CITY REVIEW DRAFT #1

TRANSPORTATION ASSESSMENT

LYNNWOOD PUBLIC FACILITIES DISTRICT MASTER PLAN

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1. INTRODUCTION

The Lynnwood Public Facilities District (PFD) owns and operates the existing Lynnwood Event Center as well as several commercial buildings and surface parking lots surrounding the Event Center. The PFD is planning to expand the Event Center and redevelop the site with a mix of uses including residential, hotel, restaurants, services, and retail.

The PFD site is located within the City Center Subarea Plan. The City of Lynnwood has designed the City Center as a "planned action" under RCW 43.21C.440 that has been evaluated under the State Environmental Policy Act (SEPA) through adoption of the *City Center Planned Action Ordinance.*[1] A planned action includes a development project, or series of projects, associated with the subarea plan whose impacts have been addressed by an environmental impact statement (EIS) before individual projects within the subarea are proposed.[2] An individual project that is consistent with the planned action is not subject to new environmental analysis because adequate analysis of significant environmental impacts already has been done in the context of a broader proposal.[3] The aforementioned project by the PFD to expand the Event Center and redevelop the site has been evaluated as part of the *City Center Subarea EIS;*[4] therefore, full SEPA review is not required for the project. However, detailed transportation analysis—including trip generation estimates, analysis of internal site roadways and access points, and parking analysis—was performed to inform the site design and determine if project-specific mitigation beyond what is already required by the City Center Subarea EIS would be needed. This report presents the transportation analysis, findings, and recommendations.

1.1. Project Description

The Lynnwood PFD site is located between 36th Avenue SW and approximately 38th Avenue SW (if the street were extended) and between 196th Street SW and the future 194th Street SW. There are two parcels on the east edge of the site fronting 36th Avenue SW that are **not** part of the PFD development site.

The existing Lynnwood Event Center is located on the southeast corner of the PFD holdings. The Lynnwood PFD's Master Plan includes plans to expand the Event Center north of the existing building and construct a new parking garage for event attendees. The rest of the site would be developed with a mix of residential, hotel, and commercial (retail/restaurant) uses. Figure 1 shows the proposed site layout. The following sections described the potential program alternatives for the mixed-use development and Event Center.

1 City of Lynnwood, *City Center Planned Action Ordinance (No. 2943),* May 2012.
2 RCW 43.21C.440; WAC 197-11-164.
3 RCW 43.21C.440; WAC 197-11-172..
5 Lynnwood Event Center Floor Plans, https://lynnwoodeventcenter.com/plan-your-event/floor-plans-virtual-tours/, accessed July 19, 2023.

Figure 1. Lynnwood PFD Event Center Site – Concept Plan

Source: Freiheit Architecture, February 14, 2025.

1.1.1. Event Center Expansion

The Lynnwood Event Center opened in 2005. It currently has about 64,000 gross square feet (gsf) of floor space, with 11 meeting rooms that have capacities ranging from about 60 to 700 people. Several of the rooms can be combined for larger events; the largest configuration—the Grand Ballroom on the second floor—can accommodate over 1,200 people in a theater configuration or about 1,100 people in a banquet configuration.[5]

The project proposes to expand the Event Center to the north, adding about 119,000 gsf of indoor and outdoor space. Jones Lang LaSalle, Inc., (JLL) has performed extensive analysis of potential events for the expanded Event Center. This includes projecting the type, frequency, and attendance of various events that could be held in the larger facility. The event plan accounts for move-in and move-out days before and after large events, and also assumes a ramp-up in bookings in the first three years after opening before full utilization may occur. Table 1 shows the potential types of events, estimated frequency, and maximum attendance for each. As shown, it is expected that the expanded facility could accommodate 90 to 139 events per year. The largest events would be consumer shows and large concerts that could have up to 2,500 attendees with the addition of the outdoor venue. Up to 10 of the largest events are expected each year. Medium events, those with 750 to 1,200 attendees, would include large conferences that utilize much of the facility, along with events in the indoor venue. Small events are those that would have 500 or fewer attendees and include smaller sporting events, galas, conferences, banquets, and meetings. As noted above, the medium-sized events with up to 1,200 attendees can already be held at the facility.

Table 1. Potential Events for Expanded Lynnwood Event Center

Event Type	Number of Events per Year	Max Attendees per Event
Large Events		
Consumer Show	2 – 3	2,500
Outdoor Concerts	5 – 7	2,500
Medium Events		
Indoor Concerts	15 – 35	1,200
Family Entertainment/Show	2 – 4	1,100
Conference/Large Meeting	10 – 18	750
Sporting Exhibition (e.g., Collegiate Pre-season Tournament)	0 – 1	750
Small Events		
Sporting Event	1 – 2	500
Galas	10 – 14	350
Conference	15 – 25	250
Social or Business Banquet	10 – 15	250
Meetings	20 – 15	50
Total All Events	**90 – 139**	

Source: JLL, July 2023. Metrics reflect events in the entire Lynnwood Events Center with the proposed expansion.

[5] Lynnwood Event Center Floor Plans, https://lynnwoodeventcenter.com/plan-your-event/floor-plans-virtual-tours/, accessed July 19, 2023.

1.1.2. Mixed-Use Development

In addition to the Event Center, the PFD site currently has four single-story commercial buildings with a total of 76,511 gsf. These buildings are occupied by a variety of tenants including a spa, retailers, service and administrative offices, restaurants, post office, and fitness uses. The proposed project would demolish these four buildings and develop mid-rise buildings with apartments and a hotel over ground floor retail/commercial uses.

1.1.3. Development Alternatives

The most likely Master Plan development scenario was subject to detailed traffic and parking analysis, and is called "Alternative 1" or the "Analysis Alternative" herein. However, it is acknowledged that future development on the PFD site could change with market economics or as development partners are contracted to build elements of the project. The team evaluated potential alternative development scenarios that could affect the land use mix and/or density. Sensitivity analysis was performed throughout this report to determine how the scenarios could affect traffic and parking.

The following four development scenarios were considered:

A. The unit density proposed in the residential building(s) increases (e.g., more studio and one-bedroom units and fewer two or three-bedroom larger units). Under this scenario, reflective of workforce housing, it is estimated that residential building(s) at the north end of the site could accommodate 550 units (instead of 408 units under Alternative 1).

B. The hotel is eliminated and replaced with a residential building. This scenario would remove 312 hotel rooms and add 245 residential units.

C. A taller hotel is built (allowed under the zoning), which could add an estimated 100 hotel rooms.

D. Commercial space is increased by adding a second floor to some of the stand-alone buildings or by adding retail space to the upper floors of the event parking garage. It is estimated that this could add 30,000 sf of commercial space. To reflect a worst-case condition for traffic and parking, all of the added commercial space was assumed to be high-turnover restaurant. Detail provided herein shows that restaurants have trip and parking generation characteristics similar to higher-intensity retail uses such as grocery or drugstore, so the analysis accounts for flexible use of the commercial space.

Scenarios B and C are mutually exclusive, but either could be combined with Scenarios A and D to reflect a "Maximum Development Alternative" for the purpose of traffic and parking analysis. Table 2 compares the programs for the Analysis Alternative and two potential Maximum Development Alternatives. These are labeled as Alternatives 1 through 3 for the purpose of this report.

Table 2. Site Development Scenarios

Use	Existing Site [a]	Alternative 1 [b] (Analysis Condition)	Alternative 2 (Max Development for Scenarios A+C+D)	Alternative 3 (Max Development for Scenarios A+B+D)
Apartments	None	408 du (~290,000 sf)	550 du (~300,000 sf)	795 du (~495,000 sf)
Hotel	None	312 rooms (~194,000 sf)	412 rooms (~255,000 sf)	0 rooms
Commercial	76,511 sf	91,030 sf	121,430 sf	121,430 sf
Event Center	63,975 sf	182,800 sf	182,800 sf	182,800 sf

sf = square feet; du = dwelling units

a. Lynnwood PFD, January 2024.

b. Freiheit Architecture, August 29, 2024

1.2. Relationship to City Center EIS and Planned Action Ordinance

The City of Lynnwood has been evaluating the potential for extensive growth in its City Center area since 2004 when it published its first *City Center Subarea EIS*[6] and adopted the *City Center Planned Action Ordinance (PAO)*, providing for streamlined environmental review under SEPA.[7] In March 2022, in advance of Sound Transit's Lynnwood Link Extension project and to reflect market changes from the pandemic, the City determined that prior growth targets were inadequate, and updated its Center City Plan to envision more housing units and lodging, but less office space. The City published the *City Center Subarea FSEIS Addendum #3*[8] to evaluate the impacts of the new growth plan.

Key findings from the EIS and PAO that relate to the Lynnwood PFD Master Plan are:

- FSEIS Addendum #3 assessed the impacts associated with 12.3 million square feet (MSF) of new development growth (Alternative C Amended). This included 4.25 MSF of office/institutional uses, 1.5 MSF retail space, 850,000 SF of lodging, and 6,000 residential dwelling units.

- Since the original City Center Subarea EIS was published in 2004, many transportation improvements have been made to improve connectivity and level of service for the subarea. These include:

    - **Lynnwood Link Extension –** The Lynnwood Station opened in August 2024, and is the current northernmost terminal for Sound Transit's 1 Line with service through Seattle to Angle Lake. It is expected to also connect to the 2 Line with service to Redmond in late 2025, and the 1 Line will extend to Federal Way by 2026.

    - **Swift Orange Line –** Community Transit commenced operation of its Swift Orange Line (a frequent all-day service) in March 2024. It connects Mill Creek to Everett College via the Lynnwood Station.

6 City of Lynnwood. *City Center Subarea Final Supplemental Environmental Impact Statement (FSEIS),* 2004

7 City of Lynnwood, *City Center Planned Action Ordinance (No. 2943),* May 2012.

8 City of Lynnwood, *Addendum #3 to the Final Supplemental Environmental Impact Statement for the City Center Subarea Plan,* March 18, 2022.

- **Interstate 5 (I-5) Improvements –** Several improvements have been made including the braided-ramp interchange at 196th Street SW and the HOV Direct Access Ramp at the Lynnwood Transit Center.

- **196th Street SW Widening** – This project added Business Access and Transit (BAT) lanes on 196th Street SW, added a center median that controls access to select locations, and widened sidewalks on both sides of the street.

- **Interurban Trail Improvements –** Several improvements have been made to the trail, including a bridge over 44th Avenue W and signalized crossings at key locations.

- **Signal operations improvements** -The City has implemented Adaptive Signal Control technology throughout the City Center.

- Major improvements serving the Lynnwood Center City that are yet to be completed include:

  - **194th Street SW Extension –** This project would construct a new roadway connecting 40th Avenue SW to 36th Avenue SW. As described later in this report, a portion of this roadway is on the PFD site.

  - **STRIDE North Line** – Sound Transit's BRT project along I-405 is expected to connect to the Lynnwood Transit Center in 2027.

  - **Poplar Way Bridge –** This City of Lynnwood project has 100% design plans, and is expected to start construction by 2026. This project will build a new arterial bridge over I-5 connecting Poplar Way/196th Street SW and 33rd Avenue W. It is intended to reduce congestion on 196th Street SW, particularly at the I-5 interchange.

  - **Everett Link Extension -** This project was part of the Sound Transit 3 (ST3) package approved by voters in 2016. The Everett Link Extension proposes to continue the 1 Line north with three new stations—West Alderwood, Ash Way, and Mariner by 2037—with a second extension to Downtown Everett by 2042.

  - **Other local improvements –** The *FSEIS* analysis[9] assumed many other local improvements including new street connections, street widening, traffic control changes, and pedestrian improvements.

Transportation mitigation measures identified in the EIS are funded in part by Transportation Impact Fees paid by new development. In addition, the EIS recommended that new developments implement transportation demand management programs that reduce vehicular trips. The *City Center Subarea FSEIS Addendum #3* determined that the Center City Plan, and its amended growth targets, would meet the City's Transportation Concurrency requirements.

The City of Lynnwood adopted a *City Center Planned Action Ordinance,* which is detailed in Lynnwood Municipal Code §17.02.300. This ordinance sets forth Development Thresholds (LMC §17.02.300.C.3.b) and states, "*The proposed project, combined with city center projects approved by or pending with the city, cumulatively do not exceed the development envelope established by the final SEIS, as shown in the following City Center Summary Development Table (Table 17.02.01). Table 17.02.01 identifies the maximum amount of planned action development for SEPA purposes. Development could occur anywhere within the city center and at potentially different rates from the estimates.*"

[9] Transportation Solutions, Inc., *Center City Level of Service Update,* March 8, 2021.

The Lynnwood PFD's Master Plan would be a small percentage of the development thresholds established for the PAO as summarized in Table 3. This shows that the PFD's proposed development would utilize about 5% of the development capacity assumed by the PAO. Based on discussions with City staff, the PAO has adequate capacity to accommodate the Lynnwood PFD project, even under Maximum Development condition (Alternative 3) .

Table 3. Comparison of Lynnwood PFD Master Plan to PAO Development Capacity Thresholds

	PAO Development Capacity [a]	Lynnwood PFD Analysis Alternative (Alternative 1)		Lynnwood PFD Maximum Development (Alternative 3)	
		Size (Net Change from Existing)	% of PAO Development Cap	Size (Net Change from Existing)	% of PAO Development Cap
Office/Institutional	4.25M sf	118,833 sf	2.8%	118,833 sf	2.8%
Retail (Restaurant)	1.5M sf	14,919 sf	1.0%	44,919 sf	3.0%
Lodging	850,000 sf	312 rooms (~194,000 sf)	22.8%	0 rooms	0%
Housing	6,000 du / 5.7M sf	408 du (~290,000 sf)	6.8%	795 du [c] (~495,000 sf)	13.2%
Total Development	**12.3 MSF**	**~ 618,000 sf** [b]	**5.0%**	**~ 659,000 sf**	**5.4%**

a. Per Lynnwood Municipal Code §17.02.300, Table 17.02.01. M = Million; sf = Square Feet; du = Dwelling Units

b. Estimated based on the average of 950 sf per dwelling unit listed in the PAO.

1.3. Planned Street Network for PFD Site

The City of Lynnwood's City Center Subarea Plans propose to create a denser street grid as part of the City's objective to "*Restructure the City Center's growth toward a more concentrated, mixed-use, pedestrian-friendly and transit-supportive center.*" For more than 20 years, these plans have included creating a new east-west street—194th Street SW—between 40th Avenue W and 36th Avenue W. [10]

The City of Lynnwood and the PFD have evaluated various location options for 194th Street SW across the PFD site to make sure that the future extension between 38th Avenue W and 36th Avenue W is feasible. Across the PFD site, the new street would be moved as far north as practical, given the constraints of grade and existing trees, where it would provide for through traffic and access to new buildings without creating a barrier for internal pedestrian movements in the heart of the PFD site. A new public north-south street—38th Avenue W—would be created along the west side of the site, and would also provide the primary vehicular access to development parcels along that edge. In the future, it is anticipated that 38th Avenue W could be widened to the west by others in order to provide access to new development on the west side of that roadway (a site not owned by the PFD). The PFD development proposes to create "woonerf"-style streets in the heart of the site that would function as low-speed / low-volume streets on typical days, but could be closed to vehicular traffic on event days. Figure 1 showed the proposed internal street network for the PDF site.

The portion of SW 194th Street across the Lynnwood PFD site, between 38th Avenue W and 36th Avenue W, will likely be constructed before the City or other private entities construct the extension west to 40th Avenue SW. To maximize connection options, the new roadway through the PFD site would be turned parallel to the west property line and become 38th Avenue W. The City of Lynnwood and its consultant, OTAK, evaluated two potential routes for the future western extension of SW 194th Street between 38th Avenue W and 40th Avenue W—a northern route and a southern route.[11] Figure 2 shows the preliminary road plan along with the potential western extension options.

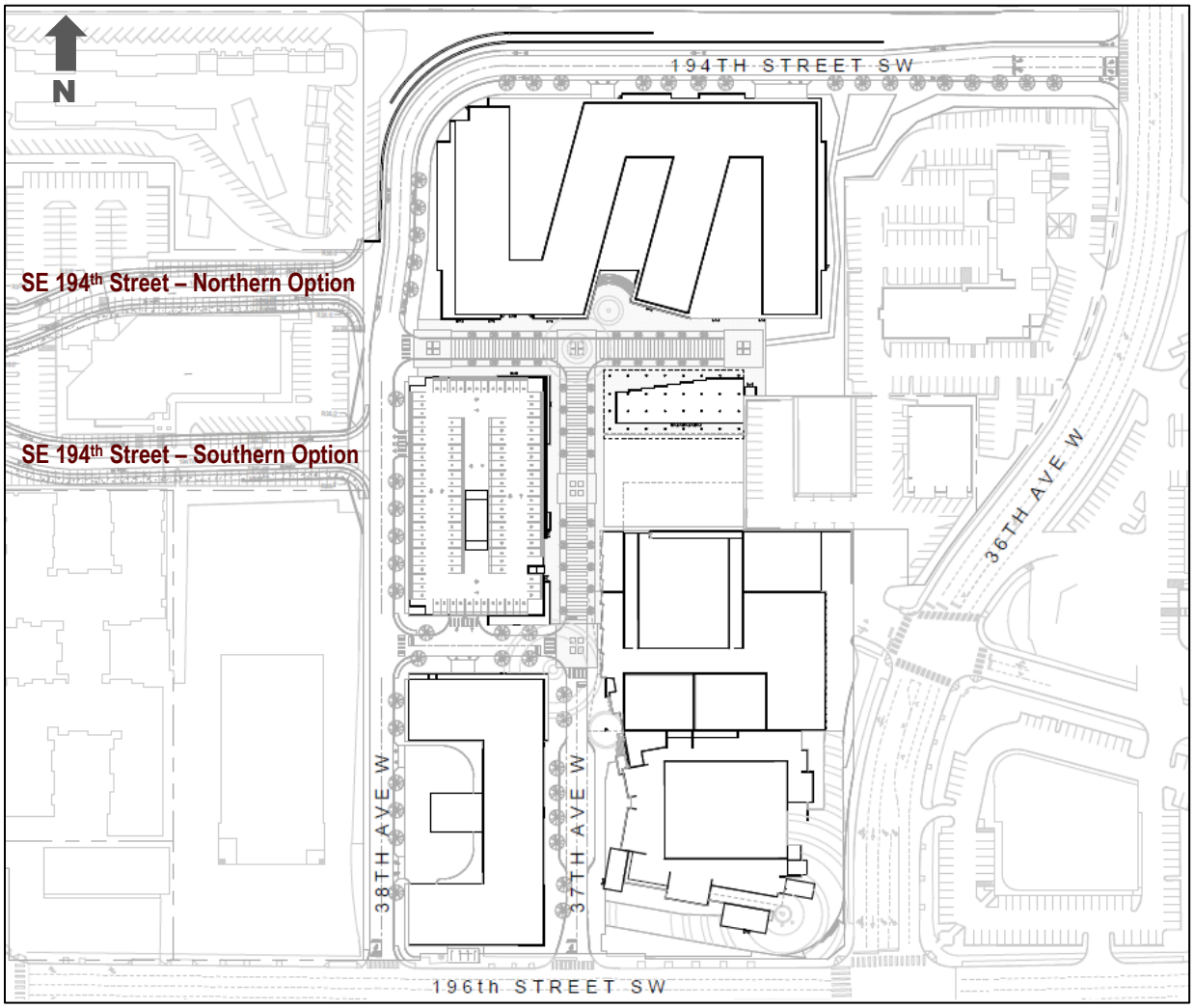
The proposed Event Center expansion would disconnect the current access to the middle of the site at W 195th Street/36th Avenue W intersection. With the project, that access point would remain, but only serve the truck loading area at the Event Center. Per discussion with the City of Lynnwood, the signal at the intersection would also remain to serve existing and future development east of 36th Avenue W and to serve pedestrian and bicycle crossings.

The proposed road configuration would be the same for all of the development alternatives.

[10] Plans to build 194th Street SW through the PFD site have been included in subarea plans for more than 20 years. It was shown in the *Lynnwood City Center Sub-Area Plan Final Supplemental Environmental Impact Statement* (September 9, 2004). The street extension continues to be part of the latest plans evaluated in *Addendum #3 to the Final Supplemental Environmental Impact Statement for the City Center Subarea Plan* (March 18, 2022).

[11] OTAK, Inc., Alignment studies, October 2024.

Figure 2. Optional Alignments for SW 194th Street Westward Extension



Source: PFD Site Plan by Freiheit Architects and SW 194th Street Alignments west of 38th Avenue W by OTAK, Inc., February 2025 .

This section was previously contained in *Draft Technical Memorandum: Trip Generation Estimates – Updated,* September 4, 2024. New information added about trips for Max Development alternatives and Concurrency .

2. TRIP GENERATION

This section presents the vehicle trip generation estimates for the Lynnwood PFD's Master Plan. Different methodologies were applied to estimate trips for the mixed-use development and the Event Center. These are described in the following sections.

Detailed trip generation calculations were performed for Alternative 1. At the end of the section, the changes in trips related to the two Maximum Development alternatives is presented.

