of construction waste per square foot for non-residential types of uses, which would apply to the recreational space. Table 2 shows how much project construction waste would be generated by the proposed land uses.

Table 2 Construction Waste Generation			
Land Use	Amount (square feet)	Generation Rate (pounds per square foot)	Tons Generated
Multi-Family Residential	190,314	4.39	417.7
Non-Residential (Recreational Space)	4,134	4.34	8.9
Total	194,448		426.6
SOURCE: U.S. Environmental Protection Agency 2009			

Multi-Family Residential:

$$190,314 \text{ square feet} \times \frac{4.39 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 417.7 \text{ tons}$$

Non-Residential (Recreational Space):

$$4,134 \text{ square feet} \times \frac{4.34 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 8.9 \text{ tons}$$

5.4 Waste Diversion

Implementing the City's 75 percent diversion of waste target goal adopted under the Zero Waste Objective requires a majority of waste to be handled at facilities other than landfills. There are two

types of waste diversion: “mixed-debris diversion” and “source-separated diversion.” Mixed-debris diversion is a method in which all material waste is disposed of in a single container for transport to a mixed C&D recycling facility. Under source-separated diversion, materials are separated on-site before transport to appropriate facilities that accept specific material types. Generally, a greater diversion rate is achieved under source separated diversion, as facilities that accept mixed debris typically achieve 50 to 70 percent diversion, whereas single material recyclers often achieve a nearly 100 percent diversion rate (City of San Diego 2013).

The project would implement source-separated diversion, and recyclable waste materials would be separated on-site into material-specific containers and diverted to an approved recycler selected from the City’s ESD directory of facilities that recycle specific waste materials from construction and demolition (Attachment 1). These facilities achieve a 100 percent diversion rate for most materials with the exception of a 75 percent diversion rate for roof material.

Table 3 provides a breakdown of the 426.6 tons by anticipated types of material and provides the most likely handling facility and diversion method. The amount of construction waste generated by the project have been combined together in Table 3. As shown in Table 3, use of the source separation method for most of the material types (where feasible) would result in the total diversion of approximately 336.9 tons, with 29.7 tons of drywall and 60.0 tons of trash/garbage being disposed of in the landfill.

Table 3 Construction Waste Diversion and Disposal by Material Type					
Material Type	Estimated Waste (tons)	Percent Diverted ¹	Nearest Handling Facility ¹	Estimated Diversion (tons)	Estimated Disposal (tons)
Asphalt and Concrete	68.5	100%	Vulcan Carol Canyon Landfill and Recycle Site	68.5	0.0
Metals	97.7	100%	Allan Company Miramar Recycling	97.7	0.0
Brick/Masonry/Tile	29.1	100%	Vulcan Carol Canyon Landfill and Recycle Site	29.1	0.0
Clean Wood/Wood Pallets	16.2	100%	Miramar Greenery	16.2	0.0
Carpet, Padding/ Foam	34.5	100%	DFS Flooring	34.5	0.0
Drywall	94.8	68% ²	EDCO Recovery & Transfer	65.1	29.7
Corrugated Cardboard	25.9	100%	Allan Company Miramar Recycling	25.9	0.0
Trash/Garbage	60.0	0%	Ramona Transfer Station and Buy Back Center	0.0	60.0
Total	426.6			336.9 79%	89.7 21%
¹ City ESD 2020 Certified C&D Recycling Facility Directory (see Attachment 1).					
² 100 percent diversion used for non-residential component.					
NOTE: Totals may vary due to independent rounding.					

With implementation of the diversion-estimated calculations outlined in Table 3, it is estimated that approximately 79.0 percent of the waste generated during the construction phase of the project would be diverted to appropriate facilities for reuse. Thereafter, 29.7 tons of drywall and 60.0 tons of trash/garbage, equivalent to 21 percent of the total construction waste, would be required to be disposed of in the landfill.

