



**Waste Management Plan for the Scripps  
Health Headquarters Project  
San Diego, California  
PTS Number 686158**

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

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1:	City of San Diego 2020 Construction & Demolition (C&D) Recycling Facility Directory
2:	City of San Diego Construction & Demolition (C&D) Debris Conversion Rate Table
3:	City of San Diego Waste Generation Factors – Occupancy Phase

## Acronyms and Abbreviations

AB	Assembly Bill
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
CEQA	California Environmental Quality Act
City	City of San Diego
ESD	Environmental Services Department
project	Scripps Health Headquarters
SB	Senate Bill
SWMC	Solid Waste Management Coordinator
U.S. EPA	United States Environmental Protection Agency
WMP	Waste Management Plan

## 1.0 Introduction

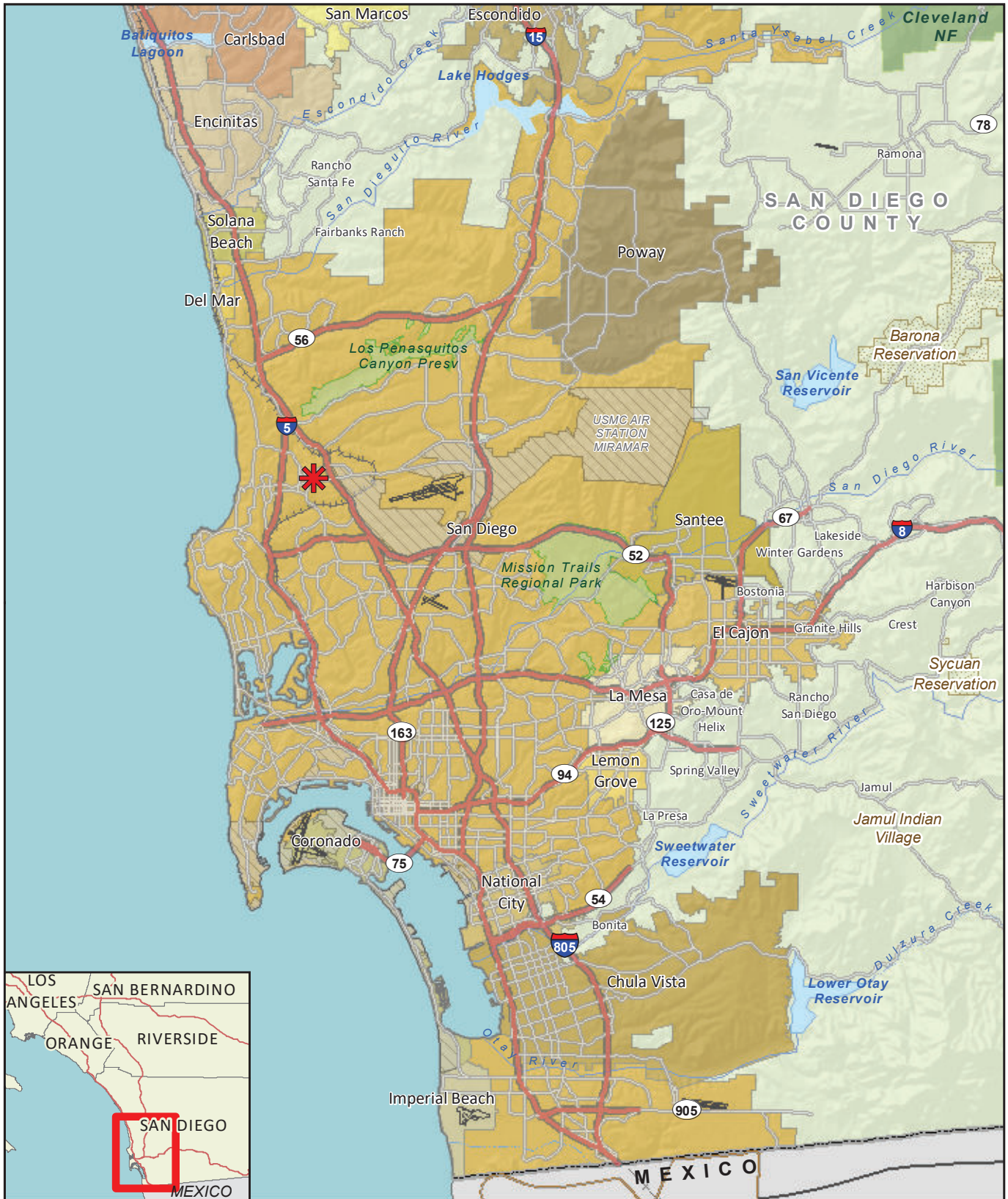
The purpose of this Waste Management Plan (WMP) is to identify the solid waste impacts that would be generated by construction and operation of the Scripps Health Headquarters Project (project) and to identify measures to reduce those impacts. The direct impact threshold of significance for projects in the city of San Diego is 1,500.0 tons of waste per year, which would likely occur when developments are over 1 million square feet. Projects that generate more than 60.0 tons of waste per year would have the potential to result in a cumulative impact on solid waste services and are required to prepare a WMP to demonstrate how the project would reduce solid waste impacts to below a level of significance.

The WMP consists of four sections corresponding to the progress of site development, which are the Demolition Phase, the Grading Phase, the Construction Phase, and the Occupancy (post-construction) Phase. Each phase addresses the amount of waste that would be generated by project activities, waste reduction goals, and the recommended techniques to achieve the waste reduction goals. More specifically, for each phase, the 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.
- Name and location of recycling, reuse, or landfill facilities where waste shall be taken.

