APPENDIX I

Waste Management Plan

Draft Conceptual Waste Management Plan

for the

Fourth Corner Apartments Project



prepared for CITY OF SAN DIEGO ENVIRONMENTAL SERVICES DEPARTMENT 9601 Ridgehaven Court, Suite 320 San Diego, California 92123-1636

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ACRONYMS

AB	Assembly Bill
amsl	above mean sea level
APN	Assessor's Parcel Number
C&D	Construction and Demolition
CalRecycle	California Department of Resources Recycling and Recovery
CEQA	California Environmental Quality Act
City	City of San Diego
CIWMA	California Integrated Waste Management Act of 1989
CY	cubic yard(s)
DSD	City of San Diego Development Services Department
DU	dwelling units
ESD	City of San Diego Environmental Services Department
ft.	foot/feet
IWMP	Integrated Waste Management Plan
lbs.	pounds
MF	Multi-Family
MMRP	Mitigation Monitoring and Reporting Program
SDMC	San Diego Municipal Code
SF	square feet
SRRE	Source Reduction and Recycling Element
State	State of California
SWMC	Solid Waste Management Coordinator
U.S. EPA	United States Environmental Protection Agency
WMP	Waste Management Plan

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1.0 INTRODUCTION

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

According to the City of San Diego, Development Services Department (DSD), California Environmental Quality Act (CEQA) Significance Determination Thresholds (July 2016) projects that include the construction, demolition, and/or renovation of 40,000 square feet (SF) or more of building space may generate 60 tons of waste or more. This amount of waste is considered to have cumulative impacts on solid waste facilities. Construction of the Fourth Corner Apartments Project would construction more than 40,000 SF of new development. Without implementation of the reduction and diversion measures identified herein, the estimated solid waste that would be generated could exceed the City's threshold; therefore, a project-specific Waste Management Plan must be implemented to mitigate solid waste impacts to below a level of significance.

This WMP has been prepared to be 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).

2.0 REGULATORY FRAMEWORK

2.1 State

2.1.1 Integrated Waste Management Act of 1989

The State of California (State) Integrated Waste Management Act (CIWMA) of 1989 [California Assembly Bill 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. Integrated Waste Management Plans 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. Assembly Bill 939 (AB 939), as modified in 2010 by Senate Bill 1016,

required all cities and counties to divert a minimum 50 percent of all solid waste from landfill disposal by the year 2020 through source reduction, recycling, and composting activities. AB 939 also required multifamily residential developments of five (5) or more units to arrange for recycling services.

2.1.2 Assembly Bill 341, Chesbro. Solid Waste: Diversion

The State legislature enacted AB 341 (California Public Resource Code Section 42649.2), in 2011, which increased the diversion target from 50 percent to 75 percent statewide (State of California, 2011). AB 341 also requires the provision of recycling service to commercial and residential facilities that generate four (4) or more cubic yards (CY) of solid waste per week.

2.1.3 Assembly Bill 1826 Chesbro. Solid Waste: Organic Waste

On September 28, 2014, Governor Brown approved 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 (including multi-family residential dwellings that consist of five or more units) that generate eight (8) or more cubic yards (CY) of organic waste per week, this requirement began April 1, 2016, while those that generate four (4) CY of organic waste per week must have an organic waste recycling program in place beginning January 1, 2017. After January 1, 2020, if CalRecycle determines that statewide disposal of organic wastes has not been reduced to 50 percent of 2014 levels, business that generate two (2) CY of commercial solid waste per week must also arrange for organic recycling services.

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 (MF) 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.

AB 1826, approved September 2014 and partially effective January 2016, will require a business in California that generates greater than two (2) CY of organic waste per week to arrange for recycling services for that organic waste in a specified manner (State of California 2014). Although organic waste generally includes landscaping and food waste, the law does not apply to food waste generated by multi-family dwellings. Other forms of organic waste are not anticipated to be generated by the project at a rate for which AB 1826 would apply.

2.2 City of San Diego

The City has enacted following codes and policies directed at the achievement of State-required diversion levels, including the Refuse and Recyclable Materials Storage Regulations (City 2009; San Diego Municipal

Code (SDMC) Chapter 14, Article 2 Division 8), Recycling Ordinance (City 2018; SDMC Chapter 6, Article 6, Division 7), and the Construction and Demolition (C&D) Debris Deposit Ordinance (City 2016; Municipal Code Chapter 6, Article 6, Division 6).

2.2.1 <u>City's Recycling Ordinance</u>

In compliance with the state policies, the City of San Diego 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 as amended, requires on-site recyclables collection for all residential and commercial uses (City of San Diego 2018). 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 to be provided by the ESD. Property owners and managers are to provide on-site recycling services and educational materials annually and to new tenants. Strategies for compliance are discussed in Section 8.2, Waste Reduction Measures.

2.2.2 <u>City's Refuse and Recyclable Materials Storage Regulations</u>

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 2009). 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 8.3, Refuse and Recyclable Exterior Storage.

