CITY OF KIRKLAND
Planning and Building Department
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MEMORANDUM

To: Planning Commission

From: Scott Guter, AICP, Senior Planner
Jeremy McMahan, Deputy Planning Director

Date: October 7, 2019

Subject: Kirkland Urban – Proposed Modifications to Master Plan and KZC 50.38
File No. CAM14-02188

Staff Recommendation

Conduct a public hearing on proposed modifications to the Kirkland Parkplace Mixed-Use Development Master Plan and Design Guidelines to accommodate Phase III of the Kirkland Urban development (see Attachment 1).

Staff recommends approval of the proposed changes with the condition that the in-lieu affordable housing payment should be increased by 0.20 units and either paid within a year or indexed by CPI as discussed below.

Background

The current Kirkland Parkplace Mixed-Use Development Master Plan and Design Guidelines was approved by the City Council on January 15, 2019 by Ordinance 0-4677. The project currently known as Kirkland Urban is located on an 11.5-acre parcel at the corner of 6th Street and Central Way. The Master Plan allows up to 744,655 square feet of office, 218,345 square feet of retail, fitness and entertainment uses, 352,000 square feet of residential uses (367 units), and a minimum of 75,000 square feet of pedestrian space including plazas, courtyards, gardens and an elevated terrace.

Section 5 of the Master Plan and Design Guidelines states that major modifications to the project, such as a reduction in open space, changes to locations of primary and secondary internal streets, and changes in allowed uses, must be reviewed for consistency with the Comprehensive Plan and requires City Council approval.

In June 2019, the City Council reviewed the requested changes to the Master Plan and Zoning Code and directed staff to add consideration of the changes to the 2019-2021 Planning Work Program.

Project

The City has now been asked by KPP Development, LLC, the project proponent, to make amendments to accommodate potential changes to the final phase (Phase III) on the east side of the development site of the Kirkland Urban development. If approved, the

changes would allow that Phase III to be completed as a mixed-use office building rather than a mixed-use residential building. The proposed modifications do not increase the total square footage of the project. The request is also adding a section to the Master Plan outlining the project's affordable housing obligation. Lastly, the request includes zoning code amendments adjusting the project's minimum square footage for retail and restaurant uses, and the maximum percentage of retail that can be counted as movie theater (see Exhibits A and B of Attachment 1).

Master Plan Amendment Request (Attachment 1, Exhibit A)

Building Use Breakdown (Master Plan page 8)

The existing office square footage would be increased from 744,655 square feet to 924,655 square feet, the Retail/Fitness/Entertainment category would remain the same at 218,345 square feet, and maximum residential square footage would be reduced from 352,000 square feet to 172,000 square feet. The total number of residential units would be reduced from 367 units to 185 total units, reflecting the units already completed in Phase I. The development standards and design guidelines in the Kirkland Parkplace Mixed-Use Development Master Plan and Design Guidelines and the regulations for height and massing in the Zoning Code will remain the same.

Affordable Housing (Master Plan page 7)

Under the current Building Use Breakdown, the Master Plan includes the construction of 367 residential units. Per Kirkland Zoning Code (KZC) Section 50.37.3, ten percent of these units must be affordable housing units. With the current Master Plan's 367 residential units, 37 would be affordable. The project proponent is requesting to lower the number residential units to 185 units, reducing the project's affordable housing to 19 units. To compensate for the loss in affordable housing the project proponent is proposing payment in-lieu of development of the additional affordable units. The proposal is in the amount of $148,385.00 per unit for 18 units. This amount was arrived at in coordination with A Regional Coalition for Housing (ARCH) to reflect the current cost of construction for a prototype affordable housing unit on the subject property, including tax exemptions and other factors. This requirement is similar to one recommended by the Planning Commission and adopted by the City Council earlier this year for the Madison Development project located in the RH 3 zone.

Staff supports the payment in-lieu as proposed, with two additional recommendations:

1. The payment should include an additional 0.2 units that have not been accounted for in the total. Phase I built 185 residential units and provided 19 affordable units within that building. The obligation under the Zoning Code was 18.5 affordable units because the rounding point for requiring another whole unit is at 0.66. They could have provided 18 affordable units and paid for the additional 0.5 unit but chose to provide 19 actual units. The affordable housing requirement for the remaining 182 residential units would be 18.2 units. Under the Zoning regulations, we would have looked at the project as a whole and considered the additional 0.5 affordable housing unit provided in Phase I as offsetting the 0.2 unit obligation in the current phase. However, a strict application of the Multifamily Property Tax Exemption (MFTE) requirements, since it is granted on a building by building basis, would require that they provide the full 10% affordable units within the building being granted the

exemption in order to receive the exemption. The only way around that would be if we changed the MFTE requirements in KMC 5.88 to require the affordable housing within the zone. The additional 0.2 units would increase the payment by $29,677.

2. The payment should either be made within one year of Council's adoption of the amending ordinance, or the total amount is adjusted according to Consumer Price Index (CPI) to account for inflation.

Organization of Uses (Master Plan page 11)

The proposed changes from residential to office use requires an amendment to the project's Organization of Uses illustrated on page 11 of the Master Plan.

Zoning Code Text Amendment Request (Attachment 1, Exhibit B)

An increase in the amount of allowed office use for the project requires an amendment to two sections of zoning code regulating the amount of retail, restaurant, and movie theater uses. KZC 50.38.010, Special Regulation 2 requires a minimum amount of retail and restaurant gross floor area (GFA) equaling 25 percent of the project's office GFA. Because the office space will be increasing, continuing to tie the required amount of retail to the amount of office space would not be feasible. The project proponent is requesting an amendment to the zoning code making the minimum retail and restaurant requirement 186,000 GFA, an amount approximately equal to the 25 percent of 744,655 GFA of office under the current Master Plan. This simply commits the project to build the same planned amount of retail square footage.

KZC 50.38.010, Special Regulation 3b sets a maximum GFA of movie theater of 20 percent of required retail and restaurant use. The request increases the movie theater percentage to 25 percent of the minimum GFA of retail and restaurant uses, a maximum 46,500 GFA of movie theater for the project based on the amended 186,000 GFA for retail and restaurant uses.

Analysis

These changes are consistent with the Comprehensive Plan, which designates the Kirkland Urban property as appropriate for commercial uses. The Comprehensive Plan Chapter for the Moss Bay Neighborhood, Downtown Plan states that: "Because this area provides the best opportunities in the Downtown for creating a strong employment base, redevelopment for office use should be emphasized. Within the Parkplace Center site, however, retail uses should be a significant component of a mixed-use complex. Residential use should be allowed as a complementary use." The proposed amendments support this policy directions while also preserving the public interest in providing affordable housing in the community.

The changes are also consistent with the SEPA Planned Action Ordinance O-4473, which establishes a maximum "envelope" of project impacts – primarily vehicle trips generated during the most congested peak hour during the evening commute (PM peak), which has a threshold of 1,680 vehicle trips during the PM peak hour. If project changes would generate more than the maximum number of PM peak vehicle trips (or other environmental impacts) identified in the Planned Action Ordinance, supplemental environmental review is required. Conversely, if project changes would generate less than the maximum number of vehicle trips (or other environmental impacts), additional

environmental review is not required, and the project changes can be approved within the parameters of the approved Planned Action Ordinance. The current changes are projected to generate 1,632 vehicle trips during the PM peak hour (see Attachment 2).

In the adopted Master Plan and Design Guidelines, major modifications to the Master Plan are required to be reviewed by staff for consistency with the Comprehensive Plan and to be approved by the City Council. Kirkland Municipal Code 3.30.040 states that the City Council shall consult with the Planning Commission prior to amending the Master Plan and Design Guidelines. The Planning Commission's recommendation on this proposal will be taken to City Council on December 10, 2019.Any additional access or circulation improvements identified in the Planned Action ordinance will be reviewed by staff and the DRB when the complete Phase III proposal is received. Required parking supply and modifications to the Transportation Management Plan and Parking Management Plan will also be reviewed when detailed square footage and design information is submitted to the City by the applicant.

The proposed amendments to the Kirkland Zoning Code are considered pursuant to KZC 160, where the Planning Commission conducted a public hearing and the makes a recommendation to City Council.

