# MEMORANDUM

**DATE:** April 20, 2022

**TO:** Paul Coffelt
City of Lynnwood

**FROM:** Amy Wasserman
TENW

**SUBJECT:** Updated Traffic Assessment
iVista@Alderwood
TENW Project No. 2022-062

The purpose of this memorandum is to provide an updated traffic assessment for the *iVista@Alderwood* project located at 18799 Alderwood Mall Parkway based on the current proposed land use and site plan. The scope of this updated traffic assessment was coordinated with City of Lynnwood staff and includes a description of the previously approved land use and trip generation, an updated project description and trip generation estimate for the current land use proposal, distribution and assignment of project trips, level of service and queuing analysis at Alderwood Mall Parkway/Beech Road, and a discussion of the project site access driveways (including alignment with adjacent properties and a sight distance assessment).

## Project Description and Trip Generation

### Previouly Approved

The *iVista@Alderwood* project was previously referred to as the Alderwood Mixed-Use Redevelopment and the project obtained Project Design Review (PDR) approval from the City of Lynnwood in 2018. As documented in the *DRAFT Alderwood Mixed-Use Redevelopment Transportation Technical Report* (Heffron, April 10, 2017), the previously approved project included the development of 336 multifamily residential dwelling units and 4,000 square feet (SF) of retail on a site with an existing 39,060 SF medical dental office building (to be removed with the proposed project).

As documented in the *Transportation Techical Report*, after applying credit for the existing medical-dental office use to be removed, the Alderwood Mixed-Use project was estimated to generate a total of 916 net new weekday daily trips of which 79 net new trips were anticipated to occur during the weekday AM peak hour (-37 in, 116 out) and 87 net new trips were anticipated to occur during the weekday PM peak hour (101 in, -14 out).

### Current Proposal

The current development plan for the *iVista@Alderwood* site includes a total of up to 362 multifamily residential dwelling units and 5,500 square feet (SF) of retail. A current site plan is provided in Figure 1.

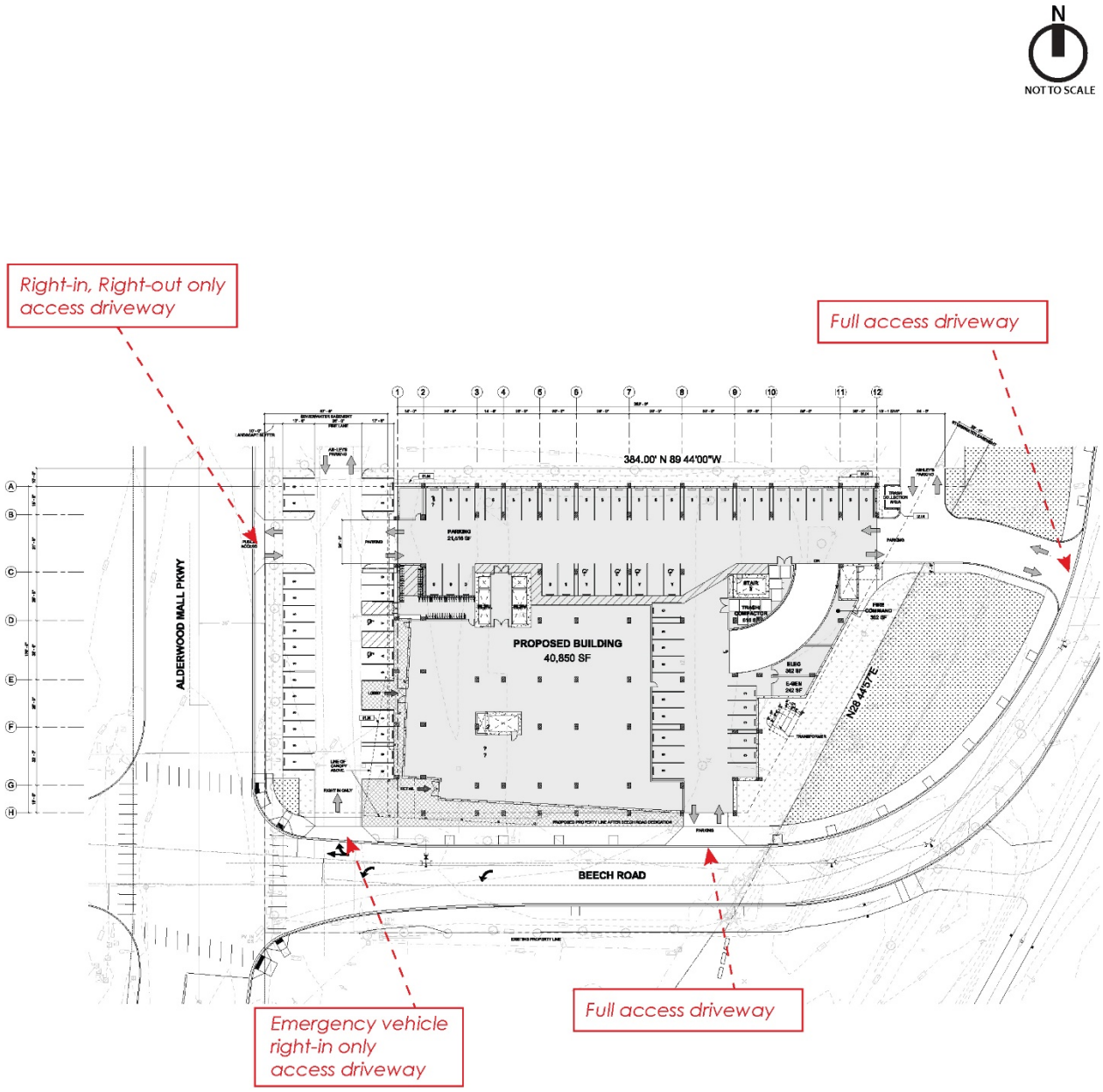



**Figure 1:** Preliminary Site Plan

The trip generation estimates for the current project proposal were based on methodology documented in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition for Land Use Code (LUC) LUC 222 (Multifamily Housing (High-Rise) Not Close to Rail Transit) and LUC 822 (Strip Retail Plaza <40k). Similar to the previously approved analysis, credit was applied to the updated trip generation estimates to account for removal of the existing medical-dental office use. The net new weekday daily, AM, and PM peak hour trip generation for the current proposed project is summarized in Table 1. The detailed trip generation estimate is included in Attachment A.

**Table 1**
**Net New Trip Generation Summary for Current Proposal**

| | Net New Trips Generated | | |
|---|---|---|---|
| Weekday Time Period | In | Out | Total |
| Daily | 304 | 305 | 609 |
| AM Peak Hour | -43 | 46 | 3 |
| PM Peak Hour | 35 | -43 | -8 |

Comparison of Current Proposed to Previously Approved Net New Trip Generation

Table 2 provides a comparison of the total weekday PM peak hour trip generation estimates for the current land use vs. the previously approved land use.

**Table 2**
**Summary of Current vs. Previously Approved Weekday Net New Trip Generation**

| | | Weekday Net New Trips Generated [1] | | |
|---|---|---|---|---|
| Scenario | Size | Daily | AM Peak Hour | PM Peak Hour |
| Current Proposed Land Use | 362 multifmaily DU<br>5,500 SF retail | 609 | 3 | -8 |
| Previously Approved Land Use | 336 multifmaily DU<br>4,000 SF retail | 916 | 79 | 87 |
| *Delta between Current and Previously Approved Land Use* | | *-293* | *-76* | *-95* |

1) After applying trip credit for the existing medical-dental office use.

As shown in Table 2, the current land use development plan with for the *iVista@Alderwood* project is estimated to generate 293 fewer net new weekday daily trips, 76 fewer net new trips during the weekday AM peak hour, and 95 fewer net new trips during the weekday PM peak hour than the previously approved land use.

## Project Trip Distribution

The distribution of project trips generated by the proposed *iVista@Alderwood* project was based on the project trip distribution documented in the *DRAFT Alderwood Mixed-Use Redevelopment Transportation Technical Report* (Heffron, April 10, 2017). The project trip distribution assumes that the Beech Road Extension project is completed. In general, trips were distributed as follows:

- North on Alderwood Mall Parkway: 40 percent entering / 80 percent exiting
- South on Alderwood Mall Parkway: 60 percent entering / 20 percent exiting

As a conservative measure, the net peak hour project trips (gross proposed less pass-by) were assigned to the study intersection based on the trip distribution and anticipated operation of each of the project driveways. The project trip distribution and assignment of AM and PM peak hour project-generated trips is illustrated in Figure 2.

