

RIVERFRONT RESIDENTIAL DEVELOPMENT

EXECUTIVE SUMMARY

PMG Acquisitions, LLC is proposing to redevelop the property located in the southwest quadrant of the intersection of SW 2nd Street and Brickell Avenue/SW 1st Avenue in Fort Lauderdale, Florida. The proposed redevelopment consists of 1,214 apartment units and 58,000 square feet of retail space. Currently, the site proposed for redevelopment is vested for a 144,720 square-foot shopping center (85,720 square-foot shopping center and 15 screen movie theater). The proposed redevelopment program results in a net reduction of 1,206 daily trips, net reduction of 64 P.M. peak hour trips, and a net increase of 291 A.M. peak hour trips when compared to the vested development containing the 144,720 square foot shopping center.

Please note that in order to provide a conservative analysis, only the occupied 6,736 square feet of the existing 144,720 square-foot shopping center were credited in the operational analysis. The project is expected to generate 315 net new A.M. peak hour trips and 160 net new P.M. peak hour trips. Trip generation calculations for the proposed redevelopment were performed using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 9th Edition.

Access to the proposed redevelopment will be provided via one (1) full-access driveway along SW 2nd Street west of Brickell Avenue/SW 1st Avenue and one (1) right-in/right-out only driveway along Brickell Avenue/SW 1st Avenue south of SW 2nd Street. The project is expected to be completed and opened by 2022.

Intersection capacity analyses indicate that the study intersections are expected to operate at adopted levels of service (LOS D or better) during the A.M. and P.M. peak hours under all analysis conditions with the exception of the northbound stop-controlled approach at the intersection of SW 2nd Street/Himmarsee Street and Project Driveway. The northbound stop-controlled approach at this intersection is expected to operate at LOS E under future total conditions during the P.M. peak hour. This result is common during peak periods where a high traffic volume, free-flowing major street intersects with a stop-controlled minor street. Additionally, the northbound stop-controlled approach is a project driveway. Therefore, any delays or queues experienced will be contained within the site and will not impact SW 2nd Street/Himmarsee Street.



Based on the parking analysis, City of Fort Lauderdale does not require on-site parking for the proposed redevelopment. However, the proposed redevelopment will provide 400 parking spaces for the retail land use, 1,403 parking spaces for the residential land use, and 88 spaces for car sharing for a total of 1,891 parking spaces.

The WAVE Streetcar is proposed to operate along Brickell Avenue/SW 1st Avenue adjacent to the project site and is proposing a station along Brickell Avenue/SW 1st Avenue between SW 2nd Street/Himmarshee Street and West Las Olas Boulevard directly fronting the redevelopment project. The project will integrate and assume cleaning and regular maintenance of the proposed WAVE Streetcar station along Brickell Avenue/SW 1st Avenue. Furthermore, the project will coordinate with the WAVE Streetcar regarding the funding and installation of the “build out” scenario for the station which includes the addition of two (2) shelters and two (2) green screening structures to the proposed station. The project will also coordinate with the City of Fort Lauderdale and the Florida East Coast Industries (FECI) to implement pedestrian safety improvements along the FECI railroad crossing at SW 2nd Street and at the Riverwalk pedestrian crossing adjacent to the project site.



Memorandum

To: Alia Awwad, P.E.
City of Fort Lauderdale Transportation and Mobility Department

From: Adrian K. Dabkowski, P.E., PTOE 
Omar Kanaan, P.E. 

Date: August 4, 2016

Subject: Riverfront Residential Redevelopment Traffic Study Methodology

The purpose of this memorandum is to summarize the traffic study methodology for the redevelopment proposed for the southwest quadrant of the intersection of SW 2nd Street and Brickell Avenue/SW 1st Avenue in Fort Lauderdale, Florida. The proposed redevelopment consists of a 1,200 apartment units and 40,000 square feet of specialty retail space consisting of retail and restaurant uses. Currently, the site proposed for redevelopment is occupied by a 144,720 square-foot shopping center. However, based on existing development occupancy data, trip generation credit was only taken for the portion of the existing development that is occupied; approximately 64,830 square feet of the 144,720 square-foot development. The existing development program and conceptual site plan are included in Attachment A. The following sections summarize our proposed traffic study methodology.

