LAND USE EQUIVALENCY PROGRAM TECHNICAL REPORT

Prepared for:

The Reef Project
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DESCRIPTION OF THE PROPOSED REEF PROJECT LAND USE EQUIVALENCY PROGRAM

INTRODUCTION

The Reef Project (Project) would include a Land Use Equivalency Program to maintain flexibility of Project land uses and floor areas so that the Project can, if necessary, respond to market fluctuations. The Land Use Equivalency Program defines a framework within which the proposed mix of land uses can be modified within the development envelope defined by the approved entitlements.

PURPOSE

The purpose of The Reef Project Land Use Equivalency Program is:

To identify a set of rules for exchanging land uses, one for another, within the scope of development approved for the Project, which:

1. Does not result in any increase in peak hour trip generation;
2. Does not result in any increase in wastewater generation;
3. Does not result in any other significant impacts beyond those identified in the EIR for The Reef Project, or result in a substantial increase in the severity of previously identified significant impacts.

There are two aspects to addressing these rules in The Reef Project EIR:

1. The rules for the Land Use Equivalency Program are defined in the Project Description; and
2. The impacts associated with implementation of the Land Use Equivalency Program are discussed in each of the Project EIR impact area sections.

The conclusions regarding the impacts of the Land Use Equivalency Program are documented in the Project EIR.

OVERVIEW/SUMMARY

The Land Use Equivalency Program is predicated on the requirement to avoid any additional impacts, with an emphasis in two areas – peak hour traffic and wastewater infrastructure. In general, the PM peak hour is characterized by the highest background traffic, and is generally considered to be the most impactful time period by the City of Los Angeles Department of Transportation (LADOT). As discussed in the Project's traffic study, the most impactful time period with respect to Project traffic would be the Friday Evening Hour, which has the highest levels of background traffic in the area of the City where the

Project is located. However, as shown in the Traffic Study, the trip generation rates for the PM Peak Hour and the Friday Evening Hour are the same. Therefore, the PM Peak Hour/Friday Evening Hour trip rate is used in this analysis as the basis for potential land use exchanges. Accordingly, the Land Use Equivalency Program would ensure that the Project would not have any greater impacts than the Project during either the PM Peak Hour or the Friday Evening Hour.

Wastewater infrastructure that would serve the Project and surrounding area has been identified by the City of Los Angeles, Bureau of Sanitation (LABS) as potentially constrained, particularly with respect to a 52-inch trunk line in Jefferson Boulevard that is currently operating at 50% capacity (see Section IV.O-1 of this EIR). Accordingly, the Land Use Equivalency Program has been structured to ensure that no new wastewater generation beyond that associated with the Project, and analyzed in the EIR, would occur as a result of the land use exchanges that would be permitted under the Land Use Equivalency Program.

The Land Use Equivalency Program is implemented through the application of an Equivalency Exchange Table that is based on quantitative generation factors for peak hour trips and wastewater. Detailed explanations of the calculations associated with the derivation of this Table provided in the following sections of this Technical Report.

DISCRETIONARY REVIEW PROCESS

The Land Use Equivalency Program includes a discretionary review process that the City must follow if the project applicant or subsequent applicants desire to use the Land Use Equivalency Program. In the event the applicant or subsequent applicants should choose to utilize the Land Use Equivalency Program, the subsequent phase(s) of the Project shall be subject to Los Angeles Municipal Code (LAMC) Section 16.05 (Site Plan Review). The procedures set forth in LAMC Section 16.05 shall apply with the following provisions (if the Project is approved, this requirement will be identified in a "Q" Condition):

1. Section 16.05-D and Section 16.05-I shall not be applicable;
2. That in addition to the provisions of LAMC Section 16.04-E,4, a "Supplemental EIR", an "Addendum", or a "Subsequent EIR" shall be acceptable to satisfy the requirements of CEQA.
3. In addition to those findings identified in Section 16.05-F, the City shall ALSO find that: "The proposed phase of the project is consistent with the approved Land Use Equivalency Program.";
4. Appeals shall be heard by the City Planning Commission, the original decision-maker on the Land Use Equivalency, in lieu of the Area Planning Commission as otherwise specified in LAMC Section 16.05-H,1; and
5. No single phase shall consist of less than 50 dwelling units or 50,000 square feet of nonresidential floor area.

LAND USE EQUIVALENCY PROGRAM CALCULATIONS

Peak Hour Trip Generation

PM/Friday Evening peak hour traffic rates were used since these rates would be the most impactful traffic factor for this type of project in the Downtown area because background traffic levels are higher in the p.m. peak hour than in the a.m. peak hour and traffic generation is higher in the p.m. peak hour than in the a.m. peak hour. Peak hour impacts are used as the basis of identifying the Project's traffic impacts in the traffic study and Project EIR.

