



**Waste Management Plan for the
La Media Retail Project
San Diego, California**

Prepared for

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A handwritten signature in black ink that reads "Va Mattos".

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1.0 Introduction

The purpose of this Waste Management Plan (WMP) for the La Media Retail Project (project) is to identify the solid waste impacts generated by construction and operation of the project, and to identify measures to reduce those impacts.

The WMP is divided into the four sections corresponding to the progress of site development, which are: the Demolition Phase, 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 17.6-acre project site is located south of Otay Mesa Road, north of Airway Road, east of La Media Road, and north of State Route 905 (SR-905), in the city of San Diego. The off-site improvement area, consisting of an additional 6.3 acres, is located on the western, northern, and eastern edges of the project site. Figures 1 and 2 depict the regional location and the project vicinity (on an aerial photograph), respectively.



The project site and most of the off-site improvement area is currently undeveloped. A portion of the off-site area is developed as part of La Media Road. Commercial/industrial land uses occur to the north, west, and southeast of the project site, while vacant lands occur to the south and east. Brown Field Municipal Airport is to the northwest of the project site, and State Route (SR-125) is approximately 0.5 mile to the east. Both the project site and the adjacent vacant lands have been extensively tilled for agriculture, although the majority of the land is currently fallow.



✱ Project Location

FIGURE 1
Regional Location



-  Project Boundary
-  Off-site Survey Area

0 Feet 200 

FIGURE 2

Project Location on Aerial Photograph

3.0 Proposed Conditions

Project entitlements require the following permits: a Planned Development Permit, Neighborhood Use Permit, Site Development Permit, Right-of-Way and Easement Vacation, Vesting Tentative Map, and Neighborhood Development Permit. The project site would be subdivided into 12 lots, eight of which would have a single commercial building each. Lot 4 would have two commercial buildings. Lot 7 would consist solely of a paved parking area, and Lots 11 and 12 would consist solely of landscaping and bioretention basins. The majority of the project site would consist of a paved parking lot and the project would include construction of storm drains and infrastructure for water and sewer connections. Lots 1, 2, and 5 would also include covered truck loading docks at the rear of each commercial building, facing SR-905. The main project access would be from Otay Mesa Road, via the proposed Avenida Costa Azul access drive on the eastern project boundary. The project would also include a 0.4-acre public right-of-way dedication to widen the northbound segment La Media Road adjacent to the project's western boundary. Right-in, right-out only access to the site would also be provided via La Media Road (Figure 3).

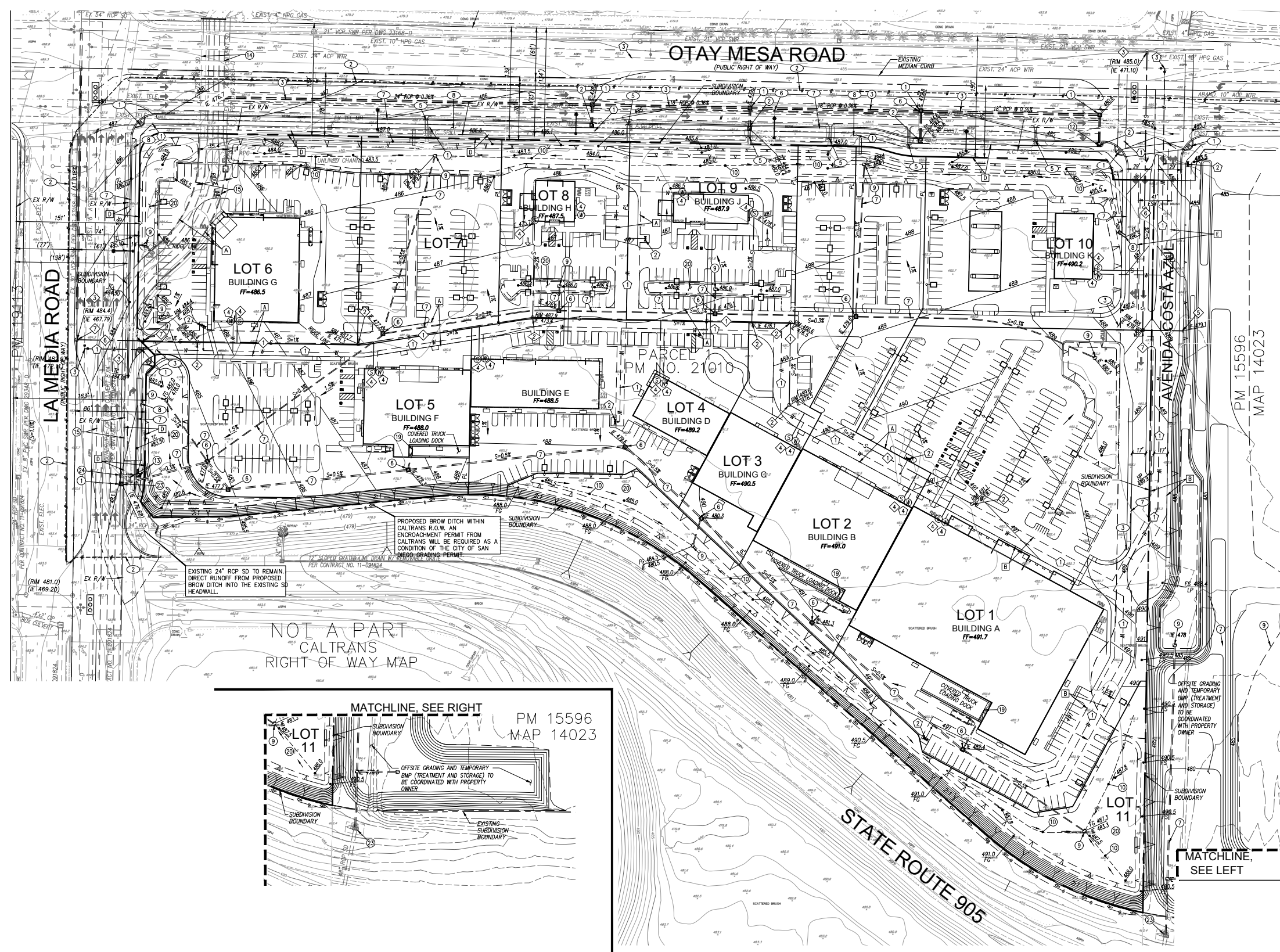
4.0 Regulatory Framework

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 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, 2010).

AB 341, approved October 2011, sets a statewide 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 to be responsible for implementing and to be in compliance with the 75 percent diversion rate through outreach and monitoring programs.

AB 1826, approved September 2014, requires businesses in California to arrange for recycling services for organic waste including food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. The law is effective on and after January 1, 2016 for businesses that generate greater than eight cubic yards of organic waste per week; effective January 1, 2017 for businesses that generate greater than four cubic yards of organic waste per week; effective January 1, 2019 for businesses that generate greater than four cubic yards of commercial solid waste per week; and, if a 50 percent statewide reduction in organic waste from 2014 has not yet been achieved, the law will be effective January 1, 2020 for businesses that generate greater than two cubic yards of commercial solid waste per week (State of California 2014). Strategies for compliance are discussed in Section 6.2, Waste Reduction Measures.



