Kearny Mesa Logistics Center Project

Draft Waste Management Plan

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
APN	Assessor Parcel Number
Applicant	Latitude 33 Planning & Engineering
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
CEQA	California Environmental Quality Act
CY	cubic yard(s)
DSD	Development Services Department (City of San Diego)
ESD	Environmental Services Department (City of San Diego)
FEMA	Federal Emergency Management Agency
IBC	International Building Code
ICC	International Code Council
IWMP	Integrated Waste Management Plan
lbs	pounds
project	Kearny Mesa Logistics Center Project
SDMC	San Diego Municipal Code
SF	square foot/feet
SRRE	Source Reduction and Recycling Element
State	State of California
SWMC	Solid Waste Management Coordinator
WDM	Waste Diversion Measures
WMP	Waste Management Plan

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

The purpose of this Waste Management Plan (WMP) is to identify the quantity of solid waste that would be generated by the Kearny Mesa Logistics Center Project (project) throughout demolition, construction, and operation, and to identify measures to reduce the potential impacts associated with management of such waste.

Proper separation and diversion of recyclable waste materials is required in order to divert each material type to a recycling/reuse facility with the highest possible diversion rate. As discussed further in Section 2.0, Regulatory Framework, in order to comply with City of San Diego's (City's) waste reduction ordinances and the waste diversion goals established in State Assembly Bill (AB) 341, the project must achieve a 75 percent diversion rate during demolition and construction. The City's California Environmental Quality Act (CEQA) Significance Thresholds for solid waste identify a threshold of 1,500 tons of waste or more during construction and demolition (C&D) for direct solid waste impacts, and 60 tons of waste or more during C&D for potentially significant cumulative solid waste impacts (City 2011). The City Environmental Services Department's (ESD) Certified C&D Recycling Facility Directory (City 2020; Appendix A) provides guidance on identifying recycling/reuse facility locations, accepted materials, recycling/reuse rates, and associated disposal fees and/or the value of the materials accepted for recycling/reuse.

This WMP has been prepared consistent with applicable federal, state, and local laws, regulations, and standards pertinent to the project. Its goal is to implement an approach for managing waste that conserves landfill space, preserves environmental quality, conserves natural resources, and reduces disposal costs. Responsibility for ensuring ongoing WMP compliance would be under the direction of the Project Solid Waste Management Coordinator (SWMC), as assigned by Latitude 33 Planning & Engineering (Applicant).

1.2 PROJECT LOCATION

The project site is an approximately 21-acre property located at 5670 Kearny Mesa Road in the community of Kearny Mesa in the City of San Diego (Figures 1 and 2, *Regional Location*, and *Project Vicinity*, respectively). The project site is currently developed with three industrial buildings and associated surface parking lots utilized by the Cubic Corporation. Surrounding uses include industrial buildings and open space to the west, State Route (SR-) 52 to the north, SR-163 to the south and east, and Kearny Mesa Road to the east of the project site. The project is situated within Assessor Parcel Numbers (APNs) 356-032-01 and -02.

The project site is currently developed with three industrial buildings (Figure 3, *Existing Site*). The sizes and locations of each of the existing buildings are provided below:

- Building A (approximately 20,000 square feet [SF]): located in the northwest corner
- Building B (approximately 46,400 SF): located in the northeast corner
- Building C (approximately 42,500 SF): located in the southeast corner

The three buildings total approximately 108,900 SF of existing industrial space on the project site, along with associated parking.

1.3 PROJECT DESCRIPTION

The proposed project consists of the redevelopment of the current Cubic property for logistics uses. The existing buildings would be demolished, and an approximately 330,000-SF industrial/logistics building would be constructed in the in the southern and western portions of the site (Figure 4, *Site Plan*). The proposed building would consist primarily of painted concrete tilt-up construction with smooth wall panels with steel sub frame, open steel web joint and panelized wood roof structure. Special design elements include accent color paint, wall plane offsets and large blue glass window walls and metal panel cladded canopies. The rest of the building would be smooth concrete tilt-up with combination of the concrete reveals and paint to create rhythm and proportion that breaks down large building volume into more human scale appropriate architectural composition. The building also includes steel frame mezzanines. The abundance of daylighting within the building would be provided via proposed roof skylights.

In addition to the building, the project would also include approximately 330 surface parking spaces and approximately 79,300 SF of landscaped areas. The project would be constructed in a single phase as a cold shell speculative warehouse/distribution building.

2.0 REGULATORY FRAMEWORK

2.1 STATE OF CALIFORNIA

The State of California (State) Integrated Waste Management Act of 1989 (California AB 939), which is administered by the California Department of Resources Recycling and Recovery (CalRecycle), requires counties to develop an Integrated Waste Management Plan (IWMP) that describes local waste diversion and disposal conditions, and lays out realistic programs to achieve the waste diversion goals (State of California 1989). IWMPs compile Source Reduction and Recycling Elements (SRREs) that are required to be prepared by each local government, including cities. SRREs analyze the local waste stream to determine where to focus diversion efforts, and provide a framework to meet waste reduction mandates. The goal of the solid waste management efforts is not to increase recycling, but to decrease the amount of waste entering landfills. AB 939 required all cities and counties to divert a minimum 50 percent of all solid waste from landfill disposal.

In 2011, the State legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 also requires the provision of recycling service to commercial and residential facilities that generate 4 cubic yards (CY) or more of solid waste per week.

In October 2014, Governor Brown signed AB 1826 Chesbro (Chapter 727, Statutes of 2014), requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. For businesses that generate 8 or more CY of organic waste per week, this requirement begins April 1, 2016, while those that generate 4 CY of organic waste per week must have an organic waste recycling program

in place beginning January 1, 2017. This law also requires that on and after January 1, 2016, local jurisdictions across the State implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residential dwellings that consist of five or more units. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties.

2.2 LOCAL REGULATIONS

The City has enacted codes and policies directed at the achievement of State-required diversion levels, including the Refuse and Recyclable Materials Storage Regulations (City 1997; Municipal Code Chapter 14, Article 2 Division 8), Recycling Ordinance (City 2007; Municipal Code Chapter 6, Article 6, Division 7), and the Construction and Demolition Debris Deposit Ordinance (City 2008; Municipal Code Chapter 6, Article 6, Division 6). The City's Zero Waste Plan, a component of the City's Climate Action Plan, was approved and adopted by City Council on July 13, 2015. The Zero Waste Plan identifies goals and strategies to achieve 75 percent diversion by 2020, 90 percent diversion by 2035, and "zero" waste by 2040 (City 2015).