## 2.0 Existing Conditions

The project site is located on the southeast corner of Executive Drive and Executive Way at 4555 Executive Drive (Assessor's Parcel Numbers 345-012-04-00 and 345-012-05-00). The overall location of the project site is west of Interstate 805 and east of Interstate 5, in the University Town Center community of the city of San Diego, California (Figure 1). The 3.79-acre project site is currently developed and utilized by the Braille Institute, San Diego. The project site is surrounded by residential development to the east, a Hilton Hotel and commercial development to the south, and commercial development to the west and north (Figure 2).



**\*** Project Location

**FIGURE 1**  
Regional Location





 Project Boundary

FIGURE 2  
Project Location on Aerial Photograph

## 3.0 Proposed Conditions

The proposed project includes the construction of a 131,200-square-foot, five-level office building with a 10,000-square-foot, one-level full basement, a surface parking lot, and a stand-alone four-level above-grade parking structure for 388 cars.

Project grading would require approximately 15,400 cubic yards of cut and 1,800 cubic yards of fill, requiring a net export of approximately 13,600 cubic yards. Access to the project site would be via Executive Drive and Executive Way. The proposed project site plan is shown in Figure 3.

## 4.0 Regulatory Framework

### 4.1 State Regulations

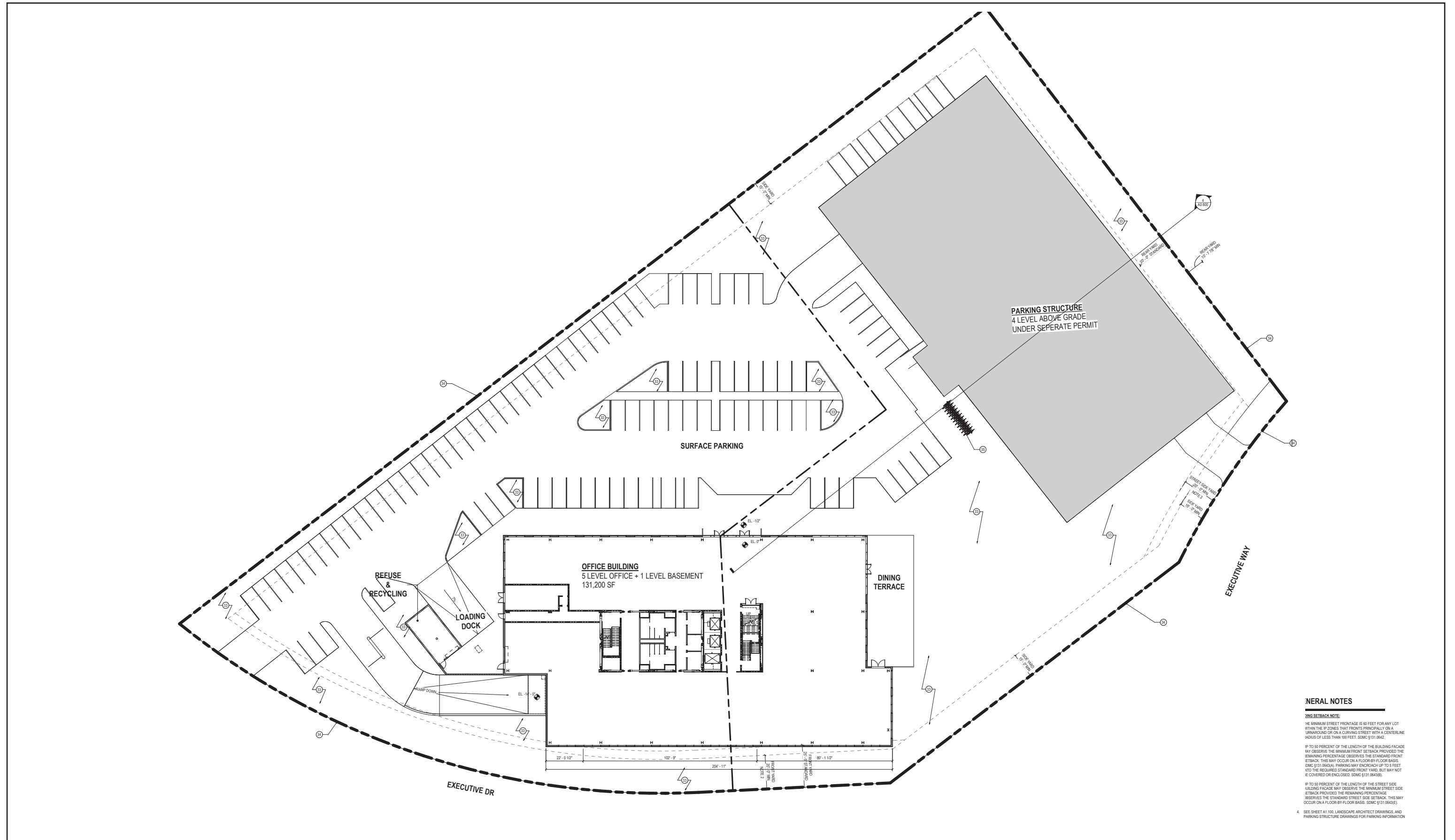
The California state legislature has enacted several bills intended to promote waste diversion. In 1989, Assembly Bill (AB) 939, the Integrated Waste Management Act—as modified in 2010 by Senate Bill (SB) 1016—mandated that all local governments reduce disposal waste in landfills from generators within their borders by 50 percent by the year 2000 (State of California 1989 and 2010).