ITEM	SYMBOL
SUBDIVISION BOUNDARY	---
RIGHT-OF-WAY	---
PROPERTY LINE	---
A.C. PAVING (SCHED. 'J')	---
TRENCH RESURFACING	---
CURB RAMP (TRUNCATED DOME DEPTH = 36")	---
P.C.C. SIDEWALK	---
6" TYPE 'C' CURB & GUTTER	---
6" TYPE 'C' CURB	---
PROPOSED DRIVEWAY PER SDG-159	---
PROPOSED SEWER MAIN (PVC)	---
PROPOSED SEWER MANHOLE	---
PROPOSED SEWER LATERAL	---
PROPOSED WATER MAIN (PVC)	---
PROPOSED WATER SERVICE	---
FIRE HYDRANT ASSY.	---
STREET LIGHT	---
SAWCUT LINE/LIMIT OF WORK	---
PROPOSED PED RAMP	---
PROPOSED RETAINING WALL	---
SURVEY MONUMENT	---
FINISH GRADE CONTOURS	---
PROPOSED SLOPES (2:1 MAX)	---
PROPOSED DAYLIGHT LINE	---

ABBREVIATIONS			
R/W	RIGHT OF WAY	EX	EXISTING
FF	FINISH FLOOR	IE	INVERT ELEVATION
PL	PROPERTY LINE		

CONSTRUCTION NOTES FOR STORM DRAIN	
1	INSTALL STORM DRAIN CLEANOUT (PUBLIC)
2	INSTALL STORM DRAIN CURB INLET (PUBLIC)
3	INSTALL STORM DRAIN PIPE (PUBLIC)
4	INSTALL STORM DRAIN VAULT (PRIVATE)
5	NOT USED
6	INSTALL STORM DRAIN CLEANOUT (PRIVATE)
7	INSTALL STORM DRAIN PIPE (PRIVATE)
8	INSTALL REVERSE FLOW CURB OUTLET (PRIVATE)
9	INSTALL STORM DRAIN BROOKS BOX WITH GRATED INLET (PRIVATE) UNLESS OTHERWISE NOTED
10	INSTALL STORM DRAIN PERFORATED PIPE (PRIVATE)
11	INSTALL STORM DRAIN PVC SOLID PIPE (PRIVATE)
12	INSTALL MODULAR WETLANDS UNIT (PRIVATE)
13	EXISTING STORM DRAIN CURB INLET (PUBLIC) TO BE RELOCATED
14	EXISTING 3'-6"x4" BOX CULVERT AND 1-72" RCP STORM DRAIN TO REMAIN (PUBLIC)
15	EXISTING 4'-8"x4" BOX CULVERT TO REMAIN (PUBLIC)
16	EXISTING 48" RCP STORM DRAIN TO REMAIN (PUBLIC)
17	NOT USED
18	NOT USED
19	PROPOSED TRENCH DRAIN (PRIVATE)
20	PROPOSED BIO-RETENTION BASIN (PRIVATE)
21	PROPOSED STORM DRAIN HEADWALL (PRIVATE)
22	NOT USED
23	CONNECT TO EXISTING STORM DRAIN
24	EXISTING STORM DRAIN CLEANOUT TO REMAIN

CONSTRUCTION NOTES FOR WATER MAIN	
1	PROPOSED WATER MAIN (PUBLIC)
2	PROPOSED FIRE HYDRANT (PUBLIC)
3	CONNECT TO EXISTING WATER
4	PROPOSED WATER LATERAL (PRIVATE)

CONSTRUCTION NOTES FOR SEWER MAIN	
1	PROPOSED SEWER MAIN (PRIVATE)
2	PROPOSED SEWER MANHOLE (PRIVATE)
3	CONNECT TO EXISTING SEWER
4	PROPOSED SEWER LATERAL (PRIVATE)
5	PROPOSED SEWER FOR FUTURE (PRIVATE)
6	PROPOSED SEWER (PUBLIC)
7	PROPOSED SEWER MANHOLE (PUBLIC)

CONSTRUCTION NOTES FOR SURFACE IMPROVEMENTS	
1	PROPOSED PED RAMP WITH TRUNCATED DOME
2	PROPOSED SAWCUT LINE/LIMIT OF WORK
3	PROPOSED DRIVEWAY
4	EXISTING SIGN TO BE REMOVED
5	EXISTING ASPHALT CONCRETE SPILLWAY TO BE REMOVED
6	EXISTING STREET LIGHT
7	PROPOSED CURB AND GUTTER
8	PROPOSED CONCRETE SIDEWALK

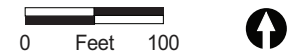
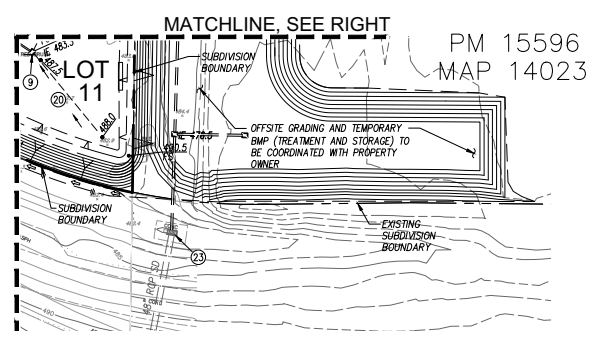


FIGURE 3
Site Plan

4.2 City of San Diego Requirements

All landfills within the San Diego region are approaching capacity and are due to close within the next 3 to 20 years. In compliance with the state policies, the City of San Diego (City) Environmental Services Department (ESD) developed the Source Reduction and Recycling Element, which describes local waste management policies and programs. The City's Recycling Ordinance, adopted November 2007, require 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 5.4.2, Contractor Education and Responsibilities.

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

5.0 Demolition, Grading, and Construction Waste

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

5.1 Demolition

The project site and most of the off-site improvement area are currently undeveloped. However, the project would require demolition of approximately 22,688 square feet of asphalt pavement, berms and spillways. Similarly, the project would require demolition of approximately 18,275 square feet of concrete sidewalks, medians, driveways, and curb and gutters along La Media Road, Otay Mesa Road, and Saint Andrews Avenue. Asphalt and concrete depth varies by project and soil type but is typically 0.5 foot deep. Based on the ESD C&D Debris Conversion Rate Table (Attachment 1), the project would require an estimated 294.1 tons of asphalt and 406.1 tons of concrete to be removed as shown in the calculation below:

$$22,688 \text{ square feet} \times 0.5 \text{ foot} = 11,344 \text{ cubic feet}$$

$$\frac{11,344 \text{ cubic feet}}{27 \text{ cubic feet}} = 420.1 \text{ cubic yards} \times 0.70 \frac{\text{tons}}{\text{unit}} = 294.1 \text{ tons}$$

$$18,275 \text{ square feet} \times 0.5 \text{ foot} = 9,138 \text{ cubic feet}$$

$$\frac{9,138 \text{ cubic feet}}{27 \text{ cubic feet}} = 338.4 \text{ cubic yards} \times 1.20 \frac{\text{tons}}{\text{unit}} = 406.1 \text{ tons}$$

Table 1 shows that this material would be entirely diverted for reuse at the appropriate facility.

Material	Tons Generated ¹	Percent Diverted	Facility ²	Tons Diverted	Tons Disposed
Asphalt (broken)	294.1	100	Vulcan Otay Asphalt Recycling Center	294.1	0
Concrete (broken)	406.1	100	Vulcan Otay Asphalt Recycling Center	406.1	0
Total	700.2	100		700.2 (100%)	0 (0%)

Note: Totals may vary due to independent rounding.
¹ESD C&D Debris Conversion Rate Table (Attachment 1).
²City of San Diego ESD 2016 Certified C&D Recycling Facility Directory (Attachment 2).

5.2 Grading

Implementation of the project would require a net import of approximately 175,000 cubic yards (10,000 cubic yards of cut soil and 185,000 cubic yards of fill soil). Any vegetation removed during the grading phase would be taken to the Otay Landfill facility for 100 percent diversion.

