

September 1 (Revised: March 23, 2021)

Ms. Tina Andersen
T&B Planning, Inc.
3200 El Camino Real, Suite 100
Irvine, CA 92602

SUBJECT: BRIDGE POINT RANCHO CUCAMONGA VEHICLE MILES TRAVELED (VMT) ANALYSIS

Dear Ms. Tina Andersen:

The following VMT Analysis has been prepared for the proposed Bridge Point Rancho Cucamonga Project (**Project**), which located at 12434 4th Street, in the City of Rancho Cucamonga, San Bernardino County, California.

PROJECT OVERVIEW

Consistent with the [Bridge Point Rancho Cucamonga Traffic Analysis](#) (Urban Crossroads, January 2021), the Project includes redevelopment of the Project site with two warehouse buildings (Buildings 1 and 2) with a combined building area of approximately 2,175,000 square feet consisting of the following uses (see Attachment A):

- 1,957,500 square feet of High-Cube Fulfillment Center (Non-Sort) Warehouse (90% of the total square footage of Building 1 and Building 2)
- 217,500 square feet of High-Cube Cold Storage Warehouse (10% of the total square footage of Building 1 and Building 2)
- The proposed Project will replace existing operational uses, which consists of 1,413,000 square feet of High-Cube Transload Short-Term Storage Warehouse (Without Cold Storage) use and 23,240 square feet of Free-Standing Discount Store.

Although the Project proposes to replace existing industrial and retail uses with newly constructed warehouse buildings, the VMT analysis focuses on the efficiency of travel related to the Project's location using the combined new building area of 2,175,000 square feet.

While not proposed as part of the Project, to provide a conservative analysis, operation of the buildings with 90% High-Cube Fulfillment Center (Sort) and 10% High-Cube Cold Storage Warehouse is also addressed below.

BACKGROUND

Changes to California Environmental Quality Act (CEQA) Guidelines were adopted in December 2018, which require all lead agencies to adopt VMT as a replacement for automobile delay-based level of service (LOS) as the measure for identifying transportation impacts for land use projects. This statewide

mandate went into effect July 1, 2020. To aid in this transition, the Governor’s Office of Planning and Research (OPR) released a Technical Advisory on Evaluating Transportation Impacts in CEQA (December of 2018) (**Technical Advisory**). (1) Based on OPR’s Technical Advisory, the San Bernardino County Transportation Authority (SBCTA) prepared the SBCTA Countywide SB 743 VMT Implementation Study (February 2020) to assist its member agencies with implementation tools necessary to adopt analysis methodology, impact thresholds and mitigation approaches for VMT. Included in this work effort, SBCTA in February 2020 also released to each of its member agencies Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (**SBCTA Guidelines**) (2), which provides a template of specific procedures for complying with the new CEQA requirements for VMT analysis. Based on the SBCTA Guidelines, the City of Rancho Cucamonga recently adopted new Traffic Impact Analysis Guidelines (June 2020) (**City Guidelines**) (3), which documents the City’s VMT analysis methodology and approved impact thresholds. The VMT analysis presented in this report has been developed based on the newly adopted City Guidelines.

PROJECT SCREENING

Consistent with City Guidelines, projects that meet certain screening thresholds based on their location and project type may be presumed to result in a less than significant transportation impact. Consistent with the screening criteria recommended in OPR’s Technical Advisory, the City of Rancho Cucamonga utilizes the following project screening thresholds:

- Transit Priority Area (TPA) Screening
- Low VMT Area Screening
- Project Type Screening

A land use project need only meet one of the above screening criteria to result in a less than significant impact.

TPA SCREENING

Consistent with guidance identified in the City Guidelines, projects located within a Transit Priority Area (TPA) (i.e., within ½ mile of an existing “major transit stop”¹ or an existing stop along a “high-quality transit corridor”²) may be presumed to have a less than significant impact absent substantial evidence to the contrary. However, the presumption may not be appropriate if a project:

- Has a Floor Area Ratio (FAR) of less than 0.75;

¹ Pub. Resources Code, § 21064.3 (“Major transit stop’ means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”).

² Pub. Resources Code, § 21155 (“For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.”).

- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.

Although the Project is located near a high-quality transit corridor, the proposed Project would develop at FAR of 0.546, which is less than 0.75 FAR requirement.