ANALYSIS PERIOD DETERMINATION

The analysis period will be based on one (1) peak period determined from two (2) 96-hour continuous traffic counts located on West Broward Boulevard west of NW/SW 2nd Avenue and on SW 2nd Street west of NW/SW 2nd Avenue. The 96-hour counts will be collected on Thursday, Friday, Saturday, and Sunday. All traffic counts will be adjusted to account for seasonality using the appropriate Florida Department of Transportation (FDOT) peak season category factors. All traffic data collected will be provided in the Appendix of the traffic impact study.

DATA COLLECTION

Turning movement counts will be collected in 15-minute intervals during the identified peak period. Turning movement counts will also include pedestrians and bicyclists. All traffic counts will be adjusted to peak season conditions using the appropriate FDOT peak season category factors. Traffic signal timing information will be obtained from Broward County Traffic Engineering Division. All traffic data collected will be provided in the Appendix of the traffic impact study.

STUDY AREA

The following intersections including project driveways will be examined as part of the study area:

- West Broward Boulevard and NW/SW 7th Avenue (South Avenue of the Arts)
- West Broward Boulevard and NW/SW 5th Avenue
- West Broward Boulevard and NW/SW 1st Avenue (Brickell Avenue)
- West Broward Boulevard and North/South Andrews Avenue
- SW 2nd Street and SW 7th Avenue (South Avenue of the Arts)

- SW 2nd Street and SW 5th Avenue
- SW 2nd Street and SW 1st Avenue (Brickell Avenue)
- SW 2nd Street and South Andrews Avenue
- SW 2nd Street and SE 2nd Avenue
- West/East Las Olas Boulevard and South Andrews Avenue
- East Las Olas Boulevard and SE 2nd Avenue

TRIP GENERATION

Trip generation calculations for the proposed redevelopment were performed using Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 9th Edition. A multimodal reduction factor of 10 percent (10%) was applied to the peak hour trip generation to account for the proposed WAVE Streetcar transit stop located along Brickell Avenue between SW 2nd Street and W Las Olas Boulevard. The multimodal reduction factor was developed based on data provided in Appendix E of ITE's *Trip Generation Handbook*, 3rd Edition, for similar developments in San Diego, CA and Portland, OR. Detailed trip generation information is provided in Attachment B.

Existing Land Uses

ITE Land Use Code (LUC) 820 (Shopping Center) was used for the existing 64,830 square-foot shopping center.

Pass-by capture trip rates were determined based on average rates provided in the ITE's *Trip Generation Handbook*, 3rd Edition. The pass-by rate for the shopping center is 34 percent (34%) for P.M. peak hour trip generation.

Proposed Land Uses

LUC 222 (High-Rise Apartment) was used for the proposed 1,200 apartment units. LUC 826 (Specialty Retail Center) was used for the 40,000 square feet of retail and restaurant space.

Internal capture is expected between the complementary land uses within a project. Internal capture trips for the project were determined based upon methodology contained in the ITE's, *Trip Generation Handbook*, 3rd Edition. An internal capture rate of 2.1 percent (2.1%) for the A.M. peak hour trip generation and 8.6 percent (8.6%) for the P.M. peak hour trip generation are expected for the proposed redevelopment.

The proposed redevelopment results in an increase of 310 net new A.M. peak hour trips and an increase of 151 net new P.M. peak hour trips. Detailed trip generation calculations are included in Attachment B.

TRIP DISTRIBUTION

Trip distribution will be determined using a select zone analysis for the appropriate Traffic Analysis Zone (TAZ) in the Southeast Florida Regional Planning Model (SERPM). Adjustments to the traffic distribution will be made to account for project trips utilizing the local roadway network as a result of the site's access management restrictions and based on actual turning movement counts collected at study area intersections.

BACKGROUND GROWTH RATE

A background growth rate will be calculated based on historic growth trends at nearby FDOT traffic count stations. Additionally, growth rates based on the SERPM projected 2010 and 2040 model network volumes will be examined. The higher of the two (2) growth rates will be used in the analysis. The City has also identified several committed projects to be included in future background conditions. These projects include:

- City to provide committed projects to be included in background conditions

The City will provide the approved traffic studies for these projects.

CAPACITY ANALYSIS

Capacity analyses will be conducted for the identified peak hour at the study intersections. Intersection analyses will be performed using Trafficware's *Synchro 9.0* traffic engineering analysis software, which applies the Transportation Research Board's (TRB's) *Highway Capacity Manual* (HCM) 2000/2010 methodology.