5.3 Construction

The ten proposed commercial buildings will total approximately 129,700 square feet, with approximately 373,800 square feet of surface parking areas. The development would also construct a total of eight trash and recycling enclosures, equivalent to a total of approximately 1,501 square feet (see Table 2). Roads, sidewalks, storm drains, surface parking, and the modular wetland units are not anticipated to generate waste from construction (i.e. no structure content). According to a 1998 study by the U.S. Environmental Protection Agency (U.S. EPA), a sample of non-residential construction projects, including office and restaurant space, generated an average of 3.9 pounds of construction waste per square foot (U.S. EPA 1998). Based on this generation rate, the total proposed building construction area of 131,201 square feet (including 1,501 square feet of trash and recycling enclosures) is estimated to generate 255.84 tons of waste during construction (see calculation below).

$$131,201 \text{ square feet} \times \frac{3.9 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 255.84 \text{ tons}$$

Table 2 shows the amount of tons estimated during the construction phase.

Construction Type	Square Footage	Generation Rate (pounds per square foot)	Tons Generated
Buildings 1 through 10	129,700	3.9	252.91
Trash and recycling enclosures (8 total)	1,501	3.9	2.93
<i>Sub-total</i>	<i>131,201</i>	--	<i>255.84</i>
Surface parking	373,800	--	--
Total	505,001	--	255.84

Estimates of material types and portions are based on similar non-residential developments. The types of construction waste anticipated to be generated include the following:

- Asphalt and concrete
- Brick/masonry/tile
- Carpet, padding/foam
- Corrugated cardboard
- Metals
- Clean wood

- Drywall
- Trash/garbage

5.4 Waste Diversion

Waste diversion would be conducted through source separation rather than mixed debris diversion. With mixed debris diversion, all material waste is disposed of in a single container for transport to a mixed C&D recycling facility where 65 percent is diverted for recycling. With source-separated diversion, materials are separated on-site before transport to appropriate facilities that accept specific material types and a greater diversion rate is achieved. Recyclable waste material would be separated on-site into material-specific containers and diverted to an approved recycler selected from ESD’s directory of facilities that recycle specific waste materials from construction (Attachment 2). These facilities achieve a 100 percent diversion rate for most materials and a 62 percent diversion rate for drywall. Given the waste reduction target of 75 percent, the majority of waste must be handled at facilities other than landfills.

With implementation of the diversion procedures and outlined in Table 3, it is estimated that 75 percent of the waste generated during the construction phase of the proposed project would be diverted to appropriate facilities for reuse. Only 64 tons of drywall and trash/garbage, equivalent to 25 percent of the total construction waste, would be disposed of in the landfill.

Material Type	Estimated Waste (tons) ¹	Handling Facility ²	Estimated Diversion (tons)	Estimated Disposal (tons)
Asphalt and Concrete	36	Vulcan Otay Asphalt Recycling Center	36	0
Metals	57	Cactus Recycling	57	0
Brick/Masonry/Tile	17	Vulcan Otay Asphalt Recycling Center	17	0
Clean Wood	10	Otay Landfill	10	0
Carpet, Padding/Foam	21	DFS Flooring	21	0
Drywall	57	EDCO Recovery & Transfer	35	22
Corrugated Cardboard	16	Cactus Recycling	16	0
Trash/Garbage	43	Otay Landfill	0	43
Total	255.8		192.0 (75%)	64.0 (25%)
NOTE: Totals may vary due to independent rounding.				
¹ Portions of material types based on demolition estimates of similar non-residential development				
² City of San Diego ESD 2016 Certified C&D Recycling Facility Directory (see Attachment 2).				

5.4.1 Total Diversion

Table 4 summarizes the amount of waste estimated to be generated and diverted by each phase of the proposed project. Of the 956 tons estimated to be produced, 892.2 tons would be diverted during the demolition and construction phases, primarily through source separation. This would result in 93 percent of waste material diverted from the landfill for reuse.

Phase	Tons Generated	Tons Diverted	Tons Disposed
Demolition	700.2	700.2	--
Grading	0	--	--
Construction	255.8	192.0 (75%)	64.0 (25%)
Total	956.0	892.2 (93%)	64.0 (7%)

5.4.2 Contractor Education and Responsibilities

A Solid Waste Management Coordinator (SWMC) for the project would be designated to ensure that all contractors and subcontractors are educated and that procedures for waste reduction and recycling efforts are implemented. Specific responsibilities of the SWMC would include the following:

- Review of the WMP at the preconstruction meeting, including the SWMC responsibilities.
- Distribute the WMP to all contractors when they first begin work on-site and when training workers, subcontractors, and suppliers on proper waste management procedures applicable to the project.
- Work with the contractors to estimate the quantities of each type of material that would be salvaged, recycled, or disposed of as waste, then assist in documentation.
- Use detailed material estimates to reduce risk of unplanned and potentially wasteful material cuts.
- Review and enforce procedures for source separated receptacles. Containers of various sizes shall:
 - Be placed in readily accessible areas that will minimize misuse or contamination.
 - Be clearly labeled with a list of acceptable and unacceptable materials, the same as the materials recycled at the receiving material recovery facility or recycling processor.
 - Contain no more than 10 percent non-recyclable materials, by volume.
 - Be inspected daily to remove contaminants and evaluate discarded material for reuse on-site.

- Review and enforce procedures for transportation of materials to appropriate recipients selected from ESD's directory of facilities that recycle demolition and construction materials (see Tables 1 and 4; Attachment 2).
- 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 proposed project meets the following state law and City Municipal Code requirements. Adjustments would be made as needed to maintain conformance:

- The City's C&D Debris Diversion Deposit Program, which requires a refundable deposit based on the tonnage of the expected recyclable waste materials as part of the building permit requirements (City of San Diego 2008).
- The City's Recycling Ordinance, which requires that collection of recyclable materials is provided (City of San Diego 2007a).
- The City's Storage Ordinance, which requires that areas for recyclable material collection must be provided (City of San Diego 2007b).
- The name and contact information of the waste contractor provided to ESD at least 10 days prior to the start of any work and updated within five days of any changes.

6.0 Occupancy–Operational Waste

6.1 Waste Generation

The estimated annual waste to be generated during occupancy of the proposed project is based on findings from the California Department of Resources Recycling and Recovery (CalRecycle) database (State of California 2016). The generation rate is based on a May 1997 study entitled “Guide to Solid Waste and Recycling Plans for Development Projects” conducted by Santa Barbara County Public Works Department. The study found that the estimated solid waste generation rate for supermarkets (commercial land use type that is anticipated) is 3.12 pounds per 100 square feet per day. The estimated annual amount in tons is calculated below:

$$129,700 \text{ square feet} \times \frac{3.12 \text{ pounds}}{100 \text{ square feet}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 2.02 \text{ tons/day}$$

$$\frac{2.02 \text{ tons}}{\text{day}} \times \frac{365 \text{ days}}{1 \text{ year}} = 737.3 \text{ tons/year}$$

Table 5 shows the amount of tons that would be generated during the occupancy phase. The total generation of waste for supermarkets equates to approximately 737.3 tons per year based on 129,700 square feet of habitable building space (excluding trash and recycling enclosures). Note that this amount is subject to vary depending on the tenant occupying the commercial buildings (1 through 10). As discussed in Section 6.2 below, 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).

	Amount (sf)	Generation Rate ¹	Waste Generated (tons)
Habitable building space	129,700	3.12 pounds/100 sf/day	737.3
Total			737.3
¹ State of California 2016 sf = square feet.			