2.2.3 Construction and Demolition Debris Deposit Ordinance

In July 2008, the Construction and Demolition (C&D) Debris Deposit Ordinance was adopted by the City and was most recently amended in 2016 (City of San Diego 2016). The ordinance requires applicants for a Building Permit or a Demolition/Removal Permit to estimate the volume of waste they will generate and pay a refundable C&D Debris Recycling Deposit at the time the building permit or demolition/removal permit is issued. The deposit is held until receipts are shown demonstrating that at least 65%¹ of the material generated at the job site is diverted from disposal. The ordinance is designed to keep C&D materials out of

¹ As of May 2017, Building Permits or Demolition/Removal Permits issued after July 1, 2016 must divert 65% by weight of the total construction and demolition debris generated.

local landfills and ensure they get diverted from disposal. Requirements are discussed further in Section 7.5, Contractor Education and Responsibilities.

2.2.4 <u>City of San Diego Zero Waste Plan</u>

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 of San Diego 2015).

2.2.5 City of San Diego CEQA Significance Determination Thresholds

As stated in the City of San Diego Development Services Department (DSD) CEQA Significance Determination Thresholds, implementation of the above described 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 (City of San Diego 2016). The City's Environmental Service Department estimates that compliance with existing City ordinances and regulations alone only achieves an approximate 40 percent diversion rate (City of San Diego 2013a). Therefore, discretionary projects must undertake additional measures to comply with existing regulations.

3.0 EXISTING CONDITIONS

The 0.87-acre project site consists of six contiguous lots at 4021, 4035, 4037 and 4061 Fairmount Avenue (Assessor's Parcel Numbers [APNs] 471-461-04, 05, 06, 07, 08 and 09). The project site is located in the CU-2-3 Zone and the Transit Area Overlay Zone within the Mid-City Communities Plan area known as the "Teralta East" Neighborhood. It is bound by Polk Avenue to the north, a commercial development to the south, Fairmont Avenue on the west, an alley to the east and dedicated City parkland on the north. The area west of the project site is developed with commercial uses, as well as a five-story mixed-use (residential/commercial) development known as City Height Square. The areas immediately south of the project site, and south of University Avenue are developed with commercial uses. Residential uses predominate the area north of Polk Avenue and east of the alley. **Figure 1** shows the regional location of the proposed project and **Figure 2** shows the project location with existing conditions on an aerial photograph.

The entire project site has been previously developed and the site is nearly level with elevations ranging from 362 feet to 366 feet above mean sea level (amsl).

The project site includes an existing commercial structure at 4061 Fairmont Avenue (approximately 7,936 SF in size), which is currently vacant. Other improvements on the site include underground utilities, concrete hardscaping, and perimeter security fencing.

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4.0 PROPOSED PROJECT

4.1 Proposed Development

The proposed mixed-use development will provide 75 multi-family units along with amenities for the residents, such as outdoor community recreation open space on the podium deck, a community room, a community kitchen, laundry room, and lounge. The non-residential component of the proposed project consists of 1,818 SF of community meeting space for use by the general public that would be located on the ground floor.

New construction would occur on 4021, 4035, 4037 and 4061 Fairmount Avenue. The proposed Site Plan is included as **Figure 3**. Vehicular parking (70 spaces), personal storage lockers, motorcycle and bicycle parking, and a refuge/recycling area (320 SF) will be provided in a secured garage on the street level (**Figure 4**). The building will be four stories of residential -wood construction, over a parking structure atgrade, approximately 62' in height. The elevator lobby, entrance and manager's office/ lounge will be located off Fairmount Avenue, next to a potential future city park. Vehicular access to the parking garage would be provided from the alley. A majority of the 70 vehicular parking spaces, storage and bicycle parking will be provided in a secured garage on the street level. Two surface parking spaces will be provided outside of the garage along the unnamed alley.

The Parking Summary and Dwelling Unit Mix is shown on Table 1 below.

Description	Unit Count Unit Mix/SF	Parking Requirement	Required Spaces	Proposed Spaces
Vehicle Spaces				
Dwelling Units ^{(1)(***)}	74	0.5 spaces/DU	37	64
Manager's Unit	1	1.75 spaces/DU	2	2
Non-residential Community Space (2)	1,818	2.1 spaces/1,000 SF	4	4
Total Vehicle Spaces			43	70
Non-Vehicle Spaces				
Motorcycle Spaces (3)	75	0.1 spaces/DU	8	8
Bicycle Spaces (3)				
Two-Bedroom Unit	55	0.5 spaces /DU	28	28
Three-Bedroom Unit	20	0.6 spaces /DU ⁽³⁾	12	12
Total Non-Vehicle Spaces			48	48

Notes: SF = Square Feet. DU = Dwelling Unit.

** Three of 64 proposed spaces would be ADA accessible per 2016 California Building Code Table 11b-208.2.

All decimals are rounded to the closet whole number

Sources:

(1) SDMC Section 143.0740 (Table 143-07D). City of San Diego, March 2020. (City of San Diego, 2020c)

(2) SDMC Section 155.0252 (Table 155-02E). City of San Diego, February 2020 (City of San Diego, 2020d)

(3) SDMC Section 142.0525 (Table 142-05C). City of San Diego, February 2020 (City of San Diego, 2020b).