Public Comment

Public comment will be taken at the Planning Commission hearing on November 14, 2019. No comments have been received at this time.

Environmental Review

Staff will prepare an Addendum to the Plan Action EIS to document that the modification proposal would not generate vehicle trips (or other project impacts) that exceed the maximum thresholds evaluated in the Planned Action EIS Addendum. This Addendum will be based in part on the traffic analysis in Attachment 2.

Attachments

1. Letter from Jessica M. Clawson dated November 1, 2019
2. Trip Generation for Proposed Master Plan Amendment by Heffron Transportation Inc, dated September 4, 2019

Cc: G. Richard Hill, Attorney for Talon Private Capital
Bill Pollard, Talon Private Capital
Jeff Roberts, Google
T. Ryan Durkan, Hillis Clark Martin & Peterson P.S.
Jim Neal, Talon Private Capital
William Leedom, Talon Private Capital
Bret Jordan, Ryan Companies
Moss Bay Neighborhood Association
KAN

McCULLOUGH HILL LEARY, PS

November 1, 2019

Scott Guter
City of Kirkland Planning and Community Development
123 Fifth Avenue
Kirkland, WA 98033

Re: Kirkland Urban Master Plan Modification

Dear Scott:

This follows up on our firm's recent letters to the Planning Department, one dated June 4, 2019 and one dated September 23, 2019. In our June 4 letter, we advised the City that Kirkland Urban intended to apply for (a) a major revision to its Master Plan and Design Guidelines and (b) a zoning code text amendment ("Revision Proposal"). In our September 23, 2019 letter, we formally submitted the Revision Proposal on behalf of Kirkland Urban. Our October 7, 2019 letter supplemented the information set forth in the prior letters. This letter amends the request in our September 23, 2019 letter based on current discussions between the parties.

As stated in the two prior letters, the Revision Proposal will not result in an increase in the overall square footage (1,315,000 sf) allowed under the existing Kirkland Urban Master Plan ("Master Plan"). The Revision Proposal will, however, result in a modification of the square footage currently allocated to office (the request will be to increase that allocation) and a corresponding decrease in the square footage currently allocated to residential (the request will be to decrease that allocation). In addition, the Revision Proposal requests a zoning code text amendment to clarify that a minimum of 186,000 sf of restaurant and retail uses will be developed as part of the Master Plan.

In coordination with City staff, we have identified applicable City regulations regarding the proposed modification.

Comprehensive Plan. The Comprehensive Plan Figure LU-1 designates the Kirkland Urban property as commercial. The proposed change is consistent with the Comprehensive Plan.

Master Plan Revisions. The Revision Proposal does require approval of two changes in the Master Plan, as follows:

- The current Master Plan's allocation of commercial and residential square footage will be amended (see Master Plan at page 8). This change in the Master Plan will require staff review for consistency with the Comprehensive Plan and City Council approval.

- The current Master Plan (page 7, "Program Requirements") will be amended to reflect the payment for affordable housing that will replace the affordable units that were previously anticipated with the Master Plan. The Plan will be amended with the following language:
    - F. Affordable Housing. Under Ordinance 4677 the Master Plan authorized construction of 367 residential units, including up to 37 affordable housing units per the Zoning code requirement for 10 percent affordable units in residential development. With the reduction of the residential component to 185 residential units, the Master Plan will include only 19 affordable units. In lieu of the remaining anticipated 18 affordable housing units, the City will accept a payment of $148,385.00 per unit.
- The current Master Plan (page 11, "Organization of Uses: Upper Grade Level") will be amended to reflect the change from residential to office.

Exhibit A sets forth the revisions to the Master Plan that Kirkland Urban is requesting.

Zoning Code Text Amendment. A Zoning Code amendment will be required, because the Revision Proposal includes a request to modify the Code's retail provisions as set forth in KZC 50.38.010, Special Regulations 2 and 3. The proposed Zoning Code amendment is attached to this letter as Exhibit B. KZC 50.38.010, Special Regulation 2, would be revised to confirm Kirkland Urban's obligation to provide a minimum of 186,000 sf of retail and restaurant uses. This obligation will result in the same minimum amount of square footage of retail and restaurant uses as under the existing approved Master Plan. Special Regulation 3b would also be revised to allow for a slightly greater portion of the Movie Theater/Restaurant to count toward the minimum requirement for retail.

Citizen Initiated Amendment Request. City staff requested that this form of Request be completed to facilitate review of the Zoning Code amendment pursuant to KZC Chapter 160. The Request has been formally submitted through the City Portal.

Planned Action Ordinance and SEPA Checklist. Ordinance 4473, Section 3.D.1(a) sets forth threshold criteria to be used to determine whether the impacts of a site-specific development have been adequately reviewed and mitigated within the context of the Planned Action. If they have been, no additional environmental review is required.

In this case, the transportation impacts of the Revision Proposal have been addressed in Heffron's Transportation Technical Memoranda evaluating trip generation for the Revision Proposal and parking demand for the Master Plan Buildout ("Heffron Memoranda"). A SEPA Checklist, including the Heffron Memoranda, has been submitted with the Revision Proposal application through the City Portal. The SEPA Checklist concludes that all impacts of the Revision Proposal are within the Planned Action thresholds identified in Section 3(D) of Planned Action Ordinance 4473. Accordingly, Kirkland Urban requests that the City determine that a SEPA addendum is the appropriate vehicle for compliance with SEPA review requirements.

We understand that the City has requested specific improvements in lieu of the NE 85th/114th Avenue NE mitigation previously identified for the Master Plan in the PAO. The improvements are specified as:

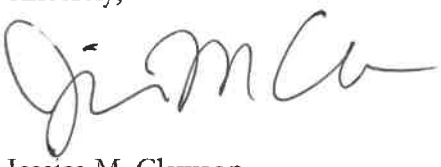
- Remove the bulb out at the NE corner of 6th Street/4th Avenue/project driveway to extend the northbound to eastbound right-turn lane at the intersection of Central Way/6th Street. This would include signal modification and relocating a utility vault at the NE corner of 6th Street/4th Avenue.
- Relocate the curb on Central Way between 6th Street and 5th Street to add a transit queue jump lane or right-turn lane. The improvement would be made within existing right-of-way. The length of this improvement is currently being determined given that currently there may not be sufficient right-of-way near 5th Street. The work may include relocation of the eastbound bike lane. The widening would also include signal modifications/additions to control the new queue jump or right-turn lane and bike lane amenities per City standard.

We understand that the City has requested this improvement in-lieu as consistent with the PAO and previous SEPA review, and we request that the SEPA addendum reflect the change.

Concurrency. The Revision Proposal requires the City Transportation Engineer to evaluate its consistency with the City's transportation concurrency requirements. A concurrency application has been submitted through the City Portal. Based on City staff review of the Heffron Memoranda, we understand that the Revision Proposal meets the City's concurrency requirements.

Kirkland Urban very much appreciates your consideration of the Revision Proposal. Please let me know if you have any questions or need additional information.

Sincerely,



Jessica M. Clawson

cc: Stephanie Croll
Jeremy McMahan
Bill Pollard
Jim Neal
William Leedom
Bret Jordan
Mark Rowe
Ryan Durkan
Abigail DeWeese

SITE AREA BREAKDOWN · TOTAL SITE AREA = 501,000 SF = 100%

Building Footprint	Vehicle Areas	Open Space
40 - 45%	20 - 25%	35 - 40%

OPEN SPACE BREAKDOWN

Sidewalks	Pedestrian Space: Plazas/Courtyards/Gardens/Elevated Terrace	Private Roof Terrace
20 - 25% of Site	15 - 20% of site (75,000 sf minimum)	10,000 sf