The TPA screening threshold is not met.

LOW VMT AREA SCREENING

City Guidelines state that “residential and office projects located within a low VMT-generating area may be presumed to have a less than significant impact absent substantial evidence to the contrary.”³ It should be noted that the commute VMT portion of an industrial project (i.e., passenger car trips only) falls under the office project categorization. Furthermore, OPR’s Technical Advisory notes that “projects that locate in areas with low VMT and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT.”⁴ The Project proposes to redevelop an existing industrial area with new warehouse buildings and does not propose to change other factors that would prohibit the use of map based screening.

The City uses the SBCTA screening tool to determine low areas of VMT. The screening tool uses the sub-regional San Bernardino Transportation Analysis Model (SBTAM) to measure VMT performance within individual traffic analysis zones (TAZ’s) within the region. The parcel containing the proposed Project was selected and the screening tool was run for the Origin/Destination (OD) VMT per service population measure of VMT. Based on the Screening Tool results, the Project resides within TAZ 53700501 and that TAZ was shown to not be within a low VMT generating zone based on the OD method of calculating VMT.

City Guidelines also identifies that for projects composed entirely of a single land use, such as the proposed Project’s industrial warehouse use, VMT may be calculated using the Production-Attraction (PA) trip matrix to allow for the isolation of vehicle trips by trip purpose (i.e., home-based work trips), which measures commute VMT. The analysis of VMT by trip purpose is consistent with the recommendations published by OPR in their Technical Advisory. The screening tool was run using the PA VMT per service population measure of VMT, which identified that the Project is located within a low VMT generating TAZ based on PA VMT per service population. It should be noted that SBTAM utilizes general categories to classify employment based land uses (i.e., retail, office, warehouse, etc.). In other words, the low VMT generating zone for TAZ 53700501 would apply to any industrial uses such as general light industrial, warehousing, high-cube fulfillment centers (non-sort), and high-cube fulfillment centers (sort).

³ Page 19 of the City Guidelines

⁴ Page 12 of the Technical Advisory

The results of the screening tool for both the OD and PA VMT per service population calculations are provided in Attachment B.

The Low VMT Area screening threshold is met.

PROJECT TYPE SCREENING

The City Guidelines identify that local serving retail less than 50,000 square feet or other local serving essential services (e.g., day care centers, public schools, medical/dental office buildings, etc.) are presumed to have a less than significant impact absent substantial evidence to the contrary. In addition, small projects anticipated to generate low traffic volumes and by association low greenhouse gas (GHG) emissions are also assumed to cause a less than significant impact. The City Guidelines indicate that small development projects generating fewer than 250 daily vehicle trips or less may be presumed to have a less than significant impact, subject to discretionary approval by the City.

Trips generated by the Project's proposed land uses have been estimated based on trip generation rates collected by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017. (4) The proposed Project is anticipated to generate a total of 976 net new vehicle trip-ends per day as compared to the existing land uses (see Attachment C), which is above the 250 daily vehicle trip threshold. City staff has also determined that the Project's size is not consistent with the intent of the small development project 250 daily trip criteria contained within the Project Type Screening evaluation.

The Project Type screening threshold is not met.

As the Low VMT Area screening criteria is met for the PA VMT per service population measure of VMT, the Project would result in a less than significant transportation impact. This conclusion also applies if the Project is occupied by a High-Cube Fulfillment Center (Sort) Warehouse, which is likewise screened out as being within a Low VMT Area.

PROJECT GENERATED VMT

While the Project meets the Low VMT Area screening criteria as described above, and therefore results in less than significant transportation impact, a project-level VMT analysis has also been conducted for informational purposes.

The first step in the analysis is to calculate project generated VMT and compare it to the City's adopted impact threshold. SBTAM is a useful tool to calculate VMT as it considers interaction between different land uses based on socio-economic data such as population, employment and other factors.⁵ It was also the tool used to establish the City's impact threshold, so is the appropriate tool to conduct the analysis to ensure an apples-to-apples comparison of project generated VMT to the adopted threshold.

⁵ A new version of SBTAM was recently released for public use in order to be consistent with the 2020 RTP/SCS adopted in September.