5.4.1 Contractor Education and Responsibilities

In order to ensure that the anticipated diversion of waste would occur during project construction, the project would include the designation of a SWMC for the duration of project construction. The SWMC would ensure that all contractors and subcontractors are educated and trained to follow City waste diversion regulations and that procedures for waste reduction and recycling efforts are implemented. Specific responsibilities of the SWMC would include the following:

- Review of the WMP at the preconstruction meeting, including the SWMC responsibilities.
- Distribute the WMP to all contractors when they first begin work on-site and when training workers, subcontractors, and suppliers on proper waste management procedures applicable to the project.
- Work with the contractors to estimate the quantities of each type of material that would be salvaged, recycled, or disposed of as waste, then assist in documentation.
- Use detailed material estimates to reduce risk of unplanned and potentially wasteful material cuts.
- Review and enforce procedures for source-separated receptacles. Containers of various sizes shall:
 - Be placed in readily accessible areas that will minimize misuse or contamination.
 - Be clearly labeled with a list of acceptable and unacceptable materials, the same as the materials recycled at the receiving material recovery facility or recycling processor.
 - Contain no more than 10 percent non-recyclable materials, by volume.
 - Be inspected daily to remove contaminants and evaluate discarded material for reuse on-site.
- Review and enforce procedures for transportation of materials to appropriate recipients selected from ESD's directory of facilities that recycle C&D materials (see Attachment 1 for ESD's facility directory).
- Ensure removal of C&D waste materials from the project site at least once every week to ensure no over-topping of containers. The accumulation and burning of on-site construction, demolition, and land-clearing waste materials will be prohibited.

- Document the return or reuse of excess materials and packaging to enhance the diversion rate.
- Coordinate implementation of a “buy recycled” program for green construction products, including incorporating mulch and compost into the landscaping.
- Coordinate implementation of solid waste mitigation with other requirements such as storm water requirements, which may include specifications such as the placement of bins to minimize the possibility of runoff contamination.

The SWMC would ensure that the project meets the following state law and City Municipal Code requirements. Adjustments would be made as needed to maintain conformance:

- The City's C&D Debris Diversion Deposit Program, which requires a refundable deposit based on the tonnage of the expected recyclable waste materials as part of the building permit requirements (City of San Diego 2008).
- The City's Recycling Ordinance, which requires that collection of recyclable materials is provided (City of San Diego 2007a).
- The City's Storage Ordinance, which requires that areas for recyclable material collection must be provided (City of San Diego 2007b).
- The name and contact information of the waste contractor provided to ESD at least ten days prior to the start of any work and updated within five days of any changes.

5.4.2 Total Diversion

With the oversight of the SWMC, the project would meet City waste diversion goals. Table 4 summarizes the amount of waste estimated to be generated and diverted by each phase of the project. Of the 426.6 tons estimated to be generated, 336.9 tons would be diverted, primarily through source separation. This would result in the diversion and reuse of 79 percent of the waste material generated from the project from the landfill, which would meet the City's current 75 percent waste diversion goal.

Table 4 Total Waste Generated, Diverted, and Disposed of by Phase				
Phase	Tons Generated	Tons Diverted		Tons Disposed
Demolition	0	0		0
Grading	0	0		0
Construction	426.6	336.9	(79%)	89.7 (21%)
Total	426.6	336.9	(79%)	89.7 (21%)
NOTE: Totals may vary due to independent rounding.				

6.0 Occupancy–Operational Waste

Unlike grading and construction, occupancy is an ongoing process. Therefore, it requires an ongoing plan to manage and reduce waste in order to meet the waste reduction goals established by local and state policy. All of the units (79 multi-family units) would be served by the City during occupancy of the project. The recreational space (tot lot) would generate minimal waste that would be managed with trash and recycling receptacles.

The City operates the Miramar Landfill, which is currently the only municipal landfill in the city. According to the City Municipal Code (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0701), the Miramar Landfill is expected to close and preserving landfill capacity is a realistic concern. City efforts have made progress, but studies have shown that there is room for improvement through additional recycling efforts. Approximately 21 percent of the waste generated in the city of San Diego and delivered for landfill disposal is paper and 16 percent is compostable organics, all of which could be diverted from landfill disposal.

6.1 Waste Generation

The estimated annual waste to be generated during occupancy of the project is based on the expected waste generation that was calculated using the City ESD Waste Generation Factors for residential uses (Attachment 2). Because the recreational space (tot lot) would generate minimal waste that would be managed with trash and recycling receptacles it was not included below.