Capacity analyses will be conducted for three (3) scenarios: existing, build-out year without project, and build-out year with project. The anticipated build-out year will be specified in the report. If intersection deficiencies are identified, strategies and improvements will be developed as mitigation measures.

The following graphics will be included for the study intersections:

- Existing conditions
- Trip distribution
- Trip assignment
- Future background traffic conditions (with growth rate)
- Future total traffic conditions (with project)

MANEUVERABILITY ANALYSIS

A maneuverability analysis for the parking garage and loading areas will be performed utilizing *AutoTURN* software. The results of the maneuverability analysis will be documented in a technical memorandum.

WAVE STREETCAR COORDINATION

Kimley-Horn will coordinate with FDOT regarding the proposed WAVE Streetcar transit stop located along Brickell Avenue between SW 2nd Street and W Las Olas Boulevard.

PARKING ANALYSIS

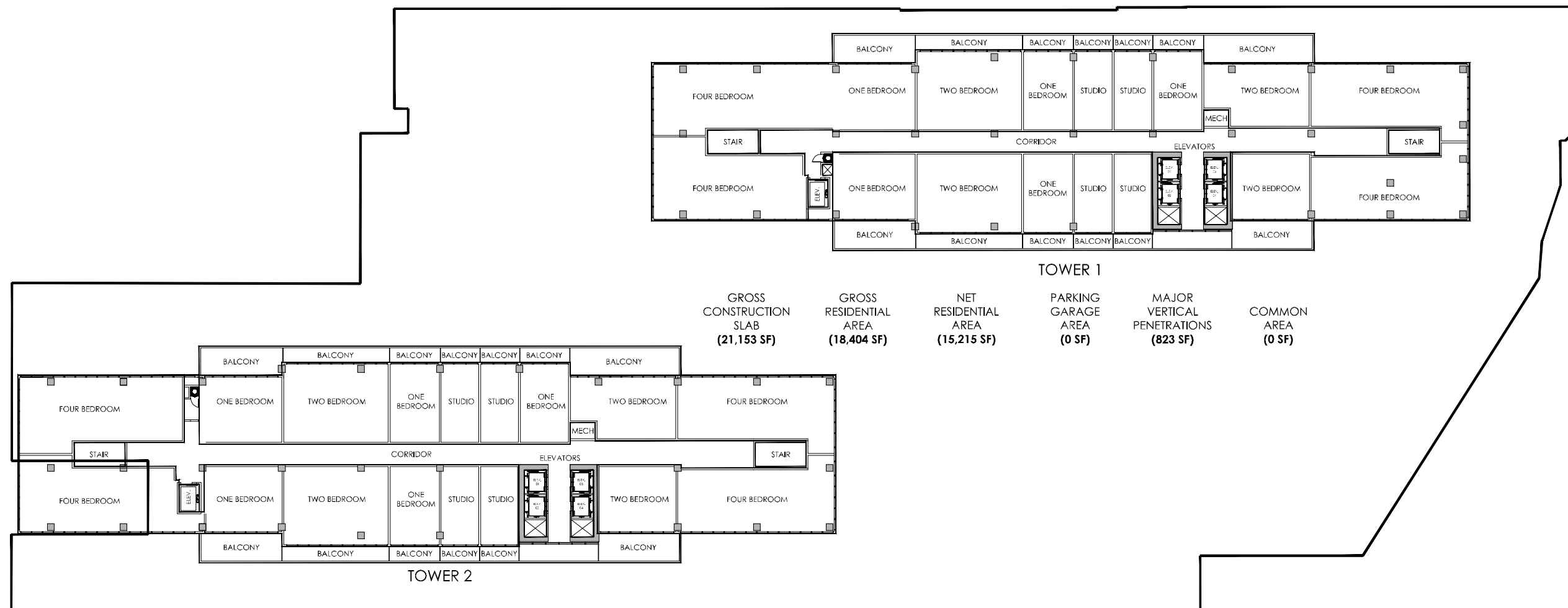
A parking analysis evaluating the number of required parking spaces based on City of Fort Lauderdale guidelines and the number of provided parking spaces based on the site plan. A summary of the parking deficiency/surplus will be documented in the report.

DOCUMENTATION

The results of the traffic analysis will be summarized in a report. The report will include supporting documents including signal timings, lane geometry, and software output sheets. The report will also include text, graphics, and executive summary to summarize the assumptions and analysis.