2.1. Trip Generation – Mixed Use Development

Trip estimates for the mixed-use development (non-Event Center) components were determined using procedures set forth in the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook.*[12] This process is applied to estimate vehicle and non-vehicle trips. ITE recommends this multi-modal process for sites that are:

- *Surrounded by compact urban development with nearby complementary land uses (infill site);*
- *A mix of complementary land uses in any part of an urban region (mixed-use development);*
- *Served by public transit, in particular if designed specifically to capitalize on transit access to the site (transit-friendly development); and*
- *Located in an area that has a noticeable amount of walking and bicycling activity or an area planned for promotion of non-motorized travel (as examples, sites in urban core areas or sites near schools and senior centers).*

The proposed project is an infill, multimodal site based on these attributes; therefore, the following approach as recommended in the *Trip Generation Handbook* was used to estimate trips for each mode of travel. This generalized process combines methods applied to mixed-use, urban infill, and transit-friendly developments and consists of the following steps:

- Estimate the number of person trips for each land use;
- Estimate internal person trips based on capture rates for land use pairs and proximity;
- Estimate person trips by mode of travel using the local mode of travel factors for the site; and
- Convert the person trips by vehicle into vehicle trips using local vehicle occupancy rates.

Each of these steps is described in the following sections.

2.1.1. Baseline Trip Generation Factors

Baseline trip generation factors for the various residential, commercial and hotel land uses are from the latest edition of ITE's *Trip Generation Manual.*[13] The ITE land use categories were selected based on the use characteristics.

For the residential apartments, trip data for "*Mid-Rise Apartments*" in a "*General Urban/Suburban, Not Close to Rail Transit*" were selected. The two planned apartment buildings would be 7 to 10 stories tall, which are defined as mid-rise apartments, and would be located more than ½-mile from the Lynnwood Link Light Rail Station. ITE data for a "*Hotel*" in a "*General Urban/Suburban Setting*" were also selected, and based on the definition, such uses may also include a full-service restaurant and cocktail lounge as well as convention facilities. Given its location adjacent to the Lynnwood Event Center, the Hotel land use trip data are appropriate.

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12 Institute of Transportation Engineers, *Trip Generation Handbook,* 3rd Edition, September 2017.
13 Institute of Transportation Engineers, *Trip Generation Manual, 11th Edition,* September 2021.

The exact use of the site's commercial space is not yet known and could fluctuate over time as businesses change. Therefore, trip rates associated with a variety of land uses were evaluated to determine the most appropriate rates to use for analysis. The ITE trip generation rates for potential commercial uses are summarized in Table 4.

Table 4. ITE Trip Generation Rates for Potential Commercial Uses

Land Use (Code)	Trips per 1,000 square feet		
	Daily Trip Rate	AM Peak Hour Trip Rate	PM Peak Hour Trip Rate
Strip Retail Plaza, 40 to 150k, (821)	67.52	1.73	5.19
Supermarket (850)	93.84	2.86	8.95
Drugstore, without drive thru (880)	90.08	2.94	8.51
High Turnover Restaurant (932)	107.20	9.57	9.05
Fast Casual Restaurant (930)	91.14	1.43	12.55
Fine Dining Restaurant (931)	83.84	0.73	7.80
Average	88.94	3.21	8.68

Source: Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition, 2021

Although the rate analysis shows that fast casual restaurants have the highest PM peak hour trip generation rates, they are also the type of restaurant that is most likely to attract trips from within the site or pass-by trips from traffic already driving past the site. A high turnover restaurant has the next highest rates, but they are similar to rates for more intensive retail including supermarket and drugstore. For the purpose of the analysis, it was assumed that about two-thirds of all commercial space (about 61,000 sf) would be high-turnover restaurants, which is close to the average rate for the range of potential commercial uses. Some of the restaurants could be occupied by coffee shops or lunch-focused shops (e.g., sandwich shop) that would generate peak trips during morning or midday times. For the AM peak hour, it was assumed that 10% (about 6,100 sf) of the restaurant space would be open for breakfast. The remaining retail and the spa were evaluated using rates for a "*Shopping Plaza (40 – 150k) with No Supermarket.*" Table 5 summarizes the baseline trip rates, equations, and other metrics used to determine trip generation for the proposed mixed-use development.

The existing commercial buildings (that are to be removed by the project) are occupied by a wide variety of uses including restaurants, retail, spa, fitness, office, and services. Collectively, these types of uses are captured by the ITE land use category for a "*Shopping Plaza (40 – 150k) with No Supermarket*." The rates for this use fall between those associated with higher-intensity uses such as restaurants and daycare and lower-intensity uses such as office, service, and fitness clubs. Therefore, they are appropriate for application to the wide mix of uses that could occur in the commercial spaces.

Table 5 summarizes the baseline trip generation equations, rates, average vehicle occupancy (AVO) factors, and vehicle percentages for the range of land uses proposed at the site.

Table 5. Baseline Trip Generation Rates, Equations, AVO, and Vehicle-Percent 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 – Mid-Rise (LU 221) [Setting = General Urban/Suburban, Not Close to Rail Transit] – Housing includes apartments, townhouses, and condominiums in a building that has between four and 10 floors.					
Daily	T = 4.77(X) – 46.46	1.14 [c]	1.15 [c]	98% [c]	98% [c]
AM Peak Hour	T = 0.44(X) – 11.61	1.13	1.09	96%	98%
PM Peak Hour	T = 0.39(X) + 0.34	1.15	1.21	97%	96%
Hotel (LU 310)– A place of lodging that provides sleeping accommodations and supporting facilities such as a full-service restaurant, cocktail lounge, meeting rooms, banquet room, and convention facilities.					
Daily	T = 10.84(X) – 423.51	1.28 [c]	1.28 [c]	94%	96%
AM Peak Hour	T = 0.50(X) - 7.45	1.26	1.26	93%	99%
PM Peak Hour	T = 0.74(X) – 27.89	1.31	1.30	99%	98%
Strip Retail Plaza (40 to 150k) – No Supermarket (LU 821) [Setting = General Urban/Suburban] – Integrated group of commercial establishments managed as a unit. Typically contains more than retail merchandising facilities with office space, a movie theater, restaurants, a post office, banks, a health club, and recreational facilities as common tenants.					
Daily	67.52 trips / 1,000 sfgla	1.19 [c]	1.17 [c]	100% [c]	100% [c]
AM Peak Hour	1.73 trips/1,000 sfgla	1.17	1.16	100%	100%
PM Peak Hour	5.19 trips/1,000 sfgla	1.21	1.18	100%	100%
High-Turnover (Sit-Down) Restaurant (LU 932) [Setting = General Urban/Suburban] – Consists of sit-down, full-service eating establishment, moderately priced, frequently a chain, casual dining.					
Daily	107.20 trips / 1,000 sf	1.52 [c]	1.52 [c]	100% [c]	100% [c]
AM Peak Hour	9.57 trips / 1,000 sf	1.52	1.52	100%	100%
PM Peak Hour	9.05 trips / 1,000 sf	1.33	1.34	100%	100%

a. *Source: Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition, 2021, unless otherwise noted. LU = ITE Land Use Code; T = number of trips; X = number of dwelling units or bedrooms for residential uses, and size of use in 1,000 square feet gross leasable area for commercial uses.*

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

c. *AVO rate and/or vehicle trip % not provided by ITE. Estimated by Heffron Transportation, Inc.*

2.1.2. Person Trips

For each land use, the baseline trip equations and/or rates were applied and multiplied by the inherent AVO and transit factors to estimate total person trips. Table 6 summarizes the estimated person trip generation for the proposed project.

2.1.3. Internal and External Person Trips

The total number of trips generated by a mixed-use development includes "internal trips," or trips made between different land uses on the site. For example, a trip that a resident or hotel guest makes to an on-site restaurant, retail store, or service would be considered an internal trip that would not require leaving the site. Likewise, some customers could visit more than one use on the site. Chapter 6 of the *Trip Generation Handbook* establishes the methodology to estimate the number of internal trips that can be expected for developments based on the types and sizes of various land uses included. Sites with uses that generate more balanced numbers of compatible person trips (e.g., residential and restaurant) 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.

The published internal capture rates were applied to the various land use pairs, and the resulting internal trips are summarized in Table 6. It was determined that about 20% of the daily person trips, about 9% of the AM peak hour trips, and about 28% of the PM peak hour trips would be internal trips. It is noted that the trip estimates below reflect a non-event day and do not account for internal trips between the hotel, restaurant, and Event Center that would be expected to occur on an event day. Table 6 also summarizes the external trips associated with each land use. As shown, the total number of external person trips for Alternative 1 is estimated at about 14,890 per day, with 490 during the AM peak hour and 1,002 during the PM peak hour.

Table 6. Person Trips Generated by Alternative 1 Mixed-Use Development (Non-Event Day)

Land Use	Size	Daily Trips	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
TOTAL PERSON TRIPS								
Multifamily Housing	408 units	2,220	44	146	190	118	75	193
Commercial	30,420 sf	2,420	38	23	61	93	96	189
Hotel	312 rooms	3,990	116	80	196	137	132	269
Restaurants	61,010 sf [a]	9,940	49	40	89	450	287	737
Total All Person Trips		18,570	247	289	536	798	590	1,388
INTERNAL PERSON TRIPS								
Multifamily Housing	408 units	440	1	7	8	31	19	49
Commercial	30,420 sf	850	5	6	11	56	53	109
Hotel	312 rooms	790	4	5	9	35	33	69
Restaurants	61,010 sf [a]	1,600	13	5	18	71	88	159
Total Internal Person Trips		3,680	23	23	46	193	193	386
% Internal Trips		**19.8%**		**8.6%**			**27.8%**	
EXTERNAL PERSON TRIPS								
Multifamily Housing	408 units	1,780	43	139	182	87	56	144
Commercial	30,420 sf	1,570	33	17	50	37	43	80
Hotel	312 rooms	3,200	112	75	187	102	99	200
Restaurants	61,010 sf [a]	8,340	36	35	71	379	199	578
Total External Person Trips		**14,890**	**224**	**266**	**490**	**605**	**397**	**1,002**

Source: Heffron Transportation, Inc., September 2024. Trips estimated using procedures in the ITE Trip Generation Handbook, 2017.

a. Analysis assumes that two-thirds of the commercial space would be high-turnover restaurant ,and that 10% of restaurant space would be open for breakfast.

2.1.4. Mode of Travel and Local Vehicle Occupancy

After the number of external person trips was estimated for each land use, they were separated by anticipated mode of travel. The resulting person trips made by vehicle were converted to vehicle trips using appropriate local vehicle occupancy rates. Additional details about the mode-of-travel and AVO rate assumptions applied to each land use are described below.

Residential – Mode-of-travel patterns for existing residents in the vicinity of the site were examined using travel behavior data from the *5-Year American Community Survey (ACS).*[14] The ACS data were compiled for residents living in Census Tract 517.02, which extends north of 196th Street SW between about 44th Avenue SW and 36th Avenue SW. The database reflects surveys from 2018 to 2022—prior to the opening of Lynnwood Link in 2024. The data show that about 13% of residents in the neighborhood commute to and from work by transit and 13% walk or bike, the remaining 73% use a vehicle. The local AVO for residents is 1.10 persons per vehicle. These

[14] US Census Bureau, Census Transportation Planning Package, *5-Year American Community Survey (ACS),* http://data5.ctpp.transportation.org/ctpp1216/Browse/browsetables.aspx, accessed August 2022.

rates were applied to peak hour trips when most trips are commute trips. A lower transit percentage (5%) was applied for daily trips.

Hotel – It is expected that some of the hotel trips would utilize transit, particularly given that Lynnwood Link light rail connects to downtown Seattle and SeaTac Airport. However, some of those transit trips could utilize rideshare services (e.g., Uber or Lyft) to connect between the transit station and site. Therefore, to provide a conservatively high estimate of vehicle trips, 100% of the hotel's external trips were assumed to occur by vehicle. The baseline AVO rate was applied to derive vehicle trips.

Commercial Trips – Walking trips among the various commercial uses are already accounted for as part of the internal trip estimates described previously. However, a small percentage of trips could be walk or bike trips from nearby residential neighborhoods or occur by transit. It was assumed that 95% of all commercial trips would be vehicle trips. Since no local AVO data are available for these land uses, they were assumed to be the same as the baseline AVOs.

Table 7 summarizes the estimated person trips by mode of travel for the proposed project.

Table 7. Person Trips by Mode of Travel and Vehicle Trips – Alternative 1 Mixed-Use Development

			AM Peak Hour Trips			PM Peak Hour Trips		
Type of Trip by Mode	**% of Trips**	**Daily Trips**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Multifamily Housing								
Walk or Bicycle Trips	14%	250	6	19	25	12	8	20
Transit Trips	13%	90	6	18	24	11	8	19
Person Trips by Vehicle	73%	1,440	31	102	133	64	41	105
Total	100%	1,780	43	139	182	87	57	144
Commercial								
Walk or Bicycle Trips	4%	60	1	1	2	1	2	3
Transit Trips	1%	20	0	1	1	0	1	1
Person Trips by Vehicle	95%	1,490	32	15	47	36	40	76
Total	100%	1,570	33	17	50	37	43	80
Hotel								
Walk or Bicycle Trips	0%	0	0	0	0	0	0	0
Transit Trips	0%	0	0	0	0	0	0	0
Person Trips by Vehicle	100%	3,200	112	75	187	102	98	200
Total	100%	3,200	112	75	187	102	98	200
Restaurants								
Walk or Bicycle Trips	5%	420	2	2	4	19	10	29
Transit Trips	0%	0	0	0	0	0	0	0
Person Trips by Vehicle	95%	7,920	34	33	67	360	189	549
Total	100%	8,340	36	35	71	379	199	578
Total Project Person Trips								
Walk or Bicycle Trips		730	9	22	31	32	20	52
Transit Trips		110	6	19	25	11	9	20
Person Trips by Vehicle		14,050	209	225	434	562	368	930
Total		**14,890**	**224**	**266**	**490**	**605**	**397**	**1,002**

Source: Heffron Transportation, Inc., September 2024.

2.1.5. Vehicle Trips

The assumed local AVO rates were applied to the estimated numbers of person trips by vehicle for each of the proposed land uses. As summarized in Table 8, on a non-event day, the mixed-use portion of the proposed project is estimated to generate about 10,280 vehicle trips per day, with 354 trips during the AM peak hour, and 724 trips during the PM peak hour.

Table 8. Vehicle Trips Generated by Alternative 1 Mixed-Use Development – Non-Event Day

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Multifamily Housing	408 units	1,310	28	93	121	58	37	95
Commercial	30,420 sf	1,260	27	13	40	30	34	64
Hotel	312 rooms	2,500	89	60	149	78	75	153
Restaurants	61,010 sf [a]	5,210	22	22	44	271	141	412
Total		**10,280**	**166**	**188**	**354**	**437**	**287**	**724**

Source: Heffron Transportation, Inc., September 2024. Estimated using procedures in the ITE Trip Generation Handbook, 2017.

a. Analysis assumes that 10% of restaurant space would be open for breakfast.

2.1.6. Net Change in Mixed-Use Vehicle Trips

Trips generated by the existing commercial buildings on the site were estimated using procedures and assumptions described previously. The same "*Shopping Plaza*" rates were applied to the total 76,511 gsf in the four existing buildings, and no other internal trip adjustments were applied. However, to provide a conservatively low estimate of existing trips, it was assumed that some of the existing restaurant and office trips would be internal trips associated with the Event Center. The percentage of vehicle trips assumed to be generated by these uses was decreased to 90%. This approach results in fewer vehicle trips to be credited when these uses are demolished. It is noted that the trip generation estimates account for spaces at the site that are currently vacant, since those could be re-occupied at any time without a new development permit. The resulting trip generation is summarized in Table 9. It shows that the proposed mixed-use development would generate about 6,530 more vehicle trips per day than the existing uses, with about 190 more vehicle trips during the AM peak hour and about 270 more vehicle trips during the PM peak hour.

Table 9. Net Change in Vehicle Trips Associated with Alternative 1 Mixed-Use Development

Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Proposed Mixed-Use	See Above	10,280	166	188	354	437	287	724
Existing Commercial	-76,511 sf	-3,750	-98	-65	-163	-225	-230	-455
Net Change		**6,530**	**68**	**123**	**191**	**212**	**57**	**269**

Source: Heffron Transportation, Inc., September 2024.

2.2. Trip Generation – Event Center

Traffic associated with events is based on attendee travel characteristics including group size, mode of travel, whether they stay in local hotels (for multi-day events), and arrival and departure patterns. These characteristics can vary by type of event. To support the analysis, trip characteristics derived from past studies of other event facilities in the Puget Sound region were reviewed. Data available from the Meydenbauer Convention Center (MCC) in Bellevue and the ShoWare Center in Kent were most applicable to the Lynnwood Event Center since they are of similar size and use. Although data were available for the Washington State Convention Center in downtown Seattle, it was deemed not representative since it is substantially larger and attracts more national conventions than expected at the Lynnwood Event Center. Trip generate factors associated with spectator events, such as concerts or sporting events, were derived from data collected for the ShoWare Center as well as other similarly-sized concert venues. The relevant trip characteristics are presented in the following sections.

2.2.1. Trip and Parking Demand Rates from Meydenbauer Convention Center

Detailed trip generation analyses were performed for the MCC[15] to support planning for an expansion prior to the COVID-19 pandemic. This analysis was performed using a full-year[16] of parking garage entry and exit records that were matched to event records for various types and sizes of events. The data were used to determine parking demand as well as daily and peak hour trip generation rates per attendee. The peak hour trip rates reflect trips during the weekday AM and PM peak hours of the city street network, which were the highest one-hour volumes between 7:00 and 9:00 A.M. and between 4:00 and 6:00 P.M. Table 10 summarizes the key metrics derived for various types of events at MCC.

Table 10. Trip Generation and Parking Demand Rates for Various Types of MCC Events

Type of Event / Event Name	Range of Attendance Studied [a]	Daily Trip Rate (Trips per Day)	Weekday AM Peak Hour Trip Rate (Trips per Hour)	Weekday PM Peak Hour Trip Rate (Trips per Hour)	Peak Parking Demand Rate (Vehicles)
Meetings	200 to 400	1.74 / attendee	0.27 / attendee (98% In, 2% out)	0.38 / attendee (19% In, 81% out)	0.60 / attendee
Conventions	1,000 to 1,500	0.76 / attendee	0.13 / attendee (96% In, 4% out)	0.09 / attendee (8% In, 92% out)	0.24 / attendee
Consumer Shows [b]	1,000 to 5,000	**Weekend Only** 0.70 / Attendee	--	--	0.12 / attendee

Source: Data for events at Meydenbauer Convention Center compiled by Heffron Transportation, Inc., 2019.

a. Reflects range of attendance for the representative event types studied.

b. Consumer shows only occurred on weekend days, so generated no weekday AM or PM peak hour trips.

[15] Heffron Transportation, Inc., *Meydenbauer Center Expansion Trip Generation and Parking Demand Analysis (DRAFT),* December 12, 2019.

[16] MCC event data used in analysis were for the period from October 1, 2018 through September 30, 2019, prior to the COVID-19 pandemic.

2.2.2. Trip Rates for Concerts / Performances / Sporting Events

Trip Metrics for Other Concert Venues

Concerts, live performances, and sporting events have trip characteristics that differ from those of typical conventions, meetings, and consumer shows because they typically attract attendees who travel and attend with others as a group. These types of events also usually occur in the evening or on weekends when they do not conflict with normal work or school hours.

Many concert venues have been planned and permitted in the past 10 years across the United States. Transportation analysis used to assess several of these venues were compiled to show the key metrics that affect trip generation and parking demand, including the vehicle occupancy and arrival patterns. Table 11 summarizes the relevant trip metrics. It is noted that all of these venues are located in suburban or rural locations, and it is assumed that all attendees and employees travel to the site by personal vehicle. As shown, the average vehicle occupancy (AVO) for events ranged from 2.3 persons per vehicle to 3.0 persons per vehicle. The study for the City of Kent's ShoWare Center[17] also collected vehicle occupancy data for a hockey game at the Everett Event Center (Angel of the Winds Arena). That survey determined an AVO rate of 2.6 persons per vehicle, similar to the occupancy rates for the peer concert venues.

[17] Heffron Transportation, Inc., *Kent Event Center, Transportation Technical Report for Draft Supplemental EIS,* February 2007.