Multi-Family Residential:

The estimated solid waste generation rate for multi-family uses is 1.6 tons/year/unit. The estimated annual amount in tons is calculated below.

$$79 \text{ dwelling units} \times \frac{1.6 \text{ tons}}{\text{year/unit}} = 126.4 \text{ tons/year/unit}$$

Table 5 shows the tons that would be generated during the occupancy phase. The proposed 79 multi-family units would generate approximately 126.4 tons of waste per year and the non-residential recreational space would generate approximately 7.02 tons of waste per year. As discussed in the following section, Waste Reduction Measures, an ongoing plan to manage waste disposal in order to meet state and City waste reduction goals would be implemented by the applicant (or applicant's successor in interest).

Table 5 Occupancy Phase Annual Waste Generation						
Land Use	Dwelling Units/ Square Feet	Generation Rate	Waste Generated (tons/unit/year)/ (tons/square feet/year)	Percent Diverted	Tons Diverted	Tons Disposed
Multi-Family Units	79 Units	1.6 tons/ unit/year	126.4	50%	63.2	63.2
Total			126.4		63.2	63.2

SOURCE: Attachment 2.

6.2 Waste Reduction Measures

According to the City Waste Management Guidelines (City of San Diego 2013), compliance with the City's Recycling Ordinances is expected to provide a minimum recycling service volume of 50 percent for large complexes. Therefore, waste anticipated to be diverted during the occupancy phase would be approximately 63.2 tons per year. The remaining 63.2 tons per year would, however, exceed the 60 ton-per-year threshold of significance for a cumulative impact on solid waste services in the City (City of San Diego 2016).

However, the City's Waste Management Guidelines have not been updated to reflect new mandates for organic material recycling and food waste collection citywide. Therefore, additional discussion is provided to characterize the organic waste stream for multi-family dwellings and estimate diversion with new organic material recycling programs anticipated to be implemented in 2022.

According to the CalRecycle 2018 Facility-Based Characterization of Solid Waste in California, organic material accounted for approximately 31 percent of the multi-family residential disposed waste. Therefore, of the 63.2 tons of disposed materials anticipated after the standard 50 percent diversion rate (see Table 5), it is assumed that 31 percent of that tonnage would be organic. In other words, it is assumed that the project would generate 19.6 tons per year of organic materials.

To comply with SB 1383, the project would need to demonstrate diversion of 50 percent of organic waste prior to January 1, 2025 and 75 percent thereafter. Of each organic waste category listed in Table 6, it is assumed that implementation of new programs and mandates for recycling of food waste and providing organic material recycling at multi-family residential facilities will result in approximately 75 percent reduction in each waste category (refer to Section 4.2 for discussion of new City programs and requirements). No diversion is included for the meat categories as it is assumed those will not be eligible for recycling. Additionally, only 75 percent diversion is assumed to account for individual non-compliance. With these assumptions, it is estimated that a 76 percent reduction in the amount of disposed organic materials would be achieved, consistent with regulatory requirements for organic material diversion. In other words, approximately 14.7 tons per year of organic materials would be diverted from the landfill with implementation of organic material recycling, including food waste recycling.

Table 6 Material Composition of Multi-Family Residential Disposed Organic Waste			
Organic Material Description	% of Total Waste	Anticipated Diversion with Franchisee Organics Recycling Programs in Place	Resulting % of Total Disposed Organic Waste
Food – Potentially Donatable	4.8%	75%	1.2%
Food – Not Donatable – meat	2.4%	0%	0%
Food – Not Donatable – Non-meat	16.2%	75%	4%
Food – Inedible	1.2%	75%	0.3%
Landscape organics and wood materials	6.6%	75%	1.7%
Total Estimate of Organic Residential Disposed Waste	31.2%		7.2% or (76% reduction)
SOURCE: CalRecycle 2020			

To reduce the cumulative impact on solid waste, the applicant (or applicant's successor in interest) shall be responsible for implementing a long-term waste management program, consistent with the Recycling Ordinance, as part of project implementation. This program shall include recyclable collection services required by and in accordance with the Recycling Ordinance, as well as providing exterior storage space for refuse, recyclable materials, and a means of handling landscaping and green waste materials. Specific program measures shall include the following:

- For multi-family residential facilities which receive solid waste collection services from a Franchisee, the responsible person shall provide on-site recycling services to occupants as required by the dates prescribed in the San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706c.
- Occupants of multi-family residential facilities which receive solid waste collection services from a Franchisee, shall participate in a recycling program by separating recyclable material from other solid waste and depositing the recyclable materials in the recycling container provided by the Franchisee or Recyclable Materials Collector (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706d).
- Consistent with SB 1383, multi-family residential facilities which receive solid waste collection services from a Franchisee, shall participate in a recycling program for organic waste collection, including food waste. This requirement shall be implemented by multi-family residential facilities, unless an exemption is granted, as soon as the City's Municipal Code is amended, and new Franchise Hauler agreements are in place that comply with the City's new organic waste collection requirements. New organic waste collection programs are anticipated by summer 2022. At a minimum, multi-family residential facilities' recycling services would include the following (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706e):
 1. Collection of recyclable materials at least two times per month.
 2. Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers.

3. Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City ESD or its successor.
 4. Designated recycling collection and storage areas.
 5. Signage on all recycling receptacles, containers, chutes, and/or enclosures which comply with the standards described in the Container and Signage Guidelines established by the City ESD or its successor.
- Occupant Education – For commercial facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707d):
 1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants' responsibility to recycle, shall be distributed to all occupants annually.
 2. All new occupants shall be given educational information on recycling programs and procedures and instructions upon occupancy.
 3. All occupants shall be given information and instructions upon any change in recycling service to the facility.
 - Occupant Education – For multi-family residential facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0706f):
 1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants' responsibility to recycle, shall be distributed to all occupants annually.
 2. All new occupants shall be given information and instructions upon occupancy.
 3. All occupants shall be given information and instructions upon any change in recycling service to the facility.

Inclusion of a project-specific waste management program, consistent with the City's Recycling Ordinance, would reduce the project's cumulative portion of impacts on solid waste, to below the City's California Environmental Quality Act Significance Determination Thresholds. The implementation of a WMP would ensure that the overall waste produced is reduced sufficiently to comply with waste reduction targets established in the City's Municipal Code and Public Resources Code (City of San Diego 2016).

6.3 Exterior Storage

The project would be required to implement the City's Municipal Code on-site refuse and recyclable material storage space requirements (City of San Diego 2007b) for the duration of project occupancy. Table 7 shows the exterior storage area requirements for residential developments.

Table 7 Minimum Exterior Refuse and Recyclable Material Storage Areas for Residential Development			
# of units	Minimum Refuse Area (square feet)	Minimum Recyclable Area (square feet)	Total Storage Area (square feet)
2–6	12	12	24
7–15	24	24	48
16–25	48	48	96
26–50	96	96	192
51–75	144	144	288
76–100	192	192	384
101–125	240	240	480
126–150	288	288	576
151–175	336	336	672
176–200	384	384	768
200+	384 plus 48 square feet for every 25 dwelling units above 201	384 plus 48 square feet for every 25 dwelling units above 201	768 plus 96 square feet for every 25 dwelling units above 201
Project (79 units)	192	192	384
SOURCE: City Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, Section 142.0820, Table 142-08B.			

Because the project would include 79 multi-family dwelling units, a minimum of 192 square feet of refuse storage area and a minimum of 192 square feet of recyclable material storage area would be required. The total exterior refuse and recyclable material storage requirement for the project would be 384 square feet. The project would meet this requirement by each individual residential unit providing its own 2.38 square feet of refuse storage and 2.38 square feet of recycling storage within their garages. One refuse storage and one recycling bin per the 79 residential units would equate to 376 square feet. However, it is expected that several units would contain multiple bins and therefore meet the total storage area requirement of 384 square feet. Refuse and recyclables stored by each dwelling unit would be collected through curbside garbage and recycling services.

During occupancy, the expected annual waste to be generated from the proposed 79 units would be approximately 126.4 tons, based on a residential waste generation rate of 1.6 tons per year per square foot. An ongoing plan to manage waste disposal in order to meet state/city certification waste reduction goals shall be implemented by the property manager through this WMP.

6.4 Organic Waste Recycling

The project would require landscaping, landscape maintenance, and brush management. Drought-tolerant plants would be used to reduce the amount of green waste produced. Collection of organic waste and its disposal at recycling centers that accept organic waste would further reduce the waste generated by the project during occupancy. Implementation of ongoing WMP requirements would include a means for handling landscaping and other organic waste materials, including food waste. The ongoing WMP measures discussed in Section 6.2, Waste Reduction Measures, would include a means for handling landscaping and other organic waste materials, in addition to food waste recycling once this service is offered by franchisees. City implementation of

SB 1383 including citywide collection and composting of food waste is anticipated to ensure 75 percent organic material diversion by 2025 as detailed in Section 6.2.