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Attachment A



GROSS
CONSTRUCTION
SLAB
(21,153 SF)

GROSS
RESIDENTIAL
AREA
(18,404 SF)

NET
RESIDENTIAL
AREA
(15,215 SF)

PARKING
GARAGE
AREA
(0 SF)

MAJOR
VERTICAL
PENETRATIONS
(823 SF)

COMMON
AREA
(0 SF)

GROSS
CONSTRUCTION
SLAB
(21,158 SF)

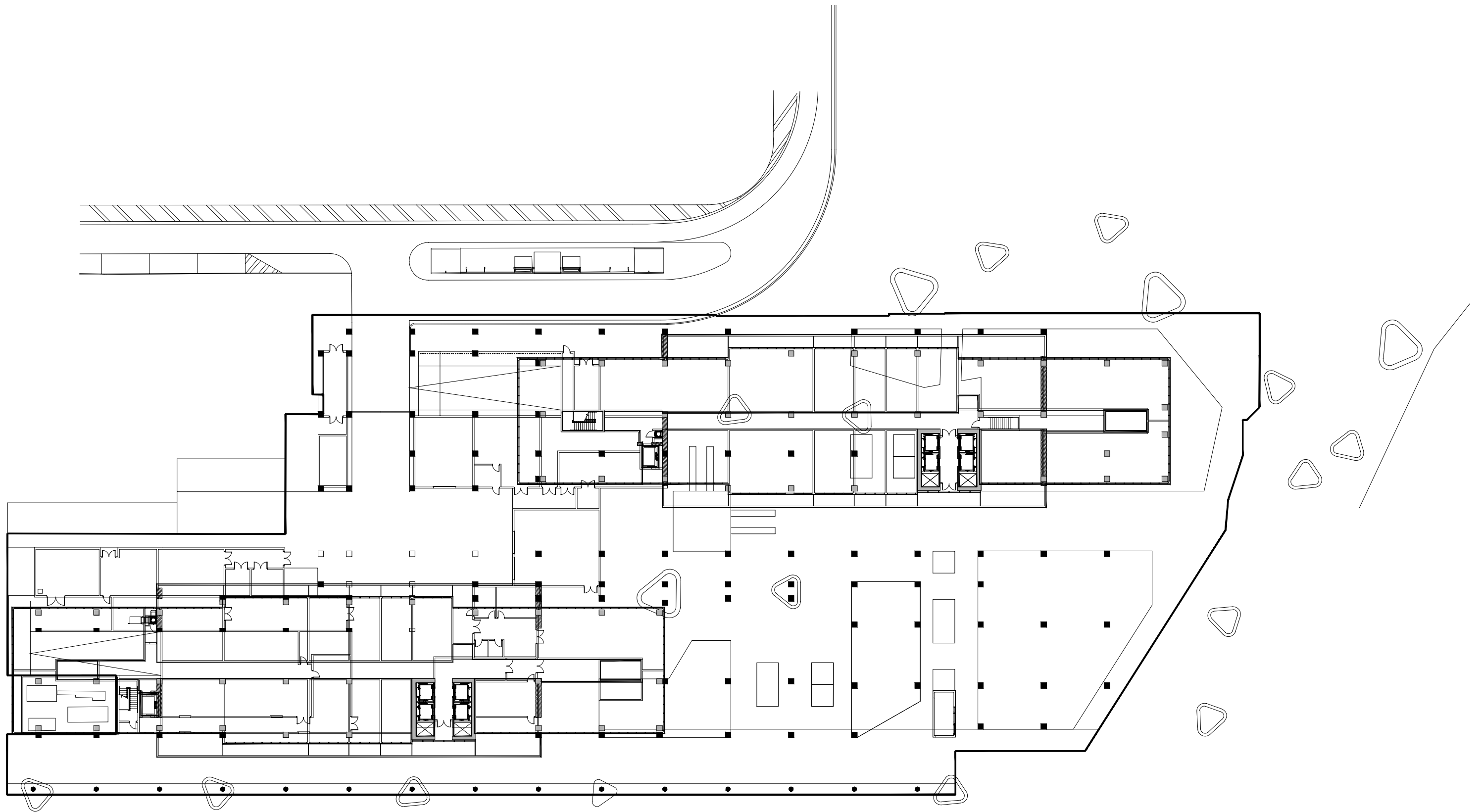
GROSS
RESIDENTIAL
AREA
(18,410 SF)

NET
RESIDENTIAL
AREA
(14,985 SF)

PARKING
GARAGE
AREA
(0 SF)