Project generated VMT has been calculated using the most current version of SBTAM, which was updated recently by SBCTA as part of the development of their recommended VMT guidelines. Adjustments in socio-economic data (SED) (i.e., employment) have been made to a separate traffic analysis zone (TAZ) to reflect the Project’s proposed land uses (i.e., warehouse use). A separate TAZ is used to isolate project generated VMT from other land uses in the model. Adjustments were also made to remove employment related to the existing use to ensure trips related to the Project were not double counted. Table 1 summarizes the employment estimates for the Project.

TABLE 1: EMPLOYMENT ESTIMATES

Land Use	Quantity (in square feet)	Estimated Employees
Warehouse	2,175,000	1,479

Project employment estimates presented in Table 1 are based on total proposed new building square footage of 2,175,000 square feet using an employment generation rate of 1 employee per 1,471 square feet for General Industrial uses.⁶ Adjustments to employment for the Project’s TAZ were made to both the base year model (2016) and the cumulative year model (2040). The base year model and cumulative year model were both run inclusive of the Project’s employment.

City Guidelines state that for projects composed entirely of a single land use such as the proposed Project, project generated VMT may be calculated using the PA trip matrix to allow for the isolation of vehicle trips by trip purpose (i.e., home-based work trips) that allows for the isolation of commute VMT for employment uses (e.g., office, industrial, etc.). Evaluation of VMT based on trip purpose is consistent with recommendations in OPR’s Technical Advisory and offers the most straight forward method for assessing VMT reductions from mitigation measures for single use project.⁷ Based on consultation with City staff, it was determined that project generated VMT would be calculated based on the PA trip matrix.

Project generated VMT was calculated for both the base year model (2016) and cumulative year model (2040) and linear interpolation was used to determine the baseline (2020) project generated VMT. The VMT value was then normalized by dividing by the Project’s service population, which in this case is the number of employees. Table 2 presents the key inputs for the calculation of project generated VMT per service population.

TABLE 2: PROJECT VMT PER SERVICE POPULATION

	Base Year (2016)	Cumulative (2040)	Baseline (2020)
Project generated VMT	36,351	35,135	36,149
Service Population	1,479 employees	1,479 employees	1,479 employees
VMT per Service Population	24.58	23.76	24.44

⁶ Table LU-18, Build Out Summary by Land Use of the City’s General Plan

⁷ Page 5 of OPR’s Technical Advisory

The adopted City Guidelines state that the City of Rancho Cucamonga has selected a threshold based on the baseline VMT performance in the City. More specifically, the City Guidelines state that a project generated VMT impact would be considered potentially significant if either of the following conditions are met:

1. The baseline project generated VMT per service population exceeds the City of Rancho Cucamonga baseline VMT per service population⁸, or
2. The cumulative project generated VMT per service population exceeds the City of Rancho Cucamonga baseline VMT per service population.

Table 3 presents the difference between baseline and cumulative project generated VMT per service population to the City's baseline VMT per service population. As shown, the baseline project generated VMT per service population is 24.44 or 7.77% below than the City's current threshold of 26.5 VMT per service population. The cumulative project generated VMT per service population is 23.76 or 10.34% below the City's threshold of 26.5 VMT per service population. Therefore, the Project's VMT impact would be considered less than significant based on the comparison of baseline project generated VMT per service population to the City's adopted threshold and the comparison of cumulative project generated VMT per service population to the City's adopted threshold. As identified previously, the Project screened out based on the low VMT area screening threshold.

TABLE 3: PROJECT GENERATED VMT PER SERVICE POPULATION COMPARISON

	Baseline (2020)	Cumulative (2040)
City Baseline VMT per service population	26.5	26.5
Project VMT per service population	24.44	23.76
Percent Change	-7.77%	-10.34%

PROJECT'S CUMULATIVE EFFECT ON VMT

The General Plan land use designations and zoning for the Project site are Heavy Industrial (northern portion of the site) and General Industrial (southern portion of the site). Based on available information, anticipated approval actions required from the City to implement the Project include a General Plan Amendment and Zoning Map Amendment to change the Heavy Industrial designations to General Industrial for consistency across the site. The proposed Project results in jobs within the total number of jobs projected by the current Southern California Association of Governments (SCAG) Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), and is consistent with the underlying employment assumptions upon which the current RTP/SCS was based. As such, the Project's

⁸ City Guidelines note that as of June 2020 the baseline VMT per service population for the City of Rancho Cucamonga is 26.5 calculated using the PA method.