6.2 Waste Reduction Measures

According to the City Waste Management Guidelines (City of San Diego 2013), compliance with the City’s Recycling Ordinances is expected to provide a minimum recycling service volume of 40 percent for large complexes. Therefore, waste anticipated to be diverted during the occupancy phase would be approximately 294.2 tons per year. The remaining

443.1 tons per year would still exceed the 60 ton-per-year threshold of significance for a cumulative impact on solid waste services in the City (City of San Diego 2016).

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

- For 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 San Diego 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.
- At a minimum recycling services would include the following (San Diego 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 of San Diego Environmental Services Department 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 of San Diego Environmental Services Department or its successor.
- Occupant Education – For commercial facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707d):

1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants responsibility to recycle, shall be distributed to all occupants annually.
2. All new occupants shall be given educational information on recycling programs and procedures and instructions upon occupancy.
3. All occupants shall be given information and instructions upon any change in recycling service to the facility.

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 6 shows the exterior storage area requirements for non-residential developments.

Because the proposed project would include a total of 129,700 habitable square feet of non-residential uses, a minimum of 288 square feet of refuse storage area and a minimum of 288 square feet of recyclable material storage area would be required. The total exterior refuse and recyclable material storage requirement for the proposed project would be 576 square feet. According to the site plans, there are a total of eight enclosures equivalent to a total square-footage of 1,501 square feet, which would be sufficient to satisfy this requirement.

Table 6 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 Storage Area per Development (square feet)
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
100,000+	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 area above 100,001
Project Total	288	288	576
SOURCE: City of San Diego Municipal Code, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, Section 142.0830, Table 142-08C; effective, January 2000.			

6.4 Organic Waste Recycling

The proposed project would require landscaping and landscape maintenance. 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 proposed project during occupancy. An ongoing WMP would include a means for handling landscaping and other organic waste materials. The ongoing waste reduction measures discussed in Section 6.2 would include a means for handling landscaping and other organic waste materials.

7.0 Conclusion

7.1 Demolition, Grading, and Construction Waste

A total of approximately 956 tons of material would be generated and 892.2 tons of material would be diverted through recycling at source separated facilities that achieve a 100 percent diversion rates. When necessary, mixed debris would be recycled at a lower diversion rate, leaving 64 tons to be disposed of. This amounts to a 93 percent reduction in solid waste, which would be diverted from the landfill.

7.2 Occupancy–Operational Waste

The proposed project would include 129,700 square feet of habitable building space for non-residential uses, generating approximately 737.3 tons of waste per year; and would be required to provide a minimum of 288 square feet of exterior refuse area and the same amount of recyclable material storage area (total of 576 square feet; see Table 6). The applicant (or applicant's successor in interest) would implement 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 of San Diego Waste Management Guidelines (City of San Diego 2013), compliance with existing ordinances is expected to achieve a 40 percent diversion rate. The project would exceed the 60 ton-per-year City threshold of significance for having a cumulative impact on solid waste services. However, preparation of this waste management plan and implementation of the waste reduction measures, outlined in Section 6.2, would mitigate the cumulative solid waste impact to below a level of significance. In addition, the applicant (or applicant's successor) would implement the following additional measures to reduce operational waste that will be disposed:

- Ensure the use of drought tolerant plants, as indicated in the project's landscape plans, which would result in a reduction in the amount of yard waste once the project is constructed and occupied.

- Provide litter bins with recycling as an integral feature in all common areas to increase the opportunity to separate out recyclables from the trash.

7.3 Overall Compliance

With implementation of the strategies outlined in this WMP and compliance with all applicable City ordinances, solid waste impacts would be reduced to below a level of significance regarding collection, diversion, and disposal of waste generated from C&D, grading, and occupancy. During occupancy, an ongoing waste management plan would include provisions to provide adequate exterior storage space for refuse, recyclable, and landscape and green waste materials.

This WMP outlines strategies to achieve 93 percent of waste being diverted from disposal during C&D of the proposed project. This would reduce the anticipated impact of waste disposal to below the direct impact threshold of significance. The occupancy phase is anticipated to involve a recurring shortcoming due to achieving a projected 40 percent diversion. However, the implementation of the ongoing WMP, including the above-mentioned additional measures, and the project providing better than a 75 percent diversion rate during the other phases would compensate to achieve overall compliance.

8.0 References Cited

California, State of

- 1989 Assembly Bill 939. Integrated Waste Management Act.
- 2010 Senate Bill 1016. Solid Waste Per Capita Disposal Measurement Act.
- 2011 Assembly Bill 341. Jobs and Recycling.
- 2014 Assembly Bill 1826. Solid Waste: Organic Waste.
- 2016 CalRecycle – Estimated Solid Waste Generation Rates.
<https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates#Commercial>
Accessed on December 22, 2016.

San Diego, City of

- 2000 Waste Composition Study 1999-2000. Final Report. San Diego Environmental Services Department. November 2000.
- 2007a Recycling Ordinance. San Diego Municipal Code Chapter 6, Article 6, Division 7. November 20, 2007.
- 2007b Refuse and Recyclable Materials Storage Regulations. Municipal Code Chapter 14, Article 2, Division 8. December 9, 2007.

- 2008 Construction and Demolition Debris Diversion Deposit Program. San Diego Municipal Code Chapter 6, Article 6, Division 6.
- 2013 California Environmental Quality Act – Guidelines for a Waste Management Plan. June 2013.
<https://www.sandiego.gov/sites/default/files/legacy/environmental-services/pdf/recycling/wmpguidelines.pdf> Accessed on December 22, 2016
- 2016 Significance Determination Thresholds. California Environmental Quality Act. July.
- United States Environmental Protection Agency (U.S. EPA)
- 1998 Characterization of Building-Related Construction and Demolition Debris in the United States. Municipal and Industrial Solid Waste Division. Office of Solid Waste. Report No. EPA530-R-98-010. June.

ATTACHMENTS

ATTACHMENT 1

City of San Diego Environmental Services Department Construction & Demolition 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	
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	=	_____
Total All						_____

ATTACHMENT 2

City of San Diego 2016 Construction & Demolition Recycling Facility Directory

2017 Certified Construction & Demolition 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%, except mixed C&D debris which updates 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.

<p><i>Please note: In order to receive recycling credit, Mixed C&D Facility and transfer station receipts must:</i></p> <ul style="list-style-type: none"> -be coded as construction & demolition (C&D) debris -have project address or permit number on receipt *Make sure to notify weighmaster that your load is subject to the City of San Diego C&D Ordinance. <p><i>Note about landfills: Miramar Landfill and other landfills do not recycle mixed C&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
EDCO Recovery & Transfer 3660 Dalbergia St, San Diego, CA 92113 619-234-7774 www.edcodisposal.com/public-disposal	71%											•					
EDCO Station Transfer Station & Buy Back Center 8184 Commercial St, La Mesa, CA 91942 619-466-3355 www.edcodisposal.com/public-disposal	71%				•							•			•		
EDCO CDI Recycling & Buy Back Center 224 S. Las Posas Rd, San Marcos, CA 92078 760-744-2700 www.edcodisposal.com/public-disposal	88%				•										•		
Escondido Resource Recovery 1044 W. Washington Ave, Escondido 760-745-3203 www.edcodisposal.com/public-disposal	71%																
Fallbrook Transfer Station & Buy Back Center 550 W. Aviation Rd, Fallbrook, CA 92028 760-728-6114 www.edcodisposal.com/public-disposal	71%				•										•		
Otay C&D/Inert Debris Processing Facility 1700 Maxwell Rd, Chula Vista, CA 91913 619-421-3773 www.sd.disposal.com	75%																
Ramona Transfer Station & Buy Back Center 324 Maple St, Ramona, CA 92065 760-789-0516 www.edcodisposal.com/public-disposal	71%				•										•		
SANCO Resource Recovery & Buy Back Center 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696 www.edcodisposal.com/public-disposal	71%				•										•		
All American Recycling 10805 Kenney St, Santee, CA 92071 619-508-1155 (Must call for appointment)						•											
Allan Company 6733 Consolidated Wy, San Diego, CA 92121 858-578-9300 www.allancompany.com/facilities.htm					•										•		
Allan Company Miramar Recycling 5165 Convoy St, San Diego, CA 92111 858-268-8971 www.allancompany.com/facilities.htm					•										•		
AMS 4674 Cardin St, San Diego, CA 92111 858-541-1977 www.a-m-s.com								•									