## Year 2035 Traffic Volumes

Future year 2035 No Action (without-project) AM peak hour traffic volumes with the Beech Road Extension were based on volumes documented in the *DRAFT Alderwood Mixed-Use Redevelopment Transportation Technical Report* (Heffron, April 10, 2017). Future year 2035 no action (without-project) PM peak hour traffic volumes with the Beech Road Extension were based on volumes provided by the City's transportation consultant (Transportation Solutions, Inc. (TSI)). The future year 2035 No Action peak hour traffic volumes at the study intersection of Alderwood Mall Parkway/Beech Road are illustrated in Figure 3.

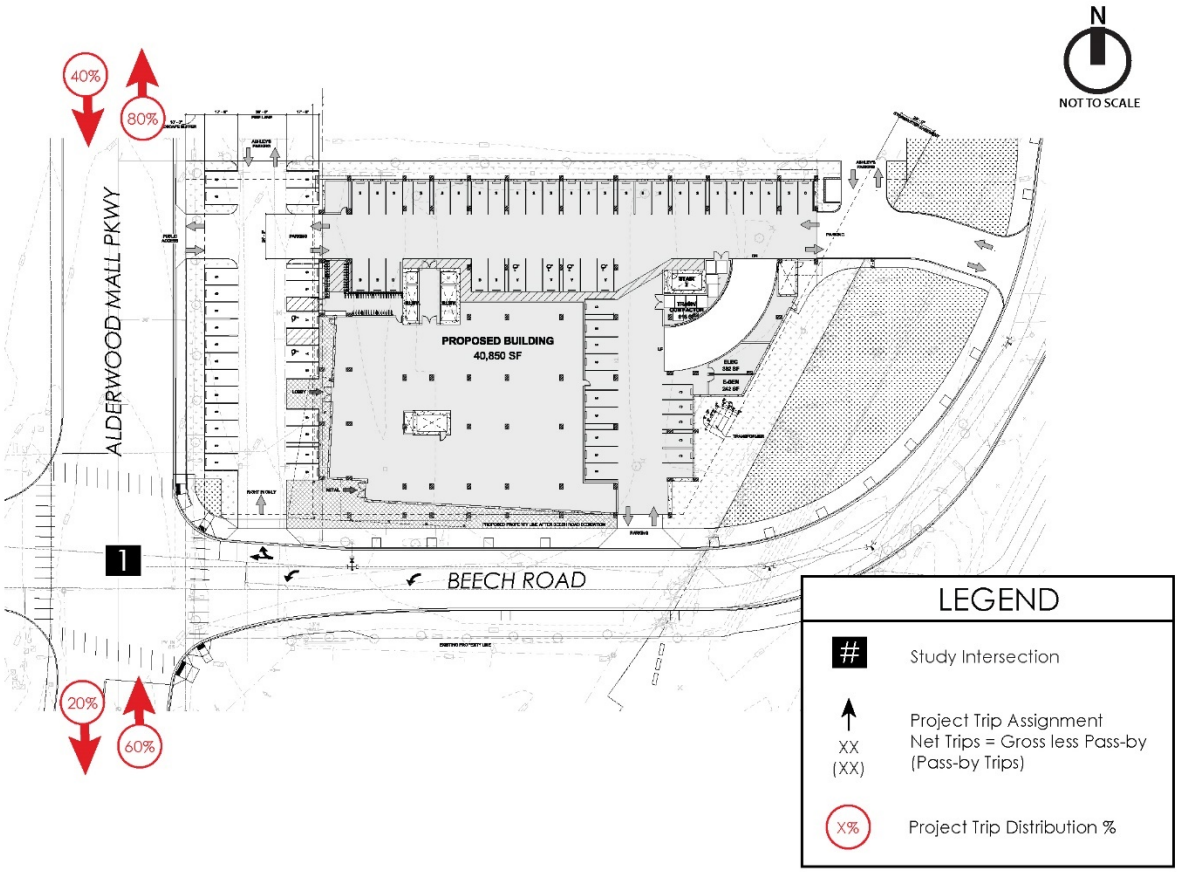
Future year 2035 with-project AM and PM peak hour traffic volumes were estimated by adding the trip assignment from the proposed project (shown in Figure 2) to the future year 2035 No Action (without project) traffic volumes (shown in Figure 3). The resulting 2035 With Project AM and PM peak hour traffic volumes at the study intersections are also shown in Figure 3.

## Year 2035 Evaluation at Alderwood Mall Pkwy/Beech Road

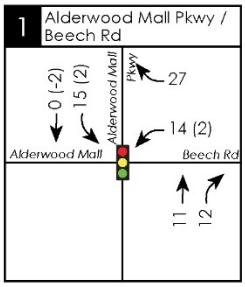
### Level of Service (LOS) Analyses

To evaluate future year 2035 operations at the intersection of Alderwood Mall Parkway/Beech Road, level of service (LOS) analyses were conducted for future year 2035 weekday AM and PM peak hour conditions without and with the proposed *iVista@Alderwood* project.

LOS calculations were based on methodology and procedures outlined in the latest *Highway Capacity Manual (6th Edition)* using *Synchro 10* traffic analysis software. The channelization and signal timing assumptions used in the LOS analysis were provided by the City of Lynnwood. Table 3 summarizes the 2035 future LOS results at the study intersection. The detailed LOS worksheets and a description of the LOS methodology are included in Attachment B.




AM PEAK HOUR




PM PEAK HOUR

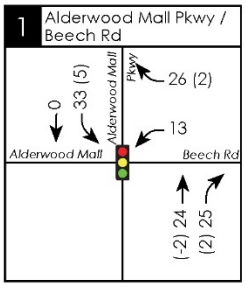
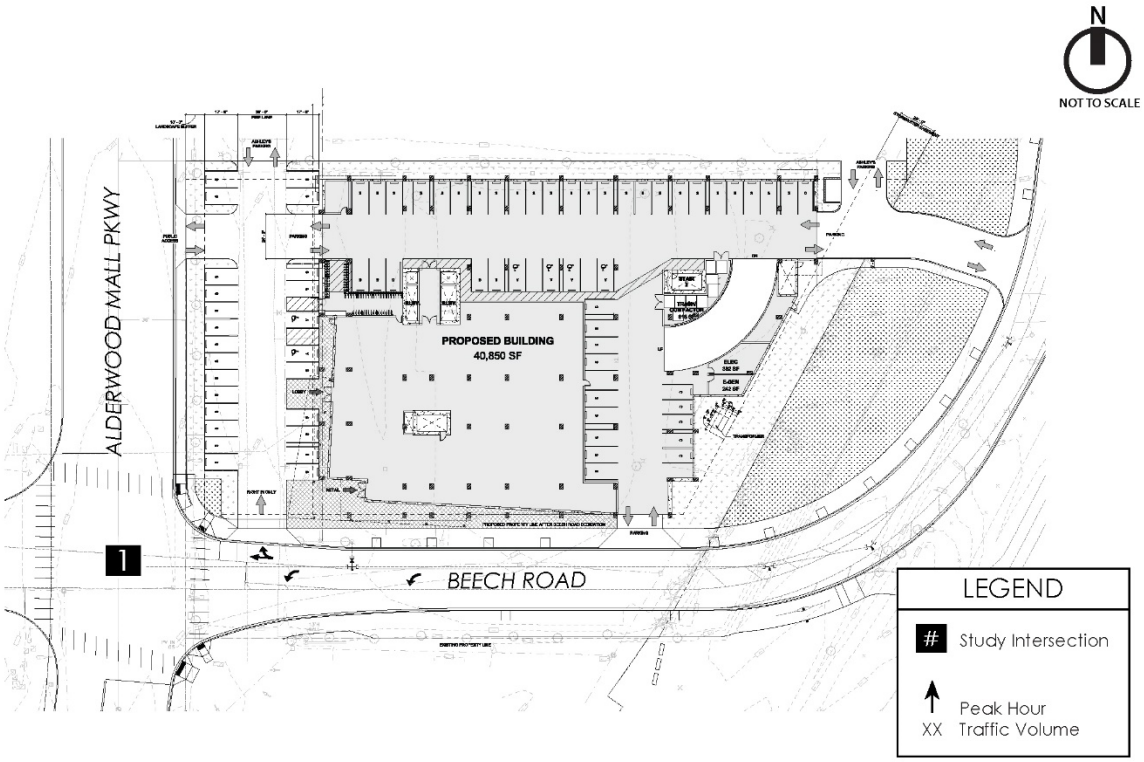