Table 11. Trip Generation Metrics from Other Concert Venues

Location	Attendance Capacity	Average Vehicle Occupancy (AVO)	% Arrivals in Pre-Event Peak Hour	% Departures in Post-Event Peak Hour	Other Useful Metrics
Sunset Amphitheater Colorado Springs, CO [a]	8,000 seats	2.5 attendees / vehicle	40%	90%	Employees estimated at 1 to 3% of Attendees and were assumed at 1.0 employees /vehicle
Groton Hill Music Center Groton, MA [b]	Up to 2,300 attendees	2.32 attendees/ vehicle	62%	85%	
Graystone Quarry Amphitheater Thompson's Station, TN [c]	7,500 attendees	3.0 attendees/ vehicle	60%	70%	Employees estimated at 1% of attendees and assumed to have an AVO of 1.2 employees/vehicle.
Waterville Landing Amphitheater, Waterville, OH [d]	10,300 seats	2.5 tickets per vehicle	Not Available	Not Available	

Sources:

a. *Kimley Horn, Sunset Amphitheater Parking & Access Plan, October 14, 2022 and LSC Transportation Consultants, Polaris Pointe South Trip Generation Memorandum, March 18, 2022.*

b. *Stantec, Traffic Impact and Access Study for Proposed Music Center at Indian Hill, Groton, MA, August 12, 2016.*

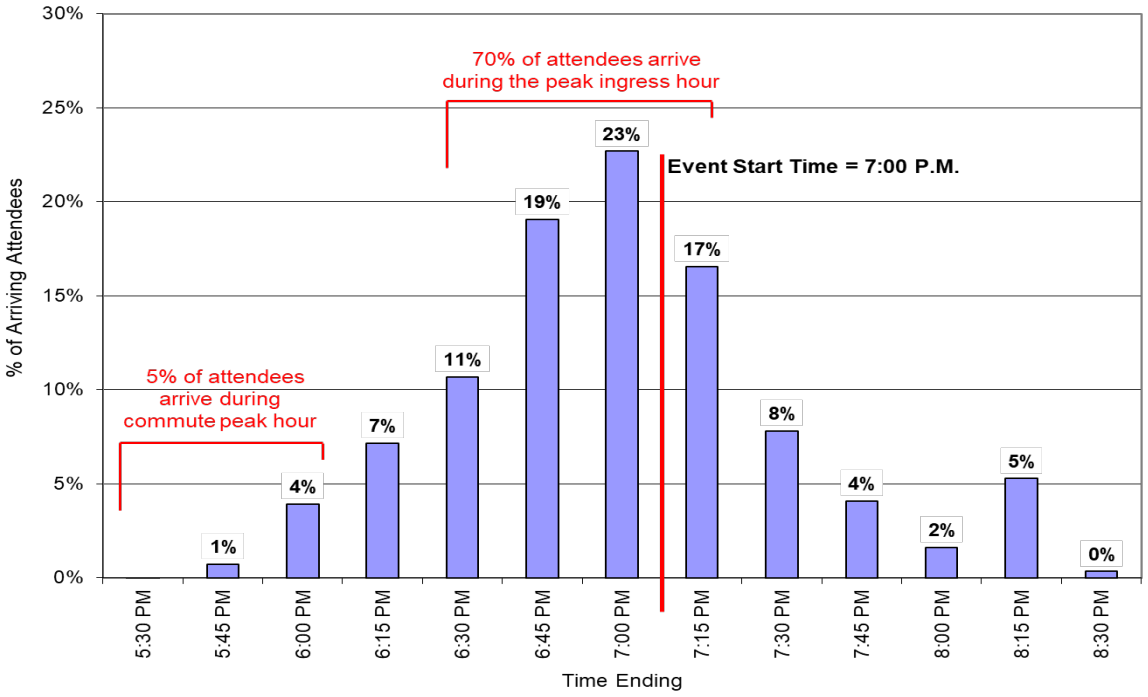
c. *FTG, LLC, Traffic Impact Study, Graystone Quarry Amphitheater, Les Watkins Road, Thomson's Station, TN, November 2017.*

d. *DGL Consulting Engineers, Waterville Landing Traffic Impact Statement, June 27, 2022.*

Arrival Pattern for a Spectator Event

Transportation analysis performed for the ShoWare Center included attendee arrival patterns based on actual data from the Seattle Thunderbirds Hockey team. Time-stamped records of when attendees scanned their tickets at the door were recorded for six different hockey games in fall 2006. Figure 3 shows the arrival pattern. That analysis found that 70% of all attendees arrived during the peak one-hour period. It is noted that 60% arrived in the hour prior to the start of the event, which is the same as reported for most of the peer concert venues described above. It does show that more than one-third of the attendees arrived after the official start time, which could be similar for a concert that has an opening act. The arrival chart also shows that an event that starts at 7:00 P.M. had very few attendees (5%) who arrived at the tail-end of the commuter PM peak period (before 6:00 P.M.)

Figure 3. Arrival Pattern for Spectator Event



Source: Heffron Transportation, Inc. Based on attendee entry data collected at the door of six Seattle Thunderbirds hockey games in fall 2006.

2.2.3. Trip Generation and Parking Demand for Lynnwood Event Center Expansion

Trip generation and parking demand for the Lynnwood Event Center Expansion project were estimated based on four travel characteristics.

- **Mode of travel** – Percentage of attendees who may use transit or ride-hail services (Uber, Lyft, etc.) to reach the site. This is expected to be up to 20% for local meetings or spectator events that will attract most of its attendees from the local area. This is expected to be lower (10%) for large consumer shows or conventions, and could be none for banquets or galas.

- **Attendee hotel use** – Percentage of attendees who may stay at local hotels when attending an event, and are assumed to park at the hotel and walk to the site. Large, multi-day conventions could have 30% to 40% of attendees stay at local hotels. Although hotel stays could also occur for

other types of events (e.g., weddings or banquets), to reflect a worst-case condition, no hotel use was assumed for local conferences or spectator events. The lower end of this range was assumed for analysis.

- **Driving and carpooling** – Vehicle occupancy for those who drive to the site. Some carpooling is expected for all types of events. Based on the review of peer facilities, it is assumed to range from about 1.3 persons per vehicle for local meetings to 2.5 persons per vehicle for spectator events.

- **Attendance patterns** – Percentage of attendees who are on site simultaneously. Attendance patterns vary by type of event. Short-duration events or those with a set start time, such as a banquet or local meeting, are assumed to have 100% of the attendees on site at the same time. Such events would have a condensed arrival and departure period, and would need parking to accommodate all attendees. At the other end of the attendance spectrum are consumer shows, which typically occurs on both a Saturday and Sunday with attendees coming and leaving at their convenience. For a consumer show, the peak attendance at any one time is estimated to be 30% of all attendees. Likewise, a multi-day convention may also have attendees attend just a few sessions each day or over the course of a day. For a convention, it is assumed that 60% of all attendees would be on site at the same time.

The four factors described above were used to derive per-attendee parking demand rates for each type of event, and the correlative trip generation rates based on the arrival and departure patterns. Table 12 summarizes the key metrics used and the resulting parking rates for the three types of comparable events—meetings/conferences, conventions, and consumer shows. The analysis shows that the rates derived for the Lynnwood Event Center are slightly higher than those derived for MCC. Consistent with findings for the MCC, the highest parking demand rate would be for a local meeting or conference.

The trip generation rates were applied to different types and sizes of events forecast to occur at the expanded Lynnwood Event Center to show the range of traffic impact and parking needs. Table 13 summarizes the weekday daily and commuter peak hour trip generation estimates for each type of event. As shown, large conventions, which can accommodate up to 1,200 attendees at the existing Lynnwood Event Center without the expansion, would continue to generate the highest number of daily and peak hour trips. Other types of events that could be accommodated by the expansion, such as outdoor concerts or larger consumer shows, would generate fewer peak hour trips.

Table 12. Peak Parking Demand Rates Derived for Lynnwood Event Center

Type of Event /	% Attendees who use transit	% Attendees who stay in local hotels	Vehicle Occupancy (Persons/Vehicle)	% Attendees on Site Simultaneously	Peak Parking Demand Rate (Veh/Attendee)	Comparable MCC Peak Parking Demand Rate (Veh/Attendee) [a]
Local Meetings and Conference	20%	0%	1.3	100%	0.62	0.60
Conventions	10%	30%	1.3	60%	0.28	0.24
Consumer Shows	10%	0%	2.0	30%	0.14	0.12
Banquets / Galas	0%	5%	2.0	100%	0.48	n/a
Spectator Events	20%	0%	2.5	100%	0.32	n/a

Source: JLL and Heffron Transportation, Inc., July 2023

a. Based on data for events at Meydenbauer Convention Center compiled by Heffron Transportation, Inc., 2019.

Table 13. Trip Generation and Parking Demand for Various Events at Lynnwood Event Center

Type of Event /	Total Attendance	Weekday Daily Trips (In + Out)	Weekday Commuter AM Peak Hour			Weekday Commuter PM Peak Hour			Peak Parking Demand
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Large Convention / Meeting (Allowed in Existing Center)	1,200	910	150	6	156	9	99	108	340
Weekend Consumer Show	2,500	0	0	0	0	0	0	0	350
Outdoor Concert (Weekday Evening)	2,500	2,000	0	0	0	50	0	50	800
Indoor Spectator Event (Weekday Evening)	1,200	960	0	0	0	24	0	24	380
Medium Convention / Meeting	750	570	94	4	98	5	62	68	210
Gala / Banquet	350	350	0	0	0	9	0	9	170

Source: Heffron Transportation, Inc., July 2023.

2.3. Summary of Trip Generation for PFD Project Alternative 1

Total site trip generation for Alternative 1 was determined for a non-event day and an event day for the purpose of evaluating site access and internal circulation operations. Although large events are expected to occur infrequently, the analysis assumes a large daytime convention with up to 1,200 attendees, which is the type of event that generated the highest number of peak hour vehicle trips. This type of event can already occur at the site. Additional sensitivity analysis was performed to evaluate the peak egress condition following a spectator event, and the peak egress flows are described in Section 3.5.

Table 14 presents the mixed-use development trip generation estimates for a non-event day. Table 15 presents the event-day trip estimates with a large daytime convention with 1,200 attendees. The latter condition assumes that 20% of the hotel and restaurant trips would be associated with event attendees and would occur internally, not generating off-site trips at the site driveways. The two conditions have very similar trip generation at the site driveways during the PM peak hour. However, on an event-day, the site is estimated to generate 33% more vehicle trips during the AM peak hour than on a non-event day due to arriving attendees.

Table 14. Lynnwood PFD Site Trip Generation Summary – Vehicle Trips on Non-Event Day

		AM Peak Hour			PM Peak Hour		
Land Use	Daily Trips	In	Out	Total	In	Out	Total
Alternative 1 Mixed-Use	10,280	166	188	354	437	288	725
Event Center	0	0	0	0	0	0	0
Total Trips	**10,280**	**166**	**188**	**354**	**437**	**288**	**725**

Source: Heffron Transportation, Inc., September 2024.

Table 15. Lynnwood PFD Site Trip Generation Summary – Vehicle Trips on Event Day

		AM Peak Hour			PM Peak Hour		
Land Use	Daily Trips	In	Out	Total	In	Out	Total
Alternative 1 Mixed-Use [a]	8,770	144	171	315	367	244	611
Event Center with Large Convention (1,200 attendees during day time)	910	150	6	156	9	99	108
Total Trips	**9,680**	**294**	**177**	**471**	**376**	**343**	**719**

Source: Heffron Transportation, Inc., September 2024.

a. *Assumes that an additional 20% of site's hotel and restaurant trips would be internal trips generated by event attendees*

2.4. Effect of Potential Land Use Changes (Sensitivity Analysis)

As described in Section 1.1, the mixed-use development program could change with market economics or as development partners are contracted to build elements of the project. The team evaluated potential alternative development scenarios that could affect land use and/or density. The following development scenarios were evaluated:

A. The unit density proposed in the residential building(s) increases (e.g., more studio and one-bedroom units and fewer two or three-bedroom larger units). Under this scenario, reflective of workforce housing, it is estimated that residential building(s) at the north end of the site could accommodate 550 units (instead of 408 units under the preferred alternative).

B. The hotel is eliminated and replaced with a residential building. This scenario would remove 312 hotel rooms and add 245 residential units.

C. A taller hotel is built (allowed under the zoning), which could add an estimated 100 hotel rooms.

D. Commercial space could be increased by adding a second floor to some of the stand-alone buildings or by adding retail space to the upper floors of the event parking garage. It is estimated that this could add 30,000 sf of commercial space. To reflect a worst-case condition for traffic and parking, all of the added commercial space was assumed to be a high-turnover restaurant. Detail provided herein shows that restaurants have similar trip and parking characteristics as higher-intensity retail such as grocery or drugstore, so the analysis accounts for flexible use of the commercial space.

Trip generation for each one of these scenarios was evaluated using the same methodology and assumptions described earlier in this chapter. Table 16 summarizes the net change in trips for each development scenario, and then sums the cumulative effect of the potential development alternatives. As shown, Alternative 2 would reflect the maximum development alternative with a total of 995 PM peak hour trips.

Table 16. Lynnwood PFD Site Trip (Mixed Use + Event) – Effect of Development Scenarios

Alternatives / Development Scenario	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Alternative 1 (Analysis Condition)	**9,680**	**294**	**177**	**471**	**376**	**343**	**719**
Net Change in Trips for Each Scenario							
A – Increased Residential Density (Add 142 units)	390	10	36	46	18	12	30
B – Convert Hotel to Residential (Add 245 residential units and remove 312 hotel rooms)	-1,070	-53	13	-40	-22	-34	-56
C – Increase hotel size (Add 100 hotel rooms)	670	24	17	41	19	20	39
D – Add commercial (Add 30,000 sf high-turn restaurant)	2,400	10	6	16	126	81	207
Alternative 2 (Scenarios A+C+D) [a, b]							
Net Change vs Alternative 1	+3,460	+44	+59	+103	+163	+113	+276
Total Trips	***13,140***	***338***	***236***	***574***	***539***	***456***	***995***
Alternative 3 (Scenarios A+B+D) [a, b]							
Net Change vs Alternative 1	+1,720	-33	+55	+22	+122	+59	+181
Total Trips	***11,400***	***261***	***232***	***493***	***498***	***402***	***900***

Source: Heffron Transportation, Inc., February 2025. Total vehicle trips listed reflect trips for both the mixed-use development and a 1,200-attendee daytime convention.

a. *Scenarios B and C are mutually exclusive.*

b. *Note that actual trip generation would be slightly lower due to increased internal trips if all land uses were to increase in size.*

2.5. Transportation Concurrency

Transportation Concurrency is a planning requirement that was imposed as part of the State of Washington's Growth Management Act (GMA, RCW 36.70A.070). It requires local cities to ensure that necessary transportation improvements are made concurrent with proposed development activity. "Concurrent with development" is defined by the GMA to mean that any necessary "improvements or strategies are in place at the time of development or that a financial commitment is in place to complete the improvements or strategies within six years."

The City of Lynnwood's Transportation Concurrency Management program is detailed in LMC §12.22. All development projects are required to apply for a Capacity Reservation Certificate (CRC), which is then reviewed against the City's level of service criteria. In order to reserve capacity for potential development scenarios, it is recommended that the CRC application reflect the trips associated with Alternative 2, which would be 995 PM peak hour trips (539 enter and 456 exit).

3. SITE ACCESS & CIRCULATION

Analysis in this section was previously contained in *Draft Technical Memorandum: Site Access, Internal Circulation and Traffic Control,* December 2, 2024.

This section evaluates the PFD site's internal circulation and site access operations based on the future condition in which SW 194th Street would be extended through the site connecting 40th Avenue W west of the site to 36th Avenue W east of the site. The portion of SW 194th Street across the Lynnwood PFD site, between 38th Avenue W and 36th Avenue W, will likely be constructed before the extension west to 40th Avenue SW. The City of Lynnwood and its consultant, OTAK, evaluated two potential routes for the future western extension of SW 194th Street between 38th Avenue W and 40th Avenue W—a northern route and a southern route.[18] Figure 2 previously showed two potential western extensions. This section compares the traffic operations for the two options and evaluates the road configuration and traffic control needs of each. Sensitivity analysis was also performed to assess the resilience of the site's internal roadways and traffic control if background or project traffic were to be higher than forecast. It also evaluates the maximum-event egress condition for which the entire main garage (about 550 parking spaces) would empty in the 30 minutes following a spectator event with a set end time such as a concert or sporting event. Finally, this section evaluates whether the future 194th Street SW / 36th Avenue W intersection would warrant signalization, and if so, when the signal should be installed based on various phasing options.

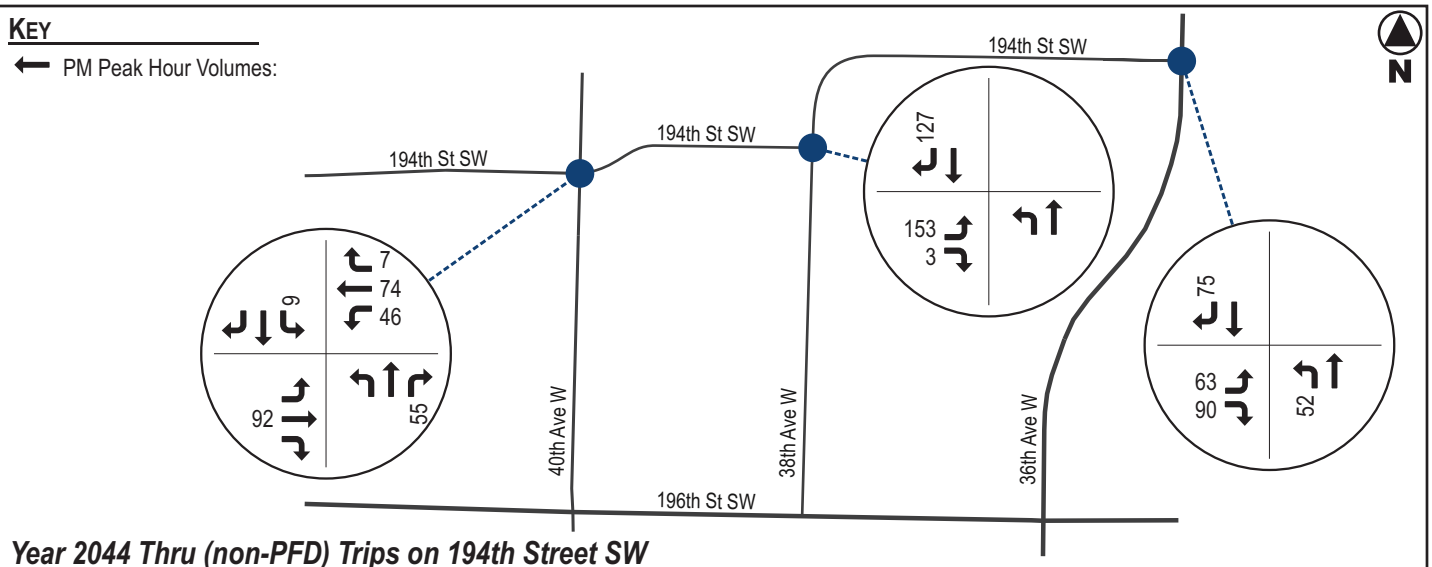
3.1. Future Traffic Volumes on 194th Street SW

The City of Lynnwood's traffic modelling consultant, Transportation Solutions Inc. (TSI), evaluated the potential changes in area traffic patterns that could occur if SW 194th Street were constructed between 40th Avenue W and 36th Avenue W. The modelling results included traffic generated by the PFD site based on the program envisioned in March 2024. The trips associated with just the PFD site were removed from the system to determine the amount of through (non-PFD) traffic that might use the new street. The modelling for year 2044 conditions estimated that 280 through trips (non-PFD) would use SW 194th Street during the PM peak hour (153 eastbound and 127 westbound).

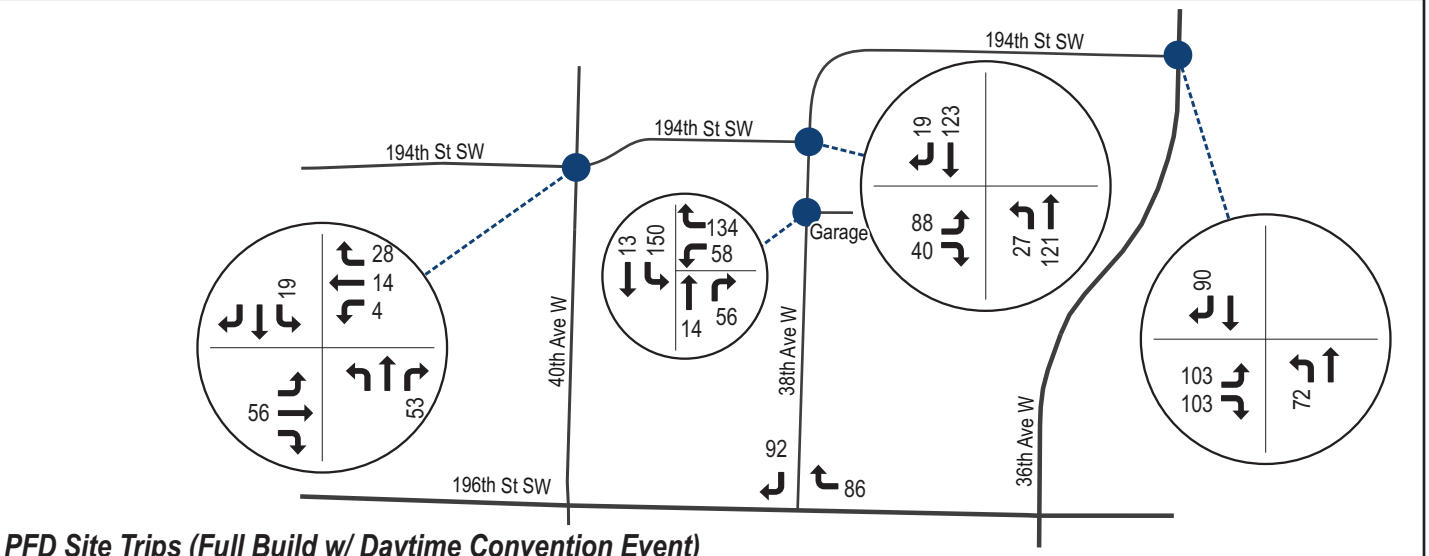
PM peak hour trips generated by the Alternative 1 PFD development program plus a 1,200-person convention event were then assigned to the roadway network. The trip distribution pattern for the PFD trips was derived using the select-zone analysis provided by TSI. Trips on the site's internal roadways were assigned based on the location of parking for the various land uses. To present a worst-case condition, all of the site's event and commercial trips were assigned to the main garage.

The combination of the 2044 non-PFD trips and full build PFD trips were used to evaluate various internal and site access intersections. Figure 4 shows the forecast 2044 PM peak hour traffic volumes using the internal street network. It is noted that the PM peak hour volumes represent the highest hourly traffic volumes for analysis purposes. As previously shown in Table 15, the PFD project would generate about 35% more traffic during the PM peak hour than during the AM peak hour, primarily because of the large number of restaurant and retail uses. Background traffic on the local streets is also much higher in the afternoon and evening and during the morning hours.