AB 341, approved October 2011, sets a policy goal of 75 percent waste diversion by the year 2020 (State of California 2011). This bill also created a mandatory commercial recycling requirement that would hold local jurisdictions responsible for implementing and for being in compliance with the 75 percent diversion rate through outreach and monitoring programs. SB 1383, approved in September 2016, established targets to reduce the amount of organic waste that is landfilled from the 2014 level by 50 percent by 2020, and by 75 percent by 2025 (State of California 2016). The law grants the California Department of Resources Recycling and Recovery (CalRecycle) the regulatory authority required to achieve the organic waste disposal reduction targets, and it has been working to develop regulations necessary to implement the new law.

### 4.2 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.





**GENERAL NOTES**

- FRONT SETBACK NOTE:**  
THE MINIMUM STREET FRONTAGE IS 60 FEET FOR ANY LOT WITHIN THE IP ZONES THAT FRONTS PRINCIPALLY ON A UPRANDOURD OR ON A CURVING STREET WITH A CENTERLINE RADIUS OF LESS THAN 100 FEET. SDMC §131.0542.
- IF TO 50 PERCENT OF THE LENGTH OF THE BUILDING FACADE MAY OBSERVE THE MINIMUM FRONT SETBACK PROVIDED THE REMAINING PERCENTAGE OBSERVES THE STANDARD FRONT SETBACK. THIS MAY OCCUR ON A FLOOR-BY-FLOOR BASIS. (DMC §131.0543A). PARKING MAY ENCRORCH UP TO 5 FEET INTO THE REQUIRED STANDARD FRONT YARD, BUT MAY NOT BE COVERED OR ENCLOSED. SDMC §131.0543B.
- IF TO 50 PERCENT OF THE LENGTH OF THE STREET SIDE BUILDING FACADE MAY OBSERVE THE MINIMUM STREET SIDE SETBACK PROVIDED THE REMAINING PERCENTAGE OBSERVES THE STANDARD STREET SIDE SETBACK. THIS MAY OCCUR ON A FLOOR-BY-FLOOR BASIS. SDMC §131.0543C.
- 4. SEE SHEET A1.100, LANDSCAPE ARCHITECT DRAWINGS, AND PARKING STRUCTURE DRAWINGS FOR PARKING INFORMATION.

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.

### 4.3 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 requirements, 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, indicate 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 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 50 percent of their waste by recycling, reusing, or donating reusable materials. The required diversion rate is currently proposed for an increase to 65 percent. 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, the City Council adopted the Zero Waste Plan, 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 Zero Waste Plan, which is a component of 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 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

This section discusses the waste generation and diversion rates from the demolition, grading, and construction phases of the project.

### 5.1 Demolition

The project site is currently developed with 61,500 square feet of hardscape and 42,500 square feet of building area, which serves as the Braille Institute. The project would demolish the existing buildings and hardscape on-site.

Estimated demolition waste from the existing 42,500 square feet of building area is based on a 2009 study by the U.S. Environmental Protection Agency (U.S. EPA), where a sample of non-residential demolition projects generated an average of 158 pounds of waste per square foot (U.S. EPA 2009). Based on this generation rate, existing building demolition will produce 8,216.0 tons as shown in the calculation below.

Estimates of material type and amounts are included in Table 1.

**Existing Buildings:**

$$104,000 \text{ square feet} \times \frac{158 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 8,216.0 \text{ tons}$$

Estimates of building material type and amounts are based on the specific characteristics of the buildings to be demolished. Nearest handling facilities are based on the ESD 2020 Certified C&D Recycling Facilities Directory (Attachment 1). Estimates have a degree of uncertainty and would be revised as the project progresses and demolition debris is more specifically identified and weighed.

Table 1 Projected Materials Generated by Demolition Activities					
Material	Tons Generated	Percent Diverted	Nearest Handling Facility <sup>1</sup>	Tons Diverted	Tons Disposed
<b>Existing Buildings/ Hardscape</b>					
Concrete Paving	6293.2	100%	Hanson Aggregates West-Miramar	6293.2	0.0
Building Materials (doors, windows, cabinets, etc.)	21.0	100%	Habitat for Humanity ReStore	21.0	0.0
Tile	79.1	100%	Enniss Incorporated	79.1	0.0
Carpet	973.2	100%	DFS Flooring	973.2	0.0
Carpet Padding/Foam	32.8	100%	DFS Flooring	32.8	0.0
Drywall (5/8" thick)	704.0	66%	EDCO Recovery & Transfer	464.6	239.4
Ceiling Tiles	112.7	100%	AMS	112.7	0.0
<b>TOTAL</b>	<b>8216.0</b>			<b>7976.6</b>	<b>239.4</b>
NOTE: Totals may vary due to independent rounding. Portions of material types are based on specific characteristics of buildings to be demolished.					
<sup>1</sup> City of San Diego ESD 2020 Certified C&D Recycling Facility Directory (see Attachment 1).					

## 5.2 Grading

As discussed in Section 3.0, Proposed Conditions, project grading would require approximately 15,400 cubic yards of cut and 1,800 cubic yards of fill, requiring a net export of approximately 13,600 cubic yards of soil. Based on the ESD C&D Debris Conversion Rate Table, graded soil weighs approximately 1.3 tons per cubic yard (Attachment 2). Therefore, project grading would result in a net export of 17,680 tons of soil, as shown in the calculation below.