As stated in the City Development Services Department (DSD) CEQA Significance Determination Thresholds (City 2016a), implementation of these regulations and ordinances alone is not projected to achieve a 50 percent diversion rate, far below the current 75 percent diversion level targeted by the State and identified in the Zero Waste Plan for 2020. The City's ESD estimates that compliance with existing City ordinances and regulations alone achieves only an approximate 30 and 40 percent diversion rate for small and large projects, respectively (City 2013). Therefore, discretionary projects must undertake additional measures to comply with existing regulations.

2.2.1 City of San Diego CEQA Significance Determination Thresholds

The City's CEQA Significance Determination Thresholds establish solid waste generation thresholds for discretionary projects. Proposed projects that involve construction, demolition, and/or renovation that meet or exceed the thresholds described below are considered to have potentially significant solid waste impacts and require the preparation of a WMP.

Direct Impacts

A project would have a direct impact on solid waste services if it would generate 1,500 tons of waste or more during demolition and construction. Projects that include the construction, demolition, or renovation of 1,000,000 SF or more of building space are considered by the City to have the potential to generate this amount of waste, and therefore may have direct impacts on solid waste services. Additional considerations are as follows:

- The generation of large amounts of waste result in direct impacts that bring facilities closer to daily throughput limits, shorten facility lifespans, require increased numbers of trucks and other equipment, and make it difficult for the City to achieve required waste reduction levels. Waste management planning is based on a steady rate of waste generation and does not assume increased waste generation due to growth.

- While all projects are required to comply with the City's waste management ordinances, direct and cumulative impacts are mitigated by the implementation of project-specific WMPs, which may reduce solid waste impacts to below a level of significance.

- For projects over 1,000,000 SF, a significant direct and cumulative solid waste impact would result if the compliance with the City's ordinances and the WMP fail to reduce the impacts of such projects to below a level of significance and/or if a WMP for the project is not prepared and conceptually approved by the ESD prior to distribution of the draft environmental document for public review.

Cumulative Impacts

A project would have a cumulative impact on solid waste services if it would generate 60 tons of waste or more per year. Projects that include the construction, demolition, and/or renovation of 40,000 SF or more of building space are considered by the City to potentially generate this amount of waste, and therefore may have cumulative impacts on solid waste services. Other projects such as new single-family residences on public streets or projects creating a demand for litter bin service may also cumulatively impact solid waste services.

While all projects are required to comply with the City's waste management ordinances, cumulative impacts are mitigated by the implementation of a project-specific WMP that reduces solid waste impacts to below a level of significance.

Project Potential Impacts

The project may generate more than 1,500 tons of solid waste materials during demolition and construction and therefore may exceed the City's threshold for direct solid waste impacts. The project also proposes construction of more than 40,000 SF, thereby exceeding the City's threshold for cumulative solid waste impacts without implementation of solid waste diversion measures.

Because implementation of the project without waste diversion measures may exceed direct and cumulative solid waste thresholds, the City has required preparation of this WMP in compliance with CEQA and City Guidelines, to ensure that the project contribution to the overall waste produced within the City would be reduced sufficiently to allow the City to comply with the waste reduction targets established in the Public Resources Code and State statutes.

2.2.2 City of San Diego Refuse and Recyclable Materials Storage Ordinance

San Diego Municipal Code (SDMC) Section 142.0801 et seq. contains the language of the City Refuse and Recyclable Materials Storage Ordinance (Storage Ordinance), an ordinance that is required by State law. Table 1, *Required Minimum Storage Areas for Non-residential Development*, (SDMC Table 142 08C) provides information on minimum exterior refuse and recyclable material storage areas for non-residential development.

Table 1
REQUIRED MINIMUM STORAGE AREAS FOR NON-RESIDENTIAL DEVELOPMENT

Gross Floor Area (SF)	Minimum Refuse Storage Area (SF)	Minimum Recyclable Material Storage Area (SF)	Total Minimum Storage Area (SF)
0-5,000	12	12	24
5,001-10,000	24	24	48
10,001-25,000	48	48	96
25,001-50,000	96	96	192
50,001-75,000	144	144	288
75,001-100,000	192	192	384
100,001+	192+48 SF for every 25,000 SF of building area above 100,001	192+48 SF for every 25,000 SF of building area above 100,001	384+96 SF for every 25,000 SF of building area above 100,001

SF = square feet

City of San Diego Recycling Ordinance

The City's Recycling Ordinance, found in SDMC Section 66.0701 et seq., was adopted in November 2007 (City 2007). The Recycling Ordinance requires the provision of recycling service for all commercial facilities, all single-family residences, and multi-family residences with more than 49 units. The Ordinance also provides an exemption for land uses that generate less than 6 CY of waste per week. However, as noted above, AB 341, which was chaptered after the City enacted this ordinance, has imposed a requirement that "captures" any uses being served with 4 CY or more of refuse capacity. This State requirement makes the provision of recycling service a virtually universal requirement. In addition, the Recycling Ordinance also requires development of educational materials to ensure occupants are informed about the City's ordinance and recycling services, including information on types of recyclable materials accepted.

City of San Diego Construction and Demolition Debris Deposit Ordinance

On July 1, 2008, the City's C&D Debris Deposit Ordinance became effective (City 2008). An amendment to the ordinance and revisions to the associated C&D deposit schedule were approved by the City Council on December 10, 2013 (effective January 1, 2014) and on April 19, 2016 (effective June 22, 2016). The C&D Debris Deposit Ordinance is designed to keep C&D materials out of local landfills and ensure that materials are diverted from disposal. The ordinance creates an economic incentive to recycle C&D debris through the collection of fully refundable deposits that are returned, in whole or in part, upon proof of the amount of C&D debris the project applicant diverted from landfill disposal. The ordinance requires that the majority of construction, demolition and remodeling projects requiring building, combination, and demolition permits pay a refundable C&D Debris Recycling Deposit and divert at least 65 percent of their debris by recycling, reusing, or donating usable materials. The deposit is held until the applicant provides receipts demonstrating that a minimum 65 percent of the material generated has been diverted from disposal in landfills.