**Figure 2**: Peak Hour Trip Distribution and Assignment



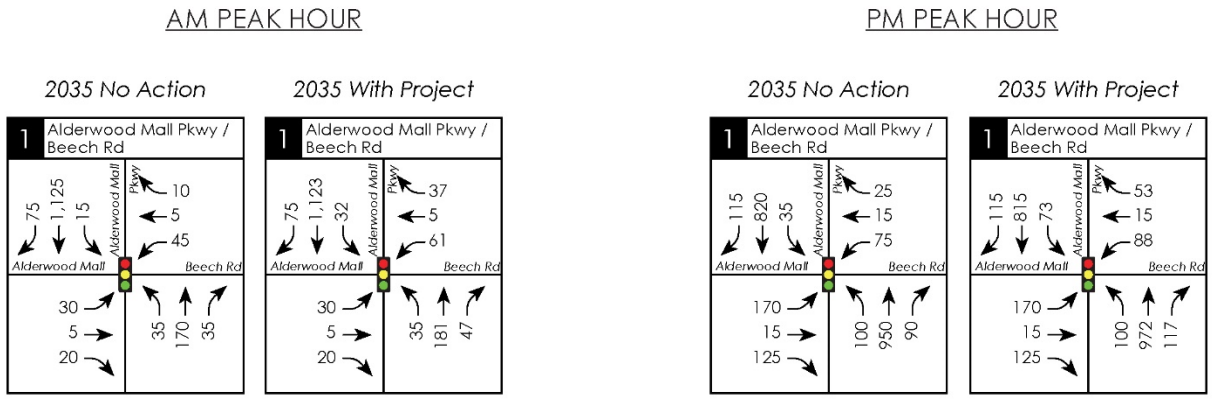




**Figure 3:** 2035 Weekday Peak Hour Traffic Volumes

**Table 3**
**Year 2035 Peak Hour Level of Service Summary at Alderwood Mall Pkwy/Beech Rd**

| | 2035 No Action | | 2035 With Project | |
|---|---|---|---|---|
| Signalized Study Intersection | LOS | Delay (sec/veh) | LOS | Delay (sec/veh) |
| **AM PEAK HOUR** | | | | |
| 1. Alderwood Mall Pkwy / Beech Rd | B | 13.6 | B | 14.8 |
| **PM PEAK HOUR** | | | | |
| 1. Alderwood Mall Pkwy / Beech Rd | B | 19.9 | C | 21.2 |

As shown in Table 3, the signalized study intersection of Alderwood Mall Parkway/Beech Road is anticipated to operate at LOS C or better in 2035 without or with the proposed *iVista@Alderwood* project.

Queuing Impacts at Site Access Driveways on Beech Road

A weekday AM and PM peak hour queueing analysis was conducted at the signalized study intersection of Alderwood Mall Parkway/Beech Road to ensure that queues from the signal would not inhibit access to the proposed *iVista@Alderwood* site access driveways on Beech Road. As shown on the Figure 2 site plan, the proposed project driveway on Alderwood Mall Parkway would be limited to right-in right-out movements only so queueing from the signal would not affect this proposed driveway.

The queue results were based on the methodology used by the *Synchro 10* traffic analysis software program and were rounded to the nearest 25 feet. The reported queue lengths are 95th percentile queues and represent a condition that is anticipated to be exceeded only five percent of the time.

The results of the AM and PM peak hour queuing analysis are summarized in Table 4 and are only summarized for the westbound approach for which queues would potentially impact the *iVista@Alderwood* driveways on Beech Road. The queue calculation worksheets are included in Attachment B.

**Table 4**
**Year 2035 Peak Hour Queuing Analysis Summary at Alderwood Mall Pkwy/Beech Rd**

| | | 95th % Queue Length (ft)[2] | | | |
|---|---|---|---|---|---|
| | | AM PEAK HOUR | | PM PEAK HOUR | |
| Intersection / Movement | Storage (ft) [1] | 2035 No Action | 2035 With Project | 2035 No Action | 2035 With Project |
| 1) Alderwood Mall Pkwy/Beech Rd | | | | | |
| Westbound Left-Turn | 125' | 75' | 100' | 125' | 125' |
| Westbound Shared Thru-Right | 200' | 25' | 50' | 50' | 50' |

1. The storage length for the westbound left-turn movement was estimated based on preliminary intersection design and the storage for the westbound shared thru-right was measured to the iVista South Driveway on Beech Rd.
2. Queues are 95th Percentile queues rounded to the nearest 25 feet.

As shown in Table 4, during the weekday AM and PM peak hours in 2035, the 95th percentile queues for the westbound approach on Beech Road at Alderwood Mall Parkway are estimated to be 125 feet or less without or with the iVista@Alderwood project, and therefore would not inhibit or block turns into or out of the iVista South Driveway on Beech Road.

Additionally, the proposed enter-only project driveway on Beech Road directly east of Alderwood Mall Parkway would be an enter-only driveway for emergency vehicle access only and therefore westbound vehicle queueing at the Alderwood Mall Parkway/Beech Road signal would not be anticipated to impact this driveway.

## Proposed Site Access

### Sight Distance Assessment

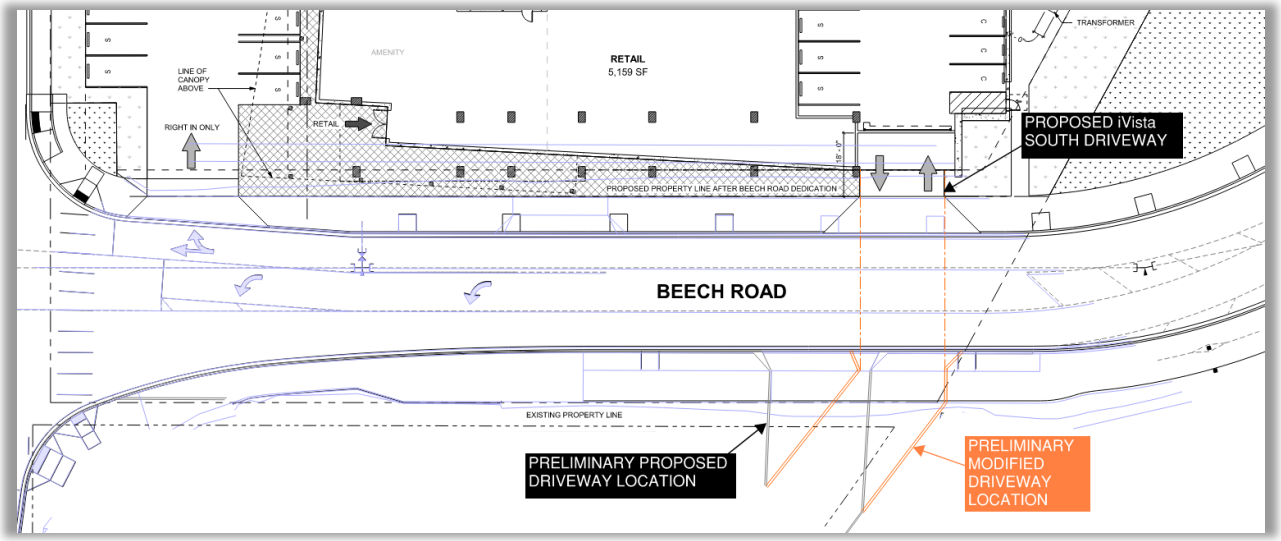
A sight distance assessment was conducted at the proposed *iVista@Alderwood* site access driveways on Alderwood Mall Parkway and Beech Road. The proposed westernmost project driveway on Beech Road would be an enter-only driveway for emergency vehicle access only and was therefore not evaluated for sight distance. For the purposes of calculating the minimum sight distance, the speed limit on both Alderwood Mall Parkway and Beech Road was assumed to be 35 mph.