5.0 PRECONSTRUCTION

A Solid Waste Management Coordinator (SWMC) for the Fourth Corner Apartments Project will be assigned and will have the authority to provide guidelines and procedures for contractor(s) and staff to implement waste reduction and recycling efforts. These responsibilities are, but not limited to, the following:

- Review and understand the Waste Management Plan including responsibilities of SWMC.
- Work with contractor(s) to estimate quantities of each type of material that will be salvaged, recycled, or disposed of as waste, then assist contractor(s) with documentation.
- Review and update procedures as needed for material separation and verify availability of containers and bins needed to avoid delays.
- Review and update procedures for periodic solid waste collection and transportation to recycling and disposal facilities.
- Review and update solid waste management requirements for each trade.
- Possess the Authority to issue Stop Work orders if proper procedures are not being followed.

During each phase, from preconstruction to occupancy, the Waste Management Plan will provide contractors and staff guidelines to ensure the proper reduction, segregation, recycling, and disposal of demolition, construction, and on-going operational waste. Proper segregation of recyclable materials is required based on type of materials generated and the availability of recycling facilities able to accept those materials. This responsibility will be under the direction of the assigned SWMC.

The SWMC will coordinate with Environmental Services Department and/or Mitigation Monitoring staff, including regular communication and invitations to the work site. An invitation shall be extended to an Environmental Services Department representative at least 7 days prior to attend each pre-construction meeting of each phase of the development.

6.0 **PROJECT CONSTRUCTION**

The project proposes to demolish existing commercial structure at 4061 Fairmont Avenue through a Site Development Permit per San Diego Municipal Code (SDMC) Section 126.0504 (i) -Proposed Demolition of Historic Structure. At-grade parking is provided to the south of the structure and a small storage shed is located in the southeast corner of this property. The urban gardens on 4037 and 4021 Fairmont Avenue; and a surface parking lot at 4035 Fairmont Avenue, including the perimeter fencing, would be removed and replaced by the proposed project.

The proposed project would also remove the existing 7.5' wide sidewalks in front of 4021, 4035, 4037, and 4061 Fairmount Avenue and replace them with a 10' wide parkway. Additionally, the project would replace that portion of the existing 20' alley that abuts the project site and underground the overhead electrical lines within the alley.

Grading and improvement plans would be reviewed by the City Engineer prior to development. The anticipated construction start date for the project is early 2021, and the duration is expected to be 14 to 16 months.

7.0 DEMOLITION, GRADING AND CONSTRUCTION

The Fourth Corner Apartments Project generally involves demolition of existing structures and the construction of new residential units. Because it is unknown if the project will salvage existing building materials it is assumed that demolition and construction materials will be segregated for transport to specified recycling facilities. According to the City's most recent Waste Characterization Study, C&D waste constituted one of the largest components of disposed waste in San Diego in 2012, approximately 26 percent, for an estimated 311,649 tons (City of San Diego 2013b).

AB 939 required the diversion of 50 percent of all solid waste, including C&D waste by the year 2020. AB 341 increased this goal to 75 percent. To mitigate for any solid waste impacts identified for the Fourth Corner Apartments Project the project will divert 75% or more of waste generated in compliance with the policy goal of AB 341. These goals for all phases, and other waste management requirements would be communicated to grading contractors through contract documents, the CEQA document and corresponding Mitigation Monitoring and Reporting Program (MMRP), and the Solid Waste Management Coordinator (SWMC) for the proposed project.

7.1 Demolition Waste

Demolition activities would include removal of the main building and shed at 4061 Fairmont Avenue as well as the shed at 4037 Fairmont, totaling approximately 8,408 SF; and approximately 14,934 SF of paved areas. Approximately 14,394 SF of existing concrete and asphalt would be removed, as well as the sidewalks in front of 4035 through 4061 Fairmount Avenue (see Figures 2 and 5). Chain-link and metal fencing would also be removed as would the wooden utility poles in the alley.

According to the City's *Guidelines for a Waste Management Plan* (2013a), during demolition, three pounds per square foot of waste are generated during demolition, construction, and also per year during ongoing use of a site (City of San Diego, 2013b., p. 10). Additionally, if more specific information on waste generation is not available, the total amount of waste can be equally distributed between the types of waste expected.

Based on this generation rate, and best estimates of asphalt and concrete pavement from the ESD C&D Debris Conversion Rate Table (Appendix B), it is estimated that approximately 438 tons of waste would be generated during demolition.

Estimates of material type and amounts are presented on Table 2 (Summary of Demolition Areas, Waste Generation and Diversion) and are discussed below. Anticipated portions of demolition debris to be diverted for recycling are 50 percent from the buildings and 100 percent from the paved areas, for a total diversion rate of 98 percent. This rate of diversion would exceed the current state requirement of 50 percent and the 2020 goal of 75 percent.

Estimates of building material type and amounts are based on the specific characteristics of the buildings to be demolished. Estimates have a degree of uncertainty and would be revised as the proposed project progresses and demolition debris is more specifically identified. Material weights are based on the ESD C&D Debris Conversion Rate Table (Appendix B, City of San Diego 2016). Building materials are classified as:

- Aspha	lt -	Concrete	-	Trash/garbage
- Buildin	ig materials -	Drywall (used)	-	Treated wood
- Carpet	t, padding/foam -	Roofing materials		
- Clean	wood -	Scrap metal		

Paved areas to be demolished would include the parking lots, that portion of the alley along the western boundary of the site, and the sidewalk along the project site frontage on Fairmont Avenue. Asphalt and concrete paving depth varies by project and soil type, but is typically six inches for surface parking lots. Based on the same conversion rate table, estimated asphalt and concrete to be removed totals 425 tons. These materials would be entirely diverted for reuse at the appropriate facility recommended in Appendix A, 2020 Certified Construction & Demolition Recycling Facility Directory. Removed landscaping and native vegetation would have a negligible weight relative to waste from other sources and would be recycled as green waste at the Miramar Greenery facility, achieving a 100 percent diversion rate.