**Export Soil:**

$$13,600 \text{ cubic yards} \times 1.3 \frac{\text{tons}}{\text{unit}} = 17,680 \text{ tons}$$

All exported soil would be recycled using the City’s Clean Fill Dirt Program or an approved Clean Fill Dirt handler listed on the City’s Certified C&D Recycling Facilities Directory (see Attachment 1).

Project grading would also 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 (CEQA) 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 a 131,200-square-foot, five-level office building with a 10,000-square-foot, one-level full basement, a surface parking lot, and a 119,500-square-foot parking structure. The U.S. EPA (2009) provides an average generation rate of 4.34 pounds of construction waste per square foot for non-residential types of uses. Based on this generation rate, project construction waste is estimated to generate a total of 565.7 tons of waste during construction (see calculations and Table 2 below).

**Office (non-residential):**

$$131,200 \text{ square feet} \times \frac{4.34 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 284.7 \text{ tons}$$

**Basement (non-residential):**

$$10,000 \text{ square feet} \times \frac{4.34 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 21.7 \text{ tons}$$

**Parking Structure (non-residential):**

$$119,500 \text{ square feet} \times \frac{4.34 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 259.3 \text{ tons}$$

Table 2 Construction Waste Generation			
Land Use	Amount (square feet)	Generation Rate (pounds per square foot)	Tons Generated
Office (non-residential)	131,200	4.34	284.7
Basement (non-residential)	10,000	4.34	21.7
Parking Structure (non-residential)	119,500	4.34	259.3
<b>TOTAL</b>			<b>565.7</b>
SOURCE: U.S. Environmental Protection Agency (2009).			

## 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 materials 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 (see 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 565.7 tons of construction waste estimated to be generated by anticipated types of material and identifies the most likely handling facility and diversion method. 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 430.7 tons, with approximately 135.0 tons being disposed of in the landfill.

With implementation of the diversion-estimated calculations outlined in Table 3, it is estimated that approximately 430.7 tons, equivalent to 76 percent of the waste generated during the construction phase of the project, would be diverted to appropriate facilities for reuse. Subsequently, 135.0 tons, equivalent to 24 percent of the total construction waste, would be required to be disposed of in the landfill.

Table 3 Construction Waste Diversion and Disposal by Material Type					
Material Type	Estimated Waste (tons)	Percent Diverted <sup>1</sup>	Nearest Handling Facility <sup>1</sup>	Estimated Diversion (tons)	Estimated Disposal (tons)
Asphalt and Concrete	95.7	100%	Vulcan Carol Canyon Landfill and Recycle Site	95.7	0
Metals	150.8	100%	Allan Company Miramar Recycling	150.8	0
Brick/Masonry/Tile	46.3	100%	Vulcan Carol Canyon Landfill and Recycle Site	46.3	0
Clean Wood/Wood Pallets	25.7	100%	Miramar Greenery	25.7	0
Carpet, Padding/Foam	24.8	100%	DFS Flooring	24.8	0
Drywall	68.1	68%	EDCO Recovery & Transfer	46.3	21.8
Corrugated Cardboard	41.1	100%	Allan Company Miramar Recycling	41.1	0
Trash/Garbage	113.2	0%	Ramona Transfer Station and Buy Back Center	0.0	113.2
<b>TOTAL</b>	<b>565.7</b>			<b>430.7 (76%)</b>	<b>135.0 (24%)</b>
<sup>1</sup> City of San Diego ESD 2020 Certified C&D Recycling Facility Directory (see Attachment 1).					

### 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 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 must be 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 10 days prior to the start of any work and updated within 5 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 26,461.7 tons estimated to be generated, 26,087.3 tons would be diverted, primarily through source separation. This would result in the diversion and reuse of 98.6 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	8,216.0	7,976.6	239.4
Grading/Landscape Debris	17,680.0	17,680.0	0
Construction	565.7	430.7	135.0
<b>TOTAL</b>	<b>26,461.7</b>	<b>26,087.3</b>	<b>374.4</b>

## 6.0 Occupancy – Operational Waste

Unlike grading and construction, occupancy is an ongoing process. The project would construct a 131,200-square-foot, five-level office building with a 10,000-square-foot, one-level full basement, a surface parking lot, and a stand-alone four-level above-grade parking structure for 388 cars. Therefore, it requires an ongoing plan to manage and reduce waste in order to meet the waste reduction goals established by local and state policies. The building would be served by a franchisee.

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 reach capacity in 2030 and preserving landfill capacity is a realistic concern. City efforts have made progress, but studies have shown that there is still 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 which was calculated using the City ESD waste generation factors for commercial/industrial uses (Attachment 3). The generation factor for office under commercial/industrial uses of 0.0017 is used to estimate waste generation. The estimated annual amount in tons is calculated below:

$$131,200 \text{ square feet} \times 0.0017 = 223.0 \text{ tons/year}$$

Table 5 shows the number of tons that would be generated during the occupancy phase. The proposed office building, which totals 131,200 square feet, would generate approximately 223.0 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	Maximum Buildout	Generation Rate	Waste Generated (tons)	Percent Diverted	Tons Diverted	Tons Disposed
Office	131,200 square feet	0.0017 tons/year/unit	223.0	50	111.5	111.5
SOURCE: Attachment 3.						