	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
Armstrong World Industries, Inc. 300 S. Myrida St, Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) www.armstrong.com/commceilingsna								•									
Cactus Recycling 8710 Avenida De La Fuente, San Diego, CA 92154 619-661-1283 www.cactusrecycling.com					•								•		•		•
DFS Flooring 10178 Willow Creek Road, San Diego, CA 92131 858-630-5200 www.dfsflooring.com						•	•										
Duco Metals 220 Bingham Drive Suite 100, San Marcos, CA 92069 760-747-6330 www.ducometals.com															•		
Enniss Incorporated 12421 Vigilante Rd, Lakeside, CA 92040 619-443-9024 www.ennissinc.com		•	•						•	•							
Escondido Sand and Gravel 500 N. Tulip St, Escondido, CA 92025 760-432-4690 www.weirasphalt.com/esg		•															
Habitat for Humanity ReStore 10222 San Diego Mission Rd, San Diego, CA 92108 619-516-5267 www.sdhfh.org/restore.php				•													
Hanson Aggregates West – Lakeside Plant 12560 Highway 67, Lakeside, CA 92040 858-547-2141		•															
Hanson Aggregates West – Miramar 9229 Harris Plant Rd, San Diego, CA 92126 858-974-3849		•								•							
HVAC Exchange 2675 Faires St, Chula Vista, CA 91911 619-423-1855 www.thehvaxexchange.com															•		
IMS Recycling Services 2740 Boston Ave, San Diego, CA 92113 619-423-1564 www.imsrecyclingservices.com					•								•				
IMS Recycling Services 2697 Main St, San Diego, CA 92113 619-231-2521 www.imsrecyclingservices.com													•		•		
Inland Pacific Resource Recovery 12650 Slaughterhouse Canyon Rd, Lakeside, CA 92040 619-390-1418											•						
Lamp Disposal Solutions 1405 30 th Street, San Diego, CA 92154 858-569-1807 www.lampdisposalsolutions.com														•			
Los Angeles Fiber Company 4920 S. Boyle Ave, Vernon, CA 90058 323-589-5637 www.lafiber.com						•	•										

	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
Miramar Greenery, City of San Diego 5180 Convoy St, San Diego, CA 92111 858-694-7000 www.sandiego.gov/environmental-services/miramar/greenery.shtml											•						
Moody's 3210 Oceanside Blvd., Oceanside, CA 92056 760-433-3316		•								•						•	
Otay Valley Rock, LLC 2041 Heritage Rd, Chula Vista, CA 91913 619-591-4717 www.otayrock.com		•															
Reclaimed Aggregates Chula Vista 855 Energy Wy, Chula Vista, CA 91913 619-656-1836		•														•	
Reconstruction Warehouse 3650 Hancock St., San Diego, CA 92110 619-795-7326 www.recowarehouse.com				•													
Robertson's Ready Mix 2094 Willow Glen Dr, El Cajon, CA 92019 619-593-1856		•								•						•	
Romero General Construction Corp. 8354 Nelson Wy, Escondido, CA 92026 760-749-9312 www.romerogc.com/crushing/nelsonway.htm		•															
SA Recycling 3055 Commercial St., San Diego, CA 92113 619-238-6740 www.sarecycling.com															•		
SA Recycling 1211 S. 32 nd St., San Diego, CA 92113 619-234-6691 www.sarecycling.com															•		
Universal Waste Disposal 8051 Wing Avenue, El Cajon, CA 92020 619-438-1093 www.universalwastedisposal.com														•			
Vulcan Carol Canyon Landfill and Recycle Site 10051 Black Mountain Rd, San Diego, CA 92126 858-530-9465 www.vulcanmaterials.com		•	•							•						•	
Vulcan Otay Asphalt Recycle Center 7522 Paseo de la Fuente, San Diego, CA 92154 619-571-1945 www.vulcanmaterials.com		•															



An Employee-Owned Company

April 29, 2020

Mr. Theodore R. L. Shaw
Senior Land Use Consultant
Atlantis Group
2488 Historic Decatur Road, Suite 200
San Diego, CA 92106

Reference: Addendum to the Waste Management Plan for the La Media Retail Project, San Diego, California (RECON Number 7105)

Dear Mr. Shaw:

RECON Environmental, Inc. (RECON) has prepared an addendum evaluating potential solid waste impacts associated with the Industrial Alternative to the La Media Retail Project (project). This alternative would develop the project site with two industrial buildings totaling approximately 257,158 square feet. Impacts associated with the commercial/retail project were evaluated in the *Waste Management Plan for the La Media Retail Project* (Retail WMP) (RECON 2017).

PROJECT DESCRIPTION – LA MEDIA INDUSTRIAL NORTH PROJECT ALTERNATIVE

The 17.6-acre project site is located in the city of San Diego, south of Otay Mesa Road, north of State Route 905, and east of the La Media Road (Figure 1). The off-site improvement area, consisting of an additional 6.3 acres, is located on the western, northern, and eastern edges of the project site. Figures 1 and 2 depict the regional location and the project vicinity (on an aerial photograph), respectively.

The project site and most of the off-site improvement area is currently undeveloped. A portion of the off-site improvement area is developed as part of La Media Road. Commercial/industrial land uses occur to the north, west, and southeast of the project site, while vacant lands occur to the south and east. Brown Field Municipal Airport is to the northwest of the project site, and State Route 125 is approximately 0.5 mile to the east. Both the project site and the adjacent vacant lands have been extensively tilled for agriculture, although the majority of the land is currently fallow.

The Industrial Alternative proposes to construct two industrial buildings totaling approximately 257,158 square feet on the 17.6-acre project site (Figure 3). Building 1 would total 113,928 square feet and would be located on the western portion of the project site. Building 2 would total 143,240 square feet and would be located on the eastern portion of the project site. A total of 285 parking spaces would be provided on the site. The Industrial Alternative also includes the same off-site improvements located on the western and northern boundaries for frontage and roadway improvements as addressed for the commercial/retail project. However, the off-site improvement area to the east of the project site has been entitled under the Sunroad Project, and mitigation for potential impacts to this area have accounted for under that project. Therefore, this addendum does not evaluate impacts to the off-site improvement areas east of the project site.