The C&D Ordinance stipulates that projects will be required to divert 75 percent of their wastes when mixed debris facilities with a permitted daily tonnage capacity of at least 1,000 tons maintain a 75 percent diversion rate for three consecutive calendar year quarters. Greater than 75 percent diversion also may be required for a project if a higher goal is specified during discretionary permitting.

Mixed debris recyclers in San Diego County currently achieve between 68 and 89 percent diversion rates at their facilities (City 2020; Appendix A). This is because not everything that comes through the door is usable or marketable. While there are two facilities that achieve a diversion rate equal to or greater than 75 percent, the others have a diversion rate of 68 percent. For a project that would dispose of mixed debris at one of the facilities that achieve a 68 percent diversion rate, virtually all clean C&D waste from a project must be source separated and sent to a material-specific recycling facility, such as aggregate and metal recyclers, in order to achieve an overall diversion rate of 75 percent. Higher diversion rates can also be accomplished by salvage and/or on-site reuse of C&D materials. The City's C&D thresholds and deposit amounts are shown below in Table 2, *City C&D Deposit Schedule*.

Table 2
CITY C&D DEPOSIT SCHEDULE

Building Category	Deposit per SF[1]	Minimum SF Subject to Ordinance	Maximum SF Subject to Ordinance	Range of Deposits
Residential New Construction, Non-residential Alterations, Demolition	$0.40	1,000	100,000	$400-$40,000
Non-residential New Construction	$0.20	1,000	50,000	$200-$10,000
Flat Rate				
Residential Alterations	$1,000	1,000	6,999	$1,000

Source: City 2016b

[1] Deposit amounts are applied to the entire area(s) where work will be performed, and are calculated based on square footage.

SF = square foot/feet

3.0 PRE-CONSTRUCTION WASTE

Prior to initiation of the project's construction activities, site preparation would require clearing/ grubbing and demolition. Clearing and grubbing would require removal of existing vegetation. All three of the existing buildings and associated structures within the project area would be demolished, including paved parking lot areas, sidewalks, curbs, and gutters.

All C&D-generated waste would be subject to compliance with the source separation and diversion requirements contained in this WMP to divert, recycle, and/or re-use these materials to the maximum degree possible. As identified in the City's Certified C&D Recycling Facility Directory (City 2020; Appendix A), "Mixed C&D Debris" recyclers attain at most an 89 percent diversion rate, whereas "source separated" material recyclers can attain nearly 100 percent diversion rates (City 2020). As a result, in order to achieve the highest level of waste diversion from landfills, and highest dollar value for the quality of materials, the project would source separate (segregate) clean recyclable materials on the site by material type, to the maximum extent practicable, and divert them for recycling or reuse at City-certified facilities specializing in each material type.

3.1 DEMOLITION

3.1.1 Building Demolition

The existing development includes three industrial buildings that are proposed to be demolished as part of the project. Using aerial imagery, it was determined that each of the three existing buildings are one story in height and collectively comprise a total of approximately 108,900 SF of industrial space.

In the International Building Code (IBC), the International Code Council (ICC) classifies buildings into five categories based on their type of construction (ICC 2015). Construction Type I buildings are considered to be fire resistive, often by using non-combustible materials such as steel with a fire-resistant coating and concrete. Construction Type II buildings typically have non-combustible walls, but are not considered to be fire resistive. Construction Type III buildings are combustible, typically built with block or brick walls and a wooden roof. Buildings that utilize heavy timber in their framework are classified as Construction Type IV. Construction Type V buildings have wooden frames are considered to be combustible.

The existing buildings to be demolished are estimated to be Type II construction. This construction type typically consists of non-combustible materials, including concrete and steel. A breakdown of building demolition by square footage is listed below.

- Building A: 20,000 SF
- Building B: 46,400 SF
- Building C: 42,500 SF

3.1.1.1 Salvage

No salvage of materials in the existing building is proposed.

3.1.1.2 Recycling

The overall estimated quantity of debris from the buildings are based on the "General Building Formula" contained in the Federal Emergency Management Agency's (FEMA) Debris Estimating Field Guide (2010). The formula multiplies building length, width, and height (in feet) by a constant of 0.33 to account for air space in the building, and divides the resulting number by 27 to convert cubic feet to cubic yards (FEMA 2010):

$$\frac{\text{Length x Width x Height x 0.33}}{27} = \text{CY}$$

Building A has an approximate height of 35 feet, Building B has an approximate height of 27 feet, and Building C has an approximate height of 25 feet. The square footage listed above equals their length times width. Using these dimensions, structural debris for Building A as an example is estimated as follows:

$$\frac{\text{(20,000 SF x 35 feet x 0.33)}}{27} = \textbf{8,556 CY}$$

Using this formula for the remaining buildings provides the following estimated quantities of debris, totaling approximately 36,854 CY of demolition debris for the existing buildings:

- Building A: 8,556 CY
- Building B: 15,312 CY
- Building C: 12,986 CY

As specific materials contained in the existing building are not known, estimates were pulled from the Military Base Closure Handbook – A Guide to Construction and Demolition Materials Recovery (CalRecycle 2002). According to this handbook, demolition of typical commercial concrete structures results in a C&D waste stream (by volume) as follows:[1]

- 51 percent concrete
- 22 percent brick
- 18 percent wood
- 5 percent paperboard
- 3 percent metal

In addition to the percentages listed above, it is assumed that there are other recyclable "mixed debris" materials present in unknown quantities, which are estimated to comprise 20 percent of the total demolition debris. These materials would be too damaged or mixed to be source separated into clean materials, and would be disposed of accordingly. An additional eight percent non-recyclable "waste" also was factored into the total waste stream anticipated for demolition of the structures. Factoring in the 28 percent mixed debris and trash that would be generated during demolition, the concrete, brick, wood, paperboard, and metal breakdown provided in the Military Base Closure Handbook would account for the remaining 72 percent of total waste.

The complete breakdown of waste types and volumes of demolition waste anticipated to be generated are shown in Table 3, *Existing Structure Demolition Waste Content*.

[1] The *Military Base Closure Handbook – A Guide to Construction and Demolition Materials Recovery* has the percentage total of waste equaling 99 percent. This is likely due to rounding that was not disclosed in the document. To allow for balanced equations, a quarter of a percent was added to concrete, brick, wood, and paperboard materials in the calculations.