Vehicle sight distance standards and sight triangle areas are based on the WSDOT *Design Manual* Section 1340.03(3) and Snohomish County *Engineering Design and Development Standards* Section 3-08E. Vehicle sight triangles per WSDOT standards are measured from a point 18 feet behind the edge of the traveled way and the length of the triangle along the road varies depending on posted speed. For a posted speed of 35 mph, the minimum sight distance is 250 feet. The vehicle sight triangle exhibits were provided by KPFF and are included in Attachment C.

### Alignment with Other Driveways on Beech Rd

The alignment of the proposed *iVista@Alderwood* South Driveway on Beech Road was evaluated for compatibility with the preliminary proposed driveway location for the property on the south side of the Beech Road Extension. The preliminary alignment for the proposed driveway on the south side of Beech Road was provided by the City.

As shown in the snip below, the proposed iVista driveway and the proposed driveway on the south side of Beech Road would be offset to the left by approximately 23 feet (measured centerline to centerline). If the proposed driveway on the south side of Beech Road were able to be shifted to the east to align with the proposed iVista driveway, the potential for any left-turn conflicts at the driveways would be eliminated and the queue storage for the westbound left-turn and shared thru-right movements at the signalized Alderwood Mall Parkway/Beech Road intersection would be maximized.




If you have any questions regarding the information presented in this memorandum, please contact me at (425) 250-0579 or amy@tenw.com.

cc: Oscar Del Moro, Cosmos Development
Chris Bicket, TENW

Attachments:

A – Detailed Trip Generation Estimates for Current Project Proposal
B – LOS Methodology and LOS/Queue Reports
C – Sight Distance Evaluation Exhibits

# ATTACHMENT A

## Detailed Trip Generation Estimates for Current Project Proposal

## iVista@Alderwood
## Trip Generation Summary - Weekday Daily

| Land Use | Size/Units[1] | ITE LUC[2] | Directional Distribution[2] In | Directional Distribution[2] Out | Trip Rate or Equation[2] | Trips Generated In | Trips Generated Out | Trips Generated Total |
|---|---|---|---|---|---|---|---|---|
| ***Daily*** | | | | | | | | |
| ***Proposed Uses:*** | | | | | | | | |
| Multifamily Housing (High-Rise) Not Close to Rail Transit | 362 DU | 222 | 50% | 50% | T = 3.76(X) + 377.04 | 869 | 869 | 1,738 |
| Strip Retail Plaza (<40k) | 5,500 SF | 822 | 50% | 50% | T=42.20(X) + 229.68 | 231 | 231 | 462 |
| | | | | *Pass-by Trips[3] =* | *40%* | -93 | -92 | -185 |
| | | | | | | 138 | 139 | 277 |
| ***Less Existing Uses:*** [4] | | | | | | | | |
| Medical/Dental Office Building - Stand-Alone | 39,060 SF | 720 | 50% | 50% | 36.00 | -703 | -703 | -1,406 |
| | | | | | *Gross Proposed Weekday Daily Trips =* | 1,100 | 1,100 | 2,200 |
| | | | | | *Less Pass-by Trips =* | -93 | -92 | -185 |
| | | | | | *Net Proposed Weekday Daily Trips =* | 1,007 | 1,008 | 2,015 |
| | | | | | *Less Existing Use Trips =* | -703 | -703 | -1,406 |
| | | | | | **Net New Weekday Daily Trips =** | **304** | **305** | **609** |

1. DU = Dwelling Units, SF = Square Feet.
2. Per Institute of Transportation Engineers, Trip Generation Manual, 11th Edition.
3. Pass-By trip percentage determined based on the ITE *Trip Generation Manual* , 11th Edition.
   Pass-By trips for Strip Retail Plaza (LUC 822) were assumed to be equal to PM pass-by for Shopping Plaza (40-150k) (LUC 821).
4. Existing uses per previous traffic analysis.

## iVista@Alderwood
## Trip Generation Summary - Weekday AM Peak Hour

| Land Use | Size/Units[1] | ITE LUC[2] | Directional Distribution[2] In | Directional Distribution[2] Out | Trip Rate or Equation[2] | Trips Generated In | Trips Generated Out | Trips Generated Total |
|---|---|---|---|---|---|---|---|---|
| ***AM Peak Hour*** | | | | | | | | |
| ***Proposed Uses:*** | | | | | | | | |
| Multifamily Housing (High-Rise) Not Close to Rail Transit | 362 DU | 222 | 34% | 66% | T = 0.22(X) + 18.85 | 33 | 65 | 98 |
| Strip Retail Plaza (<40k) | 5,500 SF | 822 | 60% | 40% | 2.36 | 8 | 5 | 13 |
| | | | | *Pass-by Trips* [3] = | *40%* | -3 | -2 | -5 |
| | | | | | | 5 | 3 | 8 |
| ***Less Existing Uses:*** [4] | | | | | | | | |
| Medical/Dental Office Building - Stand-Alone | 39,060 SF | 720 | 79% | 21% | Ln(T) = 0.90Ln(X) + 1.34 | -81 | -22 | -103 |
| | | | | | *Gross Proposed AM Peak Hour Trips =* | 41 | 70 | 111 |
| | | | | | *Less Pass-by Trips =* | -3 | -2 | -5 |
| | | | | | *Net Proposed AM Peak Hour Trips =* | 38 | 68 | 106 |
| | | | | | *Less Existing Use Trips =* | -81 | -22 | -103 |
| | | | | | **Net New AM Peak Hour Trips =** | **-43** | **46** | **3** |

Notes:

1. DU = Dwelling Units, SF = Square Feet.
2. Per Institute of Transportation Engineers, Trip Generation Manual, 11th Edition.
3. Pass-By trip percentage determined based on the ITE *Trip Generation Manual* , 11th Edition.
   Pass-By trips for Strip Retail Plaza (LUC 822) were assumed to be equal to PM pass-by for Shopping Plaza (40-150k) (LUC 821).
4. Existing uses per previous traffic analysis.

## iVista@Alderwood
## Trip Generation Summary - Weekday PM Peak Hour

| Land Use | Size/Units[1] | ITE LUC[2] | Directional Distribution[2] In | Directional Distribution[2] Out | Trip Rate or Equation[2] | Trips Generated In | Trips Generated Out | Trips Generated Total |
|---|---|---|---|---|---|---|---|---|
| ***PM Peak Hour*** | | | | | | | | |
| ***Proposed Uses:*** | | | | | | | | |
| Multifamily Housing (High-Rise) Not Close to Rail Transit | 362 DU | 222 | 56% | 44% | T = 0.26(X) + 23.12 | 66 | 51 | 117 |
| Strip Retail Plaza (<40k) | 5,500 SF | 822 | 50% | 50% | Ln(T) = 0.71Ln(X) + 2.72 | 26 | 25 | 51 |
| | | | | *Pass-by Trips[3] =* | *40%* | -10 | -10 | -20 |
| | | | | | | 16 | 15 | 31 |
| ***Less Existing Uses:*** [4] | | | | | | | | |
| Medical/Dental Office Building - Stand-Alone | 39,060 SF | 720 | 30% | 70% | T = 4.07(X) - 3.17 | -47 | -109 | -156 |
| | | | | | *Gross Proposed PM Peak Hour Trips =* | 92 | 76 | 168 |
| | | | | | *Less Pass-by Trips =* | -10 | -10 | -20 |
| | | | | | *Net Proposed PM Peak Hour Trips =* | 82 | 66 | 148 |
| | | | | | *Less Existing Use Trips =* | -47 | -109 | -156 |
| | | | | | **Net New PM Peak Hour Trips =** | **35** | **-43** | **-8** |

Notes:

1. DU = Dwelling Units, SF = Square Feet.
2. Per Institute of Transportation Engineers, Trip Generation Manual, 11th Edition.
3. Pass-By trip percentage determined based on the ITE *Trip Generation Manual* , 11th Edition.
   Pass-By trips for Strip Retail Plaza (LUC 822) were assumed to be equal to pass-by for Shopping Plaza (40-150k) (LUC 821).
4. Existing uses per previous traffic analysis.



TENW

# ATTACHMENT B

## LOS Methodology and LOS/Queue Reports

# Level of Service Methodology

Level of service calculations for intersections were based on methodology and procedures outlined in the current (6th Edition) *Highway Capacity Manual*, Transportation Research Board, using *Synchro 10* traffic analysis software.