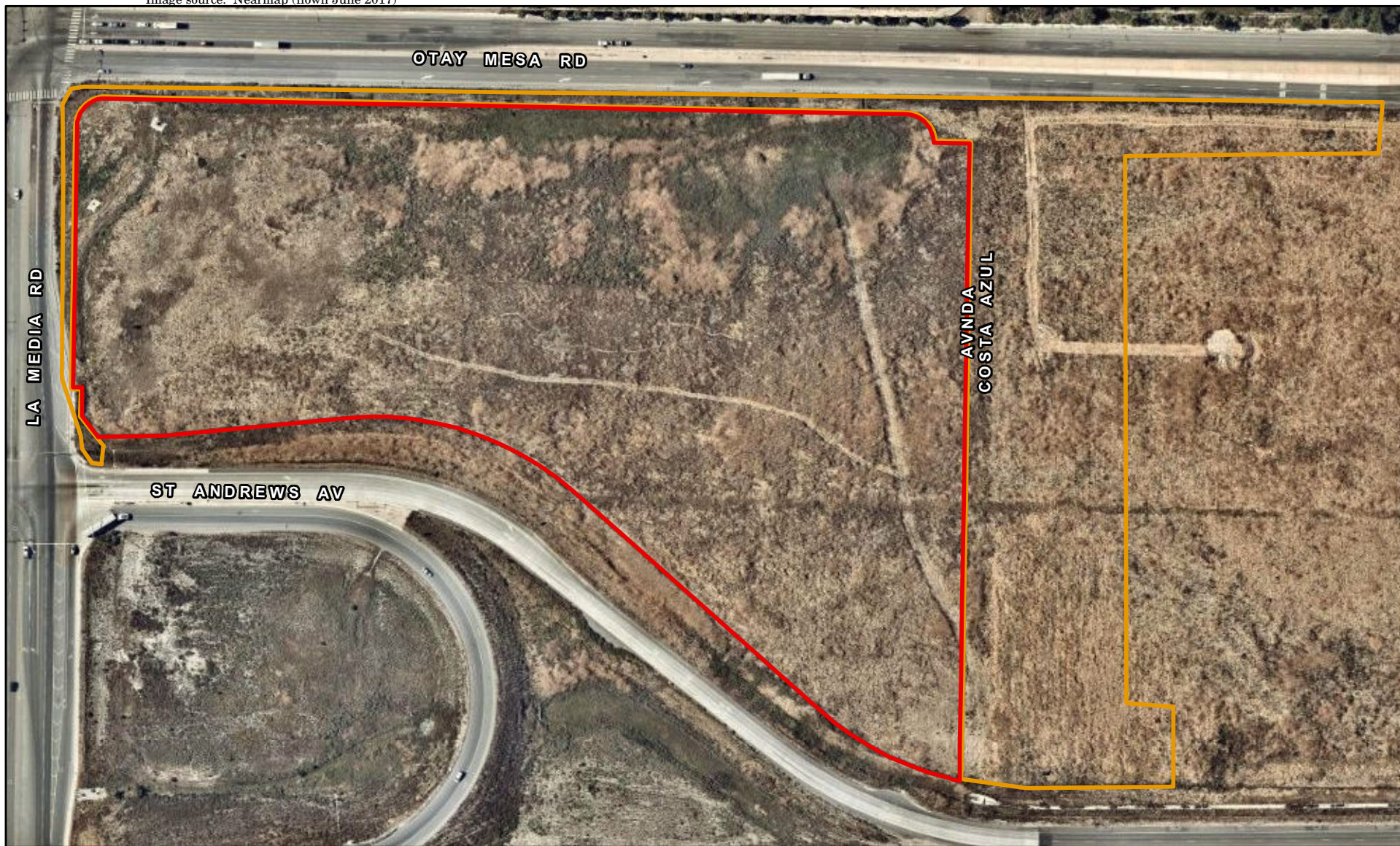


 Project Location



FIGURE 1
Regional Location

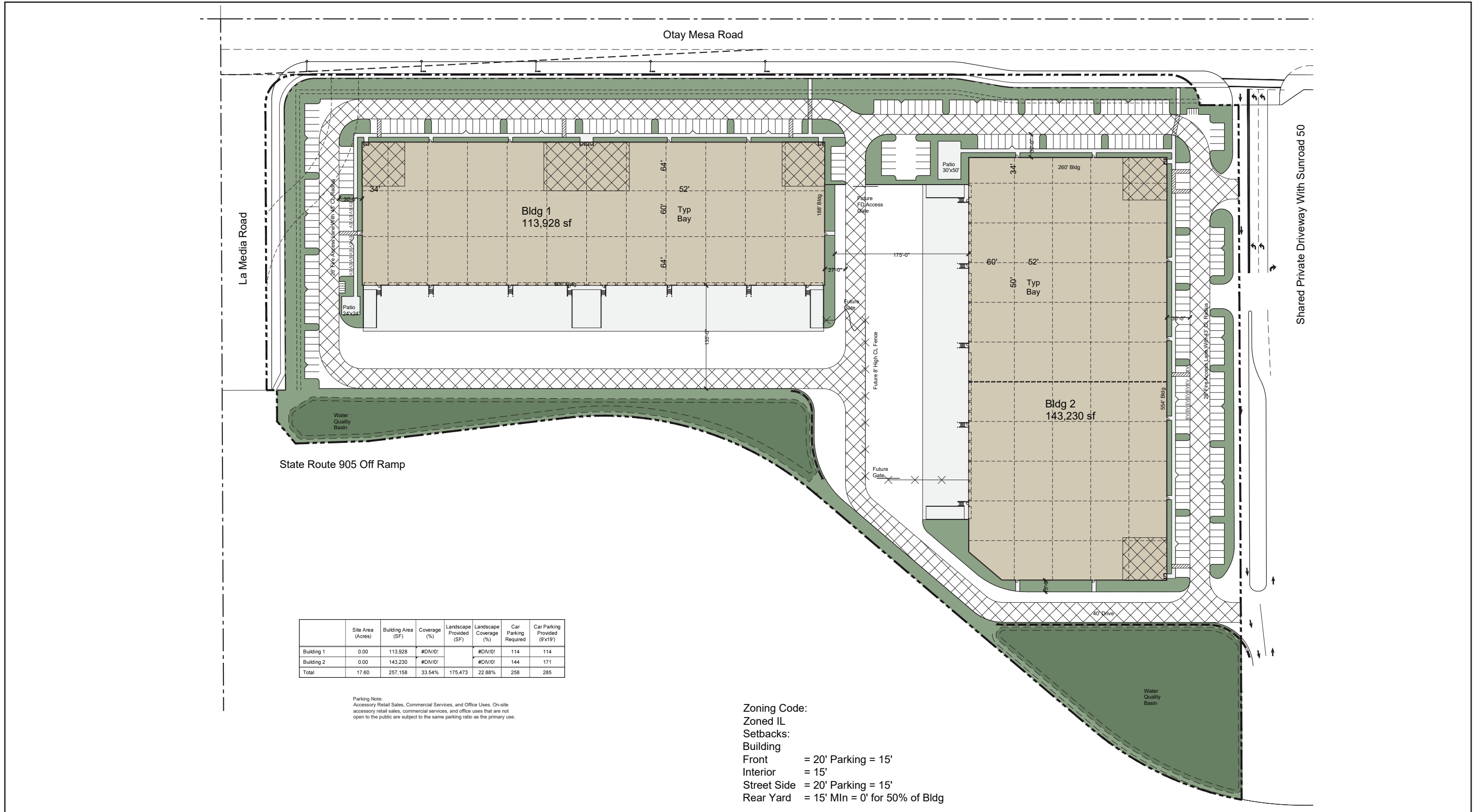


-  Project Boundary
-  Off-site Survey Area

0 Feet 200 

FIGURE 2

Project Location on Aerial Photograph



	Site Area (Acres)	Building Area (SF)	Coverage (%)	Landscape Provided (SF)	Landscape Coverage (%)	Car Parking Required	Car Parking Provided (9'x19')
Building 1	0.00	113,928	#DM/0!		#DM/0!	114	114
Building 2	0.00	143,230	#DM/0!		#DM/0!	144	171
Total	17.60	257,158	33.54%	175,473	22.88%	258	285

Parking Note:
 Accessory Retail Sales, Commercial Services, and Office Uses. On-site accessory retail sales, commercial services, and office uses that are not open to the public are subject to the same parking ratio as the primary use.