## 6.2 Waste Reduction Measures

According to the City’s Guidelines for a Waste Management Plan (City of San Diego 2013), compliance with the City’s Recycling Ordinance is expected to provide a minimum recycling service volume of 50 percent. Therefore, waste anticipated to be diverted during the occupancy phase would be approximately 111.5 tons per year. The remaining 111.5 tons per year would exceed the 60.0 ton per year threshold of significance for a cumulative impact on solid waste services in the city (City of San Diego 2016).

According to the CalRecycle 2018 Facility-Based Characterization of Solid Waste in California (CalRecycle 2020), organic material accounted for approximately 36.4 percent of the franchised commercial disposed waste. Therefore, of the 111.5 tons of disposed materials anticipated after the standard 50 percent diversion rate (see Table 5), it is assumed that 36.4 percent of that tonnage would be organic. In other words, it is assumed that the project would generate 40.6 tons per year of organic materials (Table 6). 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. Based on implementation of new programs and mandates for recycling of food waste and the availability of organic material recycling services from franchised waste haulers (refer to Section 4.2 for discussion of new City programs and requirements), a 75 percent diversion of organic waste is anticipated. Only 75 percent diversion is assumed to account for individual non-compliance and assuming certain items would not be eligible for composting. With these assumptions, the project would be consistent with regulatory requirements for 75 percent organic material diversion, providing a total organic material diversion of 30.4 tons as detailed in Table 6.

Table 6 Estimate of Project Organic Waste Generation and Diversion	
Tons of Solid Waste Disposed before Organics Recycling (Project)	<b>111.5 tons</b>
Estimated Percentage of Organic Franchised Commercial Disposed Waste <sup>1</sup>	<b>36.4%</b>
Estimate of Project Organic Waste	<b>40.6 tons</b>
Estimate 75% diversion with Franchisee organics recycling programs implemented	<b>30.4 tons</b>
Estimated of Disposed Organics	<b>10.1 or 75% diversion</b>
<sup>1</sup> CalRecycle 2020, Table 6.	

To mitigate for the cumulative impact on solid waste, the applicant (or applicant’s successor in interest) shall be responsible for implementing a long-term WMP, as outlined below, which would ensure that the development meets or exceeds the requirements set forth in AB 939 and AB 341. This program shall include recyclable collection services required by and in accordance with the City’s 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 commercial 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 City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707a.
- Occupants of commercial 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.
- Consistent with SB 1383, commercial 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 commercial 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, commercial facilities’ recycling services would include the following (City Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707c):
  1. Collection of recyclable materials as frequently as necessary to meet demand.
  2. Collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers.
  3. Collection of other recyclable materials for which markets exist, such as scrap metal, wood pallets, and food waste.

4. Utilization of recycling receptacles which comply with the standards in the Container and Signage Guidelines established by the City ESD or its successor.
  5. Designated recycling collection and storage areas.
  6. Signage on all recycling receptacles, containers, 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 (City 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 (City 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.
  - Green Waste Diversion – The applicant (or applicant's successor in interest) shall provide exterior storage space for handling landscaping and green waste materials. Green waste generated by the project shall be source separated and diverted to Miramar Greenery.

Implementation of a project-specific waste management program would reduce the project's cumulative portion of impacts on solid waste, as, per the City's CEQA 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 Public Resources Code (City of San Diego 2016).



### 6.3 Exterior Storage

This WMP follows the City’s Municipal Code on-site refuse and recyclable material storage space requirements (City of San Diego 2007b). Table 7 shows the exterior storage area requirements for non-residential developments.

Table 7 Minimum Exterior Refuse and Recyclable Material Storage Areas for Non-Residential Development			
Gross Floor Area Per Development (square feet)	Minimum Refuse Storage Area Per Development (square feet)	Minimum Recyclable Material Storage Area Per Development (square feet)	Total Minimum Area Per Development (square feet)
0-5,000	12	12	24
5,000-10,000	24	24	48
10,001-25,000	48	48	96
25,001-50,000	96	96	192
50,001-75,000	144	144	244
75,001-100,000	192	192	384
100,001+	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	192 plus 48 square feet for every 25,000 square feet of building area above 100,001	384 plus 96 square feet for every 25,000 square feet of building above 100,001
<b>Project: 131,200 sq. ft.</b>	<b>252</b>	<b>252</b>	<b>504</b>
SOURCE: City of San Diego Municipal Code, Chapter 14, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, Section 142.0830, Table 142-08C.			

Because the project would include a total of 131,200 square feet of office space, a minimum of 252 square feet of refuse storage area and a minimum of 252 square feet of recyclable material storage area would be required. The total exterior refuse and recyclable material storage requirement for the project would be 504 square feet.

During occupancy, the expected annual waste to be generated from the proposed 131,200 square feet of office space would be 223.0 tons, based on an office waste generation rate of 0.0017 ton per year per unit. An ongoing plan to manage waste disposal in order to meet state and city certification waste reduction goals shall be implemented by the property manager through this WMP. Included in this program shall be the provision of a minimum of 252 square feet of exterior refuse storage area and 252 square feet of exterior recyclable material storage area, as required by the City’s Municipal Code. The project would meet this requirement by providing a 504-square-foot refuse storage and recycling room.