Approximately 438 tons of waste is expected to be generated during demolition and approximately 435 tons of materials would be recycled including asphalt, building materials, carpet, padding/foam; clean wood; concrete; drywall (used), roofing materials, and scrap metal. Approximately 7 tons of debris would be disposed in a landfill. Table 2 identifies areas to be demolished and estimates the quantity of wastes generated and diverted for each.

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Feature	SF (a)	Lbs. ^(b)	Conversion Rate	Demolition Waste Generation (Tons)	Percent Diverted	Tons Diverted
<u>Structures</u>						
4061 Main Structure	7,936	23,808	0.0005 (c)	11.904	75%	8.93
4061 Shed	410	1,230	0.0005 ^(c)	0.615	75%	0.46
4035 Shed	62	186	0.0005 ^(c)	0.093	75%	0.07
Subtotal	8,408	25,224		12.61	75%	9.46
Feature	SF (a)	CA (ð)	Conversion Rate ^(e)	Tons ^(g)		
Paved Areas						
Asphalt (d)	11,934	221.00	0.70	154.70	100%	154.7
Concrete (f)	15,000	208.33	1.30	270.83	100%	270.8
Subtotal	26,934	429.33		425.53	100%	425.5
TOTAL (h)		25,653		438	98%	435

Table 2. Summary of Demolition Areas, Waste Generation and Diversion

Notes

SF = square foot; CY = cubic yards: Lbs = pounds

(a) Areas estimated using GIS analysis of site aerial photo.

(b) Generation rate = 3 lbs per SF. Source: City of San Diego Guidelines for Waste Management Plan, 2013 (p. 10)

(c) Tons estimated by converting lbs to tons (1 lb. = 0.0005 tons).

(d) Asphalt assumed to be 6-inches thick (0.5 ft)

(e) Cubic yards estimated by dividing length x width x thickness÷27.

(f) Concrete assumed to be 4.5 inches thick (0.375 ft).

(g)Tons calculated using City of San Diego Debris Conversion Rate Table (City of San Diego 2016). (h) Rounded to nearest whole.

7.2 Grading

As discussed in Section 6.0, Project Construction the entire site has been previously developed/disturbed.

The entire project site, approximately 0.87 acres would be graded as part of the Fourth Corner Apartments Project. It is anticipated that approximately 700 cubic yards (CY) of cut and 150 CY of fill (including 550 CY of export) would be required to implement the grading plan. All exported soil would be recycled using the City of San Diego Clean Fill Dirt Program or an approved clean fill dirt handler listed in Appendix A (City of San Diego 2020a).

7.3 Construction Waste

According to a 2009 study by the United States Environmental Protection Agency (U.S. EPA), a sample of multi-family construction projects generated an average of 4.0 pounds of waste per square foot and nonresidential construction projects generated an average of 4.3 pounds of construction waste per square foot (U.S. EPA, 2009). Based on these waste generation rates it is estimated that the proposed would generate approximately 268 tons of waste during construction (See Table 3).

Structure	Land Use	Area (SF)	Generation Rate (pounds per SF)	Tons Generated
4061 Fairmont Ave	Multi-Family (Residential)	104,142	4.0	208.28
Parking	Parking (non- residential)	26,040	4.3	55.99
Community Space	Non-residential	1,818	4.3	3.91
	268.18			

Table 3.	Construction	Waste	Generation
10010 01	0011011 0011011	114010	oonoration

Source: U.S. EPA 2009

Construction activities would generate debris that would be separated on-site into material specific containers to facilitate reuse and recycling and to increase efficiency waste reclamation. Source separation of materials on site is essential to ensure appropriate waste diversion, minimize costs associated with transportation and disposal, and facilitate compliance with the C&D ordinance. The types of construction waste anticipated to be generated include:

-	Asphalt and Concrete	-	Ceiling Tile
-	Brick/Masonry/Tile	-	Dirt
-	Cabinets. Doors, Fixtures, Windows	-	Drywall
-	Cardboard	-	Landscape (Debris)

The exact amount of construction materials and waste is currently unknown. Based upon our estimates, the project would recycle approximately 75 percent of construction waste materials and is in accordance with state diversion targets. Construction debris would be separated on-site into material-specific containers to facilitate reuse and recycling.

7.4 Waste Diversion

Multiple strategies will be used to ensure that the goal of 75 percent of solid waste diversion is met. The main method that will be implemented during construction and demolition of the proposed project is source separation. The types of construction and demolition waste discussed above would be separated on-site into material-specific containers to facilitate reuse and recycling. For C&D waste that is difficult to source separate, a mixed debris container will be provided that will be sent to a mixed debris facility and should be used only in "worst case scenarios".

Table 4 summarizes the amount of waste estimated to be generated and diverted during the construction and demolition phases of the proposed project.