MAJOR
VERTICAL
PENETRATIONS
(808 SF)

COMMON
AREA
(0 SF)



1st floor

Existing Development Program

| 1st Floor | Suite | SF |
|-----------------------|-------|--------|
| Off the Hookah | 101 | 4,332 |
| | 103 | 5,498 |
| | 105 | 1,130 |
| | 135 | 2,982 |
| Riverfront Plaza | 107 | 1,100 |
| | 109 | 1,200 |
| Original Signman | 111 | 1,620 |
| Vacant | 113 | 1,637 |
| Vacant | 115 | 1,275 |
| Vacant | 117 | 1,362 |
| Vacant | 139 | 1,904 |
| Street Couture | 119 | 1,225 |
| Top Shelf Convenience | 121 | 775 |
| Heart to Art | 123 | 1,225 |
| Argie Grill | 125 | 983 |
| Vacant | 127 | 755 |
| Vacant | 129 | 755 |
| Papaya Gyro | 131 | 875 |
| Theater (Vacant) | | 59,000 |
| 1st Floor Total: | | 89,633 |
| Non-vacant: | | 22,945 |

| 2nd Floor | Suite | SF |
|------------------------|-------|--------|
| Vacant | 217 | 2,170 |
| Vacant | 201 | 4,480 |
| GSA/SSA | 203 | 36,085 |
| Vacant | 215 | 6,552 |
| Agency Net Interactive | 155 | 5,800 |
| 2nd Floor Total: | | 55,087 |
| Non-vacant: | | 41,885 |

Total 1st and 2nd Floor (sf): 144,720
 Total Occupied (sf): 64,830
 Total Vacant (sf): 79,890

Attachment B

**Table E.4 Transit Mode Shares at Non-CBD Residential TOD
(metropolitan Washington, DC)**

| | Site A | Site B | Site C | Site D | Site E | Site F | Site G | Site H | Site I | Site J | Site K | Site L | Site M | Site N | Site O | Site P |
|---|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Dwelling Units | | | | | | | | | | | | | | | | |
| Total | 564 | 345 | 378 | 714 | 575 | 509 | 308 | 499 | 540 | 858 | 399 | 404 | 120 | 196 | 706 | 310 |
| Distance to Heavy Rail Transit | | | | | | | | | | | | | | | | |
| (ft.) | 150 | 550 | 600 | 1,100 | 1,200 | 1,250 | 1,350 | 1,400 | 1,450 | 1,700 | 1,700 | 2,300 | 2,500 | 2,600 | 2,800 | 2,700 |
| % Transit for Motorized Trips by Residents | | | | | | | | | | | | | | | | |
| All Trips | 67% | 65% | 56% | 58% | 54% | 54% | 40% | 41% | 43% | 60% | 34% | 18% | 36% | 70% | 42% | 37% |
| Work & School Trips | 77% | 63% | 70% | 76% | 66% | 64% | 48% | 55% | 65% | 65% | 49% | 36% | 56% | 71% | 49% | 64% |

**Table E.8 Transit Mode Shares at Surveyed Residential TOD Sites
in California**

| | Site A | Site B | Site C | Site D | Site E | Site F | Site G | Site H | Site I | Site J | Site K |
|--------------------------------------|------------|---------|---------|------------|------------|------------|-----------|-----------|------------|-----------|-----------|
| Metro Area ^a | SF | SF | SF | SF | SF | SF | SD | SD | SF | LA | LA |
| Location in CBD? | No | No | No | No | No | No | Yes | Yes | Yes | No | No |
| Total Dwelling Units | 44 | 99 | 71 | 35 | 56 | 100 | 149 | 211 | 443 | 133 | 120 |
| Rail Transit Type | Heavy | Heavy | None | Heavy | Heavy | Heavy | Light | Light | Heavy | None | None |
| Distance to Rail Transit | 0.17 miles | 300 ft. | n.a. | 0.17 miles | 0.28 miles | 0.36 miles | 0.3 miles | 0.3 miles | 0.35 miles | n.a. | n.a. |
| Distance to Bus Transit | 300 ft. | 300 ft. | 300 ft. | 300 ft. | 300 ft. | 300 ft. | 300 ft. | 300 ft. | 1,200 ft. | 1,200 ft. | 1,200 ft. |
| % Walk/Bike Trips | | | | | | | | | | | |
| AM Peak Hour | 89% | 73% | 14% | 25% | 62% | 34% | 13% | 20% | 25% | 16% | 6% |
| PM Peak Hour | 66% | 71% | 35% | 74% | 73% | 62% | 31% | 20% | 34% | 35% | 10% |
| % Transit for Motorized Trips | | | | | | | | | | | |
| AM Peak Hour | 100% | 26% | 34% | 67% | 45% | 33% | 2% | 4% | 81% | 0% | 10% |
| PM Peak Hour | 79% | 17% | 46% | 38% | 26% | 37% | 0% | 9% | 74% | 5% | 6% |