Zoning Code:
 Zoned IL
 Setbacks:
 Building
 Front = 20' Parking = 15'
 Interior = 15'
 Street Side = 20' Parking = 15'
 Rear Yard = 15' Min = 0' for 50% of Bldg

PROJECT IMPACTS – INDUSTRIAL ALTERNATIVE

Demolition

The Industrial Alternative would require demolition of the same existing facilities within the project site and off-site improvement areas as the commercial/retail project. This would include approximately 22,688 square feet of asphalt pavement, berms and spillways and demolition of approximately 18,275 square feet of concrete sidewalks, medians, driveways, and curb and gutters along La Media Road, Otay Mesa Road, and Saint Andrews Avenue. As with the commercial/retail project, the Industrial Alternative would require an estimated 294.1 tons of asphalt and 406.1 tons of concrete to be removed as shown in the calculations below:

$$22,688 \text{ square feet} \times 0.5 \text{ foot} = 11,344 \text{ cubic feet}$$

$$\frac{11,344 \text{ cubic feet}}{27 \text{ cubic feet}} = 420.1 \text{ cubic yards} \times 0.70 \frac{\text{tons}}{\text{unit}} = 294.1 \text{ tons}$$

$$18,275 \text{ square feet} \times 0.5 \text{ foot} = 9,138 \text{ cubic feet}$$

$$\frac{9,138 \text{ cubic feet}}{27 \text{ cubic feet}} = 338.4 \text{ cubic yards} \times 1.20 \frac{\text{tons}}{\text{unit}} = 406.1 \text{ tons}$$

Table 1 shows that this material would be entirely diverted for reuse at the appropriate facility.

Table 1 Material Generated by Demolition Phase					
Material	Tons Generated¹	Percent Diverted	Facility²	Tons Diverted	Tons Disposed
Asphalt (broken)	294.1	100	Vulcan Otay Asphalt Recycling Center	294.1	0
Concrete (broken)	406.1	100	Vulcan Otay Asphalt Recycling Center	406.1	0
Total	700.2	100		700.2 (100%)	0 (0%)
Note: Totals may vary due to independent rounding.					
¹ Environmental Services Department (ESD) Construction and Demolition (C&D) Debris Conversion Rate Table (Attachment 1).					
² City of San Diego ESD 2020 Certified C&D Recycling Facility Directory (Attachment 2).					

Grading

Project grading would require approximately 900 cubic yards of cut and 184,300 cubic yards of fill, resulting in a net import of 183,440 cubic yards of soil. Consistent with the 2017 Retail WMP, any vegetation removed during the grading phase would be taken to the Otay Landfill facility for 100 percent diversion.

Construction

The Industrial Alternative would construct two industrial buildings totaling approximately 257,158 square feet, which is larger than the 131,201 square feet proposed under the commercial retail project. According to a 1998 study by the U.S. Environmental Protection Agency (U.S. EPA), a sample of non-residential construction projects, including office and restaurant space, generated an average of 3.9 pounds of construction waste per square foot (U.S. EPA 1998). Based on the same U.S. EPA generation rate used for the commercial/retail project, the Industrial Alternative is estimated to generate 501.46 tons of waste during construction, which is larger than the 255.84 tons estimated for the commercial/retail project (see calculation below).

$$257,158 \text{ square feet} \times \frac{3.9 \text{ pounds}}{\text{square foot}} \times \frac{1 \text{ ton}}{2,000 \text{ pounds}} = 501 \text{ tons}$$

Diversion

The Industrial Alternative would be subject to the same waste diversion measures as the commercial/retail project. Table 2 estimates that 75 percent of the waste generated during the construction phase of the proposed project would be diverted to appropriate facilities for reuse. Only 42 tons of drywall and 84 trash/garbage, equivalent to 25 percent of the total construction waste, would be disposed of in the landfill.

Material Type	Estimated Waste (tons) ¹	Handling Facility ²	Estimated Diversion (tons)	Estimated Disposal (tons)
Asphalt and Concrete	71	Vulcan Otay Asphalt Recycling Center	71	0
Metals	111	Cactus Recycling	111	0
Brick/Masonry/Tile	34	Vulcan Otay Asphalt Recycling Center	34	0
Clean Wood	19	Otay Landfill	19	0
Carpet, Padding/Foam	41	DFS Flooring	41	0
Drywall	111	EDCO Recovery & Transfer	69	42
Corrugated Cardboard	30	Cactus Recycling	30	0
Trash/Garbage	84	Otay Landfill	0	84
Total	501		376 (75%)	126 (25%)

¹Portions of material types based on demolition estimates of similar non-residential development
²Environmental Services Department Construction and Demolition Recycling Facility Directory (see Attachment 2).

Table 3 summarizes the amount of waste estimated to be generated and diverted by each phase of the Industrial Alternative. Of the 1,201.2 tons estimated to be produced, 1,076.2 tons would be diverted during the demolition and construction phases, primarily through source separation. This would result in 87 percent of waste material diverted from the landfill for reuse. This is larger than the commercial/retail project’s total of 64.0 tons, but it would still be consistent with the City of San Diego’s (City’s) requirement to divert 75 percent of construction debris to landfills. Therefore, the Industrial Alternative would not result in any new significant impacts related to construction waste that were not identified in the 2017 Retail WMP.

Phase	Tons Generated	Tons Diverted	Tons Disposed
Demolition	700.2	700.2	--
Grading	0	--	--
Construction	501.0	376.0 (75%)	126.0 (25%)
Total	1,201.2	1,076.2 (87%)	126.0 (13%)

The Industrial Alternative would designate a Solid Waste Management Coordinator (SWMC) to ensure that all contractors and subcontractors are educated and that procedures for waste reduction and recycling efforts are implemented. This would ensure that the Industrial Alternative would be subject to the same construction measures identified in the WMP prepared for the commercial retail project. Specific responsibilities of the SWMC identified in the 2017 Retail WMP include the following:

- Review of the WMP at the preconstruction meeting, including the SWMC responsibilities.
- Distribute the WMP to all contractors when they first begin work on-site and when training workers, subcontractors, and suppliers on proper waste management procedures applicable to the project.

- Work with the contractors to estimate the quantities of each type of material that would be salvaged, recycled, or disposed of as waste, then assist in documentation.
- Use detailed material estimates to reduce risk of unplanned and potentially wasteful material cuts.
- Review and enforce procedures for source separated receptacles. Containers of various sizes shall:
 - Be placed in readily accessible areas that will minimize misuse or contamination.
 - Be clearly labeled with a list of acceptable and unacceptable materials, the same as the materials recycled at the receiving material recovery facility or recycling processor.
 - Contain no more than 10 percent non-recyclable materials, by volume.
 - Be inspected daily to remove contaminants and evaluate discarded material for reuse on-site.
- Review and enforce procedures for transportation of materials to appropriate recipients selected from Environmental Services Department's (ESD's) directory of facilities that recycle demolition and construction materials (see Tables 1 and 3; see Attachment 2).
- Ensure removal of Construction and Demolition (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 proposed project meets the following state law and City Municipal Code requirements. Adjustments would be made as needed to maintain conformance:

- The City's C&D Debris Diversion Deposit Program, which requires a refundable deposit based on the tonnage of the expected recyclable waste materials as part of the building permit requirements (City of San Diego 2008).
- The City's Recycling Ordinance, which requires that collection of recyclable materials, is provided (City of San Diego 2007a).
- The City's Storage Ordinance, which requires that areas for recyclable material collection must be provided (City of San Diego 2007b).
- The name and contact information of the waste contractor provided to ESD at least 10 days prior to the start of any work and updated within five days of any changes.