Phase	Tons Generated	Tons Diverted	Tons Disposed
Demolition	438	435	3
Construction	268	201	67
TOTAL	706	636	70

Table 4. Total Waste Generated, Diverted and Disposed by Phase

7.5 Contractor Education and Responsibilities

To facilitate management of demolition and construction materials, the construction contractor shall identify a person to act as Solid Waste Management Coordinator whose responsibility it becomes to work will all contractors and subcontractors to ensure all practices outlined in this Waste Management Plan. The responsibilities of the Solid Waste Management Coordinator, include, but are not limited to, the following:

- Review Waste Management Plan
- Coordinate and oversee salvage operations
- Review and update procedures as needed for material separation and verify availability of containers and bins to avoid delays
- Review and update procedure for periodic solid waste collection and transportation to recycling and disposing facilities
- Educate contractors and subcontractors regarding waste management plan requirements and ensuring that contractors and subcontractors carry out the measures described in the WMP
- Ensure ESD attendance at Preconstruction Meeting and ensure compliance with segregation requirements, and verification of recycled content in base materials
- Ensure that contamination rates in bins remain below 5% by weight of the bin

The contractors and subcontractors would perform daily inspections of the construction site to ensure compliance with the requirements of the WMP and all other applicable laws and ordinances and report directly to the Solid Waste Management Coordinator. Daily inspections would include verifying the availability and number of dumpsters, proper sorting and segregation materials, and salvaging of excess materials.

8.0 OCCUPANCY PHASE

8.1 Waste Generation

The Fourth Corner Apartments Project will be managed under Price Charities. During the occupancy phase, it is estimated that 71 tons per year will be generated by the new development (Refer to Table 5). The expected waste generation was calculated from information from CalRecycle's collection of estimated waste during occupancy.

Type of Project	Square Footage/Unit	Generation Factor*	Tons Per Year			
Multi-Family Residential	75	0.93	69.75			
Community Space (Non- Residential)	1,818	0.00046	0.84			
Total Proposed Estimated Oc	cupancy Tonnage Per Year		70.59			

Table 5. Occupancy Waste Generation

Source: https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates

8.2 Waste Reduction Measures

The applicant shall be responsible for implementing a long-term solid waste management plan to ensure that the development meets or exceeds the required diversion percentages and follows City Ordinances. Measures for waste management include:

- Providing trash, recycling, and green waste bins for each residential unit
- Provide information to residents to encourage recycling of all paper products, cardboard, glass, aluminum cans, recyclable plastics, and yard waste.

Complying with City Ordinances will result in approximately 40% diversion, leaving 42.2 tons per year of disposal, which is below the threshold for significance.

8.3 Refuse and Recyclable Materials Storage

The Fourth Corner Apartments Project will be required to comply with the City of San Diego Municipal Code Section 142.0810 General Regulations for Refuse and Recyclable Material Storage, Section 142.0820 Refuse and Recyclable Materials Storage Regulation for Residential Development, and Section 142.0830 Refuse and Recyclable Material Storage Regulations for Nonresidential Development, by providing a total of 320 SF of exterior refuse and recycling storage for Residential and Non-Residential development. Because the proposed project includes a total of 75 dwelling units, a minimum of 288 square feet of exterior refuse and recyclable materials storage area would be required. As shown on **Table 6**, the Fourth Corner Apartments Project will provide 296 square feet exterior refuse and recyclable materials storage in accordance with the City regulations. The proposed project also includes 1,818 SF of nonresidential development, requiring a minimum of 24 square feet of exterior refuse and recyclable storage area. As shown on **Table 7**, the project will provide 24 square feet exterior refuse and recyclable materials storage in accordance with the City regulations.

Number of Dwelling Units	Minimum Refuse Storage Area Per Development (SF)	Minimum Recyclable Material Storage Area Per Development (SF)	Total Minimum Storage Area Per Development (SF)	Total Storage Area Provided (SF)
51-75 144		144	288	296

Table 6. Minimum Exterior Refuse and Recyclable Material Storage for Residential Development

Source: San Diego Municipal Code Chapter 14, Article 2, Division 8: Refuse and Recyclable Materials Storage Regulations (Table 142-08B).

Table 7. Minimum Exterior Refuse andRecyclable Material Storage for Non-Residential Development

Gross Floor Area (SF)	Minimum Refuse Storage Area Per Development (SF)	Minimum Recyclable Material Storage Area Per Development (SF)	Total Minimum Storage Area Per Development (SF)	Total Storage Area Provided (SF)
0-5,000	12	12	24	24

Source: San Diego Municipal Code Chapter 14, Article 2, Division 8: Refuse and Recyclable Materials Storage Regulations (Table 142-08C).

9.0 OVERALL COMPLIANCE

During the demolition and construction of the project, it is estimated that 706 tons of waste will be generated. During these phases, debris and materials will be separated on-site to material specific containers and those materials that can be recycled will be used on site or redirected to appropriate recipients selected from the ESD's directory of facilities that handle demolition and construction debris and materials (See Appendix A). Providing segregation of these materials would result in 90% diversion of construction and demolition waste (636 tons). An estimated 70 tons would end up going to landfill disposal. **Table 8** summarizes the tons of material type generated by each phase, the diversion rates and handling, tons diverted and tons disposed.