Table 3
EXISTING STRUCTURE DEMOLITION WASTE CONTENT

Material	Percent Waste by Material (%)[1,2]	Volume Waste by Material (CY)3
Concrete	37	13,599
Brick	16	5,904
Wood – Clean[4]	7	2,421
Wood – Treated[4]	7	2,421
Metal	2	796
Paperboard	4	1,393
Mixed debris	20	7,371
Trash	8	2,948
	TOTAL	**36,854**

Sources: FEMA 2010; CalRecycle 2002

1 Estimated percentages for concrete, brick, wood, paperboard, and metal provided by the Military Base Closure Handbook – A Guide to Construction and Demolition Materials Recovery (CalRecycle 2002) were broken down from the 72 percent of demolition materials remaining after subtracting 20 percent mixed debris and 8 percent trash. For example, the percent waste by material for concrete was generated by multiplying 72 percent by 51 percent (the concrete composition in commercial concrete structures) to yield 37 percent of the total waste generated during demolition.

2 Total does not equal 100 percent due to rounding.

3 Table information subject to field verification during demolition.

4 For estimation purposes, wood waste materials are split 50 percent clean, and 50 percent treated to conservatively account for inability to recycle treated wood.

CY = cubic yard

It is assumed that treated wood, in addition to approximately eight percent of demolition waste, would not be recyclable. These materials would be disposed of at the Miramar Landfill at a zero percent diversion rate. The additional 20 percent of "mixed debris" demolition materials would be disposed of at a City-approved mixed debris materials recycling facility at a minimum 68 percent diversion rate (City 2020; Appendix A).

3.1.2 Pavement Demolition

Pavement demolition is expected to include the asphalt parking lots and internal roadways throughout the site. Using aerial imagery, it was determined that a total of approximately 295,100 SF of asphalt material would be removed. Demolition estimates for these materials have been calculated based on the following assumptions:

- Demolition estimate for asphalt (paved parking areas) assumes 3 inches thick and 142 pounds (lbs) per cubic foot. This would equate to approximately 10,476,050 lbs, or 5,238 tons, based on the 295,100 SF of existing on-site asphalt.

Salvage

Asphalt may have the potential to be salvaged and reused on-site. As a conservative estimate, it is assumed that all pavement material will be removed from the site.

Recycling

Quantities of parking, sidewalk, and sidewalk/curb demolition materials are estimated to total approximately 5,238 tons. The diversion rate for asphalt is 100 percent (City 2020; Appendix A). Therefore, the quantity diverted and recycled is estimated to total 5,238 tons.

3.2 CLEARING AND GRUBBING

Clearing and grubbing involves the removal of existing vegetation. There is a small amount of existing vegetation on the site that would be removed, including the small grass area and few surrounding trees located in the northern portion of the site (see Figure 3). Although there is potential for some existing landscaping to be retained and reused on site, most of the existing ornamental landscaping within the project is assumed to be removed. Vegetation would be processed and recycled at a target rate of 100 percent diversion at Miramar Greenery, a City-certified green waste recycling facility. The City's Certified C&D Recycling Facility Directory states the diversion rate for clean source-separated materials shall be 100 percent (City 2020; Appendix A). However, the amount of existing vegetation that would be removed is minimal, so the volumes of removed vegetation and other cleared materials during the clearing and grubbing process is negligible and not calculated for this analysis.

3.3 GRADING

According to the project's architectural plans, grading is anticipated to require 23,700 CY of cut and 16,700 CY of fill, for a net export of 7,000 CY, or 9,100 tons, to be exported offsite (Latitude 33 Planning & Engineering 2020). Estimates were based on the City's C&D Debris Conversion Rate Table, which identifies an excavated soil weight of 1.30 tons/CY (City 2016c; Appendix B).

Excavated soil is anticipated to be diverted at a rate of 100 percent to one of the facilities from the City's Certified C&D Recycling Facility Directory (City 2020; Appendix A). Certified facilities include the following:

- Hanson Aggregates West, Miramar, 9229 Harris Plant Road, San Diego, CA 92126
- Vulcan Carol Canyon Landfill and Recycle Site, 10051 Black Mountain Road, San Diego, CA 92126
- Moody's, 3210 Oceanside Boulevard, Oceanside, CA 92056
- Robertson's Ready Mix, 2094 Willow Glen Drive, El Cajon, CA 92019
- Terra Bella Nursery, 302 Hollister Street, San Diego, CA 92154

Other waste materials associated with grading are anticipated to include negligible amounts of waste generated by contractors working on site during the grading process.

3.4 SUMMARY OF PRE-CONSTRUCTION WASTE GENERATION AND DIVERSION

As discussed above, the waste materials to be generated during demolition, clearing and grubbing, and grading for project implementation would be source-separated for recycling or reuse at City-certified facilities specializing in each material type, as applicable. A summary of anticipated waste generation volumes and diversion rates for pre-construction activities is provided in Table 4, *Pre-Construction*

Demolition, Clearing/Grubbing, and Grading Solid Waste Generation, Diversion Rates, and Facilities. As shown in the table, during pre-construction the project would generate 45,293 tons and divert 41,593 tons.

3.4.1 Summary of Salvage Material

Demolition of the buildings, parking lot, and curb/gutter/sidewalk would generate salvageable materials. However, as no specific inventory of reusable items has been conducted at this preliminary stage and no salvage plan has been prepared, no salvage is proposed.

3.4.2 Summary of Recycled Material

Materials generated during pre-construction demolition, clearing and grubbing, and grading that are designated for recycling would be source separated on site during these activities. The City's Certified C&D Recycling Facility Directory, updated quarterly, states the diversion rate for these materials shall be 100 percent, except mixed C&D debris which achieves a maximum 89 percent diversion rate at the EDCO CDI Recycling and Buy Back Center (City 2020).