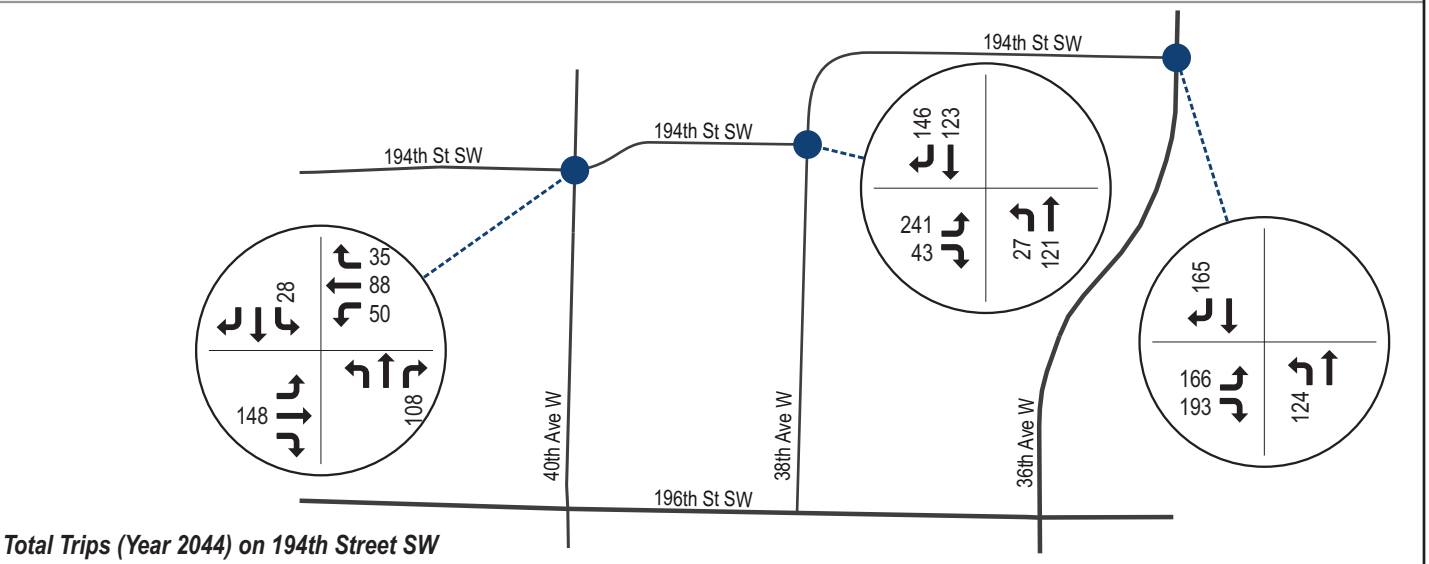
[18] OTAK, Inc., Alignment studies, October 2024.



Year 2044 Thru (non-PFD) Trips on 194th Street SW



PFD Site Trips (Full Build w/ Daytime Convention Event)



Total Trips (Year 2044) on 194th Street SW

LYNNWOOD PFD
Transportation Assessment

Figure 4
PM Peak Hour Traffic Volumes on SW 194th Street
2044 Build (w/ PFD Mixed Use plus 1,200-person Convention)

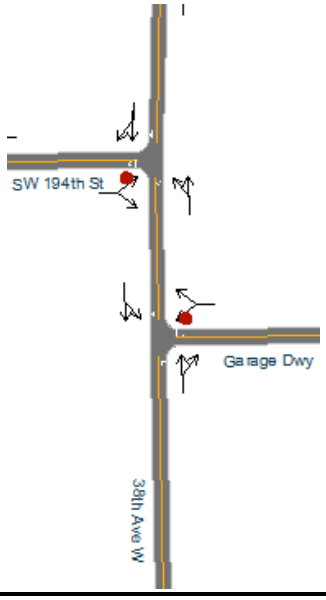
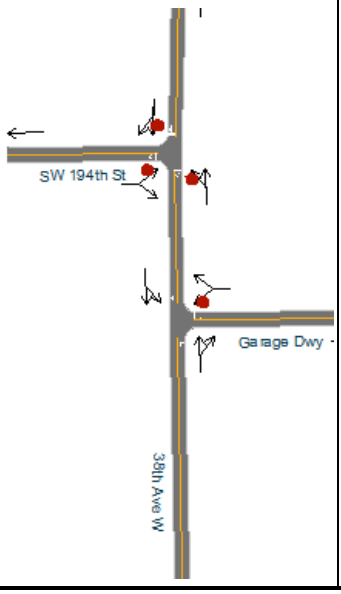
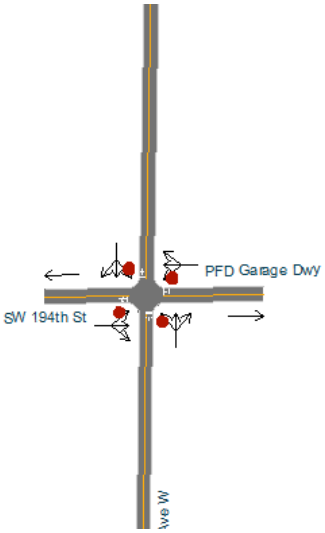
heffron transportation inc

3.2. Intersection of 194th Street SW (Extension) / 38th Avenue W

The eastern end of the 194th Street SW extension and 38th Avenue W would be constructed on the PFD site. However, the western extension of 194th Street SW would likely be constructed later, and the alignment may change depending on the adjacent property's site access needs and/or the City's future road plans. To maximize connection options to the future west end of 194th Street SW, the new roadway through the PFD site would be turned parallel to the west property line and become 38th Avenue W. The City of Lynnwood and its consultant, OTAK, evaluated two potential routes for the future western extension of SW 194th Street between 38th Avenue W and 40th Avenue W—a northern route and a southern route (see Figure 2).

Three different intersection scenarios were evaluated for 194th Street SW and 38th Avenue W to assess traffic operations and resilience of various configurations and traffic control conditions. Table 17 summarizes the three scenarios tested.

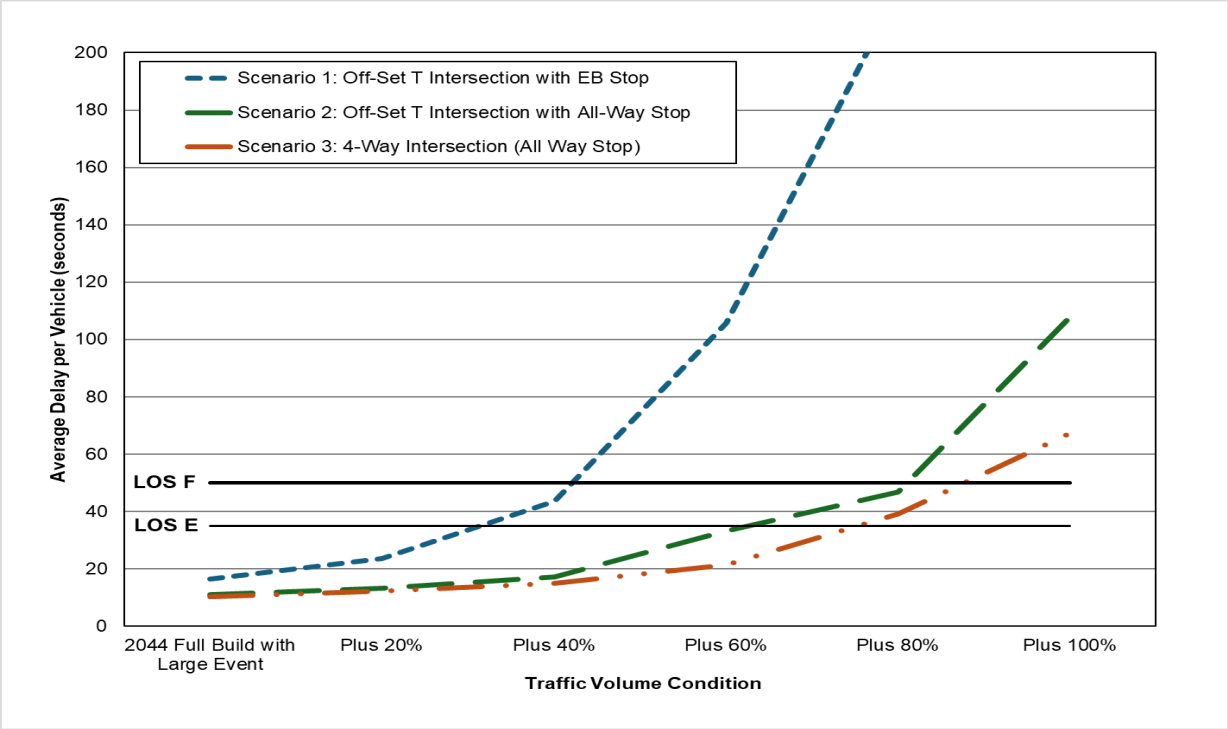
Table 17. Intersection Scenarios Evaluated for 194th Street SW / 38th Avenue W

Characteristic	Scenario 1	Scenario 2	Scenario 3
Configuration	T-Intersection where main garage driveway is off-set from 194th Street	T-Intersection where main garage driveway is off-set from 194th Street	Four-Leg Intersection with main garage driveway connected to 194th Street
Traffic Control	Stop sign on eastbound 194th Street SW	All-Way Stop	All-Way Stop
Diagram			

Traffic operations analysis was performed for these three conditions using the 2044 Full Build PM peak hour traffic volumes shown in Figure 4. The volumes were then uniformly increased in 20% increments to determine each scenario's ability to accommodate more traffic than forecast. It is noted that it is more likely that only the non-PFD traffic would increase at such high levels since those are affected by external factors such as local and regional growth, whereas growth in traffic generated by the PFD site would be constrained by space and on-site parking limitations. However, this uniform growth analysis does provide a way to show each scenario's resiliency to potential unforeseen increases in traffic.

Estimated vehicular delay was used to compare operations for the different intersection scenarios. For Scenario 1, which would have a T-intersection with just a stop sign on the eastbound approach, the average delay per vehicle is for the eastbound movement. For the all-way stop conditions, the delay reported is the average delay per vehicle for all movements. Figure 5 illustrates the findings, and shows the level of service associated with different delay values.

Figure 5. Traffic Operations Comparison for 194th Street SW / 38th Avenue W Scenarios



Source: Heffron Transportation, Inc., September 2024.
Note: For Scenario 1, which would have a T-intersection with just a stop sign on the eastbound approach, the delay is for the eastbound movement. For the all-way stop conditions, the delay reported is for all movements.

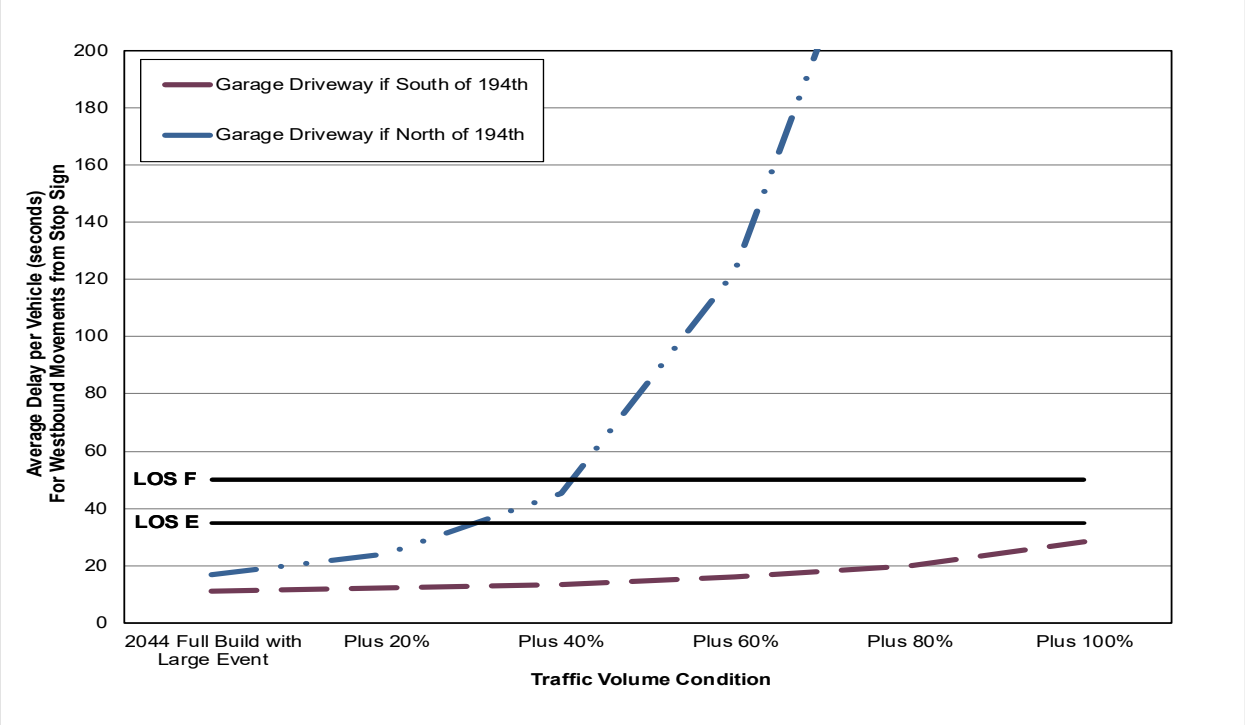
The analysis shows that all three of the scenarios would operate at an acceptable level of service (LOS D or better) with full build of the PFD site with a large event. However, if volumes were to increase beyond those estimates, Scenario 1 (the T-intersection with an eastbound stop sign) would be the least resilient, with delays for vehicles on the stop-sign-controlled approach increasing sharply with growth. The all-way-stop controlled intersection scenarios would provide more resilience to accommodate growth, with Scenario 3 (four-leg intersection) providing the best operations. The finding that a four-leg all-way-stop intersection would operate better than a three-leg all-way-stop 'T' intersection is reasonable since, at this site, it would better balance traffic volumes among the approaches.

A roundabout was also evaluated, assuming that all four legs connect at one intersection (similar to Scenario 3). While a roundabout would also perform well and provide resilience to growth, it would require the two highest-volume movements—the eastbound left turn (through traffic on 194th Street SW) and southbound left turn (arriving traffic to main garage)—to make a three-quarter turn around the roundabout. The left turn into the garage would have right-of-way priority over through traffic on 194th Street SW (since it is the first to arrive in the roundabout flow). An all-way stop would provide equal right-of-way priority for these two movements. For this reason, an all-way-stop should be pursued instead of a roundabout.

3.3. Main Garage Driveway on 38th Avenue W

The analysis presented in the previous section shows that the main garage driveway on 38th Avenue W would operate at an acceptable level of service if it were connected directly to the 194th Street SW extension as an all-way stop. However, if that is not possible, sensitivity analysis (see Figure 6) shows that the main garage's driveway would operate at better levels of service if it were located south of the 194th Street SW connection (the Northern Option), since most of the traffic using 194th Street SW would not pass the main garage driveway, reducing the conflicting traffic at the driveway intersection. If main garage's driveway were located north of the 194th Street SW connection (Southern Option), then nearly all traffic that uses the western connection on 194th Street SW (to 40th Avenue W) would conflict with the main garage driveway, degrading operations and resilience. Depending on growth forecasts, this could then require that both the 194th Street SW / 38th Avenue W intersection **and** the main garage driveway / 38th Avenue W intersections be controlled by all-way stops. This would create a double-stop condition for the through traffic on 194th Street SW.

Figure 6. Traffic Operations Comparison for Main Garage Driveway (Stop-Controlled WB Only)



Source: Heffron Transportation, Inc., September 2024. Both conditions assume that the driveway would be stop-controlled for westbound (egress) traffic and traffic on 38th Avenue W would flow free. Delays are for Westbound Movements.

It is noted that the proposed PFD site access layout as well as the connection location of 194th Street SW could change as plans evolve. For example, if the Northern Alignment of 194th Street SW could be curved to align with the PFD's Woonerf, it may then be desirable to move the garage access to take access from the west end of the Woonerf in order to benefit from an all-way stop at the 194th Street SW/Woonerf/38th Avenue W intersection. As noted in the section above, creating an all-way stop where the main garage intersects 194th Avenue SW would provide better overall operating performance and resilience to growth than a T-intersection.

3.4. Signal Warrant Analysis for 194th Street SW/ 36th Avenue W

The new 194th Street SW extension would intersect 36th Avenue W on the east side of the PFD site. This future intersection was evaluated to determine if it would warrant a traffic signal per the guidelines described in Section 3.4.1. The warrant analysis, presented in Section 3.4.2, shows that the intersection would meet all warrants under the PFD's full build condition. Additional analysis was then performed to determine if the signal would be warranted for interim phases of development within the Master Plan and/or before 194th Street connects west to 40th Avenue W.

3.4.1. MUTCD Signal Warrants

The *Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways*[19] provides a series of signal warrants, described in Chapter 4C, that define the minimum conditions under which installation of traffic control signals might be justified. The warrants involve engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of a potential signal locations and are intended to avoid an unnecessary installation of a traffic signal. The MUTCD investigation of the need for a traffic control signal includes applicable analysis based on eight warrants. The warrants applicable to this proposed project are briefly described below.

- **Warrant 1 (A and B): Eight-Hour Vehicular Volumes.** There are two different conditions that are evaluated for this warrant, and each would be satisfied when the traffic volumes on the main street and minor street of any eight hours of an average day meet minimum thresholds for the type of roadway. Given that 36th Avenue W currently has two lanes in each direction, and two approach lanes are proposed on 194th Street SW (a left-turn and a right-turn lane), Warrant 1A would be met if the major street volumes (36th Avenue W) are at or above 600 vehicles per hour and the minor street volumes (194th Street SW) are at or above 200 vehicles per hour. Warrant 1B would be met for major street volumes of 900 or more per hour with minor street volumes of 100 or more per hour.

- **Warrant 2: Four-Hour Vehicular Volume.** This warrant is satisfied when the traffic volumes on the main street and minor street of any four hours meet minimum thresholds for the type of roadway. This warrant is determined based on volume curves in MUTCD Figures 4C-1 and 4C-2.

- **Warrant 3: Peak Hour.** The peak hour signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. This warrant is satisfied when peak hour volumes meet minimum thresholds for the type of roadway and/or several delay-based criteria.

- **Warrant 4: Pedestrian Volume.** The pedestrian volume signal warrant is intended for application where the traffic volume on a major street is so high that pedestrians experience excessive delay in crossing the major street. This warrant is satisfied when minimum pedestrian volumes are met and there are insufficient gaps in traffic to cross the street. Given that some large events at the Event Center would require off-site parking, and the most proximate off-site parking areas are located east of 36th Avenue W, events that generate about 150 pedestrian crossings per hour (reflecting approximately 60 parked vehicles with 2.5 persons per vehicle) would warrant a signal.

While there are five other warrants, none would be applicable to the subject intersection.

[19] US Department of Transportation, Federal Highway Administration, 11th Edition, 2023.

3.4.2. Warrant Analysis

A new 24-hour traffic count was performed on 36th Avenue W on September 26, 2024 for use in the warrant analysis. These volumes were then also used to determine how the forecast traffic volumes on 194th Street SW (see Section 3.1) could fluctuate by different hours of the day. Full build conditions were evaluated for the year 2044 consistent with the TSI model forecasts. Appendix B provides the detailed signal warrant analyses.

The warrant analysis shows that the intersection would meet Warrants 1 (A and B), 2 and 3 in 2044 with the 194th Street SW Extension and full build of the PFD site. Only one of these warrants would need to be met to justify installation of the traffic signal.

Sensitivity analysis was then performed to determine when the signal would be warranted if only part of the PFD Master Plan was developed and/or if the 194th Street SW did not yet connect to 40th Avenue SW. Table 18 summarizes the findings. As shown, the signal would be warranted when 25% of the Master Plan is developed even if 194th Street SW is not connected through to 40th Avenue W. The signal would also be warranted when the street is connected, even if no traffic is generated by the PFD site. Based on this, design plans should assume that the signal would be installed when 194th Street is constructed.

Table 18. Is Traffic Signal Warranted for 194th Street SW / 36th Avenue W Intersection?

% of PFD Site Traffic [a]	194th Street SW Does NOT Connect to 40th Avenue S	194th Street SW Connects to 40th Avenue W
0%	No	Yes
25%	Yes	Yes
50%	Yes	Yes
75%	Yes	Yes
100%	Yes	Yes

Source: Heffron Transportation, Inc., October 2024.

a. PFD site traffic reflects Alternative 1 conditions.

The multifamily buildings on the site could be constructed as the first phase of PFD Master Plan development, before 194th Street SW is constructed. These could be served by the existing northern driveway on 36th Avenue SW. Trips associated with only the multifamily buildings would not trigger the need for a traffic signal at the 36th Avenue W/North Access intersection.

3.5. Peak Event Egress Condition

Traffic operations were assessed for the peak egress following a 2,500-person outdoor concert. This type of event is expected to generate 1,000 vehicle trips after the event (assuming that 80% of all attendees use a vehicle to reach the site with 2.5 persons per vehicle) plus trips associated with employees and ridehail services (e.g., Uber and Lyft). However, the main parking garage at the site would only be able to accommodate about 550 vehicles, and the rest of the event attendees would either park off-site (about 250 vehicles) or use ridehail services (about 100 vehicles making inbound and outbound trips).