	Tons Generated	Handling ⁽¹⁾ and Diversion Rates	Tons Diverted	Tons Disposed
Demolition Wastes				•
Asphalt	154.7	Hanson Aggregates (100% diversion)	154.7	0
Building Materials	1.58	EDCO (100% diversion)	1.58	0
Carpet, padding/foam	1.58	DFS Flooring (100% diversion)	1.58	0
Clean wood	1.58	Inland Pacific (100% diversion)	1.58	0
Concrete	270.8	Hanson Aggregates (100% diversion)	270.8	0
Drywall	1.58	EDCO (100% diversion)	1.58	0
Roofing Materials	1.58	LEED (100% diversion)	1.58	0
Scrap Metal	1.58	Allan Company (100% diversion)	1.58	0
Trash/Garbage	1.58	Miramar Landfill (0% diversion)	0	1.58
Treated wood	1.58	Miramar Landfill (0% diversion)	0	1.58
Construction Wastes				
Asphalt and Concrete	33.5	Hanson Aggregates (75% diversion)	25.125	8.375
Brick/Masonry/Tile	33.5	Vulcan Carrol Canyon Landfill (75% diversion)	25.125	8.375
Cabinets. Doors, Fixtures, Windows	33.5	EDCO (75% diversion)	25.125	8.375
Cardboard	33.5	EDCO (75% diversion)	25.125	8.375

Table 8. Waste Generated, Diverted and Disposed – Demolition, Construction, Occupancy

	Tons	Handling ⁽¹⁾ and Diversion	Tons	Tons		
	Generated	Rates	Diverted	Disposed		
Ceiling Tile	33.5	Armstrong World Industries, Inc. (75% diversion)	25.125	8.375		
Dirt	33.5	Hanson Aggregates (75% diversion)	25.125	8.375		
Drywall	33.5	EDCO (75% diversion)	25.125	8.375		
Landscape (Debris)	33.5	Miramar Greenery (75% diversion)	25.125	8.375		
C&D Total	706		636	70		
Ongoing Use Waste						
Occupancy Waste	70.6/year	Separate material bins, education and information provided (40% diversion)	28.24/year	42.36/year		
Ongoing Total	70.6		28.24/year	42.36/year		

Table 8. Waste Generated, Diverted and Disposed – Demolition, Construction, Occupancy

Note:

(1) The contractor reserves the right to select any authorized processing facility as long as the facility is City-certified to meet minimum diversion requirement.

With implementation of this WMP, the proposed project would comply with all applicable City ordinances regarding collection, diversion, and disposal of waste generated from C&D, grading, and occupancy. During occupancy, an ongoing waste management plan would include provision of sufficient interior and exterior storage space for refuse and recyclable materials, and a means of handling and recycling landscaping and green waste materials.

10.0 REFERENCES

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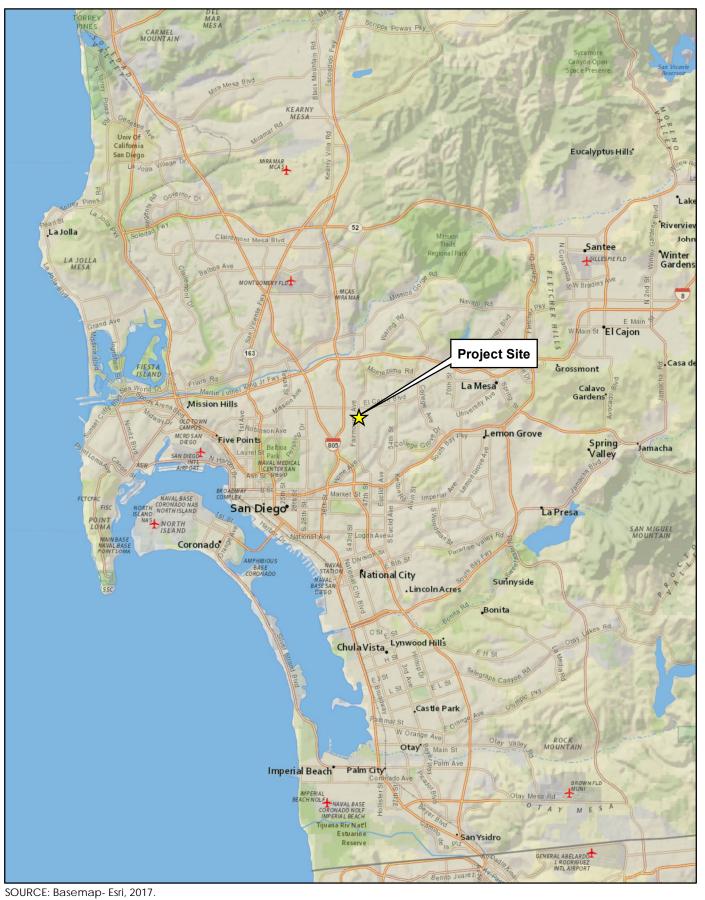
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11.0 LIST OF PREPARERS

This Conceptual Waste Management Plan has been completed by BRG Consulting, Inc., 304 Ivy Street, San Diego, CA 92101.

The following individuals contributed to the research and/or preparation of this report.