Table 4
PRE-CONSTRUCTION DEMOLITION, CLEARING/GRUBBING, AND GRADING SOLID WASTE GENERATION, DIVERSION RATES, AND FACILITIES

Source of Material	Material	Volume (CY)	Tons/Unit Conversion Factor	Tons	Diversion Rate (Percent)	Facility/Destination of Materials	Tons Diverted	Tons Disposed
Building Demolition	Concrete	13,599	1.2	16,319	100%	A	16,319	0
	Brick	5,904	0.7	4,133	100%	A	4,133	0
	Clean Wood	2,421	0.15	363	100%	B	363	0
	Treated Wood	2,421	0.15	363	0%	C	0	363
	Metal	796	0.51	406	100%	A	406	0
	Paperboard	1,393	0.05	70	100%	A	70	0
	Mixed Debris	7,371	1.19	8,771	68%	A	5,964	2,807
	Trash	2,948	0.18	531	0%	C	0	531
Parking/Sidewalks/ Gutter Demolition	Asphalt/Concrete	--	--	5,238	100%	A	5,238	0
Grading	Wet Earth	7,000	1.3	9,100	100%	A	9,100	0
			TOTAL	**45,293**	**92%**	**--**	**41,593**	**3,701**

Sources: City's Certified C&D Recycling Facility Directory (City 2020; Appendix A), City's C&D Debris Conversion Rate Table (City 2016c; Appendix B)
Facility/Destination Key:
A. Appropriate facility on City's Certified C&D Recycling Facility Directory
B. Miramar Greenery, 5180 Convoy Street, San Diego, CA 92111
C. Miramar Landfill, 5180 Convoy Street, San Diego, CA 92111
Notes:

- Table information subject to field verification during pre-construction.
- The Applicant would contract with source separating recycling facilities listed in the City's Certified C&D Recycling Facility Directory (City 2020) with an equal or greater diversion rate to ensure diversion rates meet those estimated in this table.
- The Tons/Unit Conversion Factor for concrete/steel was not provided in the City's C&D Debris Conversion Rate Table; therefore, concrete's factor of 1.2 was used in the estimates.
- Total diversion rate based on the percentage of total tons of waste diverted over the total tons of waste generated.

CF = cubic feet; CY = cubic yards

4.0 CONSTRUCTION WASTE

In order to estimate the quantity of waste generated during construction, City ESD staff recommends assuming each material type (carpet, ceiling tiles, etc.) would approximately equal the square footage of each structure. This square footage can then be multiplied by the weight of the material, and divided by 10 to account for 10 percent waste generated during the construction process. A 10 percent construction waste generation rate is a very conservative figure based on the following reasoning:

- The cost of purchasing construction materials in excess of the quantity required is prohibitive.
- Many materials, such as metal studs, come prefabricated in specific sizes, such that the contractor can accurately predict and purchase the specific quantity that would be required.
- Contractors can return unused and unneeded items (such as metal studs, appliances, fixtures, etc.) and/or utilize materials (such as brick or drywall) on other projects.
- Not all materials would be utilized throughout project square footage, so generation rates based on the total square footage are bound to be overestimated.

The project proposes Type III construction for the proposed building. Based on the proposed development, the following building materials that may generate waste are likely to be used during construction:

- Wood
- Drywall
- Carpet/Carpet padding
- Metals
- Concrete
- Asphalt
- Ceramic tile
- Ceiling tile
- Brick/Masonry
- Roofing materials

Other waste generated would consist of packaging materials from construction material, appliances, windows, etc., including the following:

- Corrugated cardboard (packaging)
- Industrial plastics (plastic wrap, fasteners, etc.)
- Styrofoam (appliance packaging, not peanuts)

4.1 ESTIMATED CONSTRUCTION WASTE GENERATION AND DIVERSION

The City uses a rule of thumb of 3 lbs/SF of waste materials generated during construction (3 lbs = 0.0015 tons). Material quantities are based on City guidance as follows:

- Total project SF x each material type = Total quantity of construction materials required
- Total construction material required x 10 percent = Anticipated quantity of construction waste generated

Anticipated project construction waste generation is shown in Table 5, *Construction Solid Waste Generation, Diversion Rates, and Facilities*.

Table 5
CONSTRUCTION SOLID WASTE GENERATION, DIVERSION RATES, AND FACILITIES

Source of Material	New Gross SF	Material	Diversion Rate (Percent)[1]	Tons Diverted[2]	Tons Disposed
Proposed Building	330,000	Metals	100%	49.5	0.0
		Concrete/Asphalt	100%	49.5	0.0
		Wood	100%	49.5	0.0
		Brick/Masonry	100%	49.5	0.0
		Drywall	100%	49.5	0.0
		Carpet/Carpet Padding	100%	49.5	0.0
		Mixed Debris	68%	33.7	15.8
		Trash	0%	0.0	49.5
		TOTAL	**84%**	**330.7**	**65.3**

[1] Trash would be taken to the Miramar Landfill (5180 Convoy Street, San Diego, CA 92111) at a zero percent diversion rate. All other construction debris would be taken to an appropriate facility listed on the City's Certified C&D Recycling Facility Directory. Facilities that process metals, concrete/asphalt, and wood all achieve a 100 percent diversion rate for these materials. Facilities that process mixed debris achieve a minimum 68 percent diversion rate, which was conservatively assumed for this project (City 2020; Appendix A).

[2] For each material type, construction waste quantities are calculated based on:
Three lbs of waste per building SF (e.g., 330,000 SF for the Proposed Building x 3 lbs/SF = 990,000 lbs, or 495 tons);
Total construction material required x 10 percent = anticipated quantity of construction waste generated (49.5 tons)

Note that numbers may not total due to rounding.
lbs = pounds; SF = square feet/footage

The majority of the floor of the proposed building is anticipated to be concrete with minimal amounts of carpet present. The calculations in Table 5 conservatively assume that the entire floor would be carpeted. As such, the amount of waste generated related to carpet/carpet padding would likely be less than what is shown in Table 5.

4.1.1 PROPOSED POST-CONSUMER CONTENT CONSTRUCTION MATERIALS

In order to further minimize waste, the project would utilize recycled content construction materials, where feasible. Given the preliminary nature of the project plans, a minimum target of five percent is anticipated, with verification of purchase of materials equating to this target to be provided prior to or

during the pre-construction meeting. See Section 6.1, for the construction waste management, coordination, and oversight measures that would be implemented pursuant to this WMP.

5.0 OCCUPANCY WASTE

5.1 STORAGE

The project would be managed under the Applicant or its designee(s). The City's Storage Ordinance (Municipal Code Section 142.0801 et. seq.) requires the provision of separate bins for recyclable waste products to be separated from non-recyclable solid waste. To comply with the Storage Ordinance, the project would be required to provide recycling containers at convenient locations throughout the development, meeting or exceeding the minimums shown in Table 1.