The goal would be to empty the 550-stall main garage in 30 minutes or less, which would relate to a peak egress flow rate of 1,100 vehicles per hour. Capacity events are also anticipated to generate an additional 200 vehicle trips (100 entering and 100 exiting the site) associated with attendee ride-hail trips after the event, although those would occur in separate facility and not use the main garage access ramp. While some trips associated with the mixed-use development could occur in the peak egress period (expected to be after 9:00 P.M.), it is assumed to be small (60 trips in, 20 trips out) as residents and others would be informed about event conditions.

Several options and access configurations were tested, and it was determined that the following event management strategies should be implemented:

- Use internal signs and cones to reverse the inbound garage ramp lane to outbound so that vehicles have two lanes for outbound garage traffic.
- Prohibit northbound traffic on 38th Avenue W between the hotel drive and the garage driveway to reduce potential conflicting traffic with garage egress.
- Use flagger(s) at key intersections at and near the garage driveway to countermand stop signs and make the intersections function more like traffic signals. If the garage driveway is separated from 194th Street SW extension, then two flaggers would likely be needed, one at the intersection of 194th Street SW / 38th Avenue W intersection and another at the main garage driveway/38th Avenue W intersection.
- If the garage driveway aligns with the 194th Street SW extension, force traffic exiting the garage to the egress route that is associated with their lane (e.g., northernmost lane forced to exit towards 36th Avenue SW and southernmost lane forced to exit to 40th Avenue SW) to minimize delays associated with merging.

With the above provisions, it is estimated that the garage could be emptied in 20 to 30 minutes following an event.

3.6. Intersection of 196th Street SW/38th Avenue SW

A new north-south public roadway—38th Avenue W—would be created along the western edge of the PFD site. This new street would intersect 196th Street SW about midway between 36th Avenue SW and 40th Avenue SW. A center median recently constructed on 196th Street SW would restrict turn movements at this intersection to right-in/right-out only.

Traffic operations at this intersection were evaluated for the AM and PM peak hour conditions with the PFD project. The highest use of 38th Avenue SW would occur before 194th Street SW is extended west to 40th Avenue SW, and the most convenient egress from the PFD site to reach areas to the west would be via the 196th Street SW/38th Avenue SW intersection. It is acknowledged that traffic could also choose to

exit via 36th Avenue SW and head north to other grid-connected arterials (e.g., 188th Street SE), so this assumption reflects a worst-case condition.

Traffic counts performed by the City of Lynnwood (November 2, 2023) were obtained for the intersections on each side of the new connection: at 196th Street SW/36th Avenue SW and 196th Street SW/40th Avenue SW. These counts show that westbound traffic on 196th Street SW is higher in the AM peak hour (1,510 vehicles per hour) than in the PM peak hour (1,420 vehicles per hour).

Peak hour traffic volumes for the PFD site would be highest for a day with a large convention event (see Table 15). It was assumed that before 194th Street SW is extended west, that up to 32% of the site traffic could exit via the 38th Avenue SW intersection. Some traffic arriving from Interstate 5 could also use that access.

Level of service was evaluated for the intersection assuming that southbound 38th Avenue SW would have a single lane for right-turn only, and the approach would be controlled by a stop sign. The southbound approach would operate at LOS C during both the AM and PM peak hour conditions. The actual operating conditions are expected to be better than LOS C since the upstream traffic signal would provide gaps in the 196th Street SW traffic stream.

Once 194th Street SW is extended west to 40th Avenue SW, traffic volumes on 38th Avenue SW would decrease. Through traffic on 196th Avenue SW may also decrease with the additional grid connection. Both changes would improve operations at the subject intersection.

The new intersection will require approval from the Washington State Department of Transportation (WSDOT). The City of Lynnwood will prepare an Intersection Control Evaluation (ICE) Report for WSDOT's review.

3.7. Summary of Circulation and Access Findings

The following summarizes the key findings from the internal site access and circulation analysis:

- At full build-out, the proposed Lynnwood PFD sites would have four points of access/egress—two on the south side of the site (196th Street SW at site driveway and at 38th Avenue W), one to the east (194th Street SW to 36th Avenue W) and one to the west (194th Street SW to 40th Avenue W). It would also have a truck/loading access at SW 195th Street. Even before the western extension of 194th Street SW, this would be sufficient for this size project.

- The future intersection at 194th Street SW / 38th Avenue W would operate at an acceptable level of service as a four-leg intersection with all-way stop control with access to and from the main garage as the fourth (east) leg of the intersection. Each leg of the intersection could have a single-lane approach (no auxiliary turn lanes would be needed). This configuration would have a high level of resilience to accommodate growth, and the intersection's traffic volumes could increase by 80% over forecast 2044 volumes before it reaches capacity.

- If 194th Street SW cannot be aligned with the main garage egress (either at the proposed Woonerf road or a separate driveway), then on-site operations would be best if 194th Street SW is located north of the main garage's driveway where little to no through traffic would conflict with driveway traffic. If 194th Street SW has to be located south of the main garage's driveway, then the garage driveway may also require an all-way stop, creating a double-stop condition for through traffic on 194th Street SW.

- A roundabout was also evaluated for the 194th Street SW / 38th Avenue W intersection assuming that all four legs, including the main garage's driveway, connect to the roundabout. While a roundabout would also perform well and provide resilience to growth, it would require the two highest-volume movements—the eastbound left turn (through traffic on 194th Street SW) and southbound left turn (arriving traffic to main garage)—to make a three-quarter turn around the roundabout. The left turn into the garage would have right-of-way priority over through traffic on 194th Street SW (since it is the first to arrive in the roundabout flow). An all-way stop would provide equal right-of-way priority for these two movements and require a smaller footprint. For this reason, an all-way-stop should be pursued instead of a roundabout.

- A traffic signal would be warranted at the 194th Street SW / 36th Avenue W when 25% of the PFD Master Plan is developed even if 194th Street SW is not connected through to 40th Avenue W. The signal would also be warranted when the street is connected, even if no traffic is generated by the PFD site. Based on this, design plans should assume that the signal would be installed when 194th Street is constructed.

- The residential buildings on the site could be constructed as the first phase of PFD Master Plan, before 194th Street SW is constructed. These could be served by the existing northern driveway on 36th Avenue SW. Trips associated with only the residential buildings would not trigger the need for a traffic signal at the 36th Avenue W/North Access intersection.

- The future intersection at 196th Street SW/38th Avenue SW would operate at LOS C or better as a stop-controlled intersection with right-in/right-out only movements. The new intersection will require approval from the Washington State Department of Transportation (WSDOT). The City of Lynnwood will prepare an Intersection Control Evaluation (ICE) Report for WSDOT's review.

- Following a large set-time event, the main garage could be emptied in 20 to 30 minutes by implementing traffic management strategies.

4. PARKING ANALYSIS

Analysis in this section was previously contained in *Draft Technical Memorandum: Parking analysis and Management Strategies.* The management strategies have been moved to the **Mitigation** section.

4.1. Parking Demand for Mixed-Use Development (Non-Event)

4.1.1. Methodology

Most municipal parking codes, including Lynnwood's, are typically suited to estimating the minimum parking requirement for a single land use on its own site. When two or more land uses are located on a site, there is often the opportunity to reduce overall supply since some spaces could be shared at different times of the day. For example, the peak parking demand for residential and hotel uses occurs overnight and on weekends, whereas the peak demand for retail and restaurant uses occurs over the lunch and dinner hours. The Lynnwood PFD site not only has multiple land uses, but has many spaces that would serve occasional peak event needs and could likely be shared with other used on non-event days.

The parking analysis for the Lynnwood PFD site considered the peak cumulative demand periods without and with events of different sizes. This analysis was then used to determine parking management strategies that should be implemented to optimize the parking experience for residents, hotel guests, and customers of the retail, restaurant, and other uses. Additional strategies are recommended for event days depending on the type and size of events.

Parking demand estimates for the proposed land uses, other than the Event Center, were based on the land-use characteristics and the potential to share parking at different times of day. First, the peak parking demand estimates were derived for each land use from a variety of national and local sources. Potential parking reductions were assessed based on internal trips and neighborhood attributes such as proximity to transit. Then, the parking accumulation patterns—or how parking changes by day of week and time of day for each use—were determined to show how parking stalls could be shared among uses at different times of day.

4.1.2. Parking for Residential Uses

Peak parking demand estimates for the project's residential uses were based on national and local (Puget Sound region) data sources. The available data were used to determine how the number of bedrooms and surrounding transit characteristics can affect parking demand rates. Recommended parking rates are summarized at the end of this section.

Published Parking Generation Rates

The traditional source of parking demand information is the Institute of Transportation Engineers' (ITE) *Parking Generation Manual*, for which the latest edition was published in October 2023.[20] It includes demand rates and equations for more than a hundred land uses collected from studies throughout the United States. It has rates for many different types of housing, and the latest edition includes information about how residential parking is affected by its proximity to high-capacity transit. The site is located just over ½-mile from the Lynnwood Station on Sound Transit's 1 Line. Although that distance is beyond the distance considered to be "Close to Rail Transit," it does show how transit could affect residential vehicle ownership. Table 19 summarizes ITE's residential parking rates for different types and locations of multi-family housing.

[20] Institute of Transportation Engineers, *Parking Generation, 6th Edition,* October 2023.

Table 19. ITE Parking Demand Rates for Various Multi-Family Housing Types

Land Use [ITE Land Use Code]	Description	Weekday Parking Demand Rate for Dense Multi-Use Urban Setting	
		Not Close to Rail Transit	Within ½-mile of Rail Transit
Multi-Family Housing – 1 Bedroom (Mid-Rise) [Land Use Code 218]	Residential building with 4 to 10 floors that consists entirely of 1-bedroom dwelling units. A studio or micro apartment is treated as a 1-bedroom dwelling unit for this land use.	0.28 vehicles per dwelling unit	0.35 vehicles per dwelling unit [a]
Multi-Family Housing – 2+ Bedroom (Mid-Rise) [Land Use Code 221]	Residential building with 4 to 10 floors that consists of at least one dwelling unit with two or more bedrooms.	0.93 vehicles per dwelling unit	0.70 vehicles per dwelling unit

Source: Institute of Transportation Engineers, Parking Generation Manual, 6th Edition, October 2023.

a. Limited data (two sites studied) available for this category.

Walk, Transit, and Bike Influences

The ability to live without a car often depends on what services can be reached without one. The most common metric available to assess a neighborhood's accessibility are the walk, bike, and transit scores, which are rating metrics developed by the *Walk Score Advisory Board*[21] to compare the transportation mobility of various neighborhoods. The online *Walk Score* tool rates walking, transit, and biking mobility based on a variety of factors—such as sidewalk continuity, proximity to destinations, and transit service—and applies scores on a scale from 1 to 100 points. The higher the score, the better the mobility for that location. The scores for the project site are summarized in Table 20. The *Walk Score* for the site is 68, meaning that some errands can be accomplished on foot. The *Transit Score* of 50 is good, even though this rating was made before the new Link Light Rail Station opened in August 2024. Figure 7 shows the 20-minute walk shed provided by the *Walk Score* tool, and the future station and many retail uses near the station are within that walk shed. As Lynnwood's Center City continues to develop, more services and transit will be located within the site's walk shed, and the area's pedestrian and bike infrastructure will improve.

Table 20. Walk, Transit, and Bike Scores for Lynnwood PFD Site

Measure	Score [a]	Rating Notes [b]
Walk Score	68	Somewhat walkable. Some errands can be accomplished on foot.
Transit Score	50	Good Transit. Many nearby public transportation options.
Bike Score	67	Bikeable. Some bike infrastructure

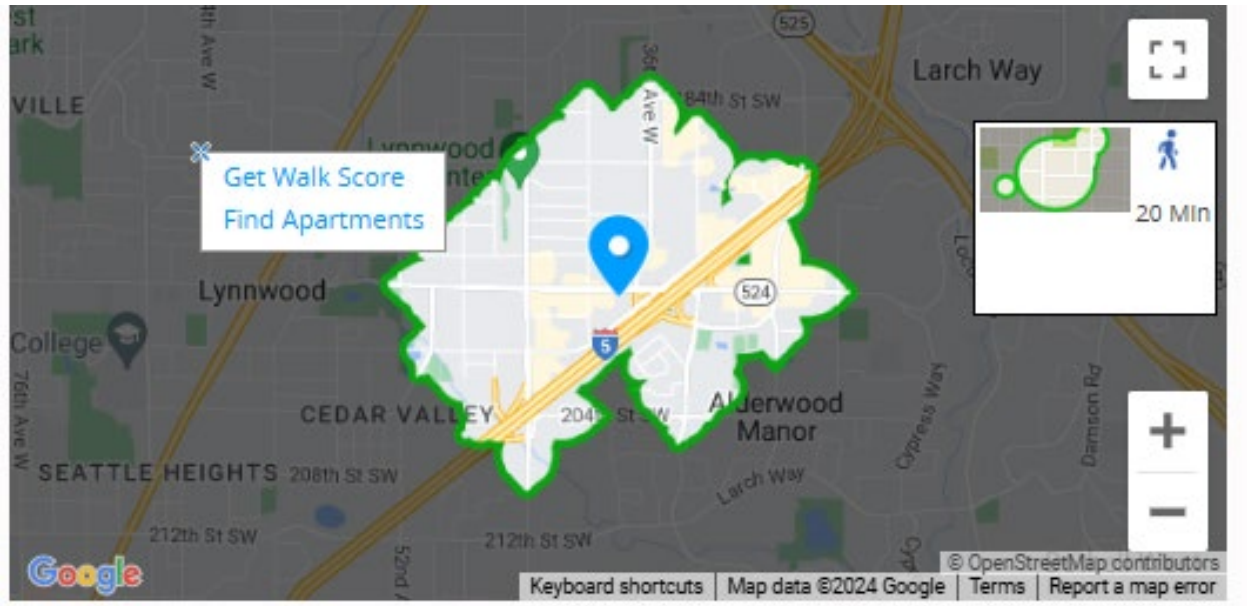
Source: WalkScore.com, accessed May 2024.

a. Score on a scale of 0 to 100, with higher scores reflecting better mobility.

b. Rating notes provided by the model.

[21] Walk Score website: https://www.walkscore.com/, accessed November 2022. The Walk Score methodology was developed with the Walk Score Advisory Board and validated by leading academic researchers.

Figure 7. Walk Score Travel Time Map (20-minute Walk Shed)



Source: WalkScore.com, accessed March 2023.

King County Right Size Parking Calculator

The *King County Multi-Family Residential Parking Calculator*[22] (to be referred to as the *MFRPC)* is one of the largest databases of residential parking demand data in the country. This tool was originally created by King County Metro (Metro) in 2012, because it recognized that constructing too much parking supply can result in higher levels of automobile ownership, vehicle travel, congestion, and development costs. With a grant from the Federal Highway Administration, Metro compiled information about multi-family residential parking use at more than 200 developments in King County over the winter and spring of 2012. Parking occupancy was recorded on Tuesdays, Wednesdays, and Thursdays between midnight and 5:00 A.M. in each multi-family development studied, which is when peak parking demand for residential uses occurs. Metro then developed a statistical model to estimate parking use based on building, neighborhood, and environmental characteristics. King County updated the calculator in 2018 with additional data collected at 75 sites throughout the county. Overall, Metro collected data for 275 multi-family sites. For comparison, the national ITE database for Multifamily Mid-Rise Housing with 2+ bedrooms is based on 77 study sites (44 sites not close to transit and 33 site close to transit).[23]

The *MFRPC* predicts the parking demand for a multi-family residential project based on seven independent variables, each one of which demonstrated strong statistical correlation related to parking demand.[24] Metro found a strong correlation between the modelled results and actual observed demand when considering all seven factors as follows:[25]

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22 King County Metro, https://rightsizeparking.org/, accessed July 2022.

23 Institute of Transportation Engineers, *Parking Generation Manual, 6th Edition,* October 2023. Data used for Dense Multi-Use Urban areas.

24 King County Metro, *Right Size Parking Final Report,* August 15, 2015. https://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/rsp-final-report-8-2015.pdf

25 King County Metro, *King County Multi-Family Residential Parking Calculator V 2.0,* "Background" tab. https://rightsizeparking.org/background.php, the cumulative use of the variables resulted in an "*R-squared value of 0.85 indicates that 85 percent of the variation observed in parking use can be explained through these nine variables.*"

- Gravity measure of Transit Frequency – a factor that accounts for both the quantity and proximity of transit service;
- Percent of units designated affordable;
- Average number of bedrooms in all units;
- Gravity measure of population and jobs;
- Size of unit;
- Average rent; and
- Parking price as a fraction of average rent.

Although the *MFRPC* tool is specifically designed to assess parking demand ratios in King County, parking demand for the Lynnwood site can be estimated by using King County neighborhoods that have similar travel characteristics. Four comparable neighborhoods were selected based on their location adjacent to major arterials (similar to 196th Street SW), as well as their walk, transit and bike scores. The selected sites were in Shoreline, near Totem Lake in Kirkland, and the Northgate and Columbia City neighborhoods of Seattle. Each was then tested assuming the same mix of residential units by size, and assuming a modest residential parking charge since residents at the Lynnwood PFD site would likely be required to pay for parking. Parking pricing could be tiered depending on whether the resident has a reserved parking space or not. For the purpose of this analysis, the comparable-neighborhood parking rates all assumed that parking would cost $100 per month. Table 21 summarizes the results. The parking demand rates for the comparable neighborhood sites range from 0.50 to 0.52 stalls per unit.

Table 21. Right Size Parking Model Rates for Comparable Neighborhoods

	Modal Score			King County MFRPC Parking Rate [a]	
Neighborhood	**Walk**	**Transit**	**Bike**	**Stalls per Unit**	**Stalls per Bedroom**
Shoreline [a]	71	51	79	0.52 vehicles per unit	0.46 vehicles per bedroom
Totem Lake, Kirkland [b]	75	45	45	0.50 vehicles per unit	0.41 vehicles per bedroom
Northgate, Seattle [c]	89	65	79	0.50 vehicles per unit	0.41 vehicles per bedroom
Columbia City, Seattle [d]	82	58	78	0.50 vehicles per unit	0.41 vehicles per bedroom

Analysis performed by Heffron Transportation, Inc., May 2024. All sites evaluated assumed the same residential program as planned for the Lynnwood PFD site with 408 units and 476 bedrooms and that residents would pay $100 per month for parking.

a. Shoreline site located at 15711 Aurora Avenue N, Shoreline. It is adjacent to RapidRide E Line, but not near light rail transit.

b. Totem Lake site located at 12911 120th Avenue NE, Kirkland. It is not close to light rail.

c. Columbia City site located at 5601 Martin Luther King Jr Way S, about ½ mile from the Columbia City Light Rail Station.

d. Northgate site located at 11030 5th Avenue NE, about 4,900 feet from the Northgate light rail station.

Selected Residential Parking Rate

The LMC minimum parking supply requirement for residential uses is 0.50 stalls per unit (per LMC Table 21.60.3.) The LMC rate is supported by ITE and King County data for multi-family sites in a similar setting. Therefore, 0.50 stalls per unit will be used to assess the Lynnwood PFD's peak residential parking demand. Since residential spaces are likely to be in secured areas of building garages, this analysis assumes that those spaces could **not** be shared with other uses at the site.

4.1.3. Parking for Commercial Uses

ITE Parking Rates

ITE's *Parking Generation Manual* provides the most robust database of parking demand for a variety of commercial, civic, and service uses. It is recognized that the site's commercial uses could change over time as market conditions warrant. Therefore, the parking demand analysis for the Lynnwood PFD site strives to reflect a conservatively-high estimate of parking associated with potential uses, so that if and when they change, the project's parking supply would continue to accommodate the demand. Table 22 lists the range of relevant parking demand rates along with the rates that were selected to estimate parking demand for this analysis. For the restaurant use, the selected rate reflects a high-turnover sit-down restaurant, which is at the high-end of food service rates. The rate was applied to the entire size of the combined restaurant spaces, which is a conservative assumption since a mix of restaurant types—including a coffee and/or sandwich shop—could occupy a portion of the space, which would reduce the parking demand since those types of uses would peak at different times of day from a dinner restaurant. For the retail use, an average of various rates was used since the proposed space is large enough to accommodate a range of retail types.

Table 22. ITE Parking Demand Rates for Various Commercial and Service Uses

Land Use (ITE Land Use Code)	Description	Peak Parking Rate (Vehicles per 1,000 sf)	
		Weekday	Saturday
Food & Beverage Service			
High-Turnover (Sit Down) Restaurant–Serves Breakfast (932)	Full-service eating establishments with a typical duration of stay of 60 min or less.	8.34	10.18
High-Turnover (Sit Down) Restaurant – Does Not Serve Breakfast (932)	Same as above, but typically includes restaurants with lounge or bar	8.97	11.53
Brewery / Tap Room (971)	Facility to market a brewery's products. Facility could house social gatherings.	5.66	6.76
	Restaurant Rate Assumed for Analysis	**8.97**	**11.53**
Retail / Service			
Supermarket (850)	Free-standing retail store selling a complete assortment of food and household items.	2.47	2.93
Pharmacy / Drug Store without drive-in window (880)	Retail store that primarily sells prescription and non-prescription drugs, personal items some food products, and general merchandise.	2.46	1.82
Shopping Plaza (40-150 ksf) without Supermarket (821)	Integrated group of commercial uses that are managed as a unit.	3.11	2.40
Health / Fitness Club (492)	Private facility that primarily focuses on individual fitness or training. It typically provides fitness equipment, weight room, spa, locker rooms, pool, whirlpool, sauna, and sport courts.	5.20	3.46
Daycare (565)	Provides care for pre-school age children, normally during daytime hours.	2.27	n/a [b]
	Retail Rate Assumed for Analysis (Reflects average since likely to be a mix of uses)	**3.10**	**2.12**
Hotel			
Hotel (310)	Place of lodging that provides supporting facilities such as a full-service restaurant, concierge serve, valet parking, cocktail lounge, meeting rooms, banquet room and convention facilities.	0.64 / room	0.65 / room
Limited-Service Hotel (312)	Lodging, but with limited facilities such as a swimming pool or fitness room. These types of hotels do not have meeting rooms, restaurants, bar, or concierge services. May have a complimentary breakfast buffet.	0.66 / room	0.53 / room
	Hotel Rate Assumed for Analysis (Reflects limited-service hotel, since meeting rooms and restaurants would be provided elsewhere on site)	**0.66 / room**	**0.53 / room**

Source: Institute of Transportation Engineers, Parking Generation Manual, 6th Edition, October 2023.

a. The square footages are based on gross leasable area (gla) for the shopping center use, and gross floor area (gfa) for all other uses.

b. n/a – Not applicable. No rate published as most daycare facilities are not open on Saturdays.