BUILDING USE BREAKDOWN · Approximate 1,315,000 GROSS SF TOTAL = 100%

Commercial Office	Retail / Fitness / Entertainment	Residential
744,655 sf	218,345 sf	352,000 sf

proposed:
924,655 sf

proposed:
185 units
172,000 sf

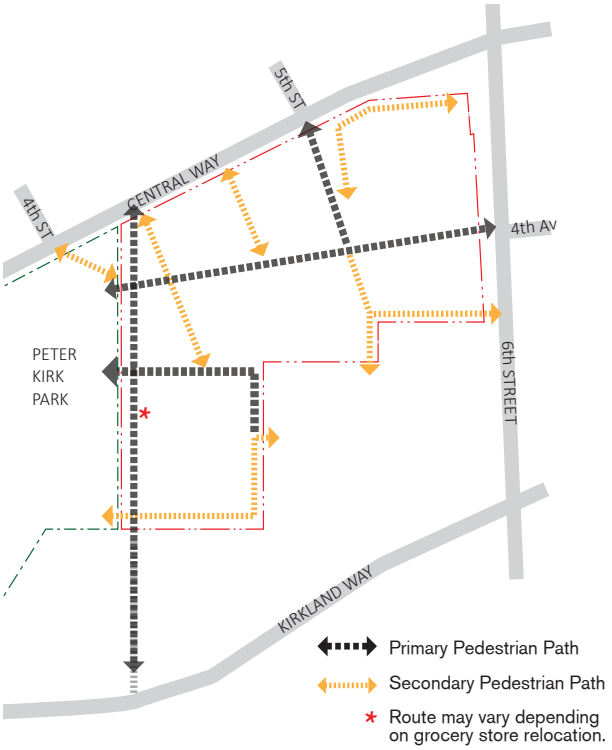
10. Public Amenities, Access, and Organization of Uses

A. PEDESTRIAN CONNECTIONS

Intent: Create a network of identifiable linkages into and through the project site for pedestrians.

The diagram at right shows approximate pedestrian connections. Darker lines indicate primary connections designated by the Comprehensive Plan. Lighter lines show secondary connections linking existing proposed streets as well as Peter Kirk Park. These connections are for public use.

The applicant shall work with the City to define appropriate wayfinding strategies between the development and the Cross Kirkland Corridor.



Network of pedestrian connections

MASTER PLAN: DEVELOPMENT STANDARDS

9. Program Requirements

The following requirements and ratios are established to quantify use types at the completion of the project, and are not a requirement for any single phase.

A. PEDESTRIAN SPACE

The development will include a variety of public open spaces that vary in size and character. A minimum of 15%, or 75,000 square feet, of the site shall be activated pedestrian-oriented space, in the form of courtyards, plazas, etc. See diagram (Section 10.D) for approximate locations and dimensional requirements of specific spaces. Definition of appropriate design treatments are found in the district-specific design guidelines (Section 13).

B. ARTS COMMITMENT

In an effort to encourage integrated art into the project, Parkplace is working in collaboration with representatives from the cultural council and local art community and will identify and create opportunities to integrate art into the project.

C. GREEN BUILDING COMMITMENT

Section V. Natural Environment of the Comprehensive Plan outlines broad goals and policies related to environmental sustainability. Section XV.D of the Comprehensive Plan and Guiding Principle #8 (see Section 8 of this document) describe goals specific to the Parkplace site.

1. In response to these goals and policies, the following requirements will apply to the Kirkland Parkplace project:

a. All new office buildings will be designed achieve a LEED CS Gold threshold. A USGBC Pre-Certification Application showing points meeting LEED CS Gold will be included with permit submittals to show which points will be pursued.

b. The multi-family residential building(s) will be designed to a LEED for Homes Multifamily Mid-Rise Silver threshold; or to meet Built Green 4 Star certification.

c. The applicant shall encourage all potential tenants for Kirkland Parkplace to pursue LEED-CI. To accomplish this, the applicant will create and distribute to tenants a set of Tenant Design Guidelines to show strategies tenants can use to achieve LEED-CI certification. These Tenant Design Guidelines will be made available to the City of Kirkland to inform their ongoing sustainability programs.

d. At the end of tenant build-outs of the office space, the applicant shall prepare an executive summary for the City of Kirkland, outlining what sustainability measures were incorporated in the tenant build-outs (unless otherwise restricted by tenant confidentiality).

e. In addition, the applicant shall strive to make design choices in its Core and Shell buildings that are conducive to the achievement of LEED-CI by tenants.

2. In the interest of promoting a holistic sustainability approach, the applicant shall strive to integrate site-specific strategies identified as focus areas, such as:

a. Energy efficiency strategies, like centralized cooling options and heat recovery.

b. Low Impact Development (LID) strategies like stormwater planters, vegetated roofs, and bioswales.

c. Materials and resource strategies like recycled materials, regional materials, and FSC certified wood.

D. COMMUNITY-SERVING RETAIL AND SERVICES

Include neighborhood-serving retail and services. Possible examples include: grocery, childcare, bookstore, drugstore, dry cleaner, movie theater, barbershop, shoe repair, etc.

E. PARKING

To guide the transformation described in the Comprehensive Plan from “an auto-oriented center surrounded by surface parking into a pedestrian-oriented center integrated into the community” (CP XV.D-13), the majority of parking for the development shall be placed underground. Surface parking will be provided along selected internal streets and at other selected surface parking locations to support retail uses.

F. AFFORDABLE HOUSING

Under Ordinance 4677 the Master Plan authorized construction of 367 residential units, including up to 37 affordable housing units per the Zoning code requirement for 10 percent affordable units in residential development. With the reduction of the residential component to 185 residential units, the Master Plan will include only 19 affordable units. In lieu of the remaining anticipated 18 affordable housing units, the City will accept a payment of $148,385.00 per unit.

C. ORGANIZATION OF USES: UPPER GRADE LEVEL

BUILDINGS

- **A** Office over Lower Level Retail / Entertainment
- **B** Retail/office/daycare
- **C** Residential with Retail at the base
- **D** Retail

SITE

- **E** Pedestrian Space: Plaza/Courtyard/ Garden/Elevated Terrace
- Vehicular and Pedestrian Circulation
- Pedestrian-Only Circulation
- Vehicle Site Access
- Pedestrian Site Access