5.2 WASTE GENERATION – EXISTING USES

The project site's existing uses that would be demolished as part of the project include manufacturing and auto service uses. To understand the change in waste generated during occupancy, estimates of existing waste generation of buildings that will be demolished were calculated. The City's ESD provides a list of waste generation factors for the occupancy phase of development, included as Appendix C of this report (City 2012). Table 6, *Estimated Annual Solid Waste Generation and Diversion Rates – Existing Buildings*, shows the estimated waste generation and diversion for the existing buildings on the site.

Table 6
ESTIMATED ANNUAL SOLID WASTE GENERATION AND DIVERSION RATES – EXISTING BUILDINGS

Source of Material	Square Footage	Existing Building Use	Waste Generation Factor[1]	Tons Generated (per year)	Expected Percent Diverted from Source-Separated Recycling[2]	Tons Diverted (per year)	Tons Disposed (per year)
Existing Building A	20,000	Manufacturing	0.0059	118	40%	47	71
Existing Building B	46,400	Manufacturing	0.0059	274	40%	110	164
Existing Building C	42,500	Auto/Service/ Repair	0.0051	217	40%	87	130
			TOTAL	**609**	**--**	**243**	**365**

1 Waste generation factors provided in Appendix C to this WMP.
2 Reflects compliance with existing City Storage Ordinance and City Recycling Ordinance.

As shown in the table, the existing buildings planned to be demolished currently generate approximately 609 tons of waste, of which 365 tons would be disposed and 243 tons would be diverted. These estimates are based on the City's current waste generation factors, and do not take into consideration any additional sustainability measures and recycling programs that may be implemented by current vendors.

5.3 WASTE GENERATION – PROJECT USES

The Applicant or its designee(s) would educate the vendor(s) for on-site custodial duties regarding the appropriate waste diversion program to ensure the proper handling of waste. Each vendor employee would be educated on the principles of proper waste handling and diversion to meet the Applicant's goal to reduce/reuse/recycle. The estimated waste generation and diversion for the proposed manufacturing use are shown in Table 7, *Estimated Annual Solid Waste Generation and Diversion Rates – Proposed Building*.

Table 7
ESTIMATED ANNUAL SOLID WASTE GENERATION AND DIVERSION RATES – PROPOSED BUILDING

Source of Material	Square Footage	Proposed Building Use[1]	Waste Generation Factor[1]	Tons Generated (per year)	Expected Percent Diverted from Source-Separated Recycling[2,3]	Tons Diverted (per year)	Tons Disposed (per year)
Proposed Building	330,000	Manufacturing	0.0059	1,947	40%	779	1,168
			TOTAL	1,947	--	779	1,168

[1] Waste generation factors provided in Appendix C to this report.
[2] Reflects compliance with existing City Storage Ordinance and City Recycling Ordinance.
[3] The Applicant would contract with City-approved recycling haulers and disposal facilities.

As shown in the table, it is anticipated that at full buildout, approximately 1,168 tons of waste are anticipated to be disposed of annually, and approximately 779 tons are estimated to be diverted in association with the new structure. These estimates are based on the City's current waste generation factors, which do not take into consideration additional sustainability measures and recycling programs that may be implemented at the project and exceed the overall 40 percent diversion estimated by the City for occupancy.

5.4 CHANGE IN WASTE GENERATION

Based on the difference between the existing buildings' waste generation and the proposed building's waste generation, the project would result in a net increase of 1,338 tons of waste. Of this, 803 tons would be disposed, and 535 tons would be diverted from the landfill.

6.0 WASTE REDUCTION, RECYCLING, AND DIVERSION MEASURES

The Applicant is committed to waste reduction during all aspects of project demolition, grading, construction, and operation, and would incorporate the Waste Diversion Measures (WDM) described below to ensure compliance with applicable solid waste disposal and waste reduction regulations and ordinances. Mandatory compliance with these measures shall be included in all project contractor agreements, clearly reflected on project plans, and verifiable by City ESD staff through written submittals and/or site inspections as described below.

6.1 CONSTRUCTION WASTE MANAGEMENT, COORDINATION, AND OVERSIGHT

6.1.1 Contractor Agreements and City Coordination

All WDM described herein shall be included as part of contractor agreements and clearly reflected on project plans identifying activities required to be undertaken during clearing, grading, and construction. These measures shall also be provided in checklist format to City ESD staff prior to the initiation of any activities identified in the WMP. ESD staff shall be allowed access to the project site, project plans, and contractor education program meetings and materials (described below) to verify conformance with these measures.

6.1.2 Designation of a Solid Waste Management Coordinator

Prior to initiation of any construction, clearing, grading, or grubbing activities on site, the Applicant shall designate a Solid Waste Management Coordinator (SWMC) for the property with the authority to provide guidelines and procedures for contractor(s) and staff to implement waste reduction and recycling efforts. These responsibilities shall include, but are not limited to, the following:

- Prepare a Contractor Education Program on the waste separation and diversion/disposal procedures specified in this WMP. The Contractor Education Program shall contain, at a minimum, the following information:
    - Written and visual description of each waste type required to be source separated
    - Written and graphic description of how each waste type must be treated prior to and during source separation
    - Direction on which waste types go to mixed-debris facilities
    - Direction on which waste types go to Miramar Landfill
    - Direction on materials requiring special handling, such as hazardous materials
    - Contact for designated contractor in case of questions or emergency
    - Contact at City ESD in case of questions or emergency
    - Phone number, address, and telephone contact information for each contracted hauler and disposal/diversion facility to be utilized
- Ensure the correct number and signage of bins, as specified in this WMP.
- Ensure a maximum 5 percent contamination by different waste types/non-recyclable materials by weight in the bins.
- Ensure no overtopping of bins occurs.

- Work with contractor(s) to refine estimated quantities of each type of material that would be recycled, reused, or disposed of as waste, then assist contractor(s) with documentation of that waste through receipts at each recycling and landfill facility identified in this WMP, or as otherwise agreed to by ESD staff.

- Issue stop work orders if procedures and standards specified in this WMP are not being followed/met.

- Coordinate with ESD and/or Mitigation Monitoring staff, including regular communication and invitations to the work site, and ensure appropriate staff members are involved at every stage.

- Ensure ESD staff attendance at the contractor education meeting and pre-construction meetings of each phase of the development.

6.1.3 Contractor Waste Management Training

The project's SWMC or an ESD-approved contractor designee shall carry out Contractor Education Program presentations ensuring all project personnel are trained regarding content and requirements of this WMP. Prior to beginning work on any portion of the project, each member of the team, including all workers, subcontractors, and suppliers, shall be provided with a copy of the WMP, and undergo training on proper waste management procedures applicable to the project.