Christina J. Willis, President/Project Manager Rachel Rowe, Environmental Planner John Addenbrooke, Document Production Manager





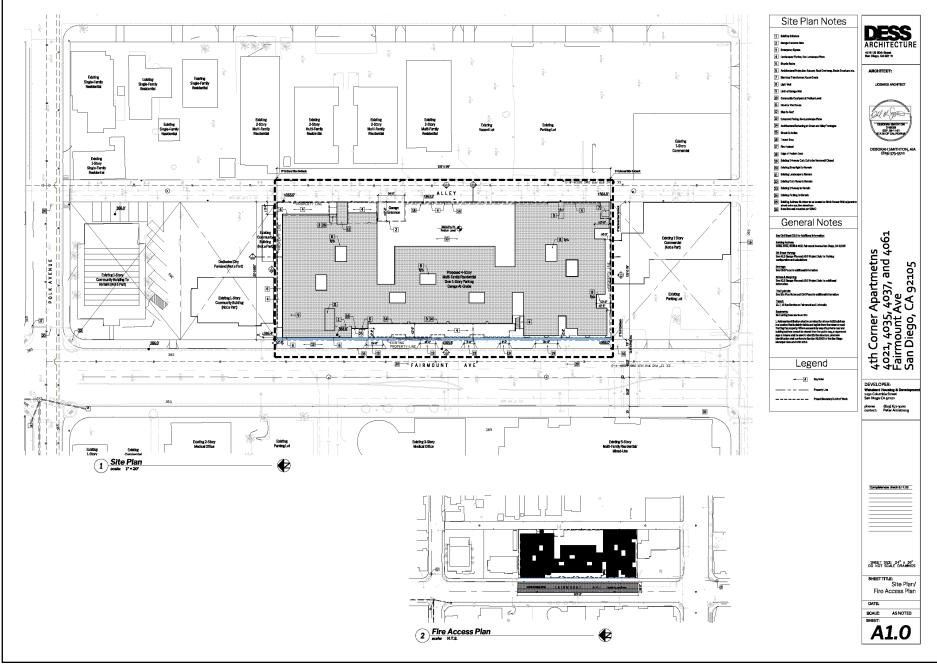
Regional Location Map Fourth Corner Apartments Project Figure 1



SOURCE: Basemap-Esri, 2017. SanGIS, 2017.

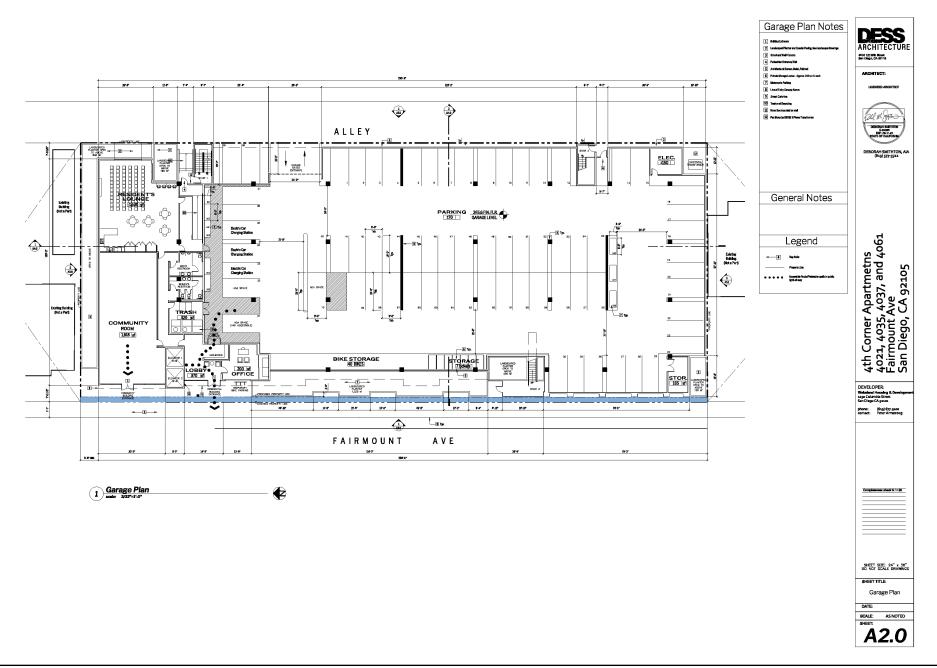
N 0 400 800 Feet

Project Location and Vicinity Fourth Corner Apartments Project Figure 2



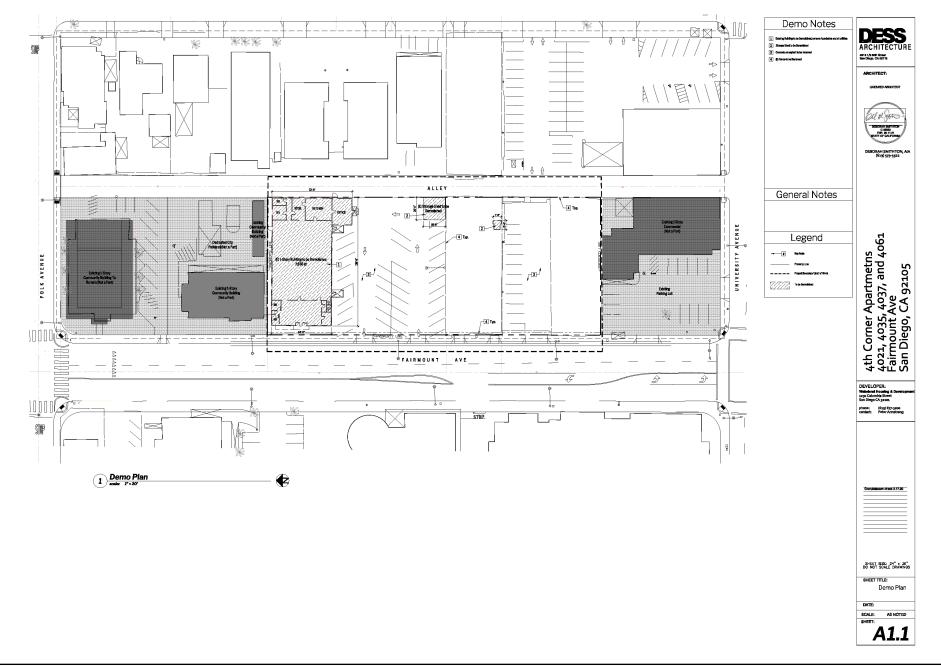
SOURCE: Dess Partners Architecture, 2020.