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contribution to cumulative impacts for VMT is considered less than significant. This is also supported when comparing the cumulative project generated VMT to the City's adopted threshold as previously shown in Table 3 and the fact that it resides in a low VMT area.

CONCLUSION

The Project is located in a Low VMT Area based on PA VMT per service population measure of VMT and therefore is presumed to result in a less than significant transportation impact. In addition, project generated PA VMT per service population for both Baseline and Cumulative scenarios are below the City's adopted VMT threshold. The Project has a less than significant transportation impact based on VMT.

If you have any questions, please contact me directly at aevatt@urbanxroads.com.

Respectfully submitted,

URBAN CROSSROADS, INC.



Aric Evatt, PTP
President



Robert Vu, PE
Transportation Engineer

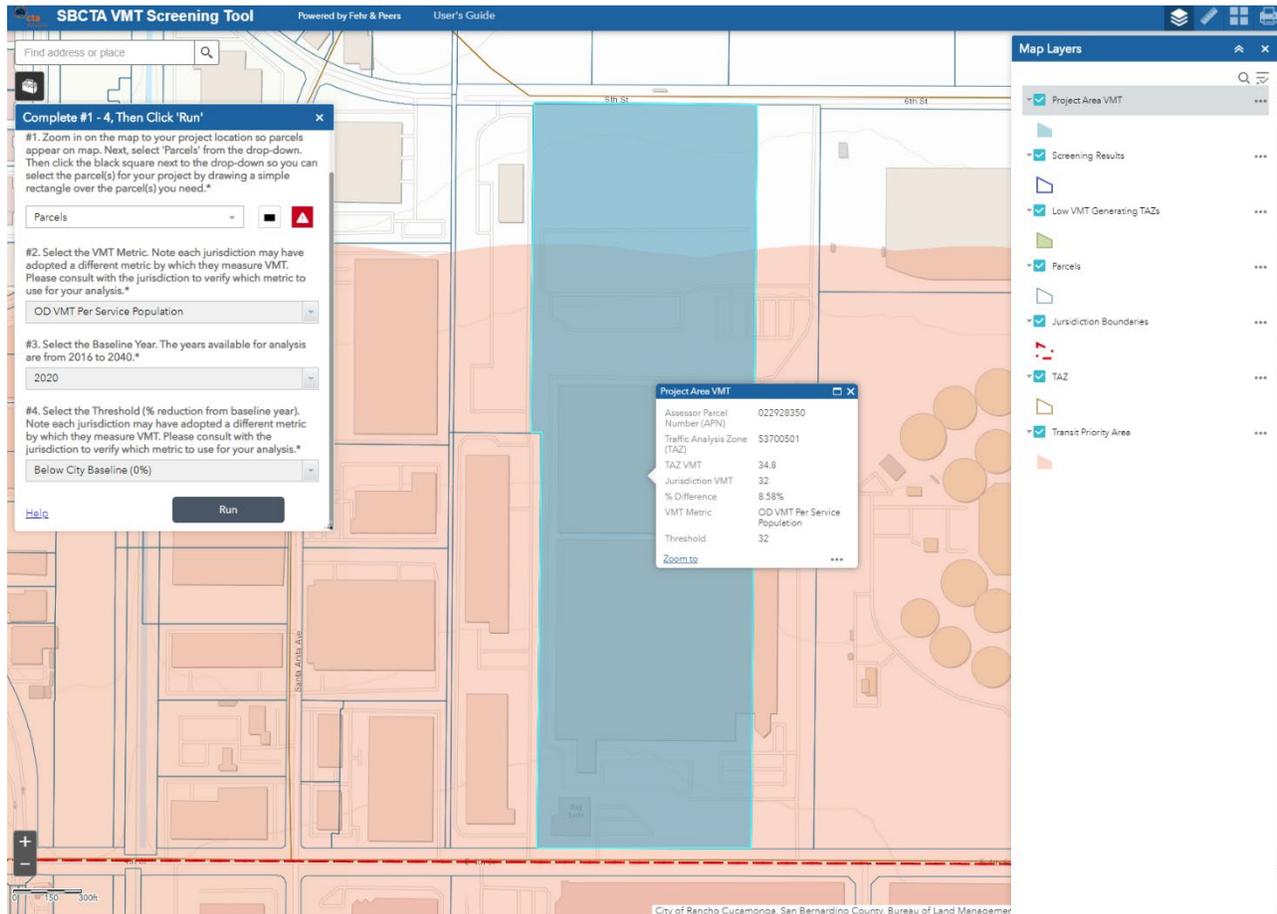
REFERENCES

1. **Office of Planning and Research.** *Technical Advisory on Evaluating Transportation Impacts in CEQA.* State of California : s.n., December 2018.
2. **San Bernardino County Transportation Authority.** *Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment.* February 2020.
3. **City of Rancho Cucamonga .** *Traffic Impact Analysis Guidelines.* City of Rancho Cucamonga : s.n., June 2020.
4. **Institute of Transportation Engineers.** *Trip Generation Manual.* 10th Edition. 2017.