### 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 (City of San Diego 2021).

## 7.0 Conclusion

### 7.1 Demolition, Grading, and Construction Waste

Diversion goals would be communicated to contractors through contract documents; the project's CEQA document, this WMP and corresponding project conditions; and the SWMC for the project. The project would require approximately 15,400 cubic yards of cut and 1,800 cubic yards of fill, requiring a net export of approximately 13,600 cubic yards of soil. All exported soil would be recycled using the City's Clean Fill Dirt Program or an approved Clean Fill Dirt handler listed on the City's Certified C&D Recycling Facilities Directory. All green waste would be recycled at the Miramar Greenery facility (5180 Convoy Street); thus, the project would achieve 100 percent diversion during grading.

Of the 26,461.7 tons estimated to be generated (8,216.0 from demolition, 17,680.0 tons from grading and 565.7 tons from construction), 26,087.3 tons would be diverted (7,976.6 tons from demolition, 17,680.0 tons from grading and 430.7 tons from construction). This would result in the diversion and reuse of 98.6 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 develop 131,200 square feet of office space that would generate approximately 223.0 tons of waste per year. As such, the project would be required to provide a minimum of 252 square feet of exterior refuse area and 252 square feet of recyclable material storage area (total of 504 square feet; see Table 5). The project would meet this requirement by providing 252 square feet of exterior refuse area and 252 square feet of recyclable material storage area (total of 504-square-feet) for each building.

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 111.5 tons of non-recyclable waste per year would be generated from the project, exceeding the 60.0 ton-per-year threshold of significance for having a cumulative impact on solid waste services by 51.5 tons per year. However, preparation of

this WMP and implementation of the waste reduction measures, outlined in Section 6.2 above, would ensure the cumulative solid waste impact is reduced to below a level of significance.

## 8.0 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. With the oversight of the SWMC during the construction phase, the project would divert and reuse 98.6 percent 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.

## 9.0 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.

2016 Senate Bill 1383. Short-Lived Climate Pollutants (SLCP).

California Department of Resources Recycling and Recovery (CalRecycle)

2020 2018 Facility-Based Characterization of Solid Waste in California. May 15.

2020 New Statewide Mandatory Organic Waste Collection,  
<https://www.calrecycle.ca.gov/organics/slcp/collection>. Accessed December 22, 2021.

San Diego, City of

2007a Recycling Ordinance. San Diego Municipal Code Chapter 6, Article 6, Division 7. November 20.

2007b Refuse and Recyclable Materials Storage Regulations. Municipal Code Chapter 14, Article 2, Division 8. December 9.

- 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.
- 2016 California Environmental Quality Act – Significance Determination Thresholds. July.
- 2021 New Food and Yard Waste Rules – SB 1383. City of San Diego, Environmental Services. <https://www.sandiego.gov/environmental-services/recycling/sb1383>. Accessed December 7, 2021.

U.S. Environmental Protection Agency (U.S. EPA)

- 2009 Estimating 2003 Building-Related Construction and Demolition Materials Amounts. <https://www.epa.gov/sites/production/files/2017-09/documents/estimating2003buildingrelatedcanddmaterialsamounts.pdf>.



## ATTACHMENTS

## ATTACHMENT 1

### City of San Diego 2020 Construction & Demolition Recycling Facility Directory



## 2020 Certified Construction & Demolition (C&D) Recycling Facility Directory

These facilities are certified by the City of San Diego to accept materials listed in each category. Hazardous materials are not accepted. The diversion rate for these materials shall be considered 100 percent, except mixed C&D debris, which update quarterly. The City is not responsible for changes in facility information. Please call ahead to confirm details such as accepted materials, days and hours of operation, limitations on vehicle types, and cost. For more information visit:

[www.recyclingworks.com](http://www.recyclingworks.com)

<p><i>*Transfer Stations offer both recycling and trash disposal services. In order to receive recycling credit, you must:</i></p> <p><i>-Notify the weighmaster your load is subject to the City of San Diego C&amp;D Ordinance.</i></p> <p><i>-If your load is mixed Construction and Demolition (C&amp;D) debris, ensure it is coded correctly on the receipt. Tickets coded as "MSW, trash or refuse" will receive 0% credit.</i></p> <p><i>-Ensure the project address and Permit number are added to the receipt.</i></p> <p><i>Please note: Miramar Landfill and other landfills DO NOT recycle mixed C&amp;D debris.</i></p>	Mixed C&D Debris	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
<p><b>*EDCO Recovery &amp; Transfer*</b> 3660 Dalbergia St, San Diego, CA 92113 619-234-7774   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%	•										•						•
<p><b>*EDCO Station Transfer Station &amp; Buy Back Center*</b> 8184 Commercial St, La Mesa, CA 91942 619-466-3355   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%	•			•							•			•			•
<p><b>*EDCO CDI Recycling &amp; Buy Back Center*</b> 224 S. Las Posas Rd, San Marcos, CA 92078 760-744-2700   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	89%				•	•	•								•			•
<p><b>Escondido Resource Recovery</b> 1044 W. Washington Ave, Escondido 760-745-3203   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%																	
<p><b>*Fallbrook Transfer Station &amp; Buy Back Center*</b> 550 W. Aviation Rd, Fallbrook, CA 92028 760-728-6114   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%				•										•			•
<p><b>Otay C&amp;D/Inert Debris Processing Facility</b> 1700 Maxwell Rd, Chula Vista, CA 91913 619-421-3773   <a href="http://www.sd.disposal.com">www.sd.disposal.com</a></p>	87%																	
<p><b>*Ramona Transfer Station &amp; Buy Back Center*</b> 324 Maple St, Ramona, CA 92065 760-789-0516   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%				•										•			•
<p><b>SANCO Resource Recovery &amp; Buy Back Center</b> 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696   <a href="http://www.edcodisposal.com">www.edcodisposal.com</a></p>	68%				•	•	•								•			
<p><b>Allan Company</b> 6733 Consolidated Wy, San Diego, CA 92121 858-578-9300   <a href="http://www.allancompany.com/facilities">www.allancompany.com/facilities</a></p>					•										•			
<p><b>Allan Company Miramar Recycling</b> 5165 Convoy St, San Diego, CA 92111 858-268-8971   <a href="http://www.allancompany.com/facilities">www.allancompany.com/facilities</a></p>					•										•			
<p><b>Armstrong World Industries, Inc.</b> 300 S. Myrida St, Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) <a href="http://www.armstrong.com/commceilingsna">www.armstrong.com/commceilingsna</a></p>								•										
<p><b>CMS Recycling Inc.</b> 1428 West Mission Rd, Escondido, CA 92029 760-741-6300   <a href="http://www.cmsmetals.com">www.cmsmetals.com</a></p>					•										•			
<p><b>DFS Flooring</b> 10178 Willow Creek Rd, San Diego, CA 92131 858-630-5200   <a href="http://www.dfsflooring.com">www.dfsflooring.com</a></p>						•	•											