- Retail
- Outdoor Amenity
- Office
- Residential

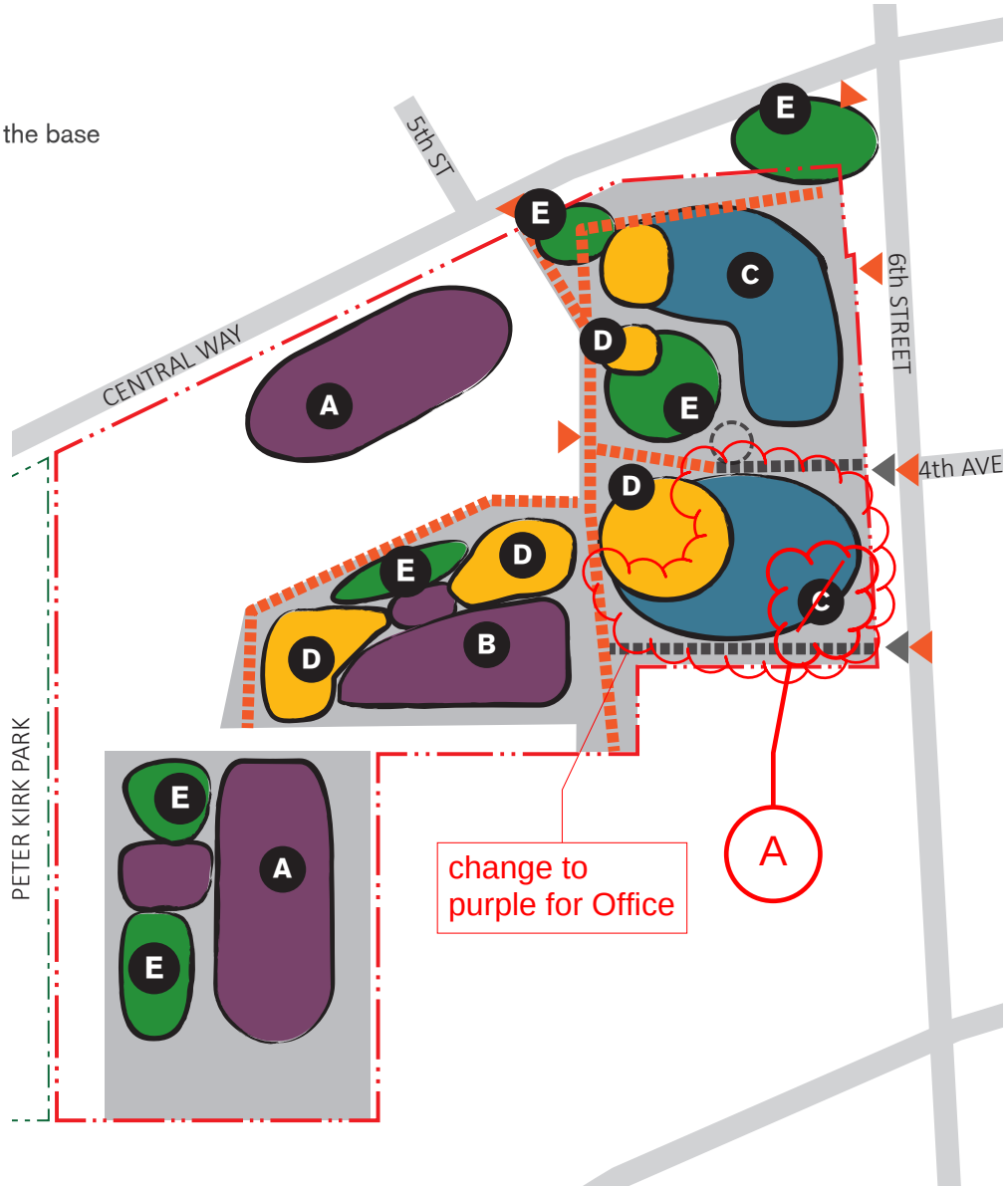


Exhibit B

Current KZC 50.38.010, Special Regulation 2, states:

The gross floor area of retail and restaurant uses in this zone shall be equal to or greater than 25% of the gross floor area of office uses in this zone. Retail uses may include accessory short term drop-off children's play facilities.

Proposed revision:

The gross floor area of retail and restaurant uses in this zone shall be equal to or greater than 186,000 gross square feet. Retail uses may include accessory short term drop-off children's play facilities.

Current KZC 50.38.010, Special Regulation 3b, states:

Movie theater. This use may be included as a retail use under Special Regulation 2; provided, that the gross floor area of this use shall not count toward more than 20 percent of the required minimum gross floor area of retail and restaurant uses.

Proposed revision:

Movie theater. This use may be included as a retail use under Special Regulation 2; provided, that the gross floor area of this use shall not count toward more than 25 percent of the required minimum gross floor area of retail and restaurant uses.

heffron transportation inc

TECHNICAL MEMORANDUM

Project: Kirkland Urban

Subject: Trip Generation for Proposed Master Plan Amendment

Date: September 4, 2019

Author: Jennifer Barnes, PE JAB
Marni Heffron, PE, PTOE

This memorandum presents the methodology and assumptions used to estimate trips a generated by the proposed Master Plan buildout program for the Kirkland Urban development, which would increase the amount of allowed office, but would be offset by a decrease in residential, with no net change in the total size of the overall development.

1. Overview and Summary of Findings

The Kirkland Urban project was originally evaluated in the *State Environmental Policy Act (SEPA) Addendum to the Downtown Area Planned Action Ordinance EIS 2008 & Related SEPA Document,* [1] which supports the adopted Planned Action Ordinance (PAO) O-4473.[2] There have been two amendments to the Master Plan, in March 2018 and January 2019. The PAO established a PM peak hour trip threshold of 1,680 total vehicle trips for the project, which was determined through the SEPA EIS analysis.

The analyses presented in this memorandum evaluates whether the currently-proposed Master Plan buildout would cause the trip threshold to be exceeded. It reflects updates to the Institute of Transportation Engineers' (ITE) recommended trip generation methodology since the time the SEPA Addendum analysis was completed. The analysis shows that with these updates reflected, the proposed program changes are projected to generate 1,632 vehicle trips during the PM peak hour, which is less than the PAO threshold of 1,680. Therefore, the updated program would not change the mitigation requirements established in the PAO.

One update to the project's Transportation Management Plan/Parking Management Plan (TMP/PMP) is recommended to address concerns raised by the City regarding the effect of office employee density on trip and parking generation. Per the PAO, the current goal of the TMP is that *"no more than 77 percent of the project's office employee trips occur by single-occupant vehicles."* It is recommended that this goal include adjustment that would occur if the actual office employee density is higher than the density inherent in the trip generation analysis. The adjustment would be a decrease to the SOV target in proportion to the increase in employee density. The intent would be to retain the same level of assumed vehicle trips (and parking demand) reflected in the SEPA analysis even if employment density increases.

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1 City of Kirkland, February 2015.
2 City of Kirkland, Ordinance O-4473, adopted February 17, 2015.

2. Program Description

The proposed project program is summarized in **Table 1**.With the proposed revision, 180,000 square feet (sf) previously approved for residential development would instead be developed as office. This would result in 185 residential units and 924,655 sf of office, with the overall development remaining at the previously-approved size of 1,315,000 sf.

Table 1. Kirkland Urban – Proposed Buildout under Master Plan

Land Use Type (ITE Code)	Buildout under Proposed Master Plan [1]		Buildout Under Current Master Plan [2]	
	Size (sf)	Units Applied to Analysis [3]	Size (sf)	Units Applied to Analysis [3]
General Retail (820)	50,411	sf	50,411	sf
Residential (221) [4]	172,000	185 units	352,000	367 units
Office (710)	924,655	sf	744,655	sf
Restaurant (932)	44,789	sf	44,789	sf
Supermarket (850)	55,251	sf	55,251	sf
Movie Theater (445)	53,839 [5]	496 seats	53,839 [3]	496 seats
Daycare (565)	14,055	170 students	14,055	170 students
Total	1,315,000	---	1,315,000	---

sf = square feet

1. *Source: Talon Private Capital, LLC, July 2019.*
2. *Source: City of Kirkland, Ordinance O-4677, Adopted January 15, 2019.*
3. *If no value is provided, the square footage listed for the land use was used in the calculation.*
4. *Land use code 220 was applied for prior analysis; this has been updated to land use code 221 for new analysis.*
5. *Size of planned theater includes a 12,150-sf mezzanine.*

3. Summary of Methodology Updates

The trip projections presented in this memorandum apply the same methodology, published by ITE in the *Trip Generation Handbook*[3], that was applied to all previous transportation analyses for the project, with the updates described below. The full methodology and resulting trip estimates are described in Section 4.

Trip Rates and Equations – The trip rates and equations were updated to the current (10th edition) *Trip Generation Manual*.[4] This is consistent with the City's direction in O-4473, which states,

> *"The City Public Works Director shall have discretion to determine incremental and total trip generation, consistent with the Institute of Transportation Engineers (ITE) Trip Generation Manual (latest edition) or an alternative manual accepted at the City Public Works Director's sole discretion, for each Planned Action Project permit application proposed under this Planned Action."*

In the current edition of the *Trip Generation Manual*, published average trip rates and equations were updated for 176 land use categories, reflecting additional trip generation data that were compiled by ITE

3 ITE, Trip Generation Handbook, 3rd Edition, 2017.
4 ITE, Trip Generation Manual, 10th Edition, 2017.

since the previous edition. For the major land use categories associated with the proposed project—residential, office, and retail—the new ITE rates result in slightly lower trip generation values than previously analyzed.

Multifamily Residential Categories – In the 10th Edition, multifamily housing has been separated into categories: "Low-Rise" (one or two levels), "Mid-Rise" (three to 10 levels), or "High-Rise" (greater than 10 levels). The Kirkland Urban residential development is in the Mid-Rise Multifamily category. Prior analysis had applied a generic "Apartment" land use that reflected a mix of these categories.

Internal Trip Calculations – Internal trips are walking trips made between different uses on the site (e.g., an office employee goes to a restaurant on site, an apartment resident shops at the on-site supermarket), and therefore do not reflect new trips on the street system. The internal trip calculations previously applied were based upon the methodology established in the current edition of the *Trip Generation Handbook*, so no substantial updates were needed. However, two minor updates were applied.