Source: Data for these tables extracted from: Kimley-Horn and Associates, Inc., Economic & Planning Systems, and Gene Bregman & Associates. Trip Generation Rates for Urban Infill Land Uses in California. California Department of Transportation, 2009.

^a"Metro Area" uses the following abbreviations: LA (Los Angeles), SD (San Diego), and SF (San Francisco).

**Table E.11 Transit Mode Shares at Surveyed Residential TOD Sites
in Portland Metropolitan Area**

| | Site A | Site B | Site C | Site D | Site E | Site F | Site G | Site H |
|-------------------------------|--------|---------|---------|---------|----------|----------|----------|----------|
| Residential Units | | | | | | | | |
| Total | 115 | 90 | 85 | 554 | 36 | n.a. | 208 | 283 |
| Occupied | 115 | 90 | 85 | 525 | 36 | 52 | 155 | 215 |
| On-Site Commercial | | | | | | | | |
| Sq. Ft. (000) | 2.3 | none | 24 | 10 | none | none | none | 22 |
| Distance to Transit | | | | | | | | |
| Light Rail | 50 ft. | 1 block | n.a. | 500 ft. | n.a. | < ¼ mile | ¼–½ mile | ¼–½ mile |
| Bus | 50 ft. | 1 block | 1 block | 500 ft. | 2 blocks | < ¼ mile | ¼–½ mile | ¼–½ mile |
| % Walk/Bike Trips | | | | | | | | |
| AM Peak Period | 41% | 16% | 24% | 3% | 21% | 7% | 0% | 5% |
| PM Peak Period | 37% | 10% | 24% | 4% | 21% | 8% | 0% | 10% |
| % Transit for Motorized Trips | | | | | | | | |
| AM Peak Period | 48% | 17% | 20% | 18% | 11% | 12% | 16% | 15% |
| PM Peak Period | 42% | 23% | 13% | 9% | 13% | 13% | 12% | 6% |

Source: Data for these tables extracted from: Lapham, M. Transit Oriented Development—Trip Generation and Mode Split in the Portland Metropolitan Region. Portland State University, 2001.

PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY AM PEAK HOUR TRIP GENERATION

| ITE TRIP GENERATION CHARACTERISTICS | | | | | DIRECTIONAL DISTRIBUTION | | GROSS VOLUMES | | | MULTIMODAL REDUCTION | | EXTERNAL TRIPS | | | INTERNAL CAPTURE | | EXTERNAL TRIPS | | | PASS-BY CAPTURE | | NET NEW EXTERNAL TRIPS | | | | | |
|-------------------------------------|----|-----------------|-------------------------|----------|--------------------------|-----------|---------------|-----|----|----------------------|-------|----------------|----------|----|------------------|-------|----------------|----------|----|-----------------|-------|------------------------|----------|----|-----|-------|-----|
| Land Use | | | ITE Edition | ITE Code | Scale | ITE Units | Percent | | In | Out | Total | Percent | MR Trips | In | Out | Total | Percent | IC Trips | In | Out | Total | Percent | PB Trips | In | Out | Total | |
| | | | | | | | In | Out | | | | | | | | | | | | | | | | | | | |
| GROUP 1 | 1 | Shopping Center | 9 | 820 | 64.83 | ksf | 62% | 38% | 74 | 46 | 120 | 10% | 12 | 67 | 41 | 108 | 0.0% | 0 | 67 | 41 | 108 | 0.0% | 0 | 67 | 41 | 108 | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITE Land Use Code | | | Rate or Equation | | | | Total: | | | 74 | 46 | 120 | 10.0% | 12 | 67 | 41 | 108 | 0.0% | 0 | 67 | 41 | 108 | 0.0% | 0 | 67 | 41 | 108 |
| 820 | | | LN(Y) = 0.61*LN(X)+2.24 | | | | | | | | | | | | | | | | | | | | | | | | |