Operational Waste

The estimated annual waste to be generated during occupancy of the project is based on the expected waste generation that was calculated using the City ESD's Waste Generation Factors for non-residential uses (Attachment 3). The estimated solid waste generation rate for non-residential uses is 0.0059 ton/year (manufacturing uses). The estimated annual amount in tons is calculated below.

Non-Residential (Manufacturing):

$$257,158 \text{ square feet} \times \frac{0.0059 \text{ tons}}{\text{square feet/year}} = 1,517.2 \text{ tons/year}$$

Table 4 shows the amount of tons that would be generated during the occupancy phase. The proposed 257,158 square feet of industrial uses would generate approximately 1,517.2 tons of waste per year. This is larger than the 737.3 tons that would be generated by the commercial/retail project. The Industrial Alternative would be required to implement 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 4 Occupancy Phase Annual Waste Generation						
Land Use	Dwelling Units/ Square Feet	Generation Rate	Waste Generated (tons/unit/year)/ (tons/square feet/year)	Percent Diverted	Tons Diverted	Tons Disposed
Non-Residential Uses	257,158 square feet	0.0059 tons/square feet/year	1,517.2	40%	606.9	910.3
SOURCE: Attachment 3.						

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 40 percent. Therefore, waste anticipated to be diverted during the occupancy phase would be approximately 910.3 tons per year. The remaining 910.3 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).

To mitigate for the cumulative impact on solid waste, the applicant (or applicant's successor in interest) shall be responsible for implementing the long-term waste management program measures identified in the 2017 Retail WMP prepared for the commercial/retail project. This program shall include recyclables collection services required by and in accordance with the Recycling Ordinance, as well as providing exterior storage space for refuse, recyclable materials, and a means of handling landscaping and green waste materials. Specific program measures shall include the following:

- For 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 San Diego 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.
- At a minimum recycling services would include the following (San Diego 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 of San Diego Environmental Services Department 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 of San Diego Environmental Services Department or its successor.
- Occupant Education – For commercial facilities, the responsible person shall ensure that occupants are educated about the recycling services as follows (San Diego Municipal Code, Chapter 6, Article 6, Division 7, Section 66.0707d):
 1. Information, including the types of recyclable materials accepted, the location of recycling containers, and the occupants responsibility to recycle, shall be distributed to all occupants annually.
 2. All new occupants shall be given educational information on recycling programs and procedures and instructions upon occupancy.
 3. All occupants shall be given information and instructions upon any change in recycling service to the facility.

Therefore, the Industrial Alternative would not result in any new significant impacts related to operational waste that were not identified in the 2017 Retail WMP

Exterior Storage

Table 5 shows the exterior storage area requirements for non-residential developments. Because the project would include a total of 257,158 habitable square feet of non-residential uses, a minimum of 288 square feet of refuse storage area and a minimum of 288 square feet of recyclable material storage area would be required. Therefore, the Industrial Alternative would provide a total of 576 square feet of exterior refuse and recyclable material storage.

Table 5 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 Storage Area per Development (square feet)
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
100,000+	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 area above 100,001
Project Total	288	288	576
SOURCE: City of San Diego Municipal Code, Article 2, Division 8: Refuse and Recyclable Material Storage Regulations, Section 142.0830, Table 142-08C; effective, January 2000.			

Organic Waste Recycling

The Industrial Alternative would require landscaping and landscape maintenance. 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 proposed

Mr. Theodore R. L. Shaw
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project during occupancy. An ongoing WMP would include a means for handling landscaping and other organic waste materials.

Overall Compliance

The Industrial Alternative would be subject to the strategies outlined in the 2017 Retail WMP prepared for the commercial/retail project. Compliance with these strategies and all applicable City ordinances would reduce impacts related to solid waste to a level less than significant generated from C&D, grading, and occupancy. During occupancy, an ongoing waste management plan would include provisions to provide adequate exterior storage space for refuse, recyclable, and landscape and green waste materials.

Although the Industrial Alternative would generate more waste than the commercial/retail project, adherence to the applicable WMP strategies identified in the 2017 Retail WMP and all applicable City ordinances would achieve 87 percent of waste being diverted from disposal during C&D. This would reduce the anticipated impact of waste disposal to a level less than significant. The occupancy phase is anticipated to involve a recurring shortcoming due to achieving a projected 40 percent diversion. However, the implementation of the ongoing WMP identified in the 2017 Retail WMP, and the project providing better than a 75 percent diversion rate during the other phases would compensate to achieve overall compliance. Therefore, the Industrial Alternative would not result in any new significant solid waste impacts that were not identified in the 2017 Retail WMP.

Sincerely,



Nick Larkin
Senior Project Manager

NHL:jg

REFERENCE CITED

RECON Environmental, Inc. (RECON)
2017 Waste Management Plan for the La Media Retail Project, San Diego, California.

ATTACHMENTS

ATTACHMENT 1



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	
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	=	_____
Total All						_____

ATTACHMENT 2

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

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&D Ordinance.</i></p> <p><i>-If your load is mixed Construction and Demolition (C&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&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>*EDCO Recovery & Transfer* 3660 Dalbergia St, San Diego, CA 92113 619-234-7774 www.edcodisposal.com</p>	68%	•										•						•
<p>*EDCO Station Transfer Station & Buy Back Center* 8184 Commercial St, La Mesa, CA 91942 619-466-3355 www.edcodisposal.com</p>	68%	•			•							•			•			•
<p>*EDCO CDI Recycling & Buy Back Center* 224 S. Las Posas Rd, San Marcos, CA 92078 760-744-2700 www.edcodisposal.com</p>	89%				•	•	•								•			•
<p>Escondido Resource Recovery 1044 W. Washington Ave, Escondido 760-745-3203 www.edcodisposal.com</p>	68%																	
<p>*Fallbrook Transfer Station & Buy Back Center* 550 W. Aviation Rd, Fallbrook, CA 92028 760-728-6114 www.edcodisposal.com</p>	68%				•										•			•
<p>Otay C&D/Inert Debris Processing Facility 1700 Maxwell Rd, Chula Vista, CA 91913 619-421-3773 www.sd.disposal.com</p>	87%																	
<p>*Ramona Transfer Station & Buy Back Center* 324 Maple St, Ramona, CA 92065 760-789-0516 www.edcodisposal.com</p>	68%				•										•			•
<p>SANCO Resource Recovery & Buy Back Center 6750 Federal Blvd, Lemon Grove, CA 91945 619-287-5696 www.edcodisposal.com</p>	68%				•	•	•								•			
<p>Allan Company 6733 Consolidated Wy, San Diego, CA 92121 858-578-9300 www.allancompany.com/facilities</p>					•										•			
<p>Allan Company Miramar Recycling 5165 Convoy St, San Diego, CA 92111 858-268-8971 www.allancompany.com/facilities</p>					•										•			
<p>Armstrong World Industries, Inc. 300 S. Myrida St, Pensacola, FL 32505 877-276-7876 (Press 1, Then 8) www.armstrong.com/commceilingsna</p>								•										
<p>CMS Recycling Inc. 1428 West Mission Rd, Escondido, CA 92029 760-741-6300 www.cmsmetals.com</p>					•										•			
<p>DFS Flooring 10178 Willow Creek Rd, San Diego, CA 92131 858-630-5200 www.dfsflooring.com</p>						•	•											

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

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

ATTACHMENT 3

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