<p><b>*Transfer Stations offer both recycling and trash disposal services. In order to receive recycling credit, you must:</b>  -Notify the weighmaster your load is subject to the City of San Diego C&amp;D Ordinance.  -If your load is mixed Construction and Demolition (C&amp;D) debris, ensure it is coded correctly on the receipt. Tickets coded as "MSW, trash or refuse" will receive 0% credit.  -Ensure the project address and Permit number are added to the receipt.  <b>Please note: Miramar Landfill and other landfills DO NOT recycle mixed C&amp;D debris.</b></p>	Mixed C&D Debris	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	
<p><b>Duco Metals</b>  220 Bingham Drive Suite 100, San Marcos, CA 92069  760-747-6330   <a href="http://www.ducometals.com">www.ducometals.com</a></p>																			
<p><b>Escondido Materials</b>  500 N. Tulip St, Escondido, CA 92025  760-432-4690   <a href="http://www.weirasphalt.com">www.weirasphalt.com</a></p>		•																	
<p><b>Habitat for Humanity ReStore</b>  8101 Mercury Ct, San Diego, CA 92108  619-516-5267   <a href="http://www.sandiegohabitat.org">www.sandiegohabitat.org</a></p>				•															
<p><b>Hanson Aggregates – Hollister St</b>  389 Hollister St, San Diego, CA 92154  858-974-3849</p>		•																	
<p><b>Hanson Aggregates West – Lakeside Plant</b>  12560 Highway 67, Lakeside, CA 92040  858-547-2141</p>		•																	
<p><b>Hanson Aggregates West – Miramar</b>  9229 Harris Plant Rd, San Diego, CA 92126  858-974-3849</p>		•								•									
<p><b>HVAC Exchange</b>  2675 Fairve St, Chula Vista, CA 91911  619-423-1564   <a href="http://www.hvacx.com">www.hvacx.com</a></p>															•				
<p><b>Inland Pacific Resource Recovery</b>  12650 Slaughterhouse Canyon Rd, Lakeside, CA 92040  619-390-1418   <a href="http://www.iprrgreen.com">www.iprrgreen.com</a></p>											•								
<p><b>Los Angeles Fiber Company</b>  4920 S. Boyle Ave, Vernon, CA 90058  323-589-5637   <a href="http://www.lafiber.com">www.lafiber.com</a></p>						•	•												
<p><b>Miramar Greenery, City of San Diego</b>  5180 Convoy St, San Diego, CA 92111  858-694-7000   <a href="http://www.miramargreenery.com">www.miramargreenery.com</a></p>											•								
<p><b>Moody's</b>  3210 Oceanside Blvd, Oceanside, CA 92056  760-433-3316   <a href="http://www.moodyselecorazonrecycling.com">www.moodyselecorazonrecycling.com</a></p>		•								•						•			
<p><b>Planet Recycling</b>  187 Mace St, Chula Vista, CA 91911  888-258-7755   <a href="http://www.planetrecyclingphoenix.com">www.planetrecyclingphoenix.com</a></p>						•													
<p><b>RAMCO</b>  8354 Nelson Way, Escondido, CA 92026  760-205-1797   <a href="http://www.ramco.us.com">www.ramco.us.com</a></p>		•																	
<p><b>Reclaimed Aggregates Chula Vista</b>  855 Energy Way, Chula Vista, CA 91913  619-656-1836</p>		•														•			
<p><b>Robertson's Ready Mix</b>  2094 Willow Glen Dr, El Cajon, CA 92019  619-593-1856   <a href="http://www.rrmca.com">www.rrmca.com</a></p>		•								•						•			
<p><b>Rockridge Crushing</b>  12485 Highway 67, Lakeside, CA 92040  619-324-6570</p>		•																	
<p><b>SA Recycling</b>  3055 Commercial St, San Diego, CA 92113  619-238-6740   <a href="http://www.sarecycling.com">www.sarecycling.com</a></p>															•				