PROPOSED WEEKDAY AM PEAK HOUR TRIP GENERATION

| ITE TRIP GENERATION CHARACTERISTICS | | | | | DIRECTIONAL DISTRIBUTION | | GROSS VOLUMES | | | MULTIMODAL REDUCTION | | EXTERNAL TRIPS | | | INTERNAL CAPTURE | | EXTERNAL TRIPS | | | PASS-BY CAPTURE | | NET NEW EXTERNAL TRIPS | | | | | |
|-------------------------------------|-------------|----------|-------|-----------|--------------------------|-----|---------------|-----|-------|----------------------|----------|----------------|-------|-------|------------------|----------|----------------|------|-------|-----------------|----------|------------------------|------|-------|-----|-----|-----|
| Land Use | ITE Edition | ITE Code | Scale | ITE Units | Percent | | In | Out | Total | Percent | MR Trips | In | Out | Total | Percent | IC Trips | In | Out | Total | Percent | PB Trips | In | Out | Total | | | |
| | | | | | In | Out | | | | | | | | | | | | | | | | | | | | | |
| 1 High-Rise Apartment | 9 | 222 | 1200 | du | 25% | 75% | 90 | 269 | 359 | 10% | 36 | 81 | 242 | 323 | 1.4% | 5 | 79 | 239 | 318 | 0.0% | 0 | 79 | 239 | 318 | | | |
| 2 Specialty Retail Center | 9 | 826 | 40 | ksf | 56% | 44% | 66 | 51 | 117 | 10% | 12 | 59 | 46 | 105 | 4.3% | 5 | 56 | 44 | 100 | 0.0% | 0 | 56 | 44 | 100 | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITE Land Use Code | | | | | Rate or Equation | | Total: | | | 156 | 320 | 476 | 10.0% | 48 | 140 | 288 | 428 | 2.1% | 10 | 135 | 283 | 418 | 0.0% | 0 | 135 | 283 | 418 |
| 222 | | | | | LN(Y) = 0.99*LN(X)+1.14 | | | | | | | | | | | | | | | | | | | | | | |
| 826 | | | | | (1) | | | | | | | | | | | | | | | | | | | | | | |

Note: (1) ITE *Trip Generation Manual* does not provide trip generation rates for LUC 826 during the A.M. peak hour. Therefore, the P.M. peak hour trip generation rates were used with inverted directional distribution.

| | | | |
|-----------------------|----|-----|-------|
| | IN | OUT | TOTAL |
| Net New Vehicle Trips | 68 | 242 | 310 |

PEAK HOUR TRIP GENERATION COMPARISON

EXISTING WEEKDAY PM PEAK HOUR TRIP GENERATION

| ITE TRIP GENERATION CHARACTERISTICS | | | | | DIRECTIONAL DISTRIBUTION | | GROSS VOLUMES | | | MULTIMODAL REDUCTION | | EXTERNAL TRIPS | | | INTERNAL CAPTURE | | EXTERNAL TRIPS | | | PASS-BY CAPTURE | | NET NEW EXTERNAL TRIPS | | | | |
|-------------------------------------|----|-------------------------|----------|-------|--------------------------|---------|---------------|-----|-----|----------------------|---------|----------------|----|-----|------------------|---------|----------------|----|-----|-----------------|---------|------------------------|-----|-----|-------|-----|
| Land Use | | ITE Edition | ITE Code | Scale | ITE Units | Percent | | In | Out | Total | Percent | MR Trips | In | Out | Total | Percent | IC Trips | In | Out | Total | Percent | PB Trips | In | Out | Total | |
| | | | | | | In | Out | | | | | | | | | | | | | | | | | | | |
| GROUP 1 | 1 | Shopping Center | 9 | 820 | 64.83 | ksf | 48% | 52% | 215 | 233 | 448 | 10% | 45 | 193 | 210 | 403 | 0.0% | 0 | 193 | 210 | 403 | 34.0% | 137 | 128 | 138 | 266 |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 6 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 7 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 8 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 9 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 10 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 11 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 12 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 13 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 14 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 15 | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITE Land Use Code | | Rate or Equation | | | | Total: | | | 215 | 233 | 448 | 10.0% | 45 | 193 | 210 | 403 | 0.0% | 0 | 193 | 210 | 403 | 34.0% | 137 | 128 | 138 | 266 |
| 820 | | LN(Y) = 0.67*LN(X)+3.31 | | | | | | | | | | | | | | | | | | | | | | | | |