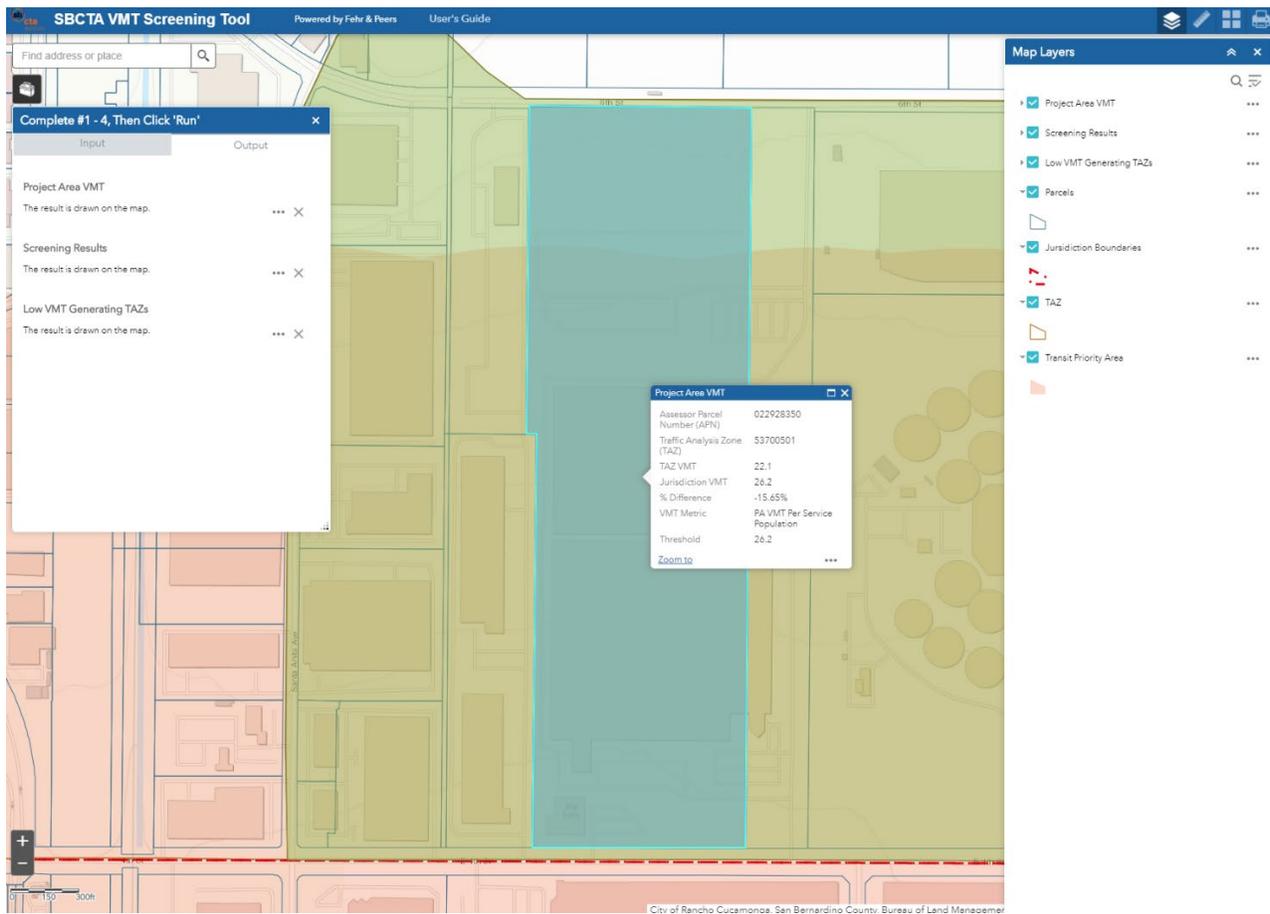
**ATTACHMENT A
PRELIMINARY SITE PLAN**

ATTACHMENT B
SCREENING RESULTS

OD VMT per Service Population



PA VMT per Service Population



**ATTACHMENT C
TRIP GENERATION**

Trip Generation Rates

Land Use ¹	ITE LU		AM Peak Hour			PM Peak Hour			Daily
	Units ²	Code	In	Out	Total	In	Out	Total	
Actual Vehicles:									
High-Cube Fulfillment Center (Non-Sort) ³	TSF	155	0.122	0.029	0.150	0.062	0.098	0.160	1.810
Passenger Cars:			0.111	0.026	0.137	0.058	0.091	0.149	1.620
Trucks:			0.011	0.003	0.014	0.004	0.007	0.011	0.190
High-Cube Cold Storage Warehouse ³	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars:			0.062	0.018	0.080	0.025	0.067	0.092	1.378
Trucks:			0.023	0.007	0.030	0.007	0.020	0.028	0.742
Free-Standing Discount Store	TSF	815	0.807	0.363	1.170	2.415	2.415	4.830	53.120
Passenger Car Equivalent (PCE):⁴									
High-Cube Fulfillment Center (Non-Sort) ³	TSF	155	0.122	0.029	0.150	0.062	0.098	0.160	1.810
Passenger Cars:			0.111	0.026	0.137	0.058	0.091	0.149	1.620
Trucks:			0.028	0.007	0.034	0.011	0.017	0.028	0.483
High-Cube Cold Storage Warehouse ³	TSF	157	0.085	0.025	0.110	0.032	0.088	0.120	2.120
Passenger Cars:			0.062	0.018	0.080	0.025	0.067	0.092	1.378
Trucks:			0.054	0.016	0.070	0.018	0.048	0.065	1.758

¹ Trip Generation Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, 10th Edition (2017) & 10th Edition Supplement (2020).

² TSF = thousand square feet

³ Vehicle Mix Source: ITE Trip Generation Handbook Supplement (2020), Appendix C.

Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Normalized % - With Cold Storage: 34.7% 2-Axle trucks, 11.0% 3-Axle trucks, 54.3% 4-Axle trucks.