7.0 Conclusion

7.1 Demolition, Grading, and Construction Waste

The project site has been mass graded. In the event of additional grading of individual pads and roadways, diversion goals would be communicated to contractors through contract documents; the project's California Environmental Quality Act document, this WMP and corresponding project conditions; and the SWMC for the project.

Of the 426.6 tons of construction waste estimated to be generated, 336.9 tons would be diverted. This would result in the diversion and reuse of 79 percent of the waste material generated from the project from the landfill, which would meet the City's current 75 percent waste diversion goal.

7.2 Occupancy–Operational Waste

The project would construct 190,314 square feet of multi-family residential use (79 multi-family residential condominium units) and 4,134 square feet of recreational space. As such, the project would be required to provide a minimum of 192 square feet of refuse storage area and a minimum of 192 square feet of recyclable material storage area (total of 384 square feet; see Table 6). The project would meet this requirement by each individual residential unit providing its own 2.38 square feet of refuse storage and 2.38 square feet of recycling storage within their garages. However, it is expected that several units would contain multiple bins and therefore meet the total storage area requirement of 384 square feet. Refuse and recyclables stored by each dwelling unit would be collected through curbside garbage and recycling services.

The applicant (or applicant's successor in interest) would implement the ongoing waste reduction measures as prescribed in this WMP to ensure that the waste is minimized and the operation of the project complies with City ordinances. According to the City Guidelines for a Waste Management Plan (City of San Diego 2013), compliance with existing ordinances is expected to achieve a 50 percent diversion rate. Therefore, approximately 63.2 tons of non-recyclable waste per year would be generated from the project, exceeding the 60-ton-per-year threshold of significance for having a cumulative impact on solid waste services by 3.2 tons per year. However, preparation of this WMP and implementation of the Waste Reduction Measures, outlined in Section 6.2 above, would reduce cumulative solid waste impacts to a level less than significant.

7.3 Overall Compliance

With implementation of the strategies outlined in this WMP and compliance with all applicable City ordinances, solid waste impacts would be reduced to below a level of significance regarding collection, diversion, and disposal of waste generated from C&D, grading, and occupancy. Implementation of a SWMC for the project during the construction phase would achieve 79 percent diversion of construction waste from landfill disposal. This would reduce the anticipated impact of waste disposal during construction to a level less than significant.

During occupancy, the applicant or applicant's successor in interest would be required to implement the ongoing WMP measures detailed herein to ensure maximum diversion from landfills. Exterior storage space for refuse, recyclable, and landscape/green waste materials would be provided consistent with City Municipal Code requirements described herein. Compliance with existing ordinances is expected to achieve a 50 percent diversion rate. Preparation of this WMP and implementation of the Waste Reduction Measures, outlined in Section 6.2 above, would reduce cumulative solid waste impacts to a level less than significant.

8.0 References Cited

California, State of

- 1989 Assembly Bill 939. Integrated Waste Management Act.
- 2010 Senate Bill 1016. Solid Waste Per Capita Disposal Measurement Act.
- 2011 Assembly Bill 341. Jobs and Recycling.
- 2014 Assembly Bill 1826. Solid Waste: Organic Waste.

California Department of Resources Recycling and Recovery (CalRecycle)

- 2018 Facility-Based Characterization of solid Waste In California.
- 2020 New Statewide Mandatory Organic Waste Collection,
<https://www.calrecycle.ca.gov/organics/slcp/collection>. Accessed December 10, 2021.

San Diego, City of

- 2007a Recycling Ordinance. San Diego Municipal Code Chapter 6, Article 6, Division 7. November 20, 2007.
- 2007b Refuse and Recyclable Materials Storage Regulations. Municipal Code Chapter 14, Article 2, Division 8. December 9, 2007.
- 2008 Construction and Demolition Debris Diversion Deposit Program. San Diego Municipal Code Chapter 6, Article 6, Division 6.
- 2013 California Environmental Quality Act – Guidelines for a Waste Management Plan. June 2013.
- 2016 Significance Determination Thresholds. California Environmental Quality Act. July.
- 2021 New Food and Yard Waste Rules – SB1383. City of San Diego, Environmental Services. Accessed December 7, 2021. <https://www.sandiego.gov/environmental-services/recycling/sb1383>.