PROPOSED WEEKDAY PM PEAK HOUR TRIP GENERATION

| ITE TRIP GENERATION CHARACTERISTICS | | | | | DIRECTIONAL DISTRIBUTION | | GROSS VOLUMES | | | MULTIMODAL REDUCTION | | EXTERNAL TRIPS | | | INTERNAL CAPTURE | | EXTERNAL TRIPS | | | PASS-BY CAPTURE | | NET NEW EXTERNAL TRIPS | | | | | |
|-------------------------------------|-------------------------|----------|-------|-----------|--------------------------|-----|---------------|-----|-------|----------------------|----------|----------------|-------|-------|------------------|----------|----------------|------|-------|-----------------|----------|------------------------|------|-------|-----|-------|-----|
| Land Use | ITE Edition | ITE Code | Scale | ITE Units | Percent | | In | Out | Total | Percent | MR Trips | In | Out | Total | Percent | IC Trips | In | Out | Total | Percent | PB Trips | In | Out | Total | | | |
| | | | | | In | Out | | | | | | | | | | | | | | | | | | | | | |
| 1 | High-Rise Apartment | 9 | 222 | 1200 | du | 61% | 39% | 242 | 154 | 396 | 10% | 40 | 217 | 139 | 356 | 5.6% | 22 | 200 | 134 | 334 | 0.0% | 0 | 200 | 134 | 334 | | |
| 2 | Specialty Retail Center | 9 | 826 | 40 | ksf | 44% | 56% | 51 | 66 | 117 | 10% | 12 | 46 | 59 | 105 | 18.8% | 22 | 41 | 42 | 83 | 0.0% | 0 | 41 | 42 | 83 | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ITE Land Use Code | | | | | Rate or Equation | | Total: | | | 293 | 220 | 513 | 10.0% | 52 | 263 | 198 | 461 | 8.6% | 44 | 241 | 176 | 417 | 0.0% | 0 | 241 | 176 | 417 |
| 222 | | | | | Y=0.32*(X)+12.3 | | | | | | | | | | | | | | | | | | | | | | |
| 826 | | | | | Y=2.4*(X)+21.48 | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | IN | | OUT | | TOTAL | |
| Net New Vehicle Trips | | | | | | | | | | | | | | | | | | | | | | 113 | | 38 | | 151 | |

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

SUMMARY (PROPOSED)

| GROSS TRIP GENERATION | | | | | |
|-----------------------|----------------------|----------------|------|----------------|------|
| INPUT | Land Use | A.M. Peak Hour | | P.M. Peak Hour | |
| | | Enter | Exit | Enter | Exit |
| | Office | | | | |
| | Retail | 66 | 51 | 51 | 66 |
| | Restaurant | | | | |
| | Cinema/Entertainment | | | | |
| | Residential | 90 | 269 | 242 | 154 |
| | Hotel | | | | |
| | | 156 | 320 | 293 | 220 |
| INTERNAL TRIPS | | | | | |
| OUTPUT | Land Use | A.M. Peak Hour | | P.M. Peak Hour | |
| | | Enter | Exit | Enter | Exit |
| | Office | 0 | 0 | 0 | 0 |
| | Retail | 3 | 2 | 5 | 17 |
| | Restaurant | 0 | 0 | 0 | 0 |
| | Cinema/Entertainment | 0 | 0 | 0 | 0 |
| | Residential | 2 | 3 | 17 | 5 |
| | Hotel | 0 | 0 | 0 | 0 |
| | | 5 | 5 | 22 | 22 |
| OUTPUT | Total % Reduction | 2.1% | | 8.6% | |
| | Office | | | | |
| | Retail | 4.3% | | 18.8% | |
| | Restaurant | | | | |
| | Cinema/Entertainment | | | | |
| | Residential | 1.4% | | 5.6% | |
| | Hotel | | | | |
| EXTERNAL TRIPS | | | | | |
| OUTPUT | Land Use | A.M. Peak Hour | | P.M. Peak Hour | |
| | | Enter | Exit | Enter | Exit |
| | Office | 0 | 0 | 0 | 0 |
| | Retail | 63 | 49 | 46 | 49 |
| | Restaurant | 0 | 0 | 0 | 0 |
| | Cinema/Entertainment | 0 | 0 | 0 | 0 |
| | Residential | 88 | 266 | 225 | 149 |
| | Hotel | 0 | 0 | 0 | 0 |
| | | 151 | 315 | 271 | 198 |