⁴ PCE factors per SBCTA CMP: 2-axle = 1.5; 3-axle = 2.0; 4+-axle = 3.0.

Existing Trip Generation Summary

Land Use	Quantity	Units ¹	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Existing Trip Generation Summary (Actual Vehicles):									
High-Cube Transload and Short-Term Storage Warehouse (Without Cold Storage)	1,431.000	TSF							
Passenger Cars:			71	21	92	34	87	121	1,684
2-axle Trucks:			3	1	4	1	3	4	54
3-axle Trucks:			4	1	5	1	3	4	66
4+-axle Trucks:			11	3	14	4	10	14	202
Total Trucks:			18	5	23	6	16	22	322
Warehousing Total Trips (Actual)²			89	26	115	40	103	143	2,006
Free-Standing Discount Store	23.240	TSF	19	8	27	56	56	112	1,236
Pass-by Reduction (PM/Daily = 17%): ³			0	0	0	-10	-10	-20	-210
Free-Standing Discount Store Total Trips (Actual)²			19	8	27	46	46	92	1,026
Total: Passenger Cars			90	29	119	80	133	213	2,710
Total: Trucks (Actual Vehicles)			18	5	23	6	16	22	322
Total (Actual Vehicles)²			108	34	142	86	149	235	3,032
Existing Trip Generation Summary (PCE):									
High-Cube Transload and Short-Term Storage Warehouse (Without Cold Storage)	1,431.000	TSF							
Passenger Cars:			71	21	92	34	87	121	1,684
2-axle Trucks:			4	1	5	2	4	6	80
3-axle Trucks:			7	2	9	3	7	10	134
4+-axle Trucks:			33	10	43	12	31	43	602
Total Trucks:			44	13	57	17	42	59	816
Warehousing Total Trips (PCE)²			115	34	149	51	129	180	2,500
Free-Standing Discount Store	23.240	TSF	19	8	27	56	56	112	1,236
Pass-by Reduction (PM/Daily = 17%): ³			0	0	0	-10	-10	-20	-210
Free-Standing Discount Store Total Trips (Actual)²			19	8	27	46	46	92	1,026
Total: Passenger Cars			90	29	119	80	133	213	2,710
Total: Trucks (PCE)			44	13	57	17	42	59	816
Total (PCE)²			134	42	176	97	175	272	3,526