- The project's SMWC, or ESD-approved Contractor-designee shall carry out contractor waste management training presentations for each new group or individual hired, contracted, or assigned to work on the project.

- The SMWC and/or Contractor-designee shall ensure that each person working on the project has completed the waste management training by maintaining a written log to be signed and dated by each trainee upon completion of the training program. Copies of this written log, along with a list of all applicable personnel, shall be provided to City ESD staff for verification during each phase of project activities.

6.1.4 Daily Site Inspections by Contractor(s)

The project contractor(s) shall conduct daily inspections of the construction site to ensure compliance with the requirements of this WMP and with all other applicable laws and ordinances. Daily inspections shall include verifying the availability and number of dumpsters based on amount of debris being generated, verifying trash and recycled materials dumpsters are correctly labeled, ensuring proper sorting and segregation of materials, and ensuring excess materials are properly salvaged. The project contractor(s) shall report the results of the daily site inspections to the SWMC.

6.1.5 Regular Removal of Waste Materials

The project contractor(s) shall ensure removal of construction waste materials in sufficient frequency to prevent over-topping of bins. The accumulation and burning of on-site grading/land-clearing and construction waste materials shall be prohibited.

6.1.6 City Verification

The Applicant shall ensure a representative of the City's ESD attends pre-construction meetings prior to clearing, grading, and construction to ensure that the following items are verified:

- Material segregation, recycling, and reuse is occurring per the WMP;
- Soil is being transported to an appropriate facility for reuse;
- Grubbed materials are sent to a suitable green waste recycling facility;
- Contract documents have appropriate estimates and constraints to avoid "overbuying" construction materials;
- Contract documents specify methods to achieve five percent post-consumer content goal;
- Contamination levels (i.e., different waste types/non-recyclable materials) do not exceed five percent by weight;
- An appropriate diversion rate (as specified in this WMP) has been included on the deposit form;
- Contract documents specify agreements for each recyclable/reusable material type to be taken to an appropriate recycling/reuse facility, as specified in this WMP; and
- Minimum exterior refuse and recyclable material storage areas have been incorporated into project plans, as a requirement of the City Storage Ordinance (Municipal Code Section 142.0801 et seq.).

6.2 CONSTRUCTION WASTE REDUCTION, DIVERSION COMPLIANCE, AND VERIFICATION

6.2.1 Identification, Separation, and Diversion of Recyclable/Reusable Materials

The Applicant shall ensure that:

- Throughout project activities, waste materials shall be source separated on site into the appropriate bin based on materials type, according to the categories in this WMP. Materials generated during clearing, grading, and construction that would-be source separated and recycled are listed below:
    - Mixed C&D (wood, dirt, concrete, drywall, brick, metals, rock, asphalt, tile, cardboard)
    - Metals
    - Concrete/Asphalt
    - Brick/Masonry
    - Wood

  - Drywall
  - Carpet/Carpet padding
  - Clean fill dirt
  - Green waste

- A separate bin for each clean waste material type to be generated during each phase of clearing, grading, and construction activity shall be provided on the site, subject to the following requirements:

  - Containers shall be clearly labeled, with a list of acceptable and unacceptable materials. The list of acceptable materials must be the same as the materials recycled at the receiving material recovery facility or recycling processor.

  - The collection containers for recyclable grading/land-clearing and construction waste shall contain no more than five percent non-recyclable materials, by weight.

  - Regular visual inspections of dumpsters and recycling bins shall be conducted to remove contaminants.

  - Recycling areas shall be clearly identified with large signs. Lists of acceptable and unacceptable materials shall be posted on recycling bins and throughout the project site and all recycled material signage shall be visible on at least two sides of haul containers.

  - Recycling bins shall be placed in areas that would be readily accessible and would minimize misuse or contamination. The SWMC shall be responsible for these efforts and they shall be reviewed at pre-construction meetings and/or during contractor education meetings, if conducted separately.

  - Recyclable and/or reusable waste materials collected in source-separated bins shall be diverted to recycling/reuse facilities as designated in Tables 4 and 5 of this WMP, or to another facility listed on the City's *Certified C&D Recycling Facility Directory*, should the designated facilities not be available.

6.2.2 Source Reduction Measures

Project contractors and subcontractors, in cooperation with the project's SWMC and ESD staff, as applicable, shall coordinate to minimize the over-purchasing of construction materials to lower the amount of materials taken to recycling and disposal facilities. The project shall minimize over-purchasing through purchase of pre-cut materials, whenever feasible. The following steps shall be undertaken:

- Detailed material estimates shall be used to reduce risk of unplanned and potentially wasteful material cuts.

- Contractor and subcontractor material purchasing agreements shall include a waste reduction provision requesting that: materials and equipment be delivered in packaging made of recyclable material; vendors reduce the amount of packaging; packaging be taken back by

vendors for reuse or recycling; and vendors take back all unused product. Contracts containing this language shall be made available to ESD staff during ESD site visits for inspection.

- Post-consumer content products shall be employed in the design and construction of the new facilities with the goal of achieving five percent post-consumer content materials. Efforts to use post-consumer content may include using products manufactured with post-consumer content materials (i.e., products that were bought, used, and recycled by consumers), such as natural textiles, aggregate, or concrete. Receipts demonstrating post-consumer content shall be provided to ESD staff at or prior to the pre-construction meetings.

- Prior to submittal, final project plans shall indicate the anticipated source and quantity of materials to be reused on site, and the source, quantity, and percentage of post-consumer content waste products anticipated to be utilized for project construction.

- Contractors shall include the anticipated source and quantity of post-consumer content products proposed for reuse or purchase in their project bid.

- Final project plans inclusive of the information above shall be provided to ESD for verification.

6.3 OPERATIONAL WASTE MANAGEMENT AND DIVERSION MEASURES

The Applicant shall undertake and/or shall specify in contract language and/or sales/lease agreements with any tenant, operator, and/or future owner, a list of recycling requirements with which the Applicant or future tenants, operators, and/or owners shall be obligated to comply, including, but not limited to, the following:

- Recycling areas shall be clearly identified with large signs.

- Lists of acceptable and unacceptable materials shall be posted on recycling bins.

- All recycled material signage shall be visible on at least two sides of recycling containers.