The Land Use Equivalency Program would allow the uses set forth herein to be exchanged for one another such that no additional peak hour traffic generation would result from any exchange that is consistent with the factors contained within the Land Use Equivalency Program. These factors are set forth in Table 1, Peak Hour Traffic Equivalency.

The conversion factor for a particular exchange is identified by finding the land use being exchanged *from* (called the donor land use) in the column on the left of Table 1 and cross referencing to the land use being exchanged *to* (called the recipient land use) on the top row of Table 1. The resulting factor indicates the number of units or 1,000 square feet of the recipient land use that can be included in the project in exchange for the number of units or 1,000 square feet of the donor land use being removed from the project. For example, 1,000 square feet of office use can be exchanged for 2.48 hotel rooms, or one hotel room can be exchanged for 160 (1,000 * 0.16) square feet of retail use.

However, within this context, the Project would not be allowed to exceed the total floor area that would be approved with the requested General Plan Amendment (6.0:1).

Table 1
Peak Hour Traffic Equivalency

Donor Land Use[a]	Recipient Land Use[b]								
	Condo (du)	Apartment (du)	Hotel (room)	Retail/ Commercial (ksf)	Office (ksf)	Gallery/ Museum (ksf)	Gym/ Fitness (ksf)	Wholesale/ Showroom (ksf)	Warehouse/ Distribution (ksf)
Generation Rate (trips)	0.44	0.53	0.48	1.87	1.27	0.17	1.50	0.45	0.32
Condominiums (du)		0.84	0.92	0.24	0.35	2.60	0.30	0.97	1.38
Apartments (du)	1.19		1.10	0.28	0.42	3.10	0.35	1.18	1.66
Hotel (room)	1.09	0.91		0.26	0.38	2.83	0.32	1.07	1.50
Retail/Commercial (ksf)[c]	4.24	3.55	3.89		1.48	11.02	1.25	4.16	5.84
Office (ksf)	2.87	2.40	2.63	0.68		7.45	0.85	2.82	3.97
Gallery/Museum (ksf)	0.39	0.32	0.35	0.09	0.13		0.11	0.38	0.53
Gym/Fitness Ctr (ksf)	3.39	2.85	3.12	0.80	1.18	8.82		3.33	4.69
Wholesale/Showroom (ksf)	1.02	0.85	0.94	0.24	0.35	2.65	0.30		1.41
Warehouse/Distribution (ksf)	0.73	0.60	0.67	0.17	0.25	1.88	0.21	0.71	

ksf = 1,000 square feet du = dwelling unit
a Land use changing from
b Land use changing to
c Retail/Commercial Land Use includes Retail, Restaurant and Grocery Store uses, as presented in Table 2.
Source (Generation Rates): Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012; The Mobility Group, 2014..
Source (Table): EcoTierra Consulting, 2015; The Mobility Group, 2015.

Wastewater Generation

In addition to not generating any additional PM peak hour traffic, an additional constraint with respect to the Project is that, under any land use equivalency exchange, the wastewater generation of the Project cannot increase over the level identified in the Project EIR. This is because the wastewater transmission infrastructure serving the Project area, particularly the 52-inch line that transmits wastewater flows out of the area, is operating at a level of capacity at which LABS has determined that additional flows could potentially pose issues with respect to the adequacy of this line, although the impacts of flows from the Project have been determined to be less than significant (Project EIR, Section IV.O-1).

Accordingly, the Land Use Equivalency Program would allow the uses set forth herein to be exchanged for one another such that no additional wastewater generation would result from any exchange that is consistent with the factors contained within the Land Use Equivalency Program. These factors are set forth in Table 2, Wastewater Generation Equivalency.

Equivalency Exchange Table

Table 3 provides the factors for overall equivalency exchanges under the Land Use Equivalency Program. Each factor presented in Table 3 reflects the lower of the two factors (peak hour traffic generation and wastewater generation) that were derived as described above. By using the lower of the two factors, the Land Use Equivalency Program assures that any land use equivalency exchange conducted in accordance with this Program will not result in either increased peak hour traffic or wastewater generation, as shown in the two example calculations provided below.

Application of the factors contained in the Equivalency Exchange Table would permit the maximum land use exchanges identified in Table 4.