¹ TSF = thousand square feet

² TOTAL TRIPS = Passenger Cars + Truck Trips.

³ Source: ITE [Trip Generation Handbook](#), 3rd Edition, 2017.

Project Trip Generation Summary

Land Use	Quantity	Units ¹	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Project Trip Generation Summary (Actual Vehicles):									
High-Cube Fulfillment (Non-Sort) (90%)	1,957.500	TSF							
Passenger Cars:			216	51	267	114	178	292	
2-axle Trucks:			4	1	5	1	2	3	
3-axle Trucks:			4	1	5	2	3	5	
4+-axle Trucks:			13	3	16	5	8	13	
Total Trucks:			21	5	26	8	13	21	
Fulfillment Center Total Trips (Actual Vehicles)²			237	56	293	122	191	313	
High-Cube Cold Storage (10%)	217.500	TSF							
Passenger Cars:			13	4	17	5	15	20	
2-axle Trucks:			2	1	3	1	2	3	
3-axle Trucks:			1	0	1	0	0	0	
4+-axle Trucks:			3	1	4	1	2	3	
Total Trucks:			6	2	8	2	4	6	
Cold Storage Total Trips (Actual Vehicles)²			19	6	25	7	19	26	
Total Project: Passenger Cars			229	55	284	119	193	312	
Total Project: Trucks (Actual Vehicles)			27	7	34	10	17	27	
Total Project (Actual Vehicles)²			256	62	318	129	210	339	
Project Trip Generation Summary (PCE)									
High-Cube Fulfillment (Non-Sort) (90%)	1,957.500	TSF							
Passenger Cars:			216	51	267	114	178	292	
2-axle Trucks:			5	1	6	2	3	5	
3-axle Trucks:			9	2	11	4	6	10	
4+-axle Trucks:			40	9	49	16	25	41	
Total Trucks:			54	12	66	22	34	56	
Fulfillment Center Total Trips (PCE)²			270	63	333	136	212	348	
High-Cube Cold Storage (10%)	217.500	TSF							
Passenger Cars:			13	4	17	5	15	20	
2-axle Trucks:			3	1	4	1	2	3	
3-axle Trucks:			1	0	1	0	1	1	
4+-axle Trucks:			8	2	10	3	7	10	
Total Trucks:			12	3	15	4	10	14	
Cold Storage Total Trips (PCE)²			25	7	32	9	25	34	
Total Project: Passenger Cars			229	55	284	119	193	312	
Total Project: Trucks (PCE)			66	15	81	26	44	70	
Total Project (PCE)²			295	70	365	145	237	382	

¹ TSF = thousand square feet

² TOTAL TRIPS = Passenger Cars + Truck Trips.

Trip Generation Comparison

Trip Generation Comparison	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Actual Vehicles:							
Existing Trip Generation ¹	108	34	142	86	149	235	3,032
Proposed Project ²	256	62	318	129	210	339	4,008
Variance	148	28	176	43	61	104	976
PCE:							
Existing Trip Generation (PCE) ¹	134	42	176	97	175	272	3,526
Proposed Project (PCE) ²	295	70	365	145	237	382	4,804
Variance	161	28	189	48	62	110	1,278

¹ Trip generation for the uses that currently exist

² Proposed Project trip generation.

ATTACHMENT D
MODEL OUTPUT SUMMARY

	Base Year (2016)	Cumulative (2040)	Baseline (2020)
Trips	3,141	3,056	3,127
Trip Length	11.57	11.50	11.56
VMT	36,351	35,135	36,149
SP	1,479 employees	1,479 employees	1,479 employees
VMT/SP	24.58	23.76	24.44