- Recycling bins shall be placed in areas that would be readily accessible and would minimize misuse or contamination.

- Prepare and distribute recycling educational materials for inspection by ESD prior to certificate of occupancy.

- After materials are approved, distribute to all project site owners/occupants.

- Green waste generated by ongoing landscaping and landscape maintenance activities shall be source separated by the landscaping contractor, and diverted to Miramar Greenery.

Prior to issuance of any certificate of occupancy/tentative certificate of occupancy, the Applicant shall invite a representative of the City ESD to:

- Inspect and approve storage areas that have been provided consistent with the City's Storage Ordinance;
- Ensure that a hauler has been retained to provide recyclable materials collection, and, if applicable, landscape waste collection; and
- Inspect and approve education materials for building tenants/owners that are required pursuant to the City's Recycling Ordinance.

For specialized product purchasing (e.g., with recycled content) to be used during occupancy, the Applicant shall provide for inspection by ESD the documentation that would be used to carry out this requirement.

7.0 CONCLUSION

As discussed under Regulatory Framework, a project may result in a significant direct impact under the City CEQA Significance Thresholds if it generates more than 1,500 tons of solid waste materials during construction and demolition. Projects that include the construction, demolition, and/or renovation of 40,000 SF or more of building space or generate approximately 60 tons of waste or more are considered to have potentially significant cumulative impacts on solid waste services. Further, AB 341 requires the diversion of 75 percent of solid waste and mandatory provision of recycling collection service during occupancy.

7.1 SUMMARY OF WASTE GENERATION AND DIVERSION

During pre-construction demolition and grading, the project would produce 45,293 tons of excavated soils, asphalt/concrete, and other C&D waste, and divert 41,593 tons of these materials from the landfill, as identified in Table 4. Approximately 3,701 tons of solid waste material generated during pre-construction is anticipated to be disposed of as non-recyclable/non-reusable waste at Miramar Landfill, for an overall pre-construction diversion rate of 92 percent.

During construction, the project would produce approximately 396 tons of solid waste (metal, concrete, concrete/steel, asphalt, brick/masonry, wood, drywall, carpet/carpet padding, mixed debris, and trash), and divert approximately 331 tons of solid waste materials from the landfill, as identified in Table 5. The diverted material would consist of clean, source-separated (segregated) recyclable and/or reusable material, as well as mixed debris, to be deposited at the recycling/reuse facilities identified in the City's Certified C&D Recycling Facility Directory (City 2020; Appendix A). Approximately 65 tons of solid waste material generated during construction is anticipated to be disposed of as non-recyclable/non-reusable waste at Miramar Landfill, for an overall diversion rate during construction of approximately 84 percent.

With the combined pre-construction and construction phases, the project would produce 45,690 tons of solid waste and would divert 41,924 tons. This would be an overall diversion rate during pre-construction and construction of approximately 92 percent.

During occupancy, it has been estimated that the project would generate an additional 1,338 tons of waste per year over existing conditions, of which 535 tons per year would be diverted to recycling/ reuse facilities, resulting in an estimated 40 percent diversion of waste from the landfill, as identified in Table 7. These materials would consist of clean, recyclable materials, gathered in on-site recycling bins. An additional 803 tons per year, or 60 percent of occupancy material generated, are estimated to be disposed of as non-recyclable/non-reusable waste at Miramar Landfill.

7.2 COMPLIANCE WITH CITY AND STATE REGULATIONS

Project compliance with City and State regulations is addressed below.

7.2.1 State of California

Based on the quantified waste generation and diversion rates discussed above, the project would exceed the 75 percent solid waste diversion rate for waste produced during the pre-construction and construction phases. The project would fail to meet the 75 percent waste reduction target annually once the buildings are occupied. This shortcoming is overcome by the following factors:

- The segregation proposed during pre-construction and construction would achieve an overall 92 percent diversion rate, exceeding the 75 percent target.
- The project would incorporate mandatory waste reduction, recycling, and diversion measures as identified in Sections 6.1 and 6.2 of this WMP during pre-construction and construction, to further reduce solid waste impacts.
- Ongoing diversion of green waste (landscaping debris) to Miramar Greenery would avoid unnecessary contributions to Miramar Landfill.
- To minimize generation of waste materials, the project would incorporate recycled, post-consumer content materials in interiors and exteriors, to the extent practicable.

In addition to these measures implemented during pre-construction and construction activities, the Applicant would commit to the recycling requirements identified in Section 6.3 of this WMP, to further reduce solid waste impacts during occupancy.

7.2.2 City of San Diego

Based on the quantified waste generation and diversion rates discussed above, the project would result in a significant impact regarding the City's CEQA Significance Determination Threshold for direct impacts to solid waste facilities during demolition and construction.

The project would be above the City's threshold (generation of more than 1,500 tons of solid waste materials) for direct impacts to solid waste facilities during demolition and construction (3,701 + 65 = 3,766 tons C&D materials to Miramar Landfill).

Regarding cumulative impacts, the project proposes greater than 40,000 SF of building space, and the project would be above the City's CEQA Significance Determination Threshold of 60 tons for disposal of waste during C&D. During occupancy, the project would achieve an average 40 percent diversion of

waste via source-separated recycling and would dispose of approximately 803 additional tons of waste per year once the buildings are occupied, compared to existing conditions. This would exceed the City's CEQA Significance Determination Threshold for cumulative impacts to solid waste services.

As mitigation, the City requires implementation of this document, a project-specific WMP, to identify measures for waste reduction. These waste exceedances would be overcome by the waste reduction achieved during construction through measures described in Sections 6.1 and 6.2 of this WMP. Through the quantified waste generation and diversion rates discussed in this document, the project would exceed the 75 percent solid waste diversion rate for waste produced during demolition and construction phases by achieving an overall 92 percent diversion rate. In addition, the measures specified for operation in Section 6.3 of this WMP would provide adequate waste management. Regarding trash and recycling storage space during operation, the project would provide at least 1,267 SF of trash and recycling storage space, per the City Storage Ordinance (Table 1). The project would comply with the City Recycling Ordinance by providing adequate space, bins, and educational materials for recycling during occupancy.

Through compliance with waste diversion measures included in this WMP, plus implementation of sustainability and efficiency features, the project's direct solid waste impact would be less than significant and the project's contribution to a cumulative solid waste generation would be reduced to a level that is less than cumulatively considerable.

8.0 LIST OF PREPARERS

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