U.S. Environmental Protection Agency

- 2009 Estimating 2003 Building-Related Construction and Demolition Materials Amounts. March.

ATTACHMENTS

ATTACHMENT 1

City of San Diego 2021 Construction & Demolition (C&D) Recycling Facility Directory



• **Material taken to a landfill is DISPOSAL. NO diversion credit is given for any material taken to a landfill.**

• You must use one of these facilities to receive diversion credit.

• Please call ahead to confirm details such as accepted materials, days and hours of operation, limitations on vehicle types, and cost.

• Ensure the project address and permit number are on the receipt.

The facilities marked below with an asterisk are transfer stations

IMPORTANT DRIVER INSTRUCTIONS - If you deliver to a transfer station, you must have your driver:

- State that your load is Construction and Demolition (C&D) debris, and ensure it is coded correctly on the receipt.

- Tickets coded as "MSW, trash, or refuse" will receive 0% credit.

	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks	Trash	Mixed C & D Debris
EDCO Recovery & Transfer 3660 Dalbergia St, San Diego, CA 92113 619-234-7774 www.edcodisposal.com	•								•							•		76%
EDCO Station Transfer Station & Buy Back Center 8184 Commercial St, La Mesa, CA 91942 619-466-3355 www.edcodisposal.com	•			•					•			•				•		76%
EDCO CDI Recycling & Buy Back Center 224 S. Las Posas Rd, San Marcos, CA 92078 760-744-2700 www.edcodisposal.com				•	•	•						•				•		82%
Escondido Resource Recovery 1044 W. Washington Ave, Escondido 760-745-3203 www.edcodisposal.com																		76%
Fallbrook Transfer Station & Buy Back Center 550 W. Aviation Rd, Fallbrook, CA 92028 760-728-6114 www.edcodisposal.com				•								•				•		76%
Otay C&D/Inert Debris Processing Facility 1700 Maxwell Rd, Chula Vista, CA 91913 619-421-3773 www.sd.disposal.com																		74%
Ramona Transfer Station & Buy Back Center 324 Maple St, Ramona, CA 92065 760-789-0516 www.edcodisposal.com				•								•				•		76%
SANCO Resource Recovery & Buy Back Center 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696 www.edcodisposal.com				•	•	•						•						76%
Allan Company 6733 Consolidated Wy, San Diego, CA 92121 858-578-9300 www.allancompany.com/facilities				•								•						
Allan Company Miramar Recycling 5165 Convoy St, San Diego, CA 92111 858-268-8971 www.allancompany.com/facilities				•								•						
Alpine Asphalt & Concrete Recycling 5690 Willows Rd, Alpine, CA 91901 760-451-6481 www.alpineasphaltandconcrete.com	•	•	•					•										
Alpine Asphalt & Concrete Recycling 0 Duro Rd, Escondido, CA 92028 760-451-6481 www.alpineasphaltandconcrete.com	•	•	•					•										
Aquafil Carpet Collection 187 Mace St, Chula Vista, CA 91911 619-816-0787 www.aquafil.com				•	•													



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	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks	Trash	Mixed C & D Debris
Armstrong World Industries, Inc. 300 S. Myrida St, Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) www.armstrong.com/commceilingsna						•												
CMS Recycling Inc. 1428 West Mission Rd, Escondido, CA 92029 760-741-6300 www.cmsmetals.com			•										•					
DFS Flooring 10178 Willow Creek Rd, San Diego, CA 92131 858-630-5200 www.dfsflooring.com				•	•													
Duco Metals 220 Bingham Drive Suite 100, San Marcos, CA 92069 760-747-6330 www.ducometals.com													•					
Escondido Materials 500 N. Tulip St, Escondido, CA 92025 760-432-4690 www.weirasphalt.com	•																	
F.J. Willert Contracting 2385 Cactus Rd, San Diego, CA 92154 619-421-1980 www.fjwillert.com	•																	
Habitat for Humanity ReStore 8101 Mercury Ct, San Diego, CA 92108 619-516-5267 www.sandiegohabitat.org		•																
Hanson Aggregates - Hollister St 389 Hollister St, San Diego, CA 92154 858-974-3849	•																	
Hanson Aggregates West - Lakeside Plant 12560 Highway 67, Lakeside, CA 92040 858-547-2141	•																	
Hanson Aggregates West - Miramar 9229 Harris Plant Rd, San Diego, CA 92126 858-974-3849	•							•										
HVAC Exchange 2675 Faivre St, Chula Vista, CA 91911 619-423-1564 www.hvacx.com													•					
Inland Pacific Resource Recovery 12650 Slaughterhouse Canyon Rd, Lakeside, CA 92040 619-390-1418 www.iprrgreen.com								•										