Influence of Internal Capture

On a typical day without an event at the site, residents and hotel guests would make up a large share of the customers for many of the site's restaurant and retail uses. In addition, customers from outside the project could visit more than one use (e.g., a trip to pick up a child from daycare combined with a trip to a pick-up take-out food at an on-site restaurant). Those trips made within the development (known as "internal trips") are expected to occur on foot and would not generate additional parking demand.

To estimate an adjustment to parking demand based on this internal capture, trip generation factors that determine internal trips based on the size of each use were applied.[26] During the PM peak hour, an estimated 67% of the site's retail and 64% of the site's restaurant trips would be expected to come from on-site residents or hotel guests. Since parking demand for the restaurant uses would be higher a little later in the evening (after 6 P.M.), it was conservatively assumed that 50% of the customers for those uses would come from elsewhere on the site and would **not** generate additional parking demand.

4.1.4. Parking Accumulation Rates

Parking demand for the various land uses may occur at different times of day, which can allow some parking spaces to be shared. Parking accumulation rates from ITE's *Parking Generation Manual*, which show the percent of peak use by time of day, were used for the residential and commercial uses.

4.1.5. Shared Parking Demand on Non-Event Days

Parking demand for the residential and commercial uses on the site were derived using the rates described previously and presented in Table 22, reductions associated with internal and shared trips, and the ITE parking accumulation rates. The initial analysis assumed a paradigm where all parking stalls on the site could be shared, and excludes the demand associated with the Event Center. Figure 8 shows the peak demand for a weekday and Figure 9 shows the peak demand on a Saturday. Both figures reflect the mixed-use development program for Alternative 1.

As shown on both figures, the peak demand for the residential and hotel uses is predicted to occur overnight from the late evening to early morning when residents are at home and hotel guests are in their rooms. The peak for the restaurant and retail uses would occur midday (between 11 A.M. and 2 P.M.) and evenings (between 6 and 9 P.M.), generally corresponding with the lunch and dinner periods. The combined cumulative peak demand is forecast to occur on weekdays overnight, when the mixed uses (primarily the residential and hotel uses) would have an estimated demand of 426 vehicles. The evening demand would be just under 400 vehicles. The demand profile would be similar on a Saturday, although with slightly fewer vehicles during the peaks.

Analysis presented later in this report shows how parking supply needs would change if some of the parking is reserved for specific uses (e.g., secured residential or hotel parking). This would eliminate the ability to share parking with other uses.

[26] Determined based on procedures in the Institute of Transportation Engineers, *Trip Generation Handbook*, 2017; Chapter 6.

Figure 8. Total Parking Demand for Mixed-Use Development (Non-Event) – Weekday
(If All Parking Stalls Could Be Shared)

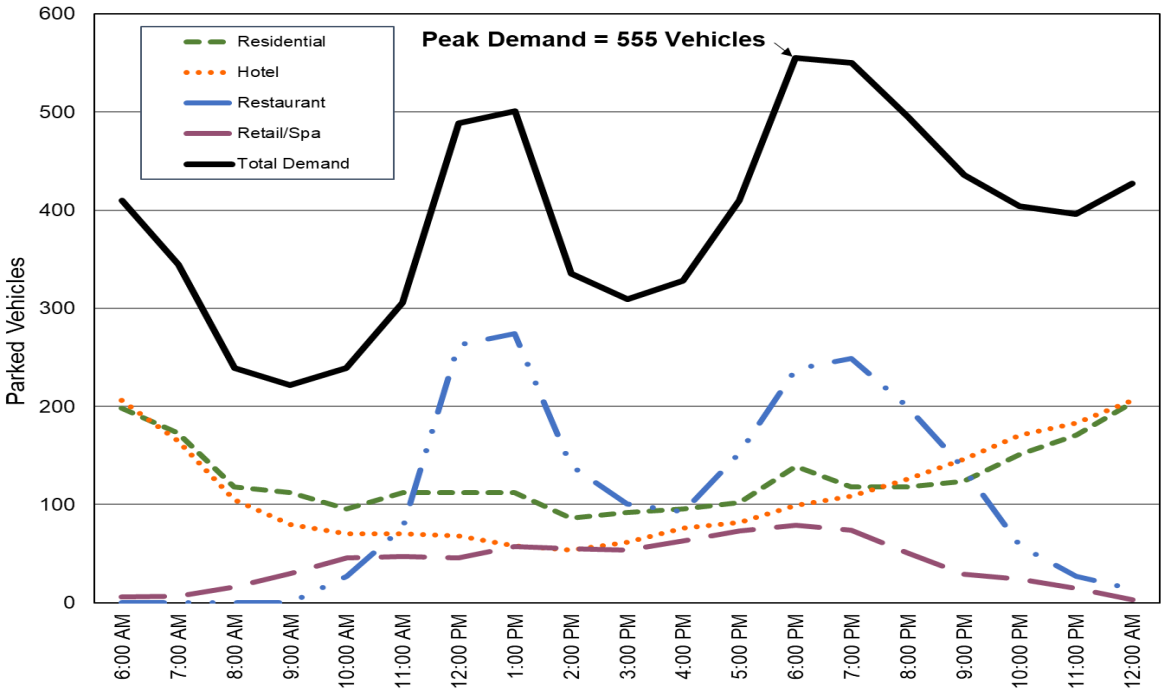
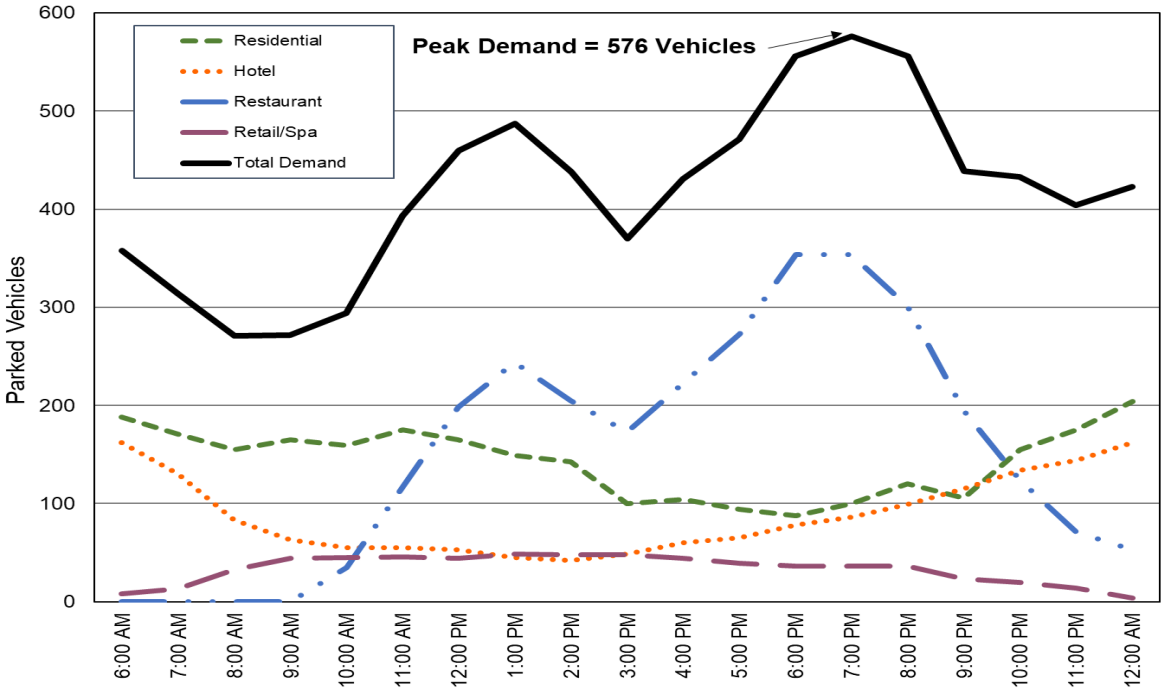


Figure 9. Total Parking Demand for Mixed-Use Development (Non-Event) – Saturday
(If All Parking Stalls Could Be Shared)



Source: Heffron Transportation, Inc., June 2024. Derived using ITE rates and accumulation patterns described herein. Both figures reflect the mixed-use development program for Alternative 1.

4.2. Event Center Parking Demand

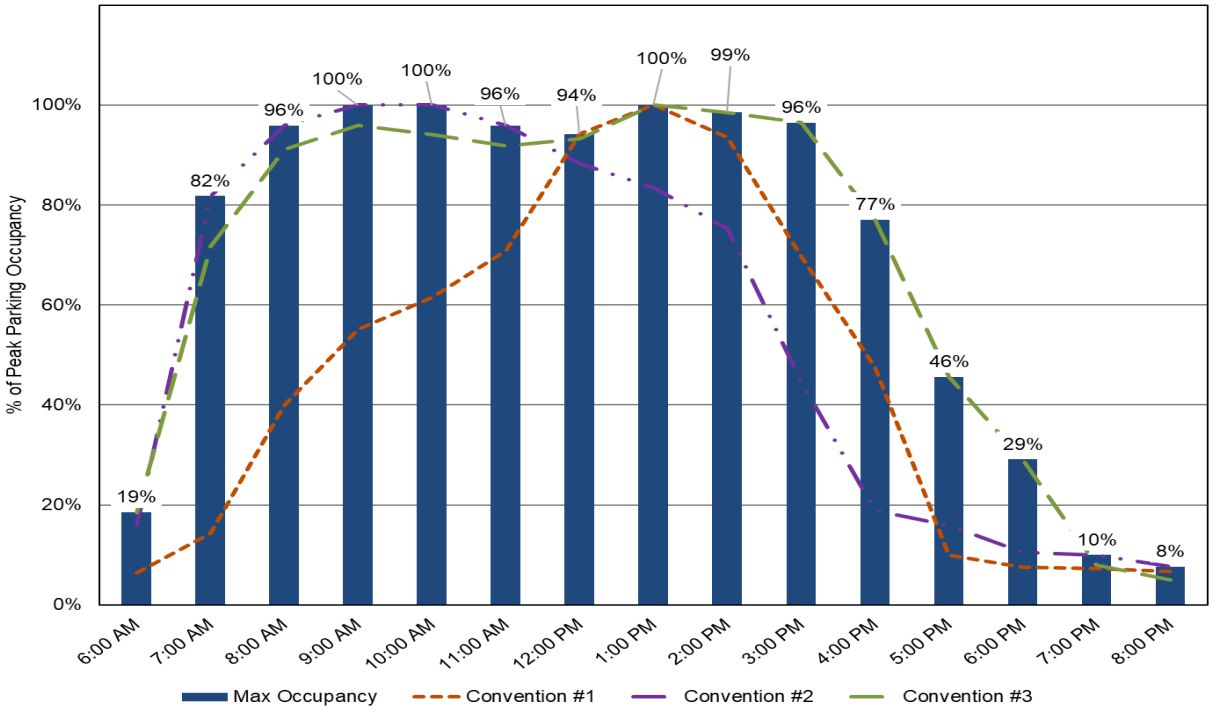
Parking demand rates for events were determined using data from a variety of sources previously described in Section 2.2. Parking demand is affected by many factors including whether the event attracts local or out-of-town patrons, whether those patrons are on site simultaneously (such as for a spectator event) or spread out over time (such as for a conference).

4.2.1. Parking Metrics

Non-Spectator Events

Non-spectator events include events such as meetings, banquets, conventions, and consumer shows. Parking rates and accumulation during day were derived for various types of meetings and conventions are based on detailed parking demand analyses performed for the Meydenbauer Convention Center (MCC).[27] The peak parking rates for various types of non-spectator events were previously listed in Table 12. How the parking fluctuates over the day, or the accumulation rates, were also derived from the MCC data. Figure 10 shows the profile for three representative conventions at MCC with different start times. Regardless of start time, the peak parking occupancies occurred between 9:00 A.M. and 1:00 P.M. Similar patterns were developed for representative meetings and consumer shows at the MCC, and those types of events also have peak occupancy during midday hours. As described later, it would be possible to hold a daytime meeting or convention and an evening concert on the same day since the parking demand for those two types of events would have very little overlap.

Figure 10. Parking Accumulation Profile – Representative Conventions at MCC



Source: MCC. Data compiled by Heffron Transportation, Inc. The different lines reflect three different conventions that occurred on different days at the MCC, and the blue bars indicate the maximum parking occupancy that occurred during the three events.

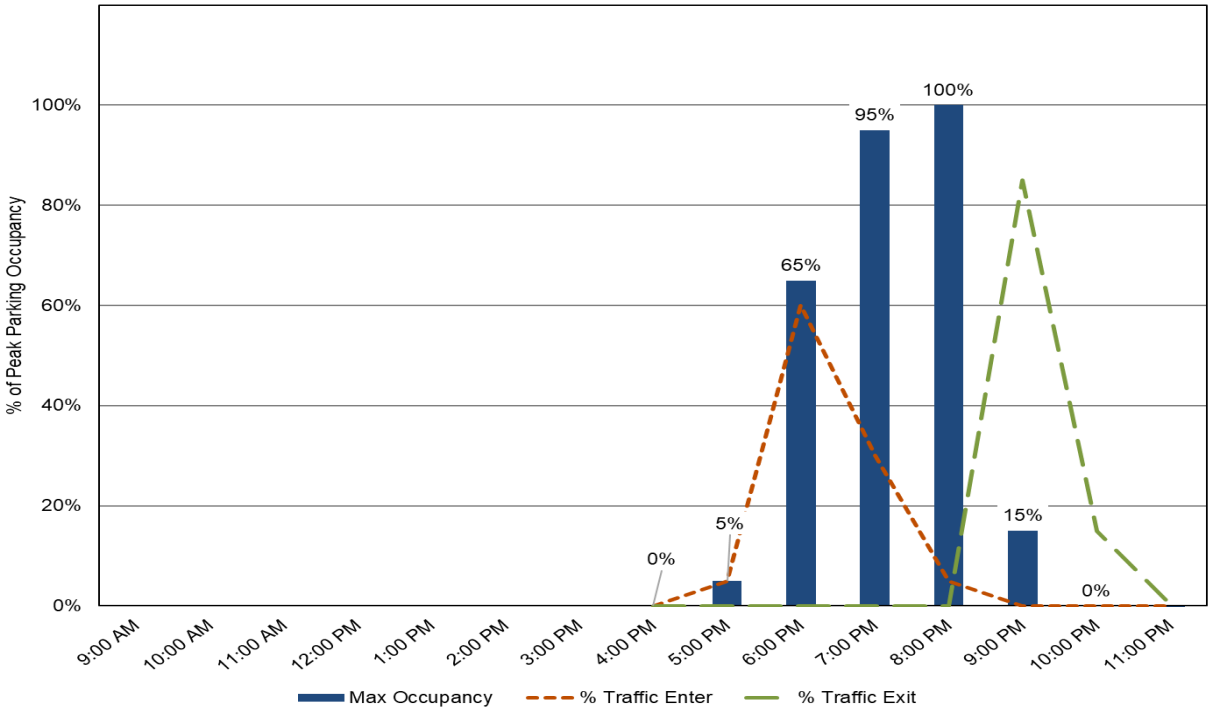
[27] Heffron Transportation, Inc., *Meydenbauer Center Expansion Trip Generation and Parking Demand Analysis (DRAFT),* December 12, 2019.

Parking Demand Rates for Spectator Events

Concerts, live performances, and sporting events have trip and parking characteristics that differ from those of typical conventions, meetings, and consumer shows because they have a set start time, and typically attract attendees who travel and attend with others as a group. These types of events also usually occur in the evening or on weekends when they do not conflict with normal work or school hours. Parking for spectator events were derived using vehicle occupancy information previously presented in Table 11.

Parking accumulation for a spectator event was derived from the arrival patterns for a spectator event previously described in Section 2.2. The accumulation profile on Figure 11 shows that peak demand for an evening event occurs well after the times when most parking demand associated with daytime meetings and conventions has dissipated.

Figure 11. Parking Accumulation Profile for a Spectator Event (Start Time = 7:00 P.M.)



Source: Heffron Transportation, Inc. Based on attendee entry data collected at six Seattle Thunderbirds hockey games in fall 2006.

4.2.2. Peak Parking Demand for Lynnwood Event Center

Peak Event-Related Demand

The derived event parking demand rates were applied to the various types of events that could occur at the Lynnwood Event Center. Table 23 summarizes those findings by type of event. Most of the planned events would have a peak demand below 400 vehicles. The highest demand would occur for an outdoor concert with a maximum attendance of 2,500 people. This size event is estimated to generate a peak demand of 800 vehicles, and could occur 5 to 10 times per year. The next highest demand could occur with a large meeting that attracts local attendees, which could generate a peak demand of 470 vehicles.

Table 23. Potential Events and Parking Demand for Expanded Lynnwood Event Center

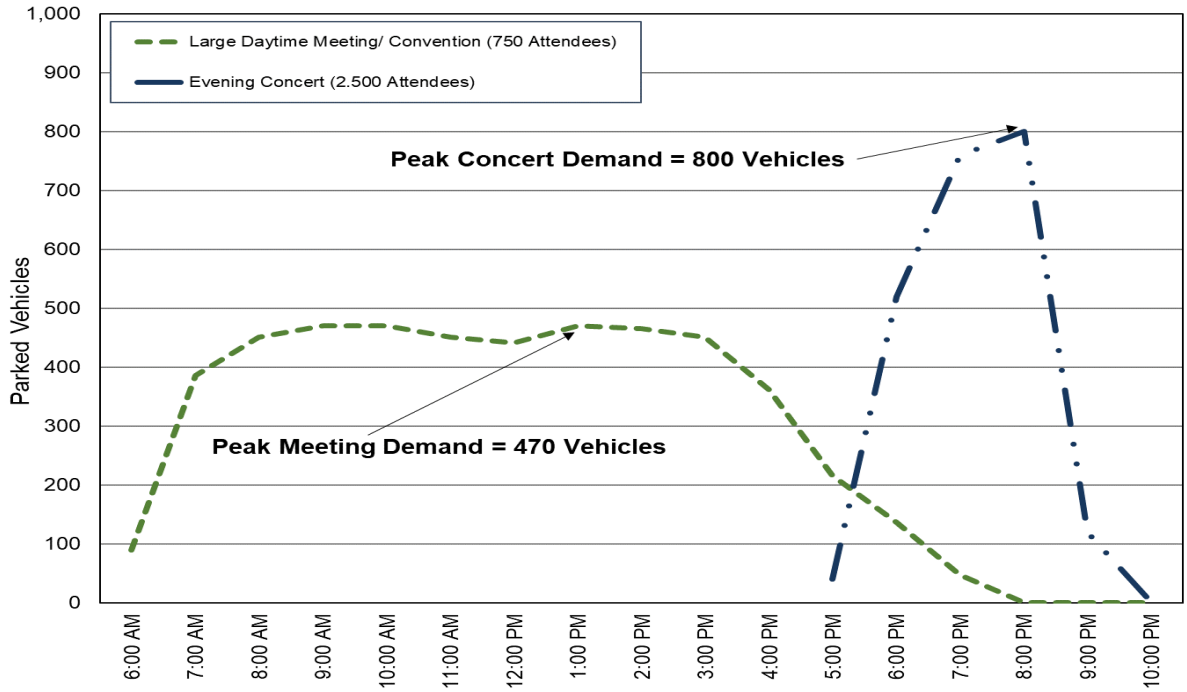
Event Type [a]	Number of Events per Year [a]	Max Attendees per Event [a]	Peak Parking Demand Rate (Veh/Attendee) [b]	Peak Parking Demand [c]
Large Events				
Consumer Show	2 – 3	2,500	0.14	350
Outdoor Concerts	5 – 10	2,500	0.32	800
Medium Events				
Indoor Concerts	15 – 35	1,200	0.32	380
Family Entertainment/Show	2 – 4	1,100	0.32	350
Conference/Large Meeting	10 – 18	750	0.62	470
Sporting Exhibition (e.g., High School Tournament)	0 – 1	750	0.32	240
Small Events				
Sporting Event	1 – 2	500	0.32	160
Galas	10 – 14	350	0.48	170
Conference	15 – 25	250	0.62	160
Social or Business Banquet	10 – 15	250	0.48	120
Meetings	20 – 15	50	0.62	30
Total All Events	**90 – 139**			

a. Source: JLL, July 2023. Metrics reflect events in the entire Lynnwood Event Center with the proposed expansion.
b. Heffron Transportation, Inc., based on studies for other convention centers, sports arenas, and concert venues.
c. Demand = Max Attendance x Parking Demand Rate.