First, the current edition of the *Trip Generation Handbook* includes up to six land use categories (Office, Retail, Residential, Restaurant, Cinema/Entertainment, Hotel) between which internal trips can be calculated. Four categories—Office, Retail, Residential, and Restaurant—were evaluated in the SEPA Addendum, with the movie theater included in the Retail category. In this updated analysis, the movie theater has been applied separately in the Cinema/Entertainment category, rather than including it in Retail. Previous analyses applied the internal trip capture worksheets provided in the *Trip Generation Handbook,* which can only be used for up to four land use categories. Inclusion of the fifth category requires that the internal trip calculation worksheet provided as part of *National Cooperative Highway Research Program (NCHRP) Report 684* [5] be used. Both worksheets apply the same ITE methodology, and analysis previously reviewed by the City, [6] showed very little difference between these approaches for the Kirkland Urban trip estimates. Therefore, use of the NCHRP worksheet to estimate internal trips between the five land use categories has negligible effect on the internal trip estimates, but more accurately reflects the current ITE methodology.

Second, in order to calculate internal trips, the ITE vehicle trips must first be converted to person trips. The SEPA Addendum analysis applied the best information available at the time, but this analysis applies updated baseline Average Vehicle Occupancy (AVO) and mode shares provided in Tables B.1 and B.2 of the current edition of the *Trip Generation Handbook* to convert ITE vehicle trips to person trips.

Pass-by Trip Percentage – The pass-by trip percentages for the retail, restaurant, and supermarket uses were updated to reflect the published rates in the current *Trip Generation Handbook.*

Daycare Travel Mode Assumption – The proposed daycare would have a capacity of 170 students, and would replace an existing 148-student daycare located next door to the Kirkland Urban site at 520 Kirkland Way. Based upon proprietary market demand analysis, the daycare estimates that 58 to 84 students of the 170-student capacity would come from within Kirkland Urban when it is at buildout level.[7] Previous analyses assumed that 100% of daycare-generated trip would be external, and that all would be new trips on the street system, resulting in a conservatively high estimate. The updated analysis assumes that with the buildout condition, some students would come with parents living or working at Kirkland Urban, consistent with the daycare's projection. The lower end of the estimated range (58 of 170 students, or 34%) was assumed to be generated within Kirkland Urban and therefore would not generate external

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5 Bochner, B., K. Hooper, B. Sperry, and R. Dunphy, NCHRP Report 684, Enhancing Internal Trip Capture Estimate for Mixed-Use Developments, Washington, DC.

6 Heffron Transportation, Inc., Parkplace Redevelopment – Trip Generation Estimates by Phase, September 1, 2015.

7 Brown, Debbie, Bright Horizons, personal communication with Jennifer Barnes, Heffron Transportation, August 27, 2015.

trips. Enrollment data provided by the daycare tenant documented the employers who have registered to enroll at the Kirkland Urban facility.[8] The data showed that of 59 families registered to enroll at the new Kirkland Urban site, 34 (57%) are from the site's largest employer. Confirmation was provided by the City this enrollment data for initial opening of the facility provides a reasonable basis to support the projection that 34% of families would come from within the site under the future buildout condition.[9]

4. Trip Generation for Proposed Program

The trip generation model for Kirkland Urban was developed using procedures set forth in ITE's *Trip Generation Handbook.*[10] ITE recognizes that "*...development sites with two or more complementary uses are now much more common and a method to accurately estimate the external trip generation effects of these types of developments is needed. At a development site consisting of two or more land uses, there is potential for interaction among these uses (referred to as "internal capture trips"), particularly where the trip can be made by walking. As a result, the total generation of external trips (that is, those entering and exiting the overall site) may be less than the simple sum of the trips generated by each discrete land use.*" Chapter 6 of the handbook presents the recommended methodology for estimating trips at mixed-use development sites, which conforms to the flow chart presented in Chapter 3 with the following steps:

1. Estimate baseline vehicle trips;
2. Convert baseline vehicle trips to person trips;
3. Estimate internal person trips;
4. Determine external person trips by mode (walk/bike, transit, and in vehicles);
5. Convert person trips by vehicle to final vehicle trips; and
6. Estimate vehicle trip subsets (pass-by / diverted trips).

Each of these steps is described in detail in the following sections.

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8 Email from Bright Horizons, August 27, 2019.
9 Email from Thang Nguyen, City of Kirkland, September 3, 2019.
10 Institute of Transportation Engineers, *Trip Generation Handbook*, 3rd Edition, 2017.

Baseline Trip Generation Factors

Table 2 summarizes the baseline trip generation rates, equations and average vehicle occupancy (AVO) factors used to estimate the proposed project's person trips.

Table 2. Baseline Trip Generation Rates, Equations and AVO Assumptions

Land Use (ITE Land Use Code)	ITE Baseline Trip Generation Rates & Equations [a]	Baseline Average Vehicle Occupancy (AVO) Rates [b]		Baseline Vehicle Trip % [b]	
		Inbound	Outbound	Inbound	Outbound
Multifamily Housing (221, Midrise) – Dwelling units located within the same building with at least three other dwelling units and that have between three and 10 floors.					
Daily	T = 5.45(X) - 1.75	1.14 [c]	1.15 [c]	97% [c]	98% [c]
AM Peak Hour	Ln(T) = 0.98 Ln(X) - 0.98	1.13	1.09	96%	98%
PM Peak Hour	Ln(T) = 0.96 Ln(X) - 0.63	1.15	1.21	97%	97%
Multiplex Theater (445) – A multiplex movie theater consists of audience seating, a minimum of 10 screens, a lobby and refreshment area. All theaters in the category show first-run movies, and may also have matinee showings. Multiplex theaters have a higher vehicle trip rate than smaller theaters with matinees, so this category was assumed because it would provide the highest vehicle trip rate.					
Daily	12.9 * PM peak rate [d]	2.00 [e]	2.00 [e]	100% [e]	100% [e]
AM Peak Hour	0.0 trips/seat	2.00 [e]	2.00 [e]	100% [e]	100% [e]
PM Peak Hour	0.10 trips/seat [d]	2.00 [e]	2.00 [e]	100% [e]	100% [e]
Daycare (565) – A facility where care for pre-school age children is provided, normally during the daytime hours. Daycare facilities generally include classrooms, offices, eating areas and playgrounds					
Daily	4.09 trips/student	1.00 [f]	1.00 [f]	100% [f]	100% [f]
AM Peak Hour	0.78 trips/student [f]	1.00 [f]	1.00 [f]	100% [f]	100% [f]
PM Peak Hour	0.79 trips/student	1.00 [f]	1.00 [f]	100% [f]	100% [f]
General Office (710) – Location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. May contain a mixture of tenants. Because of the small size of the proposed office, average rates were used.					
Daily	Ln(T) = 0.97 Ln(X) + 2.50	1.09 [c]	1.07 [c]	99% [c]	99% [c]
AM Peak Hour	T = 0.94(X) + 26.49	1.06	1.06	99%	100%
PM Peak Hour	Ln(T) = 0.95 Ln(X) + 0.36	1.11	1.07	100%	99%
Shopping Center Retail (820) – Group of commercial establishments that may include uses such as traditional retail stores, banks, post offices, recreational uses, and others.					
Daily	Ln(T) = 0.68 Ln(X) + 5.57	1.19 [c]	1.17 [c]	100% [c]	100% [c]
AM Peak Hour	T = 0.50(X) + 151.78	1.17	1.16	100%	100%
PM Peak Hour	Ln(T) = 0.74 Ln(X) + 2.89	1.21	1.18	100%	100%
Supermarket (850) – Free standing retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items. They may also contain additional products or services including ATMs, automobile supplies, bakeries, books and magazines, dry cleaning, floral, greeting cards, limited service banks, photo centers, pharmacies or video rental.					
Daily	106.78 trips/1,000 sfgfa	1.19 [g]	1.17 [g]	100% [g]	100% [g]
AM Peak Hour	3.82 trips/1,000 sfgfa	1.17 [g]	1.16 [g]	100% [g]	100% [g]
PM Peak Hour	9.24 trips/1,000 sfgfa	1.21 [g]	1.18 [g]	100% [g]	100% [g]