<p><b>*Transfer Stations offer both recycling and trash disposal services. In order to receive recycling credit, you must:</b></p> <p>-Notify the weighmaster your load is subject to the City of San Diego C&amp;D Ordinance.</p> <p>-If your load is mixed Construction and Demolition (C&amp;D) debris, ensure it is coded correctly on the receipt. Tickets coded as "MSW, trash or refuse" will receive 0% credit.</p> <p>-Ensure the project address and Permit number are added to the receipt.</p> <p><b><u>Please note: Miramar Landfill and other landfills DO NOT recycle mixed C&amp;D debris.</u></b></p>	Mixed C&D Debris	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
<p><b>SA Recycling</b> 1211 S. 32<sup>nd</sup> St, San Diego, CA 92113 619-234-6691   <a href="http://www.sarecycling.com">www.sarecycling.com</a></p>																		
<p><b>SCOR Industries</b> 2321 South Willow Ave, Bloomington, CA 92316 909-820-5046   <a href="http://www.scorindustries.com">www.scorindustries.com</a></p>		•	•		•				•		•		•		•	•		
<p><b>Terra Bella Nursery</b> 302 Hollister St, San Diego, CA 92154 619-585-1118   <a href="http://www.terrabellanursery.com">www.terrabellanursery.com</a></p>										•	•							
<p><b>Vulcan Carol Canyon Landfill and Recycle Site</b> 10051 Black Mountain Rd, San Diego, CA 92126 858-530-9465   <a href="http://www.vulcanmaterials.com">www.vulcanmaterials.com</a></p>		•	•							•						•		
<p><b>Vulcan Materials Company</b> 2275 Hard Rock Rd, Chula Vista, CA 91913 858-530-9472   <a href="http://www.vulcanmaterials.com">www.vulcanmaterials.com</a></p>		•																
<p><b>Vulcan Otay Asphalt Recycle Center</b> 7522 Paseo de la Fuente, San Diego, CA 92154 619-571-1945   <a href="http://www.vulcanmaterials.com">www.vulcanmaterials.com</a></p>		•																

## ATTACHMENT 2

### City of San Diego Construction & Demolition (C&D) Debris Conversion Rate Table





# CITY OF SAN DIEGO

## Construction & Demolition (C&D) Debris

### Conversion Rate Table

This worksheet lists materials typically generated from a construction or demolition project and provides formulas for converting common units (i.e. cubic yards, square feet, and board feet) to tons. It is a tool that should be used for preparing your Waste Management Form - Part I, which requires that quantities be provided in tons.

**Note: Weigh receipts are required for your refund request.**

- Step 1:** Enter the estimated quantity for each applicable material in Column I, based on units
- Step 2:** Multiply by Tons/Unit figure listed in Column II. Enter the result for each material in Column III.  
If using Excel version, column III will automatically calculate tons.
- Step 3:** Enter quantities for each separated material from Column III on this worksheet into the corresponding section of your Waste Management Form - Part I.

Category	Material	Column I		Column II		Column III	
		Volume	Unit	Tons/Unit	Tons	Tons	Tons
Asphalt/Concrete	Asphalt (broken)	_____	cy	x	0.70	=	_____
	Concrete (broken)	_____	cy	x	1.20	=	_____
	Concrete (solid slab)	_____	cy	x	1.30	=	_____
Brick/Masonry/Tile	Brick (broken)	_____	cy	x	0.70	=	_____
	Brick (whole, palletized)	_____	cy	x	1.51	=	_____
	Masonry Brick (broken)	_____	cy	x	0.60	=	_____
	Tile	_____	sq ft	x	0.00175	=	_____
Building Materials (doors, windows, cabinets, etc.)		_____	cy	x	0.15	=	_____
Cardboard (flat)		_____	cy	x	0.05	=	_____
Carpet	By square foot	_____	sq ft	x	0.0005	=	_____
	By cubic yard	_____	cy	x	0.30	=	_____
Carpet Padding/Foam		_____	sq ft	x	0.000125	=	_____
Ceiling Tiles	Whole (palletized)	_____	sq ft	x	0.0003	=	_____
	Loose	_____	cy	x	0.09	=	_____
Drywall (new or used)	1/2" (by square foot)	_____	sq ft	x	0.0008	=	_____
	5/8" (by square foot)	_____	sq ft	x	0.00105	=	_____
	Demo/used (by cubic yd)	_____	cy	x	0.25	=	_____
Earth	Loose/Dry	_____	cy	x	1.20	=	_____
	Excavated/Wet	_____	cy	x	1.30	=	_____
	Sand (loose)	_____	cy	x	1.20	=	_____
Landscape Debris (brush, trees, etc)		_____	cy	x	0.15	=	_____
Mixed Debris	Construction	_____	cy	x	0.18	=	_____
	Demolition	_____	cy	x	1.19	=	_____
Scrap metal		_____	cy	x	0.51	=	_____
Shingles, asphalt		_____	cy	x	0.22	=	_____
Stone (crushed)		_____	cy	x	2.35	=	_____
Unpainted Wood & Pallets	By board foot	_____	bd ft	x	0.001375	=	_____
	By cubic yard	_____	cy	x	0.15	=	_____
Garbage/Trash		_____	cy	x	0.18	=	_____
Other (estimated weight)		_____	cy	x	estimate	=	_____
		_____	cy	x	estimate	=	_____
		_____	cy	x	estimate	=	_____
<b>Total All</b>							_____

## ATTACHMENT 3

### 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