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	Asphalt/Concrete	Brick/Block/Rock	Building Materials for Reuse	Cardboard	Carpet	Carpet Padding	Ceiling Tile	Ceramic Tile/Porcelain	Clean Fill Dirt	Clean Wood/Green Waste	Drywall	Industrial Plastics	Lamps/Light Fixtures	Metal	Mixed Inerts	Styrofoam Blocks	Trash	Mixed C & D Debris
Los Angeles Fiber Company 4920 S. Boyle Ave, Vernon, CA 90058 323-589-5637 www.lafiber.com				•	•													
Miramar Greenery, City of San Diego 5180 Convo St, San Diego, CA 92111 858-694-7000 www.miramargreenery.com								•										
Moody's 3210 Oceanside Blvd, Oceanside, CA 92056 760-433-3316 www.moodyselfcorazonrecycling.com	•						•						•					
RAMCO 8354 Nelson Way, Escondido, CA 92026 760-205-1797 www.ramco.us.com	•																	
Reclaimed Aggregates Chula Vista 855 Energy Way, Chula Vista, CA 91913 619-656-1836	•												•					
Robertson's Ready Mix 2094 Willow Glen Dr, El Cajon, CA 92019 619-593-1856 www.rrmca.com	•						•						•					
Rockridge Crushing 12485 Highway 67, Lakeside, CA 92040 619-324-7065	•																	
SA Recycling 3055 Commercial St, San Diego, CA 92113 619-238-6740 www.sarecycling.com												•						
SA Recycling 1211 S. 32nd St, San Diego, CA 92113 619-234-6691 www.sarecycling.com												•						
SCOR Industries 2321 South Willow Ave, Bloomington, CA 92316 909-820-5046 www.scorindustries.com	•	•	•			•		•	•	•		•	•					
Terra Bella Nursery 302 Hollister St, San Diego, CA 92154 619-585-1118 www.terrabellannursery.com							•	•										
Vulcan Carol Canyon Landfill and Recycle Site 10051 Black Mountain Rd, San Diego, CA 92126 858-530-9465 www.vulcanmaterials.com	•	•					•						•					



2021 Certified Construction & Demolition (C&D) Recycling Facility Directory

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- Tickets coded as **"MSW, trash, or refuse"** will receive 0% credit.

[illegible]

ATTACHMENT 2

City of San Diego Waste Generation Factors – Occupancy Phase

Waste Generation Factors – Occupancy Phase

The following factors are used by the City of San Diego Environmental Services Department to estimate the expected waste generation in a new residential or commercial development.

Residential Uses

Residential Unit = 1.6 tons/year/unit
Multi-family Unit = 1.2 tons/year/unit

Example: To calculate the amount of waste that will be generated from a project with 100 new homes, multiply the number of homes by the generation factor.

100 single family homes x 1.6 = 160 tons/year

100 multi-family units x 1.2 = 120 tons/year

Commercial/Industrial Uses

General Retail	0.0028
Restaurants & Bars	0.0122
Hotels/Motels	0.0045
Food Stores	0.0073
Auto/Service/Repair	0.0051
Medical Offices	0.0033
Hospitals	0.0055
Office	0.0017
Transp/Utilities	0.0085
Manufacturing	0.0059
Education	0.0013
Unclassified Services	0.0042

Example: To calculate the amount of waste that could be generated from a new building with 10,000 square feet for offices and 10,000 square feet for manufacturing, multiply the square footage for each use by the generation factor.

10,000 square feet x 0.0017 = 17 tons/year

10,000 square feet x 0.0059 = 59 tons per year

Total estimated waste generation for building = 76 tons/year