Event Parking Profile

Parking profiles were created for the two types of events with the highest anticipated parking demand. The largest concerts are expected to be held in the evenings with a start time of 7:00 P.M. or later. The large meetings are expected to have a midday peak. Figure 12 shows the event parking profiles. As will be described later, the site would be able to accommodate a large daytime meeting with modest on-site parking management. The largest concert, however, would require off-site parking. It is noted that the two types of events could occur on the same day without substantially increasing the cumulative parking need. If the two large events shown on the figure were scheduled for the same day, the overlapping parking need could be highest at about 6:00 P.M. when vehicles from the daytime event are still exiting the site and concert attendees are arriving; however, the cumulative demand is estimated to be about 810 vehicles, just slightly higher than the evening event's peak demand. This condition would already require off-site parking, so some buffer in the quantity of off-site parking would accommodate the dual event days.

Figure 12. Parking Accumulation for the Largest Events



Source: Heffron Transportation, Inc., June 2024.

4.3. Lynnwood Code Requirements

4.3.1. Existing Parking Code

The LMC outlines parking supply requirements for uses in the Center City (CC) zone where the project is located. LMC Table 21.60.3 lists the minimum number of spaces for various land uses. For several of the uses, including places of assembly such as the Event Center, the code applies a 20% reduction to rates listed in LMC Table 21.18.03.

LMC §21.60.400.E allows that, "*Uses sharing a common parking facility that is accessible to all respective uses may reduce the required number of stalls by 40 percent.*" As described herein, the retail, restaurant, health club, and some of the hotel parking would share parking in the site's main parking garage as well as some floors of the apartment parking garages. Therefore, a 40% reduction has been applied for those uses. For the Event Center, the rate for number of seats was applied to the largest anticipated event (2,500 attendees). Table 24 lists the code-required parking rates along with the allowed reductions applied by land use.

Table 24. Code-Required Parking Supply for PFD Site

Land Use	Size [a]	LMC §21.60.3 Minimum Requirements [b]	Code Allowed Reduction	Stalls Required
Multi-Family Residential	408 units	0.5 stalls / unit		204
Hotel	312 rooms	1 stall / room	40% [d]	187
Retail	18,840 sf	3 stalls / 1,000 sf	40% [d]	34
Restaurant	61,010 sf	1 stall / 100 sf [c]	40% [d]	366
Health Fitness	11,500 sf	5 stalls / 1000 sf	40% [d]	35
Places of Assembly (Event Ctr)	2,500 seats [e]	1 stall / 4 seats	20% [f]	500
Total				**1,326**

a. Freiheit Architecture, Yield Study, May 7, 2024.
b. Based on requirements in LMC 21.60.400
c. CC zone lists parking requirement for restaurant at 1 stall per 4 seats. However, seating capacity is unknown at this time, so the rate from LMC Table 21.18.02 of 1 stall per 100 sf was used for a Dine-in Restaurant.
d. Reflects 40% reduction allowed by LMC §21.60.400 for uses that share parking.
e. Based on JLL estimates of maximum attendance for various types of events.
f. Reflects 20% less than required in Table 21.18.06 per guidance in LMC §21.60.400

Based on the code analysis, the Master Plan would be required to provide 1,326 parking stalls. Nearly 40% of the required stalls would be associated with the Event Center. The 1,026 stalls proposed is 300 fewer than required by code. As described in the next section, it is expected that off-site parking would be needed for the largest events. This is allowed by LMC §21.60.400.E.3, which states, "*Parking may be located off site, so long as it is within 1,000 feet of the property (measured along public sidewalks or walkways), is connected to the property by sidewalks or walkways, and is tied to the site by a contractual agreement that is filed with the city and deed of record at the county.*" Section 4.4 of this memorandum describes the recommended allocation and management of on-site parking, and triggers for when off-site parking may be required.

4.3.2. Recommended Development Agreement Terms

A few changes to the City of Lynnwood's parking requirements are recommended based on actual parking demand and use characteristics presented previously.

- **Reduce parking rate for hotels.** The City's rate is reflective of a fully occupied hotel where every guest drives, and does not anticipate the various ways visitors to the project are expected to access the site. Given the project site's proximity to transportation amenities such as the Lynnwood Link Station and several adjacent bus routes, in addition to the likely use of rideshare drop off areas. ITE's parking rate for a hotel—0.66 per hotel room—is more appropriate than the City's code standard. This reduction of the City's base parking requirement will be coupled with a parking demand management strategy that will ensure that all uses within the project have adequate access to parking facilities, potentially including both on- and off-site parking stalls.

- Extend distance for off-site parking from 1,000 feet to ½-mile for special event users. As described later, there is extensive surface parking in Lynnwood that could be shared with other uses, including for events. The experience at other regional venues has shown that attendees are willing to walk long distances between parking and the event venue.[28] Increasing the allowable distance to off-site parking would increase flexibility to negotiate with parking lot owners, account for future infill that may remove surface parking lots, and also help to disperse traffic away from the event venue. The 1,000-foot distance would still apply if off-site parking is required for non-event-related land uses.

[28] Local examples where parking is provided more than 1,000 feet from an event venue include Husky Stadium where both the north half of the E-13 parking lot and Red Square Garage are located more than 0.5 miles from the stadium entrance; TMobile Park, where several major parking facilities are beyond 0.5 miles from the venue entrance (Union Station Garage, North Lot, King Street Center and others); Climate Pledge Arena in Seattle where the distance between the venue entrance and 5th Avenue Garage (one of the primary event parking locations) is about 0.4 miles; ShoWare Center in Kent where the distance between the venue entrance and the Kent Station parking garage (listed on the ShoWare Center website as a parking location) is about 0.45 miles; and Angel of the Winds Arena in Everett where the distance to the Everpark Garage is about 0.3 miles.

4.4. Recommended Parking Allocation

4.4.1. Parking Allocation and Use

Table 25 shows the number of parking stalls anticipated in each building with the mixed-use development Alternative 1. The recommended allocation of stalls is based on the City zoning requirements as well as information in this report about how various uses may be able to share stalls. Overall, the project proposes 1,030 on-site parking stalls, of which 308 stalls would be reserved for exclusive use by residents or hotel guests, and 722 stalls would be unreserved and available to share by various uses.

Table 25. Lynnwood PFD Site – Parking Supply and Recommended Allocation – Alternative 1

Building	Number of Parking Stalls Provided [a]	Recommended Stall Allocation					
		Residential	Hotel	Retail	Restaurant	Health & Fitness	Event
Apartment – West	187	100		87 Shared for Commercial Uses			
Apartment – East	150	104		46 Shared for Commercial Uses			
Hotel	104		104				
Garage Building	579		579 Shared by All Uses				
On-Street / Misc.	10 [b]	10 Shared by All Uses					
Total Reserved	**308**	**204**	**104**				
Total Shared	**722**	**722 Shared**					
Total All	**1,030 Stalls**						

a. Freiheit Architecture, August 29, 2024. Analysis reflects mixed-use development Alternative 1.

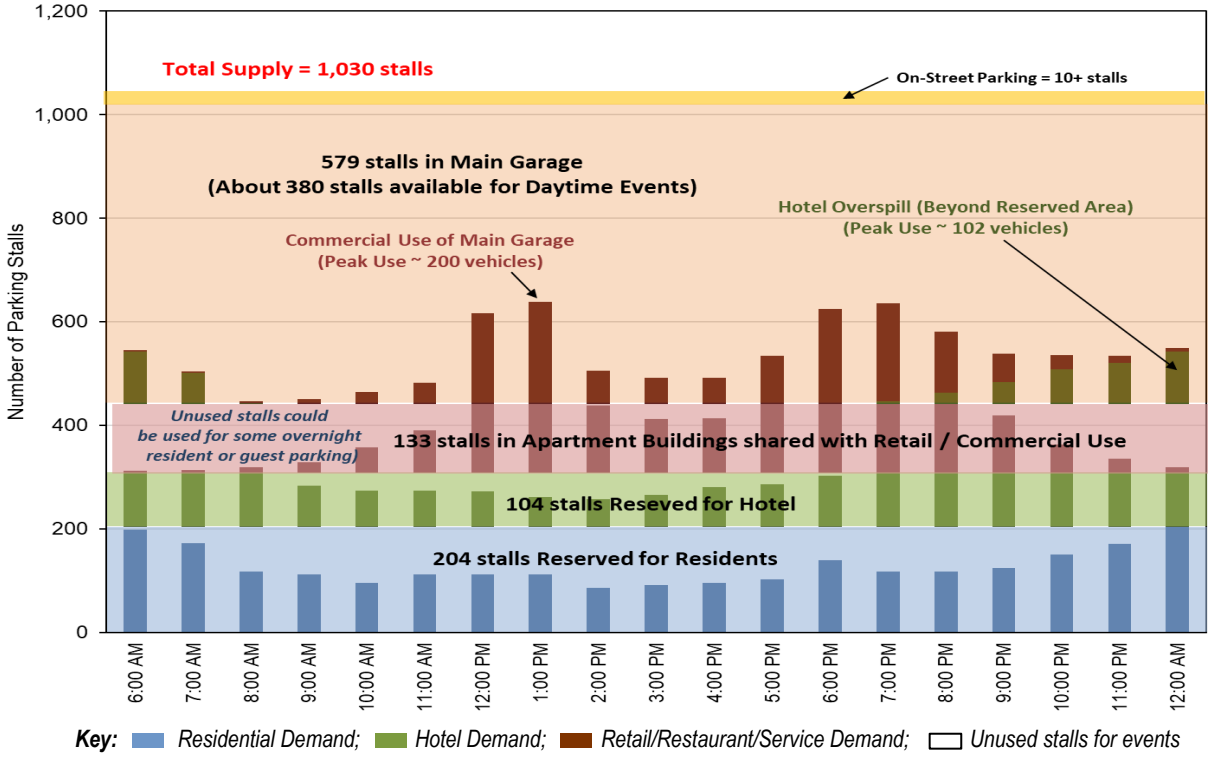
b. Some on-street parking spaces (10 to 20) could be removed during events when internal streets are closed to vehicular traffic.

4.4.2. Parking Use of Allocated Areas – Non-Event Days

Figure 13 shows the parking demand profile within each of the recommended parking areas on a day with no event. For the purpose of this analysis, shared parking floors within the two apartment buildings were assumed to accommodate about two-thirds of the combined retail, restaurant, and health club parking demand; although on non-event days, more of that demand could occur in the main garage. It was assumed that the main garage would be used for overnight hotel-generated demand that could exceed the supply within the hotel's underground parking area.

The analysis shows that even allowing for reserved hotel and residential space in the middle of the day that could not be shared with others, there would be about 380 unused parking stalls on the site on non-event days. At most, about 200 parking stalls in the main garage would be needed to serve the shared demand associated with the commercial uses and overflow hotel parking need.

Figure 13. Recommended Parking Allocation – Potential Use on Non-Event Days



Source: Heffron Transportation, Inc., September 2024.

4.4.3. Parking on Event Days

Parking supply can be managed in many different ways on event days. Two potential options were evaluated and are described below.

- **Option 1: Share Use of main garage** – This option would keep the paradigm evaluated above with about 200 spaces in the main garage shared with other commercial uses, including overflow parking for the hotel. This would provide about 380 spaces for daytime or evening events. This would accommodate many of the small to medium-sized events that could occur at the Event Center (see Table 23). However, this option could present logistical challenges during large events with a set start and end time (e.g., concerts and sporting events) that have surges in ingress and egress traffic. It would make it difficult to implement event traffic control, such as reversing internal parking garage lanes to be all inbound before the event and all outbound after the event. It would also be difficult to collect parking fees since it would be harder to separate event attendees from other customers.

- **Option 2**: **Reserve main garage for exclusive event use –** This option, which is common for large event venues such as Lumen Field and Climate Pledge Arena, would prohibit non-event users from parking in the main garage when there are certain size events expected. Under this scenario, all 579 parking stalls would be available for event use, and the option could provide the best operations for both paid parking and traffic control. Shared parking in the residential buildings (133 stalls) would still be available for customer parking when the main garage is reserved for event attendees.

  During the largest events, it is anticipated that many of the site's commercial use customers could

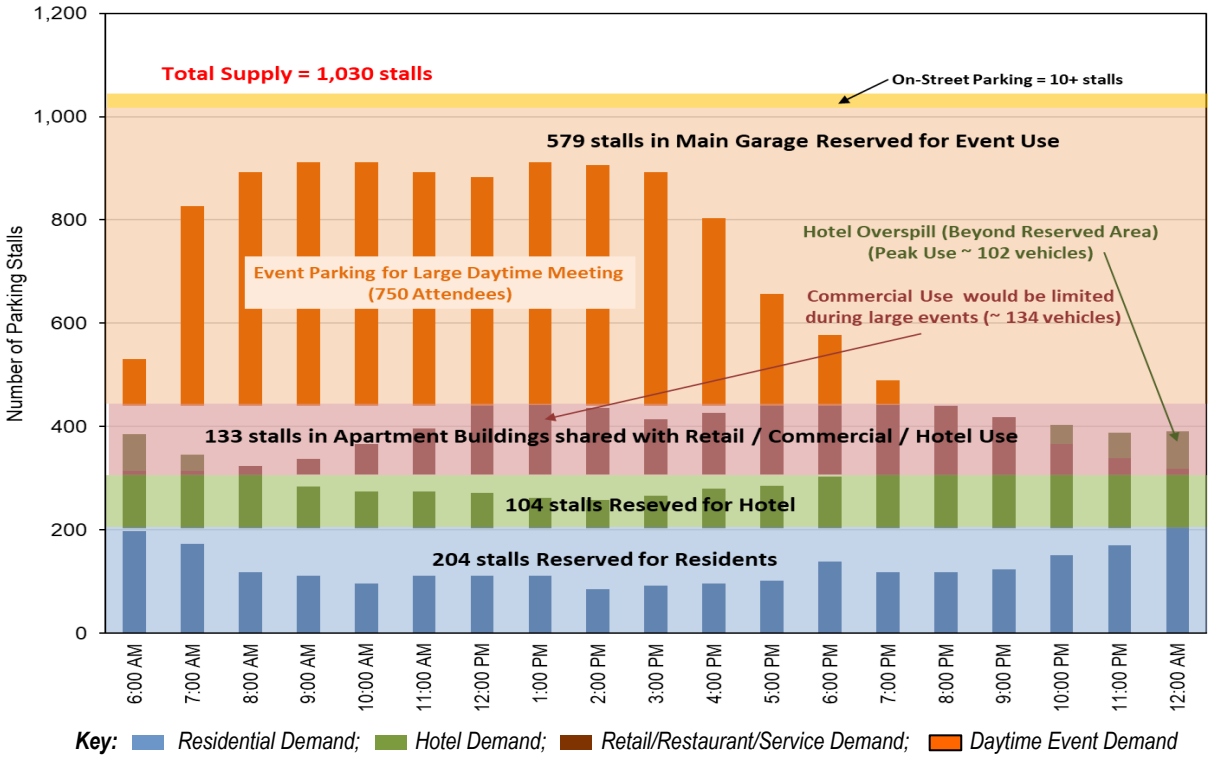
also be attending the event. This would reduce the estimated restaurant and retail parking demand since such users would be counted as event parkers. The shared parking available in both apartment buildings could continue to accommodate customers not associated with events (estimated to be about 40% of total customers who would drive to the site but not attend an event). However, parking management measures would be needed to prevent those spaces from being "poached" by event attendees using time limits, validation, or payment requirements.

Finally, some accommodations may also be needed to serve hotel overspill. This could include securing overnight parking from other nearby sites, or using valets to stack-park vehicles within the hotel garage.

Figure 14 shows how the proposed parking allocation could be used on a day with a large daytime event. Option 2, with full use of the main garage for events, would accommodate the anticipated demand associated with large local meetings where most attendees are expected to drive to the site. The 551 parking spaces could accommodate events with nearly 900 attendees.

Option 2 would also accommodate the parking demand for concerts up to about 1,700 attendees. Beyond that threshold, off-site parking would be required. As noted in Table 23, a capacity concert event (2,500 attendees) would generate a peak parking demand of about 800 vehicles. Under Option 2, where the full main garage would be available, the overspill is estimated to be 250 vehicles that would require off-site parking.

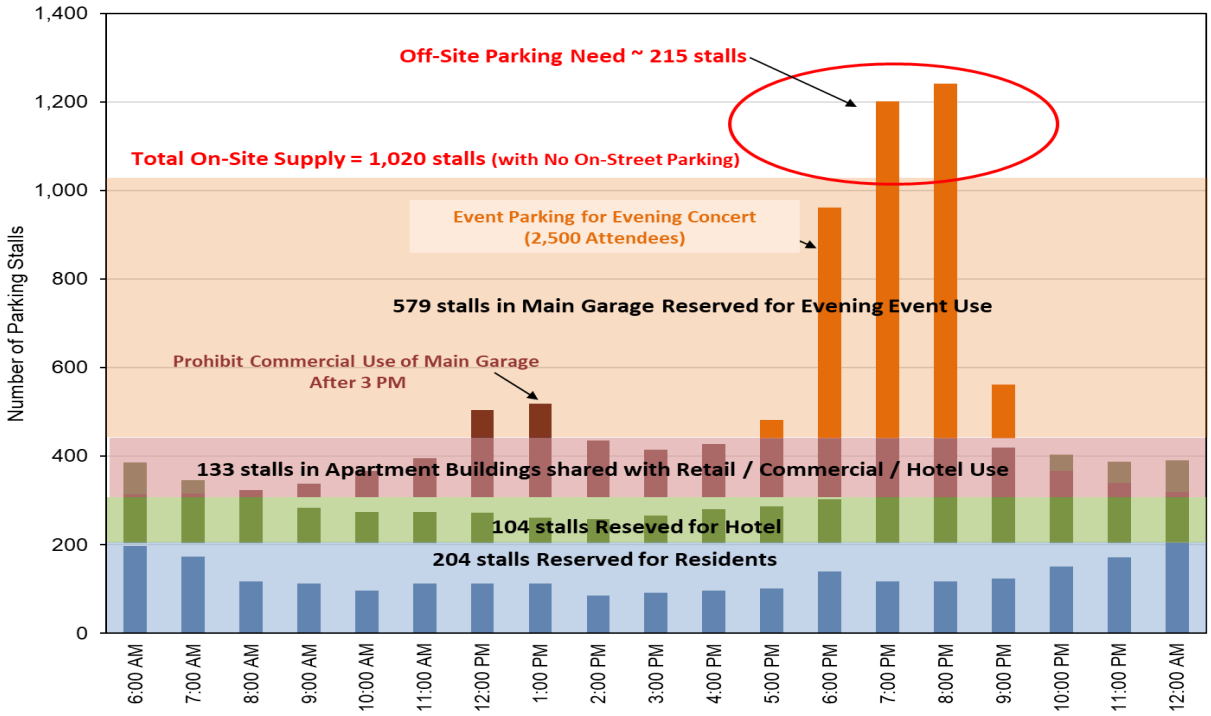
Figure 14. Recommended Parking Allocation – Potential Use on Large Event Days



Source: Heffron Transportation, Inc., September 2024.

Figure 16 shows the parking demand with an evening concert with 2,500 attendees. Under this condition, the main parking lot should be cleared of commercial users after the lunch peak (by about 3:00 P.M.). The full garage could then be used for concert attendees, and traffic flow into and out of the garage could use all available ramp lanes for ingress before the event and egress after the event. Commercial users could still have some parking available in the shared-floors of the residential buildings for customers who may not be attending the concert. This allocation example shows that if all on-site parking is used, the overflow parking need would be 215 stalls. However, some concert attendees may prefer off-site parking if it is lower cost or allows faster egress after the event. Therefore, parking in the range of 300 to 400 stalls should be secured to provide overspill capacity.

Figure 15. Recommended Parking Allocation – Potential Use with Capacity Evening Concert



Source: Heffron Transportation, Inc., September 2024.