Table 2
Wastewater Generation Equivalency

Donor Land Use[a]	Recipient Land Use[b]										
	Condo (du)	Apartment (du)	Hotel (room)	Restaurant (ksf)	Retail (ksf)	Grocery Store (ksf)	Office (ksf)	Gallery/ Museum (ksf)	Gym/ Fitness (ksf)	Wholesale/ Showroom (ksf)	Warehouse/ Distribution (ksf)
Generation Rate (gpd)	190	190	120	300	25	50	120	50	200	50	25
Condominiums (du)		1.00	1.58	0.63	7.60	3.80	1.58	3.80	0.95	3.80	7.60
Apartments (du)	1.00		1.58	0.63	7.60	3.80	1.58	3.80	0.95	3.80	7.60
Hotel (room)	0.63	0.63		0.40	4.80	2.40	1.00	2.40	0.60	2.40	4.80
Restaurant (ksf)[c]	1.58	1.58	2.50		12.00	6.00	2.50	6.00	1.50	6.00	12.00
Retail (ksf)[c]	0.13	0.13	0.21	0.08		0.50	0.21	0.50	0.13	0.50	1.00
Grocery Store (ksf)[c]	0.26	0.26	0.42	0.17	2.00		0.42	1.00	0.25	1.00	2.00
Office (ksf)	0.63	0.63	1.00	0.40	4.80	2.40		2.40	0.60	2.40	4.80
Gallery/Museum (ksf)	0.26	0.26	0.42	0.17	2.00	1.00	0.42		0.25	1.00	2.00
Gym/Fitness Ctr (ksf)	1.05	1.05	1.67	0.67	8.00	4.00	1.67	4.00		4.00	8.00
Wholesale/Showroom (ksf)	0.26	0.26	0.42	0.17	2.00	1.00	0.42	1.00	0.25		2.00
Warehouse/Distribution (ksf)	0.13	0.13	0.21	0.08	1.00	0.50	0.21	0.50	0.13	0.50	

ksf = 1,000 square feet du = dwelling unit gpd = gallons per day

a Land use changing from

b Land use changing to

c Retail, Restaurant and Grocery Store uses are reflected as Retail/Commercial in Table1.

Source (Generation Rates): City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2014.

Source (Table): EcoTierra Consulting, 2015.

Table 3
Equivalency Exchange Table

Donor Land Use[a]	Recipient Land Use[b]										
	Condo (du)	Apartment (du)	Hotel (room)	Restaurant (ksf)[c]	Retail (ksf)[c]	Grocery Store (ksf)[c]	Office (ksf)	Gallery/ Museum (ksf)	Gym/ Fitness (ksf)	Wholesale/ Showroom (ksf)	Warehouse/ Distribution (ksf)
Condominiums (du)		0.83	0.92	0.24	0.24	0.24	0.35	2.59	0.29	0.98	1.38
Apartments (du)	1.00		1.10	0.28	0.28	0.28	0.42	3.12	0.35	1.18	1.66
Hotel (room)	0.63	0.63		0.26	0.26	0.26	0.38	2.40	0.32	1.07	1.50
Restaurant (ksf)[c]	1.58	1.58	2.50		1.00	1.00	1.47	6.00	1.25	4.16	5.84
Retail (ksf)[c]	0.13	0.13	0.21	0.08		0.50	0.21	0.50	0.13	0.50	1.00
Grocery Store (ksf)[c]	0.26	0.26	0.42	0.17	1.00		0.42	1.00	0.25	1.00	2.00
Office (ksf)	0.63	0.63	1.00	0.40	0.68	0.68		2.40	0.60	2.40	3.97
Gallery/Museum (ksf)	0.26	0.26	0.35	0.09	0.09	0.09	0.13		0.11	0.38	0.53
Gym/Fitness Ctr (ksf)	1.05	1.05	1.67	0.67	0.80	0.80	1.18	4.00		3.33	4.69
Wholesale/Showroom (ksf)	0.26	0.26	0.42	0.17	0.24	0.24	0.35	1.00	0.25		1.41
Warehouse/Distribution (ksf)	0.13	0.13	0.21	0.08	0.17	0.17	0.21	0.50	0.13	0.50	

ksf = 1,000 square feet du = dwelling unit
a Land use changing from
b Land use changing to
c Traffic generation factor for Restaurant, Retail and Grocery Store uses is Retail/Commercial rate from Table 1.
Source (Table): EcoTierra Consulting, 2015.