Site Plan/Fire Access Plan Fourth Corner Apartments Project Figure 3



SOURCE: Dess Partners Architecture, 2020.

Garage Plan Fourth Corner Apartments Project Figure 4



SOURCE: Dess Partners Architecture, 2020.

Demolition Plan Fourth Corner Apartments Project Figure 5 This page intentionally left blank.

Appendix A

2020 Certified Construction & Demolition Recycling Facility Directory This page intentionally left blank.



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.recvclingworks.com

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

*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.	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
Duco Metals 220 Bingham Drive Suite 100, San Marcos, CA 92069 760-747-6330 I <u>www.ducometals.com</u>															•			
Escondido Materials 500 N. Tulip St, Escondido, CA 92025 760-432-4690 <u>www.weirasphalt.com</u>		•																
Habitat for Humanity ReStore 8101 Mercury Ct, San Diego, CA 92108 619-516-5267 <u>www.sandiegohabitat.org</u>				•														
Hanson Aggregates – Hollister St 389 Hollister St, San Diego, CA 92154 858-974-3849		•																
Hanson Aggregates West – Lakeside Plant 12560 Highway 67, Lakeside, CA 92040 858-547-2141		•																
Hanson Aggregates West – Miramar 9229 Harris Plant Rd, San Diego, CA 92126 858-974-3849		•								•								
HVAC Exchange 2675 Faivre St, Chula Vista, CA 91911 619-423-1564 <u>www.hvacx.com</u>															•			
Inland Pacific Resource Recovery 12650 Slaughterhouse Canyon Rd, Lakeside, CA 92040 619-390-1418 <u>www.iprrgreen.com</u>											•							
Los Angeles Fiber Company 4920 S. Boyle Ave, Vernon, CA 90058 323-589-5637 <u>www.lafiber.com</u>						•	•											
Miramar Greenery, City of San Diego 5180 Convoy St, San Diego, CA 92111 858-694-7000 <u>www.miramargreenery.com</u>											•							
Moody's 3210 Oceanside Blvd, Oceanside, CA 92056 760-433-3316 <u>www.moodyselcorazonrecycling.com</u>		•								•						•		
Planet Recycling 187 Mace St, Chula Vista, CA 91911 888-258-7755 <u>www.planetrecyclingphoenix.com</u>						•												
RAMCO 8354 Nelson Way, Escondido, CA 92026 760-205-1797 <u>www.ramco.us.com</u>		•																
Reclaimed Aggregates Chula Vista 855 Energy Way, Chula Vista, CA 91913 619-656-1836		•														•		
Robertson's Ready Mix 2094 Willow Glen Dr, El Cajon, CA 92019 619-593-1856 <u>www.rrmca.com</u>		•								•						•		
Rockridge Crushing 12485 Highway 67, Lakeside, CA 92040 619-324-6570		•																
SA Recycling 3055 Commercial St, San Diego, CA 92113 619-238-6740 <u>www.sarecycling.com</u>															•			

*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.	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
SA Recycling 1211 S. 32 nd St, San Diego, CA 92113 619-234-6691 www.sarecycling.com															•			
SCOR Industries 2321 South Willow Ave, Bloomington, CA 92316 909-820-5046 www.scorindustries.com		•	•		•				•		•	•	•		•	•		
Terra Bella Nursery 302 Hollister St, San Diego, CA 92154 619-585-1118 www.terrabellanursery.com										•	•							
Vulcan Carol Canyon Landfill and Recycle Site 10051 Black Mountain Rd, San Diego, CA 92126 858-530-9465 www.vulcanmaterials.com		•	•							•						•		
Vulcan Materials Company 2275 Hard Rock Rd, Chula Vista, CA 91913 858-530-9472 www.vulcanmaterials.com		•																
Vulcan Otay Asphalt Recycle Center 7522 Paseo de la Fuente, San Diego, CA 92154 619-571-1945 www.vulcanmaterials.com		•																

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Appendix B

2016 City of San Diego C&D Debris Conversion Rate Table This page intentionally left blank.



CITY OF SAN DIEGO Construction & Demolition (C&D) Debris Conversion Rate Table

This worksheet lists materials typically generated from a constructionor 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 Mangement 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.

		Column I		Column II	Column III
Category	<u>Material</u>	<u>Volume</u>	<u>Unit</u>	<u>Tons/Unit</u>	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 =	=
			- 1	x estimate	=
			cy .	x estimate =	=
				Total All	
				i ven mit	

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