Land Use (ITE Land Use Code)	ITE Baseline Trip Generation Rates & Equations [a]	Baseline Average Vehicle Occupancy (AVO) Rates [b]		Baseline Vehicle Trip % [b]	
		Inbound	Outbound	Inbound	Outbound
High-Turnover Sit-Down Restaurant (932) – Sit-down, full-service eating establishments with typical duration of stay of approximately one hour. They are usually moderately priced and often belong to a chain. This type would generate more trips than a quality restaurant and was selected to provide a conservatively high estimate of trips					
Daily	112.18 trips/1,000 sfgfa	1.33 [h]	1.34 [h]	100% [h]	100% [h]
AM Peak Hour	9.94 trips/1,000 sfgfa	1.33 [h]	1.34 [h]	100% [h]	100% [h]
PM Peak Hour	9.77 trips/1,000 sfgfa	1.33	1.34	100%	100%

a. *Source: Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017. "sfgla" = square feet of gross leasable area. "sfgfa" = square feet of gross floor area.* T = number of trips; For residential equations, X = number of dwelling units; For non-residential equations, X = building square feet. All categories reflect rates and equations for a General Urban/Suburban setting.

b. *AVO and percentage of vehicle trips inherent in the ITE trip rates. Vehicle trip percentages less than 100% reflect trips made by walk and transit modes. Based on data in ITE Trip Generation Handbook, 3rd Edition; Tables B.1and B.2, unless noted otherwise.*

c. *Daily AVO rate and/or vehicle trip % not provided by ITE. Estimated by Heffron Transportation, Inc. – reflects average of AM and PM peak hour values.*

d. *The Friday PM peak hour rate for multiplex theaters was applied. Daily rate per seat not provided by ITE for multiplex theaters. Daily rate was estimated by comparing the Daily to PM peak multiplex theater rates per screen.*

e. *AVO rate and/or vehicle trip % not provided by ITE. Estimated by Heffron Transportation, Inc. All trips generated by the movie theater assumed to occur by vehicle with an average of 2.0 occupants.*

f. *AVO rate and/or vehicle trip % not provided by ITE. Estimated by Heffron Transportation, Inc. All trips generated by the daycare assumed to occur by vehicle with one parent or caretaker driver.*

g. *For purposes of internal trip calculation, supermarket is considered a retail use, so the baseline AVOs applied to general retail use were also applied to the supermarket use.*

h. *AVO rate and/or vehicle trip % provided only for the PM peak hour; assumed to be the same for Daily and AM peak hour.*

Internal Trips

In addition to trips to and from a site, the total number of trips generated by a mixed-use development includes "internal trips," or trips made between different uses on the site. For example, a trip that an office worker makes at lunchtime to a local retail shop is calculated in the trip generation estimates for both the office and the retail uses. Chapter 6 of the *Trip Generation Handbook*[11] establishes the methodology to estimate the number of internal trips that can be expected for specific mixes of uses. This method is based on the type and size of various land uses. The more balanced the mix of uses, the higher the percentage of internal trips. Developments with a predominance of one type of use (e.g., mostly office, or mostly residential) typically have lower percentages of internal trips, while developments with a more balanced mix of uses (e.g. office, retail and residential) typically have higher percentages of internal trips.

ITE's methodology to determine internal trips has four steps:

1. Determine the number of person trips expected to be generated by each land use as if each was on a separate site.
2. Determine the number of internal trips based on internal capture rates presented in the *Trip Generation Handbook*.
3. Balance the number of internal trips to and from all land uses at the site.
4. Total the resulting number of internal trips and calculate the percentage of internal trips.

[11] Institute of Transportation Engineers, 3rd Edition, August 2014

As described previously, the internal trips for the updated program were calculated using the internal trip calculation worksheet provided as part of *NCHRP Report 684* for the included five land use types—Office, Retail, Residential, Restaurant, and Cinema/Entertainment. (Note, the Daycare was categorized as "Other" and was not included in the internal trip calculation. Instead, trips to the daycare by site residents or employees were counted as "walking" trips as described later.). The internal trip calculation worksheets for the AM and PM peak hours are provided in **Attachment A**. NCHRP does not provide a worksheet for daily internal trips; the daily trip capture rates were estimated by averaging the AM peak and PM peak capture rate for each land use category.

Person Trips

Table 3 summarizes the estimated person trips (internal, external, and total) generated by the proposed Master Plan buildout program, calculated according to the methods and assumptions described above. Based on ITE methods, internal trips are estimated to account for about 23% of the daily trips, 26% of the AM peak hour trips and 25% of the PM peak hour trips, reflecting a balanced mix between the office, retail, restaurant, and residential uses. The total number of person trips external to the site is estimated at 24,040 per day, with about 1,637 trips in the AM peak hour and 2,202 trips in the PM peak hour.

Table 3. Total Person Trips Generated by the Proposed Buildout Program

Person Trip Summary	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
TOTAL PERSON TRIPS								
Multifamily Residential (LU 221)	185 units	1,190	19	52	71	58	39	97
Multiplex Theater (LU 445)	496 seats	1,280	0	0	0	36	64	100
Daycare (LU 565)	170 students	700	70	63	133	63	71	134
Office (LU 710)	924,655 sf	10,010	825	133	958	167	856	1,023
Retail (LU 820)	50,411 sf	4,450	128	79	207	190	201	391
Supermarket (LU 850)	55,251 sf	6,960	148	98	246	315	296	611
High Turn Restaurant (LU 932)	44,789 sf	6,700	326	268	594	361	223	584
Total All Person Trips		31,290	1,516	693	2,209	1,190	1,750	2,940
INTERNAL PERSON TRIPS								
Multifamily Residential (LU 221)		445	1	12	13	39	25	64
Multiplex Theater (LU 445)		296	0	0	0	21	27	48
Daycare (LU 565)		0	0	0	0	0	0	0
Office (LU 710)		175	117	112	229	20	48	68
Retail (LU 820)		1,475	28	25	53	59	61	120
Supermarket (LU 850)		2,309	32	31	63	99	89	188
High Turn Restaurant (LU 932)		2,556	108	106	214	131	119	250
Total Internal Trips		7,256	286	286	572	369	369	738
% Internal Trips		**23.2%**		**25.9%**			**25.1%**	
EXTERNAL PERSON TRIPS								
Multifamily Residential (LU 221)		745	18	40	58	19	14	33
Multiplex Theater (LU 445)		984	0	0	0	15	37	52
Daycare (LU 565)		700	70	63	133	63	71	134
Office (LU 710)		9,835	708	21	729	147	808	955
Retail (LU 820)		2,975	100	54	154	131	140	271
Supermarket (LU 850)		4,651	116	67	183	216	207	423
High Turn Restaurant (LU 932)		4,144	218	162	380	230	104	334
Total External Person Trips		**24,034**	**1,230**	**407**	**1,637**	**821**	**1,381**	**2,202**

Source: Heffron Transportation, Inc., July 2019. Estimated using procedures in the ITE Trip Generation Handbook, 3rd Edition, 2017.

Local Mode of Travel and Average Vehicle Occupancy

The mode of travel percentages and average vehicle occupancies (AVOs) for residents and employees in the area in which the Kirkland Urban site is located were derived from Journey-to-Work survey results from the year *2010 Census*, compiled by the Puget Sound Regional Council (PSRC).[12] Since the PSRC data did not include mode share data for retail trips, the same mode of travel assumptions applied to the original (2008) EIS analysis—0% transit, 3.5% non-motorized, and 96.5% vehicle—were assumed. Given the proximity of the Kirkland Urban site to other downtown office, retail and residential development, it is expected that the assumed non-motorized travel share for retail-generated trips is conservatively low, resulting in a higher estimate of vehicle trips. As previously described, it is estimated that 34% of the day-care patrons would live or work at Kirkland Urban site and would be walk-in trips to the daycare. AVOs for trips generated by retail uses were assumed to be the same as the baseline AVOs. **Table 4** summarizes the AVO and mode-split percentage assumptions that were applied to the person trips for each land use type. **Table 5** summarizes the resulting trips by mode of travel for the proposed program.