Table 4
Maximum Permitted Land Use Exchanges

Donor Land Use[a]	Max Available to Exchange	Recipient Land Use[b]										
		Condo (du)	Apartment (du)	Hotel (room)	Restaurant (ksf)[c]	Retail (ksf)[c]	Grocery Store (ksf)[c]	Office (ksf)[c]	Gallery/ Museum (ksf)[c]	Gym/ Fitness (ksf)[c]	Wholesale/ Showroom (ksf)[c]	Warehouse/ Distribution (ksf)[c]
Condominiums (du)	895		743	820	211	211	211	310	2,316	263	875	1,230.625
Apartments (du)	549	549		606	156	156	156	229	1,712	194	647	909.281
Hotel (room)	208	131	131		53	53	53	79	499	67	222	312.000
Restaurant (ksf)	45.657	72	72	114		46	46	67	274	57	190	266.808
Retail (ksf)	60.045	7	7	12	5		30	13	30	8	30	60.045
Grocery Store (ksf)	29.355	7	7	12	5	29		12	29	7	29	58.710
Office (ksf)	392.394	247	247	392	157	266	266		942	235	942	1,557.314
Gallery/Museum (ksf)	17.507	4	4	6	2	2	2	2		2	7	9.301
Gym/Fitness Ctr (ksf)	7.879	8	8	13	5	6	6	9	32		26	36.933
Wholesale/ Showroom (ksf)	438.768	115	115	182	73	106	106	155	439	110		617
Warehouse/ Distribution (ksf)	-0-	0	0	0	0	0	0	0	0	0	0	
TOTAL[d]		**1,140**	**1,334**	**2,157**	**666**	**875**	**875**	**877**	**6,273**	**942**	**2,967**	**5,058**

ksf = 1,000 square feet du = dwelling unit
a Land use changing from
b Land use changing to
c Rounded to the nearest ksf
d Totals may not add exactly due to rounding
Source (Generation Rates): Trip Generation, 9th Edition, Institute of Transportation Engineers, 2012; The Mobility Group, 2014, City of Los Angeles, Department of Public Works, Bureau of Sanitation, 2014.
Source (Table): EcoTierra Consulting, 2015.

APPLICATION OF EQUIVALENCY EXCHANGE FACTORS

As indicated in the following two examples, application of the equivalency exchange factors in Table 3 would result in an equivalent change for the lower of the two factors (i.e., the factor in Table 3), and a lower generation for the other factor, thus assuring that the exchange would not result in an increase in generation associated with either of the two factors.

EXAMPLE 1: An exchange where the Table 3 factor is based on Peak Hour traffic generation – exchange 100 apartments for the equivalent amount of retail space

- 100 apartments (donor land use) = 28,000 square feet of retail (recipient land use) - from Table 1: 1 apartment = 0.28 ksf of retail, or 280 square feet of retail; therefore, 100 apartments = 28,000 square feet of retail.
- Peak Hour Traffic Generation
    - 100 apartments = 53 PM Peak Hour trips (Table 1 generation rate for apartments = 0.53 per apartment)
    - 28,000 square feet of retail = 52 PM Peak Hour trips (Table 1 generation rate for retail = 1.87 per ksf.
    - The same PM Peak Hour trip generation for both donor and recipient land uses (Totals may not compare exactly due to rounding).
- Wastewater Generation
    - 100 apartments = 19,000 gallons per day (Table 2 generation rate for apartments = 190 gpd per apartment)
    - 28,000 square feet of retail = 700 gpd (Table 2 generation rate for retail = 25 gpd per ksf)
    - Wastewater generation under the recipient land use is lower than under the donor land use.

EXAMPLE 2: An exchange where the Table 3 factor is based on Wastewater generation – exchange 100,000 square feet of office use for the equivalent number of condominiums

- 100,000 square feet of office space (donor land use) = 63 condominiums (recipient land use) - from Table 2: 1 ksf office = 0.63 condominium units; therefore, 100 ksf office = 63 condominium units.
- Wastewater Generation
    - 100,000 square feet of office = 12,000 gpd wastewater generation (Table 2 generation rate for office = 120 gpd per ksf)
    - 63 condominium units = 11,970 gpd wastewater generation (Table 2 generation rate for condominiums = 190 gpd per unit.

  - The same wastewater generation for both donor and recipient land uses (Totals may not compare exactly due to rounding).
- Peak Hour Traffic Generation
  - 100,000 square feet of office = 127 Peak Hour trips (Table 1 generation rate for office = 1.27 per ksf)
  - 63 condominium units = 28 Peak Hour trips (Table 1 generation rate for condominiums = 0.44 per unit.
  - Peak Hour traffic generation under the recipient land use is lower than under the donor land use.

IMPACTS OTHER THAN TRAFFIC AND WASTEWATER

As discussed in the preceding sections, the Land Use Equivalency Program, as defined above, has been structured to assure that, if the rules set forth in the Program are followed, no additional peak hour traffic impacts and no wastewater impacts would occur under any proposed land use equivalency exchange.

With respect to other environmental impacts evaluated in the Project EIR, each section of the Project EIR includes an analysis of the potential effects of the Land Use Equivalency Program. Quantitative analysis is provided for water, solid waste, police, schools, parks and recreation, and library impacts using tables that show that the maximum exchanges would not cause significant impacts with respect to each of these issues. Qualitative analysis is provided for the remaining impact areas that cannot be quantified. These analyses can be found in the corresponding sections in the Draft EIR. The combination of these approaches provides the information and analysis required to establish that implementation the Land Use Equivalency Program would not result in additional significant impacts in any potential area of environmental impact.