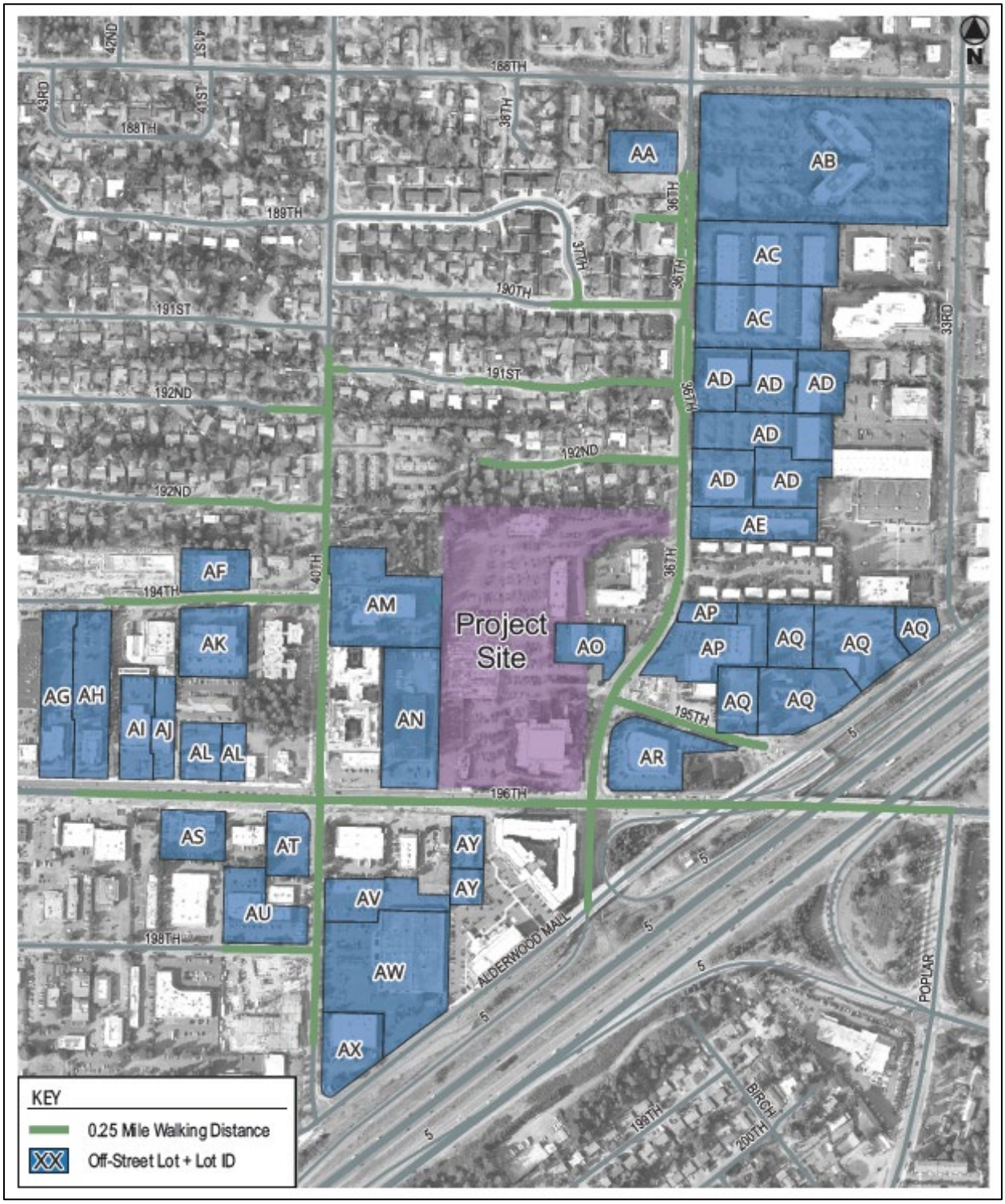
4.4.4. Off-Site Parking Opportunities

There is a substantial amount of parking near the Lynnwood Event Center that could be "shared" with event attendees during times when it is not used for its primary land-use function. For example, most office and industrial complexes only need parking during the day on weekdays, so they may be available to be shared for evening or weekend events with partnership agreements between the PFD and owners and/or tenants. Similarly, parking at churches is mostly needed on weekends (primarily Sundays) and might be able to be shared on weekdays.

Heffron Transportation inventoried parking within ¼-mile and ½-mile walking distances of the Lynnwood Event Center site in fall 2023. Only parking associated with commercial or institutional uses was studied; residential parking was excluded. Figure 16 and Table 26 show that there are 37 parcels with parking located within ¼-mile of the site. Collectively, these parcels have about 3,500 parking spaces.

As described previously, a capacity concert event would need an estimated 215 off-site parking spaces to accommodate the excess demand that could not be accommodated on site.

Figure 16. Parking Lots within 1/4-Mile of Lynnwood Event Center



Source: Heffron Transportation, Inc., July 2023. Basemap from Google Earth, accessed July 2023.
Includes only parcels with commercial and/or institutional uses (none are residential).

Table 26. Parking Lots within 1/4-Mile of Lynnwood Event Center

Lot ID	Parcel ID	Address	Land Use	Number of Parking Stalls
AA	372600400101	18820 36TH AVE W	691 Religious Activities	62
AB	372600200101	3400 188TH ST SW	639 Other Business Services	684
AC	372600200301	NA	659 Other Professional Services	110
AC	372600200404	19019 36TH AVE W	659 Other Professional Services	110
AD	372600200504	19101 36TH AVE W	639 Other Business Services	50
AD	372600200505	19105 36TH AVE W	639 Other Business Services	65
AD	372600200601	19221 36TH AVE W	639 Other Business Services	70
AD	372600200501	19109 36TH AVE W	639 Other Business Services	62
AD	372600200603	19203 36TH AVE W	639 Other Business Services	175
AD	372600200602	19217 36TH AVE W	639 Other Business Services	80
AE	372600200703	19231 36TH AVE W	659 Other Professional Services	50
AF	372600500701	4111 194TH ST SW	651 Medical & Other Health Services	54
AG	372600500903	4231 196TH ST SW	581 Eating Places (Restaurants)	110
AH	372600500904	4221 196TH ST SW	581 Eating Places (Restaurants)	145
AI	372600500802	4201 196TH ST SW	539 Other Retail Trade	55
AJ	372600500803	4201 196TH ST SW	539 Other Retail Trade	41
AK	372600500702	4100 194TH ST SW	639 Other Business Services	86
AL	372600500703	4109 196TH ST SW	581 Eating Places (Restaurants)	45
AL	372600500706	4029 196TH ST SW	581 Eating Places (Restaurants)	27
AM	372600401703	19401 40TH AVE W	639 Other Business Services	270
AN	372600401701	3909 196TH ST SW	519 Other Wholesale Trade	70
AO	372600400605	19410 36TH AVE W	639 Other Business Services	52
AP	372600200903	19417 36TH AVE W	539 Other Retail Trade	93
AP	372600200905	19409 36TH AVE W	581 Eating Places (Restaurants)	13
AQ	372600201802	3511 195TH PL SW	691 Religious Activities	60
AQ	372600200907	NA	691 Religious Activities	51
AQ	372600200901	19400 33RD AVE W	639 Other Business Services	37
AQ	372600201801	3403 ALDERWOOD MALL BLVD	691 Religious Activities	65
AQ	372600200908	NA	691 Religious Activities	155
AR	372600201400	3611 196TH ST SW	539 Other Retail Trade	103
AS	372600701500	4120 196TH ST SW	581 Eating Places (Restaurants)	62
AT	372600701306	4010 196TH ST SW	581 Eating Places (Restaurants)	74
AU	372600701311	4001 198TH ST SW	539 Other Retail Trade	n/a*
AV	372600701007	19725 40TH AVE W	539 Other Retail Trade	56
AW	372600701008	19801 40TH AVE W	559 Other Retail Trade	132
AX	372600701105	19909 40TH AVE W	559 Other Retail Trade	75
AY	372600701003	3806 196TH ST SW	637 Warehousing & Storage Services	18
AY	372600701002	3810 196TH ST SW	639 Other Business Services	36
			Total Stalls	**3,503**

Source: Parcel and owner information from Snohomish County Assessor, accessed July 2023. Number of parking stalls counted by Heffron Transportation, Inc., July 2023.

** - New development is being constructed on the site, so parking no longer available.*

4.5. Parking Effect of Potential Land Use Changes

Future development could change with market economics. Therefore, sensitivity testing was performed to assess how the following development program trade-offs could affect parking. Four scenarios previously described were evaluated:

A. Increase in residential density (increase from 408 to 550 units in the residential buildings).

B. The hotel is eliminated and replaced with a residential building. This scenario would remove 312 hotel rooms and add 245 residential units.

C. A taller hotel is built, which could add an estimated 100 hotel rooms.

- Adding up to 30,000 sf of commercial space.

4.5.1. Increase in Residential Units

If additional residential units are developed, the amount of parking for residents would also need to increase to meet the code requirement. The analysis assumed that resident parking would be reserved and not shared with commercial or event uses. Therefore, this change would not affect the parking need for other uses on the site.

4.5.2. Change from Hotel to Residential

If the hotel building was changed to a residential building, it would result in a decrease in units since hotel rooms are smaller than residential units. Based on the parking metrics described above, this would reduce overall site demand by up to 87 vehicles during the overnight hours, with a reduction of between 30 and 80 vehicles during the peak evening hours when demand may overlap with restaurant or event use. Parking supplied for the residential building would need to meet code requirement.

4.5.3. Increase in Hotel Rooms

As with the increase in resident rooms, the amount of parking for the hotel would also need to increase to meet the code requirement. If this could not occur under the hotel, some off-site parking for the hotel may be needed since the peak hotel parking need could conflict with event parking and/or resident parking elsewhere on the site.

4.5.4. Added Commercial Space

An additional 30,000 sf of commercial space could increase site demand (compared to the proposed program) by up to 47 vehicles during the midday hours if it is leased as retail space. Demand during the evening hours would be less, ranging from 27 to 34 vehicles. This change would result in a much larger increase in parking demand if the space is leased as restaurant, increasing demand by 100 to 120 vehicles on weeknight evenings, and by 150 to 170 vehicles on Saturday evenings.

As shown later in Section 4.4, there is ample on-site parking available for additional commercial space when there are no or small events at the site. On event nights, any increases in the mixed-use demand could require more off-site parking to accommodate attendees for large evening events.

5. MITIGATION

This section describes the transportation-related mitigation for the proposed PFD project. This includes mitigation required by the PAO as well as transportation features to include in the site's internal roadway system and parking management strategies for large events. Section 5.1 lists mitigation required by the Planned Action Ordinance: Sections 5.2 through 5.4 are intended to address traffic and parking impacts beyond the scope of what the PAO EIS considered.

5.1. Mitigation Required by Planned Action Ordinance

The proposed PFD project is within the Development Thresholds set forth in the City of Lynnwood's PAO (LMC §17.02.300.C.3.b). Two measures required by the PAO would mitigate the transportation-related impacts of the project to the broader street and highway network:

- **Pay Transportation Impact Fees** – The City of Lynnwood's transportation impact fees are intended to fund transportation capacity improvements that serve new growth in the Center City subarea. In the vicinity of the site this includes major improvements such as the widening of 196th Street SW (already completed) and the new Poplar Way Bridge across I-5 (expected to start construction in 2025). Both of those projects alleviate congestion on major arterials, and are also expected to relieve congestion at the nearby I-5 interchange ramps.

- **Implement a Transportation Demand Management (TDM) Program –**Elements of the TDM Program are described in Section 5.3. These measures are expected to reduce vehicle trips associated with the project.

5.2. Mitigation Related to Internal and Frontage Roadways

1. PFD will continue to collaborate with the City of Lynnwood on construction of the new 194th Street SW roadway on the PFD's property to allow for a future western extension to 40th Avenue SW while avoiding conflicts with operations of the PFD's Master Plan.

2. PFD is anticipated to dedicate public right-of-way to the City for design and construction of 196th Street SW. Signalization will be necessary for the new 194th Street SW/36th Avenue SW intersection. It is expected that the signal will be installed by the City as part of the 194th Street SW construction.

3. PFD is anticipated to dedicate public right-of-way to the City for design and construction of a new public street along the west side of the PFD site (referred to as 38th Avenue SW), and to gain approval from the WSDOT for a new public street intersection at 196th Street SW. It is expected that the new intersection would be restricted to right-in/right-out only, and controlled by a stop sign on the southbound approach of 38th Avenue SW.

4. PFD will construct and update other internal private roadways shown on the site plan for the Master Plan including a pedestrian-focused street (referred to as 37th Avenue SW) and internal connections between that street and 38th Avenue SW. Sidewalks and landscaping will be provided along these internal streets per the site plan for the Master Plan.

5. PFD will retain its signalized access at 195th Street SW/36th Avenue SW for its loading / freight access.

6. PFD will make City-required frontage improvements along 196th Street SW and 36th Avenue SW.

5.3. Trip and Parking Demand Reduction Strategies

The following strategies are recommended to reduce the site's vehicle trips and parking demand:

1. Residential building management should provide prospective tenants with a comprehensive package of information about transit, walking, biking, and rideshare services and facilities in the site vicinity.

2. All residents should be charged for parking as a separate cost from the rent (unbundled). A tiered rate system could be considered with higher rates for secured parking, and lower rates for use of available shared parking at the site.

3. Building management should actively support residents' access to public transportation and inform them of the following free and reduced fare options:

    a. Families living at the development with incomes of less than 30% area median income (AMI) would qualify for discounted fare Orca LIFT cards;

    b. All children and young adults (18 and under) are eligible for free Orca cards and ride free; and

    c. Residents with disabilities may qualify for the Sound Transit Reduced Fare Permit and Access vans.

4. Building management should provide secured and covered bike parking for employees and residents, along with short-term bike racks for visitors and customers near the commercial uses and Event Center.

8. If and when it becomes viable at the site, designate on-site parking spaces (in publicly-accessible garage or along internal streets) for an independent Car Share service (e.g., ZipCar).

9. If and when it becomes viable in Lynnwood, support micro-mobility transportation services (e.g., Lime Bike and Scooter) by designating suitable end-of-trip scooter and/or bike parking and charging station(s) at the site.

10. Participate in a City-wide Transportation Demand Management (TDM) program or organization if one is created in the future.

5.4. Parking Management Strategies

5.4.1. Parking Management Measures for Non-Event Uses

1. Allocate parking on the site to various uses as presented in Table 25, including use of parking gates and signage to separate reserved parking areas from shared parking areas.

2. Reserved parking for residents should be limited to the number of stalls required by code. Residents should be required to pay for reserved parking.

3. As part of their lease, all tenants (including residents) should be provided with the parking rules about use of shared spaces at the site as well as use restrictions in the main garage when it is needed for an event. All tenants should be informed that vehicles may be ticketed or towed if parked inappropriately.

4. All resident and guest vehicles should be required to display a parking permit in their window (based on the type of parking) to enhance enforcement of the rules.

5. Except on days with large events, the main garage can be shared among site uses, including the Event Center. However, to ensure vehicles are not in the garage when needed on event days, overnight parking by residents and guests should not be allowed in the main garage.

6. The hotel could be designed to have fewer parking spaces than required by code if agreements can be reached to share other on-site or off-site parking. If the main garage is used for overspill hotel parking, it should only be for valet parking of hotel guests' vehicles. A back-up shared location (such as in an apartment garage) should be identified for event days when the entire main garage is needed for event parking. Valets may also be able to stack-park some overspill demand within the hotel garage or other on-site facilities.

5.4.2. Parking Management Measures for Events

The following additional measures would be needed for events.

1. Encourage event patrons to utilize transit and carpool modes of travel to reduce vehicle trips and parking demand.

2. On days when the entire main garage is needed for event parking, post signs at garage driveways that the parking garage will be closed (at least 3 hours prior to the event).

3. Enact policies and/or install infrastructure to discourage event use of shared commercial parking in the apartment buildings. This could include gates that restrict access to validated or authorized users (with keycards); time limits, enforcement and other programs.

4. Off-site parking is expected to be needed for large meetings / conventions with more than about 900 attendees from the local region, and for concerts with more than 1,800 attendees. The PFD should secure agreements with near-site property owner(s) to use 300 to 400 parking stalls during evening and weekend events to provide a buffer for the total parking needed and to accommodate days with multiple events.

5. Consider pre-selling on-site and off-site parking for large events to reduce traffic circulation prior to the event. Use pricing to encourage use of off-site facilities. Pre-sale would also improve communication with attendees about travel routes to on-site and off-site parking, and reduce potential of parking in non-authorized areas.

6. Supplement signage along desired pedestrian routes between designated off-site parking areas and the Event Center.

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APPENDIX A

LEVEL OF SERVICE DEFINITIONS

Appendix A
Level of Service Definitions

Levels of service (LOS) are qualitative descriptions of traffic operating conditions. These levels of service are designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delays. Levels of service for this analysis were developed using procedures presented in the *Highway Capacity Manual, Sixth Edition* (Transportation Research Board, 2016).

Signalized Intersections

Level of service for signalized intersections is defined in terms of average delay for all vehicles that travel through the intersection. Delay can be a cause of driver discomfort, frustration, inefficient fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average delay per vehicle in seconds. Delay is a complex measure and is dependent on a number of variables including: number and type of vehicles by movement, intersection lane geometry, signal phasing, the amount of green time allocated to each phase, transit stops and parking maneuvers. Table A-1 shows the level of service criteria for signalized intersections from the *Highway Capacity Manual, Sixth Edition.*

Table A-1. Level of Service for Signalized Intersections

Level of Service	Average Control Delay Per Vehicle
A	≤ 10 seconds
B	> 10 – 20 seconds
C	> 20 – 35 seconds
D	> 35 – 55 seconds
E	> 55 – 80 seconds
F	> 80 seconds

Source: Transportation Research Board, Highway Capacity Manual, Exhibit 19.8, 2016.

Unsignalized Intersections

For unsignalized intersections, level of service is based on the average delay per vehicle for each turning movement. The level of service for all-way stop or roundabout-controlled intersections is based upon the average delay for all vehicles that travel through the intersection. The level of service for a one- or two-way, stop-controlled intersection delay is related to the availability of gaps in the main street's traffic flow, and the ability of a driver to enter or pass through those gaps. Table A-2 shows the level of service criteria for unsignalized intersections from the *Highway Capacity Manual, Sixth Edition*.

Table A-2. Level of Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle
A	0 – 10 seconds
B	> 10 – 15 seconds
C	> 15 – 25 seconds
D	> 25 – 35 seconds
E	> 35 – 50 seconds
F	> 50 seconds

Source: Transportation Research Board, Highway Capacity Manual, Exhibit 20.2, 2016.

APPENDIX B

SIGNAL WARRANT ANALYSIS

Signal Warrant Analysis
36th Avenue W & SW 194th Street
Full Build Condition with 194th Street Extension

Annual Growth Rate = 1.5%
Number of Years = 20

	36th Ave W						194th Street					Warrant 1A		Warrant 1B		Warrant 2	Warrant 3
	Existing Traffic Volumes (9/26/2024)					Future 36th Ave			Assumes Phasing		Total 194th	36th Ave W	194th St	36th Ave W	194th St		
Time Ending	NB	SB	Total	% of PM Pk	% of Daily	Growth Factor = 1.35	194th Street Thru Traffic	PDF Full Build Egress at 194th	100% Thru Traffic	100% PFD		>600? Met?	>200? Met?	>900? Met?	>100? Met?	Met?	Met?
Notes						(A)	(B)	(C,D)									
1:00 AM	29	26	55	4.7%	0.4%	74	7	10	7	10	17	N	N	N	N	N	N
2:00 AM	14	11	25	2.1%	0.2%	34	3	5	3	5	8	N	N	N	N	N	N
3:00 AM	11	19	30	2.5%	0.2%	40	4	6	4	6	10	N	N	N	N	N	N
4:00 AM	5	14	19	1.6%	0.1%	26	2	3	2	3	5	N	N	N	N	N	N
5:00 AM	16	65	81	6.9%	0.6%	109	11	15	11	15	26	N	N	N	N	N	N
6:00 AM	45	139	184	15.6%	1.3%	248	24	34	24	34	58	N	N	N	N	N	N
7:00 AM	120	326	446	37.8%	3.0%	601	58	82	58	82	140	Y	N	N	Y	N	N
8:00 AM	256	432	688	58.3%	4.7%	927	89	**107**	89	107	196	Y	N	Y	Y	Y	N
9:00 AM	364	430	794	67.3%	5.4%	1,069	103	146	103	146	249	Y	Y	Y	Y	Y	Y
10:00 AM	322	393	715	60.6%	4.9%	963	93	132	93	132	225	Y	Y	Y	Y	Y	N
11:00 AM	430	434	864	73.2%	5.9%	1,164	112	159	112	159	271	Y	Y	Y	Y	Y	N
12:00 PM	501	460	961	81.4%	6.5%	1,294	125	177	125	177	302	Y	Y	Y	Y	Y	Y
1:00 PM	473	565	1038	88.0%	7.1%	1,398	135	191	135	191	326	Y	Y	Y	Y	Y	Y
2:00 PM	523	577	1100	93.2%	7.5%	1,482	143	202	143	202	345	Y	Y	Y	Y	Y	Y
3:00 PM	491	556	1047	88.7%	7.1%	1,410	136	193	136	193	329	Y	Y	Y	Y	Y	Y
4:00 PM	572	559	1131	95.8%	7.7%	1,523	147	208	147	208	355	Y	Y	Y	Y	Y	Y
5:00 PM	537	586	1123	95.2%	7.6%	1,513	146	**432**	146	432	578	Y	Y	Y	Y	Y	Y
6:00 PM	597	583	1180	100.0%	8.0%	1,589	**153**	217	153	217	370	Y	Y	Y	Y	Y	Y
7:00 PM	488	514	1002	84.9%	6.8%	1,350	130	184	130	184	314	Y	Y	Y	Y	Y	Y
8:00 PM	366	475	841	71.3%	5.7%	1,133	109	155	109	155	264	Y	Y	Y	Y	Y	Y
9:00 PM	258	366	624	52.9%	4.3%	840	81	115	81	115	196	Y	N	N	Y	Y	N
10:00 PM	181	222	403	34.2%	2.7%	543	52	74	52	74	126	N	N	N	Y	N	N
11:00 PM	112	104	216	18.3%	1.5%	291	28	40	28	40	68	N	N	N	N	N	N
12:00 AM	57	57	114	9.7%	0.8%	154	15	18	15	18	33	N	N	N	N	N	N
Total	6,768	7,913	14,681			**19,773**	1,906	**2,904**	**1,906**	**2,904**	**4,810**						
											No. of hours met		**12**		**13**	**14**	**10**
								2904			**Hours Required**		**8**		**8**	**4**	**1**
											Warrant Met?		**YES**		**YES**	**YES**	**YES**

Red = Estimated volumes based on existing traffic flow patterns

Notes:

A. Growth Factor derived from growth rate and years of growth listed in cells H2 and H3.

B. Derived from 2045 TSI Model volumes with 194th Street Extension. Assumes just through traffic

C. Assumes that 60% of PDF-generated traffic would egress site to 194th Street/36th Ave W intersection. Daily trips = 4,840 exit x 60% = 2,904. AM Peak Hour = 178 total exit x 60% = 107. PM Peak Hour = 720 total exit x 60%= 432 trips.

D. Trips for non-peak hours derived from daily traffic flow percentage based on 36th Avenue W traffic counts.