Table 4. Mode Split & Average Vehicle Occupancy for Local Neighborhood

Land Use Type	Local AVO Rate for Area	Mode of Travel		
		Walk & Bike	Transit Trips	Vehicle Trips
Office[1]	1.07	8.0%	15.0%	77.0%
Residential[1]	1.03	4.0%	9.0%	87.0%
Retail[2]	Varies[2]	3.5%	0.0%	96.5%
Daycare	1.0	34.0% [3]	0.0%	66.0%

1. *PSRC, Journey-to-Work data from 2010 U.S. Census, Data for Transportation Analysis Zones (TAZs) 258 and 260.*
2. *Mode of travel share: City of Kirkland, 2008; AVOs vary by retail type, assumed to be the same as baseline (see Table 2).*
3. Source: Brown, Debbie, Bright Horizons, personal communication with Jennifer Barnes, Heffron Transportation, August 27, 2015.Verified with existing enrollment data provided by Bright Horizons, August 27, 2019.

[12] PSRC, Journey-to-Work data from 2010 U.S. Census, Data for Transportation Analysis Zones (TAZs) 258 and 260.

Table 5. Person Trips by Mode of Travel

Project Component and Type of Trip by Mode	% of Trips	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Residential (LU 221)								
Walk or Bicycle Trips	4.0%	30	1	1	2	1	0	1
Transit Trips	9.0%	70	2	3	5	2	1	3
Person Trips by Vehicle	87.0%	650	15	36	51	16	13	29
Total	100.0%	750	18	40	58	19	14	33
Multiplex Theater (LU 445)								
Walk or Bicycle Trips	3.5%	30	0	0	0	1	1	2
Transit Trips	0.0%	0	0	0	0	0	0	0
Person Trips by Vehicle	96.5%	950	0	0	0	14	36	50
Total	100.0%	980	0	0	0	15	37	52
Daycare (LU 565)								
Walk or Bicycle Trips	34.0%	240	24	21	45	21	25	46
Transit Trips	0.0%	0	0	0	0	0	0	0
Person Trips by Vehicle	66.0%	460	46	42	88	42	46	88
Total	100.0%	700	70	63	133	63	71	134
Office (LU 710)								
Walk or Bicycle Trips	8.0%	790	57	1	58	12	64	76
Transit Trips	15.0%	1,480	106	3	109	22	121	143
Person Trips by Vehicle	77.0%	7,570	545	17	562	113	623	736
Total	100.0%	9,840	708	21	729	147	808	955
Retail (LU 820)								
Walk or Bicycle Trips	3.5%	100	4	1	5	5	4	9
Transit Trips	0.0%	0	0	0	0	0	0	0
Person Trips by Vehicle	96.5%	2,880	96	53	149	126	136	262
Total	100.0%	2,980	100	54	154	131	140	271
Supermarket (LU 850)								
Walk or Bicycle Trips	3.5%	160	4	2	6	8	7	15
Transit Trips	0.0%	0	0	0	0	0	0	0
Person Trips by Vehicle	96.5%	4,490	112	65	177	208	200	408
Total	100.0%	4,650	116	67	183	216	207	423
Restaurant (LU 932)								
Walk or Bicycle Trips	3.5%	140	8	5	13	8	4	12
Transit Trips	0.0%	0	0	0	0	0	0	0
Person Trips by Vehicle	96.5%	4,000	210	157	367	222	100	322
Total	100.0%	4,140	218	162	380	230	104	334
Total Person Trips								
Walk or Bicycle Trips		1,490	98	31	129	56	105	161
Transit Trips		1,550	108	6	114	24	122	146
Person Trips by Vehicle		21,000	1,024	370	1,394	741	1,154	1,895
Total		**24,040**	**1,230**	**407**	**1,637**	**821**	**1,381**	**2,202**

Source: Heffron Transportation, Inc., July 2019. Estimated using procedures in the ITE Trip Generation Handbook, 3rd Edition, 2017.

Vehicle Trips for Proposed Project

Vehicle trips were determined by applying the local AVO rates to the person trips by vehicle generated by each land use. The total vehicle trips for the Proposed Buildout under the Master Plan are summarized in **Table 6**. This buildout program is estimated to generate 17,890 vehicle trips per day, with 1,218 in the AM peak hour and 1,632 in the PM peak hour.

Table 6. Total Vehicle Trips Generated by the Proposed Master Plan Buildout

Land Use	Size	Daily Vehicle Trips	AM Peak Hour Vehicle Trips			PM Peak Hour Vehicle Trips		
			In	Out	Total	In	Out	Total
Residential (LU 221)	185 units	630	15	35	50	16	13	29
Multiplex Theater (LU 445)	496 seats	480	0	0	0	7	18	25
Daycare (LU 565)	170 students	460	46	42	88	42	46	88
Office (LU 710)	924,655 sf	7,070	509	16	525	106	582	688
Retail (LU 820)	50,411 sf	2,440	82	46	128	104	115	219
Supermarket (LU 850)	55,251 sf	3,810	96	56	152	172	169	341
Restaurant (LU 932)	44,789 sf	3,000	158	117	275	167	75	242
Total		**17,890**	**906**	**312**	**1,218**	**614**	**1,018**	**1,632**

Source: Heffron Transportation, Inc. July 2019. Estimated using procedures in the ITE Trip Generation Handbook, 3rd Edition, 2017.

Trip Components

Two types of trips—primary and pass-by trips—reflect the traffic impact characteristics associated with the retail element of the proposed mixed-use land uses.

- **Pass-by Trips** are already on the roadway network on the way to another destination. For example, a trip to a retail store during a trip home from work that uses Central Way would be a pass-by trip.

- **Primary (New) Trips** are single-purpose trips generated by the retail or other land use types. New trips are generally assumed to begin and end at home, although some new trips could originate at work or other locations.

Pass-by trips would affect driveway volumes at the site access points, but do not represent new trips on the citywide roadway network. The ITE average pass-by percentages published in the *Trip Generation Handbook* (34% for general retail, 43% for high turnover restaurant, and 36% for supermarket)[13] were applied. **Table 7** summarizes the vehicle trips by component for each proposed land use.

[13] Institute of Transportation Engineers, 2017.

Table 7. Vehicle Trip Generation by Trip Component

Project Component and Type of Trip by Mode	Trip Component%	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Residential (LU 221)								
Primary Trips	100%	630	15	35	50	16	13	29
Pass-by Trips	0%	0	0	0	0	0	0	0
Total	100%	630	15	35	50	16	13	29
Multiplex Theater (LU 445)								
Primary Trips	100%	480	0	0	0	7	18	25
Pass-by Trips	0%	0	0	0	0	0	0	0
Total	100%	480	0	0	0	7	18	25
Daycare (LU 565)								
Primary Trips	100%	460	46	42	88	42	46	88
Pass-by Trips	0%	0	0	0	0	0	0	0
Total	100%	460	46	42	88	42	46	88
Office (LU 710)								
Primary Trips	100%	7,070	509	16	525	106	582	688
Pass-by Trips	0%	0	0	0	0	0	0	0
Total	100%	7,070	509	16	525	106	582	688
Retail (LU 820)								
Primary Trips	66%	1,610	60	24	84	67	78	145
Pass-by Trips	34%	830	22	22	44	37	37	74
Total	100%	2,440	82	46	128	104	115	219
Supermarket (LU 850)								
Primary Trips	64%	2,440	69	29	98	111	108	219
Pass-by Trips	36%	1,370	27	27	54	61	61	122
Total	100%	3,810	96	56	152	172	169	341
Restaurant (LU 932)								
Primary Trips	57%	1,710	99	58	157	115	23	138
Pass-by Trips	43%	1,290	59	59	118	52	52	104
Total	100%	3,000	158	117	275	167	75	242
Total Vehicle Trips								
Primary Trips		**14,400**	**798**	**204**	**1,002**	**464**	**868**	**1,332**
Pass-by Trips		3,490	108	108	216	150	150	300
Total		17,890	906	312	1,218	614	1,018	1,632

Source: Heffron Transportation, Inc., July 2019.

5. Conclusion

5.1. Summary of Findings

The trips generated by the proposed Master Plan buildout program were estimated by applying the same methods and assumptions that were applied in the SEPA Addendum analysis and subsequent updates, but further updated to reflect the most current ITE methods and assumptions as documented in the 10th Edition *Trip Generation Manual* and 3rd Edition *Trip Generation Handbook*. Use of the most current ITE resources is consistent with direction provided in the PAO (Ordinance O-4473). The proposed Master Plan buildout program for Kirkland Urban has similar types, but a different mix of land uses compared to the current adopted program, with the same total development size. In general, the updated trip generation rates (which are based upon more current data than the 9th edition, which was published in 2012), are lower than the rates previously applied. Applying the most current methods, the proposed Master Plan buildout program is projected to generate 1,632 PM peak hour trips, which would be within the 1,680 PM peak hour trip threshold that is established in the PAO.

5.2. Recommended Mitigation

The Kirkland Urban project has already implemented or committed to all except one potential transportation mitigation measure identified in the PAO. The remaining measure—construction of a dual westbound left-turn lane at the Central Way/6th Street intersection—was not identified as a concurrency or TIA mitigation measure, but may be required at the City's discretion to address site access or circulation issues. The PAO indicates that site-level analysis should be completed as part of the project permitting process to determine if the improvement is needed. This requirement would be in place with or without the proposed Master Plan revision, and whether or not the Central Way/6th Street improvement is needed would be determined as part of Phase 2 permitting.

The City has raised a concern that the trip generation estimate presented herein is based on the employment density inherent in the ITE trip generation dataset. If the employment density at Kirkland Urban is higher than that reflected in the ITE rates, then the trip generation could also be higher. To address this concern, we recommend updating the office mode share target in the project's *Transportation Management Plan/Parking Management Plan (TMP/PMP)*. Per the PAO, the current goal of the TMP is that *"no more than 77 percent of the project's office employee trips occur by single-occupant vehicles."* This goal could be converted to a target that adjusts with the number of employees (e.g. if the employee density is greater than what is reflected in the ITE rates, the vehicle mode share target would lower proportionately). The intent would be to retain the same level of assumed vehicle trips from the SEPA analysis even if employment density increases.

ATTACHMENT A

INTERNAL TRIP CALCULATION WORKSHEETS

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Kirkland Urban Mixed Use	**Organization:**	Heffron Transportation, Inc.
Project Location:	Kirkland, WA	**Performed By:**	J. Barnes
Scenario Description:	Buildout of Proposal - AM Peak	**Date:**	7/1/2018
Analysis Year:	2022	**Checked By:**	
Analysis Period:	**AM Street Peak Hour**	**Date:**	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	924,655	sfgfa	896	771	125
Retail	820,850	105,662	sfgla	388	237	151
Restaurant	932	44,789	sfgfa	445	245	200
Cinema/Entertainment	445	496	seats	0	0	0
Residential	221	185	units	63	16	47
Hotel				0	0	0
All Other Land Uses[2]	565	170	students	133	70	63
Total				1925	1339	586

Table 2-A: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.06	1%	0%	1.06	0%	0%
Retail	1.17	0%	0%	1.16	0%	0%
Restaurant	1.33	0%	0%	1.34	0%	0%
Cinema/Entertainment	2.00	0%	0%	2.00	0%	0%
Residential	1.13	4%	0%	1.09	2%	0%
Hotel	1.26	7%	0%	1.26	1%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	75	0	0	0
Retail	33		23	0	0	0
Restaurant	83	22		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	10	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,198	1,508	690
Internal Capture Percentage	26%	19%	41%
External Vehicle-Trips[3]	1,429	1,087	342
External Transit-Trips[4]	9	8	1
External Non-Motorized Trips[4]	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	14%	84%
Retail	22%	32%
Restaurant	33%	40%
Cinema/Entertainment	N/A	N/A
Residential	6%	24%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Kirkland Urban Mixed Use
Analysis Period:	**AM Street Peak Hour**

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.06	771	817	1.06	125	133
Retail	1.17	237	277	1.16	151	175
Restaurant	1.33	245	326	1.34	200	268
Cinema/Entertainment	2.00	0	0	2.00	0	0
Residential	1.13	16	18	1.09	47	51
Hotel	1.26	0	0	1.26	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		37	84	0	1	0
Retail	51		23	0	25	0
Restaurant	83	38		0	11	8
Cinema/Entertainment	0	0	0		0	0
Residential	1	1	10	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		89	75	0	0	0
Retail	33		163	0	0	0
Restaurant	114	22		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	25	47	65	0		0
Hotel	25	11	20	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	117	700	817	654	7	0
Retail	60	217	277	185	0	0
Restaurant	108	218	326	164	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1	17	18	14	1	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	70	70	70	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	112	21	133	20	0	0
Retail	56	119	175	103	0	0
Restaurant	106	162	268	121	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	12	39	51	35	1	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	63	63	63	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	Kirkland Urban Mixed Use	**Organization:**	Heffron Transportation, Inc.
Project Location:	Kirkland, WA	**Performed By:**	J. Barnes
Scenario Description:	Buildout of Proposal - PM Peak	**Date:**	7/1/2019
Analysis Year:	2022	**Checked By:**	
Analysis Period:	PM Street Peak Hour	**Date:**	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)

Land Use	Development Data (*For Information Only*)			Estimated Vehicle-Trips		
	ITE LUCs[1]	Quantity	Units	Total	Entering	Exiting
Office	710	924,655	sfgfa	942	151	791
Retail	820,850	105,662	sfgla	838	418	420
Restaurant	932	44,789	sfgfa	438	272	166
Cinema/Entertainment	445	496	seats	50	18	32
Residential	221	185	units	80	49	31
Hotel				0	0	0
All Other Land Uses[2]	565	170	students	134	63	71
Total				2482	971	1511

Table 2-P: Mode Split and Vehicle Occupancy Estimates

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.11	0%	0%	1.07	1%	0%
Retail	1.21	0%	0%	1.18	0%	0%
Restaurant	1.33	0%	0%	1.34	0%	0%
Cinema/Entertainment	2.00	0%	0%	2.00	0%	0%
Residential	1.15	3%	0%	1.21	3%	0%
Hotel	1.31	1%	0%	1.30	2%	0%
All Other Land Uses[2]	1.00	0%	0%	1.00	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		300	300		300	
Retail					300	
Restaurant					300	
Cinema/Entertainment					300	
Residential		300	300			
Hotel					300	

Table 4-P: Internal Person-Trip Origin-Destination Matrix*

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		39	7	0	2	0
Retail	10		105	9	26	0
Restaurant	7	91		12	9	0
Cinema/Entertainment	1	13	11		2	0
Residential	2	15	8	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary

	Total	Entering	Exiting
All Person-Trips	2,928	1,191	1,737
Internal Capture Percentage	25%	31%	21%
External Vehicle-Trips[3]	1,889	680	1,209
External Transit-Trips[4]	9	1	8
External Non-Motorized Trips[4]	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use

Land Use	Entering Trips	Exiting Trips
Office	12%	6%
Retail	31%	30%
Restaurant	36%	54%
Cinema/Entertainment	58%	42%
Residential	70%	66%
Hotel	N/A	N/A

[1]Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

[2]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

[3]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[4]Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Kirkland Urban Mixed Use
Analysis Period:	**PM Street Peak Hour**

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends

Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.11	151	168	1.07	791	846
Retail	1.21	418	506	1.18	420	496
Restaurant	1.33	272	362	1.34	166	222
Cinema/Entertainment	2.00	18	36	2.00	32	64
Residential	1.15	49	56	1.21	31	38
Hotel	1.31	0	0	1.30	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		164	33	0	17	0
Retail	10		144	20	129	25
Restaurant	7	91		18	40	16
Cinema/Entertainment	1	13	20		5	1
Residential	2	15	8	0		1
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		39	7	0	2	0
Retail	52		105	9	26	0
Restaurant	50	253		12	9	0
Cinema/Entertainment	10	20	11		2	0
Residential	96	49	49	0		0
Hotel	0	10	18	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)

Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	20	148	168	133	0	0
Retail	158	348	506	288	0	0
Restaurant	131	231	362	174	0	0
Cinema/Entertainment	21	15	36	8	0	0
Residential	39	17	56	14	1	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	63	63	63	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)

Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles[1]	Transit[2]	Non-Motorized[2]
Office	48	798	846	738	8	0
Retail	150	346	496	293	0	0
Restaurant	119	103	222	77	0	0
Cinema/Entertainment	27	37	64	19	0	0
Residential	25	13	38	11	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses[3]	0	71	71	71	0	0

[1]Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

[2]Person-Trips

[3]Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.