LOS generally refers to the degree of congestion on a roadway or intersection. It is a measure of vehicle operating speed, travel time, travel delays, and driving comfort. A letter scale from A to F generally describes intersection LOS. At signalized intersections, LOS A represents free-flow conditions (motorists experience little or no delays), and LOS F represents forced-flow conditions where motorists experience an average delay in excess of 80 seconds per vehicle.

The LOS reported for signalized intersections represents the average control delay (sec/veh) and can be reported for the overall intersection, for each approach, and for each lane group (additional v/c ratio criteria apply to lane group LOS only).

The LOS reported at stop-controlled intersections is based on the average control delay and can be reported for each controlled minor approach, controlled minor lane group, and controlled major-street movement (and for the overall intersection at all-way stop controlled intersections. Additional v/c ratio criteria apply to lane group or movement LOS only).

Table B1 outlines the current HCM (6th Edition) LOS criteria for signalized and stop-controlled intersections based on these methodologies.

**Table B1**
**LOS Criteria for Signalized and Stop Controlled Intersections[1]**

| SIGNALIZED INTERSECTIONS | | | UNSIGNALIZED INTERSECTIONS | | |
|---|---|---|---|---|---|
| | LOS by Volume-to Capacity (V/C) Ratio[2] | | | LOS by Volume-to Capacity (V/C) Ratio[3] | |
| Control Delay (sec/veh) | ≤ 1.0 | > 1.0 | Control Delay (sec/veh) | ≤ 1.0 | > 1.0 |
| ≤ 10 | A | F | ≤ 10 | A | F |
| > 10 to ≤ 20 | B | F | > 10 to ≤ 15 | B | F |
| > 20 to ≤ 35 | C | F | > 15 to ≤ 25 | C | F |
| > 35 to ≤ 55 | D | F | > 25 to ≤ 35 | D | F |
| > 55 to ≤ 80 | E | F | > 35 to ≤ 50 | E | F |
| > 80 | F | F | > 50 | F | F |

1 Source: Highway Capacity Manual (HCM), Transportation Research Board, 6th Edition, 2016.

2 For approach-based and intersection-wide assessments at signals, LOS is defined solely by control delay.

3 For two-way stop controlled intersections, the LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole at two-way stop controlled intersections. For approach-based and intersection-wide assessments at all-way stop controlled intersections, LOS is solely defined by control delay.

# Lanes, Volumes, Timings
## 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct

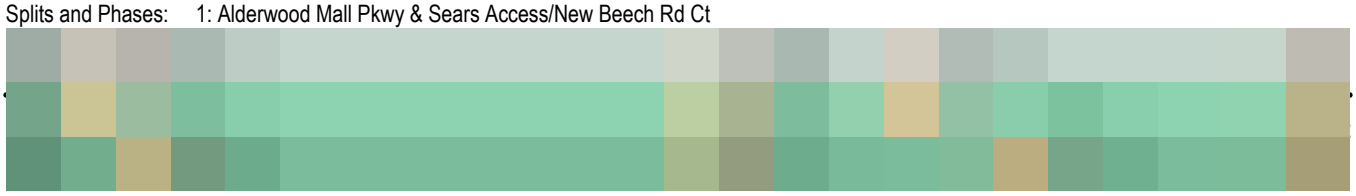
04/14/2022

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 5 | 20 | 45 | 5 | 10 | 35 | 170 | 35 | 15 | 1125 | 75 |
| Future Volume (vph) | 30 | 5 | 20 | 45 | 5 | 10 | 35 | 170 | 35 | 15 | 1125 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 110 | | 0 | 100 | | 0 | 250 | | 0 | 75 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Link Speed (mph) | | 25 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 299 | | | 363 | | | 314 | | | 704 | |
| Travel Time (s) | | 8.2 | | | 8.3 | | | 7.1 | | | 16.0 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 33 | 28 | 0 | 50 | 17 | 0 | 39 | 228 | 0 | 17 | 1333 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 26.7 | 26.7 | | 9.7 | 26.7 | | 9.7 | 21.7 | | 9.7 | 24.7 | |
| Total Split (s) | 27.0 | 36.8 | | 17.2 | 27.0 | | 15.2 | 55.2 | | 10.8 | 50.8 | |
| Total Split (%) | 22.5% | 30.7% | | 14.3% | 22.5% | | 12.7% | 46.0% | | 9.0% | 42.3% | |
| Yellow Time (s) | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | -1.7 | 0.0 | | 0.0 | 0.0 | | -1.7 | -1.7 | | 0.0 | -1.7 | |
| Total Lost Time (s) | 3.0 | 4.7 | | 4.7 | 4.7 | | 3.0 | 3.0 | | 4.7 | 3.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | Max | |
| v/c Ratio | 0.08 | 0.18 | | 0.36 | 0.11 | | 0.12 | 0.09 | | 0.02 | 0.50 | |
| Control Delay | 47.8 | 26.6 | | 59.4 | 31.9 | | 5.3 | 5.4 | | 5.1 | 9.5 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 47.8 | 26.6 | | 59.4 | 31.9 | | 5.3 | 5.4 | | 5.1 | 9.5 | |
| Queue Length 50th (ft) | 10 | 4 | | 38 | 4 | | 7 | 20 | | 3 | 273 | |
| Queue Length 95th (ft) | 28 | 34 | | 77 | 28 | | 18 | 47 | | 11 | 363 | |
| Internal Link Dist (ft) | | 219 | | | 283 | | | 234 | | | 624 | |
| Turn Bay Length (ft) | 110 | | | 100 | | | 250 | | | 75 | | |
| Base Capacity (vph) | 693 | 455 | | 184 | 321 | | 384 | 2662 | | 907 | 2660 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.05 | 0.06 | | 0.27 | 0.05 | | 0.10 | 0.09 | | 0.02 | 0.50 | |

### Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 30 | 5 | 20 | 45 | 5 | 10 | 35 | 170 | 35 | 15 | 1125 | 75 |
| Future Volume (veh/h) | 30 | 5 | 20 | 45 | 5 | 10 | 35 | 170 | 35 | 15 | 1125 | 75 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 33 | 6 | 22 | 50 | 6 | 11 | 39 | 189 | 39 | 17 | 1250 | 83 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 241 | 35 | 128 | 65 | 47 | 87 | 349 | 2073 | 419 | 863 | 2340 | 155 |
| Arrive On Green | 0.07 | 0.10 | 0.11 | 0.04 | 0.08 | 0.08 | 0.04 | 0.70 | 0.69 | 0.02 | 0.69 | 0.69 |
| Sat Flow, veh/h | 3456 | 351 | 1287 | 1781 | 591 | 1084 | 1781 | 2945 | 595 | 1781 | 3383 | 224 |
| Grp Volume(v), veh/h | 33 | 0 | 28 | 50 | 0 | 17 | 39 | 112 | 116 | 17 | 656 | 677 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1639 | 1781 | 0 | 1675 | 1781 | 1777 | 1763 | 1781 | 1777 | 1830 |
| Q Serve(g_s), s | 1.1 | 0.0 | 1.9 | 3.3 | 0.0 | 1.1 | 0.7 | 2.4 | 2.5 | 0.4 | 21.6 | 21.8 |
| Cycle Q Clear(g_c), s | 1.1 | 0.0 | 1.9 | 3.3 | 0.0 | 1.1 | 0.7 | 2.4 | 2.5 | 0.4 | 21.6 | 21.8 |
| Prop In Lane | 1.00 | | 0.79 | 1.00 | | 0.65 | 1.00 | | 0.34 | 1.00 | | 0.12 |
| Lane Grp Cap(c), veh/h | 241 | 0 | 162 | 65 | 0 | 134 | 349 | 1251 | 1241 | 863 | 1229 | 1266 |
| V/C Ratio(X) | 0.14 | 0.00 | 0.17 | 0.77 | 0.00 | 0.13 | 0.11 | 0.09 | 0.09 | 0.02 | 0.53 | 0.54 |
| Avail Cap(c_a), veh/h | 691 | 0 | 438 | 186 | 0 | 311 | 451 | 1251 | 1241 | 921 | 1229 | 1266 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 52.4 | 0.0 | 48.9 | 57.3 | 0.0 | 51.3 | 6.4 | 5.6 | 5.7 | 5.6 | 9.0 | 9.1 |
| Incr Delay (d2), s/veh | 0.3 | 0.0 | 0.6 | 17.4 | 0.0 | 0.4 | 0.1 | 0.1 | 0.1 | 0.0 | 1.7 | 1.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 0.0 | 0.8 | 1.8 | 0.0 | 0.5 | 0.2 | 0.9 | 0.9 | 0.1 | 8.2 | 8.5 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 52.7 | 0.0 | 49.5 | 74.7 | 0.0 | 51.7 | 6.5 | 5.8 | 5.9 | 5.6 | 10.7 | 10.7 |
| LnGrp LOS | D | A | D | E | A | D | A | A | A | A | B | B |
| Approach Vol, veh/h | | 61 | | | 67 | | | 267 | | | 1350 | |
| Approach Delay, s/veh | | 51.3 | | | 68.9 | | | 5.9 | | | 10.6 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 6.9 | 87.5 | 9.1 | 16.6 | 8.3 | 86.0 | 11.4 | 14.3 |
| Change Period (Y+Rc), s | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 |
| Max Green Setting (Gmax), s | * 6.1 | * 51 | * 13 | * 32 | * 11 | * 46 | * 22 | * 22 |
| Max Q Clear Time (g_c+I1), s | 2.4 | 4.5 | 5.3 | 3.9 | 2.7 | 23.8 | 3.1 | 3.1 |
| Green Ext Time (p_c), s | 0.0 | 1.5 | 0.0 | 0.1 | 0.0 | 10.3 | 0.1 | 0.0 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 13.6 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# Lanes, Volumes, Timings
## 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct

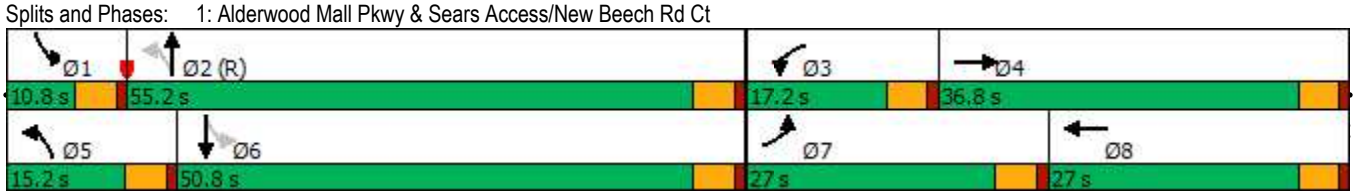
04/14/2022

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 170 | 15 | 125 | 75 | 15 | 25 | 100 | 950 | 90 | 35 | 820 | 115 |
| Future Volume (vph) | 170 | 15 | 125 | 75 | 15 | 25 | 100 | 950 | 90 | 35 | 820 | 115 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 110 | | 0 | 100 | | 0 | 250 | | 0 | 75 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Link Speed (mph) | | 25 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 299 | | | 363 | | | 314 | | | 704 | |
| Travel Time (s) | | 8.2 | | | 8.3 | | | 7.1 | | | 16.0 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 189 | 156 | 0 | 83 | 45 | 0 | 111 | 1156 | 0 | 39 | 1039 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 26.7 | 26.7 | | 9.7 | 26.7 | | 9.7 | 21.7 | | 9.7 | 24.7 | |
| Total Split (s) | 27.0 | 36.8 | | 17.2 | 27.0 | | 15.2 | 55.2 | | 10.8 | 50.8 | |
| Total Split (%) | 22.5% | 30.7% | | 14.3% | 22.5% | | 12.7% | 46.0% | | 9.0% | 42.3% | |
| Yellow Time (s) | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | -1.7 | 0.0 | | 0.0 | 0.0 | | -1.7 | -1.7 | | 0.0 | -1.7 | |
| Total Lost Time (s) | 3.0 | 4.7 | | 4.7 | 4.7 | | 3.0 | 3.0 | | 4.7 | 3.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | Max | |
| v/c Ratio | 0.46 | 0.55 | | 0.55 | 0.27 | | 0.30 | 0.49 | | 0.12 | 0.47 | |
| Control Delay | 52.7 | 18.8 | | 65.5 | 30.2 | | 7.9 | 12.3 | | 7.4 | 12.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 52.7 | 18.8 | | 65.5 | 30.2 | | 7.9 | 12.3 | | 7.4 | 12.9 | |
| Queue Length 50th (ft) | 71 | 12 | | 62 | 12 | | 24 | 248 | | 8 | 209 | |
| Queue Length 95th (ft) | 106 | 77 | | 115 | 50 | | 48 | 347 | | 22 | 303 | |
| Internal Link Dist (ft) | | 219 | | | 283 | | | 234 | | | 624 | |
| Turn Bay Length (ft) | 110 | | | 100 | | | 250 | | | 75 | | |
| Base Capacity (vph) | 686 | 533 | | 184 | 336 | | 427 | 2355 | | 319 | 2233 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.28 | 0.29 | | 0.45 | 0.13 | | 0.26 | 0.49 | | 0.12 | 0.47 | |

### Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 170 | 15 | 125 | 75 | 15 | 25 | 100 | 950 | 90 | 35 | 820 | 115 |
| Future Volume (veh/h) | 170 | 15 | 125 | 75 | 15 | 25 | 100 | 950 | 90 | 35 | 820 | 115 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 189 | 17 | 139 | 83 | 17 | 28 | 111 | 1056 | 100 | 39 | 911 | 128 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 336 | 21 | 170 | 105 | 60 | 99 | 424 | 2131 | 202 | 341 | 1999 | 281 |
| Arrive On Green | 0.10 | 0.12 | 0.13 | 0.06 | 0.09 | 0.09 | 0.05 | 0.65 | 0.64 | 0.03 | 0.64 | 0.63 |
| Sat Flow, veh/h | 3456 | 176 | 1436 | 1781 | 635 | 1047 | 1781 | 3281 | 311 | 1781 | 3129 | 440 |
| Grp Volume(v), veh/h | 189 | 0 | 156 | 83 | 0 | 45 | 111 | 572 | 584 | 39 | 517 | 522 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1612 | 1781 | 0 | 1682 | 1781 | 1777 | 1814 | 1781 | 1777 | 1791 |
| Q Serve(g_s), s | 6.3 | 0.0 | 11.3 | 5.5 | 0.0 | 3.0 | 2.4 | 20.0 | 20.1 | 0.9 | 17.8 | 17.9 |
| Cycle Q Clear(g_c), s | 6.3 | 0.0 | 11.3 | 5.5 | 0.0 | 3.0 | 2.4 | 20.0 | 20.1 | 0.9 | 17.8 | 17.9 |
| Prop In Lane | 1.00 | | 0.89 | 1.00 | | 0.62 | 1.00 | | 0.17 | 1.00 | | 0.25 |
| Lane Grp Cap(c), veh/h | 336 | 0 | 191 | 105 | 0 | 159 | 424 | 1154 | 1178 | 341 | 1136 | 1145 |
| V/C Ratio(X) | 0.56 | 0.00 | 0.82 | 0.79 | 0.00 | 0.28 | 0.26 | 0.50 | 0.50 | 0.11 | 0.46 | 0.46 |
| Avail Cap(c_a), veh/h | 691 | 0 | 431 | 186 | 0 | 313 | 507 | 1154 | 1178 | 378 | 1136 | 1145 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.7 | 0.0 | 50.9 | 55.7 | 0.0 | 50.5 | 7.6 | 10.9 | 11.0 | 8.9 | 11.0 | 11.1 |
| Incr Delay (d2), s/veh | 1.8 | 0.0 | 9.7 | 12.1 | 0.0 | 1.0 | 0.1 | 1.5 | 1.5 | 0.1 | 1.3 | 1.3 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 0.0 | 5.1 | 2.8 | 0.0 | 1.3 | 0.9 | 7.9 | 8.1 | 0.4 | 7.1 | 7.2 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 53.5 | 0.0 | 60.6 | 67.8 | 0.0 | 51.5 | 7.8 | 12.4 | 12.5 | 9.0 | 12.3 | 12.4 |
| LnGrp LOS | D | A | E | E | A | D | A | B | B | A | B | B |
| Approach Vol, veh/h | | 345 | | | 128 | | | 1267 | | | 1078 | |
| Approach Delay, s/veh | | 56.7 | | | 62.1 | | | 12.0 | | | 12.2 | |
| Approach LOS | | E | | | E | | | B | | | B | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 8.3 | 80.9 | 11.8 | 18.9 | 9.6 | 79.7 | 14.7 | 16.1 |
| Change Period (Y+Rc), s | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 |
| Max Green Setting (Gmax), s | * 6.1 | * 51 | * 13 | * 32 | * 11 | * 46 | * 22 | * 22 |
| Max Q Clear Time (g_c+I1), s | 2.9 | 22.1 | 7.5 | 13.3 | 4.4 | 19.9 | 8.3 | 5.0 |
| Green Ext Time (p_c), s | 0.0 | 9.4 | 0.1 | 1.0 | 0.0 | 8.0 | 0.8 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 19.9 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# Lanes, Volumes, Timings
## 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct

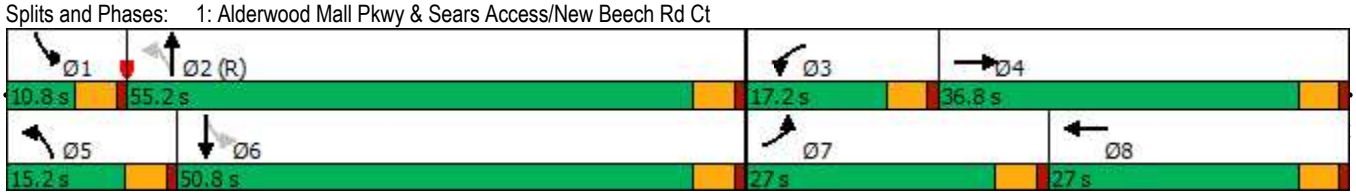
04/19/2022

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 5 | 20 | 61 | 5 | 37 | 35 | 161 | 47 | 32 | 1123 | 75 |
| Future Volume (vph) | 30 | 5 | 20 | 61 | 5 | 37 | 35 | 161 | 47 | 32 | 1123 | 75 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 110 | | 0 | 100 | | 0 | 250 | | 0 | 75 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Link Speed (mph) | | 25 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 299 | | | 363 | | | 314 | | | 704 | |
| Travel Time (s) | | 8.2 | | | 8.3 | | | 7.1 | | | 16.0 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 33 | 28 | 0 | 68 | 47 | 0 | 39 | 231 | 0 | 36 | 1331 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 26.7 | 26.7 | | 9.7 | 26.7 | | 9.7 | 21.7 | | 9.7 | 24.7 | |
| Total Split (s) | 27.0 | 36.8 | | 17.2 | 27.0 | | 15.2 | 55.2 | | 10.8 | 50.8 | |
| Total Split (%) | 22.5% | 30.7% | | 14.3% | 22.5% | | 12.7% | 46.0% | | 9.0% | 42.3% | |
| Yellow Time (s) | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | -1.7 | 0.0 | | 0.0 | 0.0 | | -1.7 | -1.7 | | 0.0 | -1.7 | |
| Total Lost Time (s) | 3.0 | 4.7 | | 4.7 | 4.7 | | 3.0 | 3.0 | | 4.7 | 3.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | Max | |
| v/c Ratio | 0.10 | 0.18 | | 0.46 | 0.26 | | 0.12 | 0.09 | | 0.04 | 0.50 | |
| Control Delay | 50.2 | 26.6 | | 62.0 | 21.6 | | 5.5 | 6.1 | | 5.2 | 9.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 50.2 | 26.6 | | 62.0 | 21.6 | | 5.5 | 6.1 | | 5.2 | 9.9 | |
| Queue Length 50th (ft) | 12 | 4 | | 51 | 4 | | 7 | 27 | | 7 | 281 | |
| Queue Length 95th (ft) | 28 | 34 | | 97 | 42 | | 18 | 47 | | 18 | 367 | |
| Internal Link Dist (ft) | | 219 | | | 283 | | | 234 | | | 624 | |
| Turn Bay Length (ft) | 110 | | | 100 | | | 250 | | | 75 | | |
| Base Capacity (vph) | 686 | 455 | | 184 | 334 | | 388 | 2558 | | 893 | 2642 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.05 | 0.06 | | 0.37 | 0.14 | | 0.10 | 0.09 | | 0.04 | 0.50 | |

### Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 30 | 5 | 20 | 61 | 5 | 37 | 35 | 161 | 47 | 32 | 1123 | 75 |
| Future Volume (veh/h) | 30 | 5 | 20 | 61 | 5 | 37 | 35 | 161 | 47 | 32 | 1123 | 75 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 33 | 6 | 22 | 68 | 6 | 41 | 39 | 179 | 52 | 36 | 1248 | 83 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 241 | 31 | 115 | 88 | 17 | 117 | 348 | 1888 | 533 | 863 | 2330 | 155 |
| Arrive On Green | 0.07 | 0.09 | 0.10 | 0.05 | 0.08 | 0.08 | 0.04 | 0.69 | 0.68 | 0.03 | 0.69 | 0.68 |
| Sat Flow, veh/h | 3456 | 351 | 1287 | 1781 | 206 | 1410 | 1781 | 2736 | 772 | 1781 | 3382 | 225 |
| Grp Volume(v), veh/h | 33 | 0 | 28 | 68 | 0 | 47 | 39 | 114 | 117 | 36 | 655 | 676 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1639 | 1781 | 0 | 1617 | 1781 | 1777 | 1731 | 1781 | 1777 | 1830 |
| Q Serve(g_s), s | 1.1 | 0.0 | 1.9 | 4.5 | 0.0 | 3.3 | 0.7 | 2.6 | 2.7 | 0.7 | 21.8 | 21.9 |
| Cycle Q Clear(g_c), s | 1.1 | 0.0 | 1.9 | 4.5 | 0.0 | 3.3 | 0.7 | 2.6 | 2.7 | 0.7 | 21.8 | 21.9 |
| Prop In Lane | 1.00 | | 0.79 | 1.00 | | 0.87 | 1.00 | | 0.45 | 1.00 | | 0.12 |
| Lane Grp Cap(c), veh/h | 241 | 0 | 146 | 88 | 0 | 134 | 348 | 1226 | 1195 | 863 | 1224 | 1261 |
| V/C Ratio(X) | 0.14 | 0.00 | 0.19 | 0.78 | 0.00 | 0.35 | 0.11 | 0.09 | 0.10 | 0.04 | 0.53 | 0.54 |
| Avail Cap(c_a), veh/h | 691 | 0 | 438 | 186 | 0 | 300 | 449 | 1226 | 1195 | 901 | 1224 | 1261 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 52.4 | 0.0 | 50.0 | 56.4 | 0.0 | 52.0 | 6.6 | 6.2 | 6.3 | 5.4 | 9.2 | 9.2 |
| Incr Delay (d2), s/veh | 0.3 | 0.0 | 0.8 | 13.6 | 0.0 | 1.6 | 0.1 | 0.2 | 0.2 | 0.0 | 1.7 | 1.6 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 0.5 | 0.0 | 0.8 | 2.4 | 0.0 | 1.4 | 0.2 | 1.0 | 1.0 | 0.3 | 8.3 | 8.6 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 52.7 | 0.0 | 50.8 | 70.0 | 0.0 | 53.6 | 6.6 | 6.3 | 6.5 | 5.4 | 10.9 | 10.9 |
| LnGrp LOS | D | A | D | E | A | D | A | A | A | A | B | B |
| Approach Vol, veh/h | | 61 | | | 115 | | | 270 | | | 1367 | |
| Approach Delay, s/veh | | 51.8 | | | 63.3 | | | 6.4 | | | 10.7 | |
| Approach LOS | | D | | | E | | | A | | | B | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 8.2 | 85.8 | 10.6 | 15.4 | 8.3 | 85.7 | 11.4 | 14.6 |
| Change Period (Y+Rc), s | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 |
| Max Green Setting (Gmax), s | * 6.1 | * 51 | * 13 | * 32 | * 11 | * 46 | * 22 | * 22 |
| Max Q Clear Time (g_c+I1), s | 2.7 | 4.7 | 6.5 | 3.9 | 2.7 | 23.9 | 3.1 | 5.3 |
| Green Ext Time (p_c), s | 0.0 | 1.5 | 0.1 | 0.1 | 0.0 | 10.3 | 0.1 | 0.1 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 14.8 |
| HCM 6th LOS | B |

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# Lanes, Volumes, Timings
## 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct

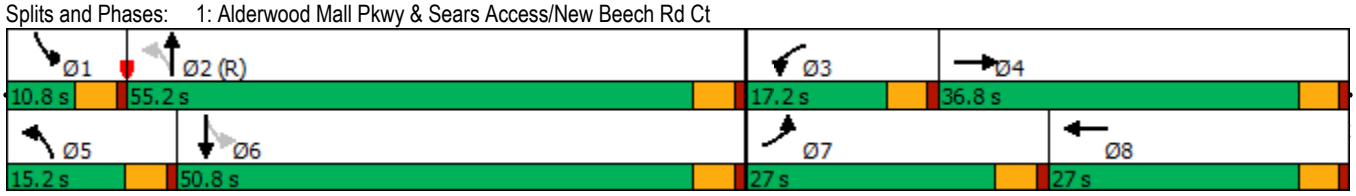
04/19/2022

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 170 | 15 | 125 | 88 | 15 | 53 | 100 | 972 | 117 | 73 | 820 | 115 |
| Future Volume (vph) | 170 | 15 | 125 | 88 | 15 | 53 | 100 | 972 | 117 | 73 | 820 | 115 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Storage Length (ft) | 110 | | 0 | 100 | | 0 | 250 | | 0 | 75 | | 0 |
| Storage Lanes | 2 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Link Speed (mph) | | 25 | | | 30 | | | 30 | | | 30 | |
| Link Distance (ft) | | 299 | | | 363 | | | 314 | | | 704 | |
| Travel Time (s) | | 8.2 | | | 8.3 | | | 7.1 | | | 16.0 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 189 | 156 | 0 | 98 | 76 | 0 | 111 | 1210 | 0 | 81 | 1039 | 0 |
| Turn Type | Prot | NA | | Prot | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | 2 | | | 6 | | |
| Detector Phase | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | | 5.0 | 10.0 | |
| Minimum Split (s) | 26.7 | 26.7 | | 9.7 | 26.7 | | 9.7 | 21.7 | | 9.7 | 24.7 | |
| Total Split (s) | 27.0 | 36.8 | | 17.2 | 27.0 | | 15.2 | 55.2 | | 10.8 | 50.8 | |
| Total Split (%) | 22.5% | 30.7% | | 14.3% | 22.5% | | 12.7% | 46.0% | | 9.0% | 42.3% | |
| Yellow Time (s) | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | |
| Lost Time Adjust (s) | -1.7 | 0.0 | | 0.0 | 0.0 | | -1.7 | -1.7 | | 0.0 | -1.7 | |
| Total Lost Time (s) | 3.0 | 4.7 | | 4.7 | 4.7 | | 3.0 | 3.0 | | 4.7 | 3.0 | |
| Lead/Lag | Lead | Lag | | Lead | Lag | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | None | None | | None | None | | None | C-Max | | None | Max | |
| v/c Ratio | 0.40 | 0.56 | | 0.61 | 0.39 | | 0.31 | 0.55 | | 0.28 | 0.48 | |
| Control Delay | 50.4 | 19.2 | | 68.8 | 24.5 | | 8.3 | 15.3 | | 8.9 | 13.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 50.4 | 19.2 | | 68.8 | 24.5 | | 8.3 | 15.3 | | 8.9 | 13.7 | |
| Queue Length 50th (ft) | 71 | 12 | | 74 | 12 | | 24 | 272 | | 18 | 209 | |
| Queue Length 95th (ft) | 106 | 77 | | 131 | 61 | | 48 | 398 | | 39 | 305 | |
| Internal Link Dist (ft) | | 219 | | | 283 | | | 234 | | | 624 | |
| Turn Bay Length (ft) | 110 | | | 100 | | | 250 | | | 75 | | |
| Base Capacity (vph) | 686 | 533 | | 184 | 354 | | 418 | 2181 | | 293 | 2161 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.28 | 0.29 | | 0.53 | 0.21 | | 0.27 | 0.55 | | 0.28 | 0.48 | |

### Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated

Splits and Phases: 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct



# HCM 6th Signalized Intersection Summary
## 1: Alderwood Mall Pkwy & Sears Access/New Beech Rd Ct

04/19/2022

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 170 | 15 | 125 | 88 | 15 | 53 | 100 | 972 | 117 | 73 | 820 | 115 |
| Future Volume (veh/h) | 170 | 15 | 125 | 88 | 15 | 53 | 100 | 972 | 117 | 73 | 820 | 115 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | No | | | No | | | No | | | No | |
| Adj Sat Flow, veh/h/ln | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | 189 | 17 | 139 | 98 | 17 | 59 | 111 | 1080 | 130 | 81 | 911 | 128 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 336 | 21 | 170 | 122 | 38 | 133 | 417 | 2016 | 242 | 327 | 1970 | 277 |
| Arrive On Green | 0.10 | 0.12 | 0.13 | 0.07 | 0.10 | 0.10 | 0.05 | 0.63 | 0.62 | 0.04 | 0.63 | 0.62 |
| Sat Flow, veh/h | 3456 | 176 | 1436 | 1781 | 367 | 1274 | 1781 | 3194 | 384 | 1781 | 3129 | 440 |
| Grp Volume(v), veh/h | 189 | 0 | 156 | 98 | 0 | 76 | 111 | 600 | 610 | 81 | 517 | 522 |
| Grp Sat Flow(s),veh/h/ln | 1728 | 0 | 1612 | 1781 | 0 | 1641 | 1781 | 1777 | 1801 | 1781 | 1777 | 1791 |
| Q Serve(g_s), s | 6.3 | 0.0 | 11.3 | 6.5 | 0.0 | 5.2 | 2.5 | 22.6 | 22.8 | 2.0 | 18.3 | 18.3 |
| Cycle Q Clear(g_c), s | 6.3 | 0.0 | 11.3 | 6.5 | 0.0 | 5.2 | 2.5 | 22.6 | 22.8 | 2.0 | 18.3 | 18.3 |
| Prop In Lane | 1.00 | | 0.89 | 1.00 | | 0.78 | 1.00 | | 0.21 | 1.00 | | 0.25 |
| Lane Grp Cap(c), veh/h | 336 | 0 | 191 | 122 | 0 | 171 | 417 | 1122 | 1137 | 327 | 1119 | 1128 |
| V/C Ratio(X) | 0.56 | 0.00 | 0.82 | 0.80 | 0.00 | 0.44 | 0.27 | 0.54 | 0.54 | 0.25 | 0.46 | 0.46 |
| Avail Cap(c_a), veh/h | 691 | 0 | 431 | 186 | 0 | 305 | 500 | 1122 | 1137 | 348 | 1119 | 1128 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Uniform Delay (d), s/veh | 51.7 | 0.0 | 50.9 | 55.1 | 0.0 | 50.5 | 8.1 | 12.3 | 12.5 | 10.1 | 11.6 | 11.7 |
| Incr Delay (d2), s/veh | 1.8 | 0.0 | 9.7 | 13.4 | 0.0 | 1.8 | 0.1 | 1.8 | 1.8 | 0.4 | 1.4 | 1.4 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | 2.8 | 0.0 | 5.1 | 3.4 | 0.0 | 2.2 | 0.9 | 9.1 | 9.3 | 0.8 | 7.3 | 7.4 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 53.5 | 0.0 | 60.6 | 68.4 | 0.0 | 52.3 | 8.3 | 14.1 | 14.3 | 10.5 | 13.0 | 13.0 |
| LnGrp LOS | D | A | E | E | A | D | A | B | B | B | B | B |
| Approach Vol, veh/h | | 345 | | | 174 | | | 1321 | | | 1120 | |
| Approach Delay, s/veh | | 56.7 | | | 61.4 | | | 13.7 | | | 12.8 | |
| Approach LOS | | E | | | E | | | B | | | B | |

| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Phs Duration (G+Y+Rc), s | 9.4 | 78.8 | 12.9 | 18.9 | 9.6 | 78.5 | 14.7 | 17.2 |
| Change Period (Y+Rc), s | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 | * 4.7 |
| Max Green Setting (Gmax), s | * 6.1 | * 51 | * 13 | * 32 | * 11 | * 46 | * 22 | * 22 |
| Max Q Clear Time (g_c+I1), s | 4.0 | 24.8 | 8.5 | 13.3 | 4.5 | 20.3 | 8.3 | 7.2 |
| Green Ext Time (p_c), s | 0.0 | 9.7 | 0.1 | 1.0 | 0.0 | 7.9 | 0.8 | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 6th Ctrl Delay | 21.2 |
| HCM 6th LOS | C |

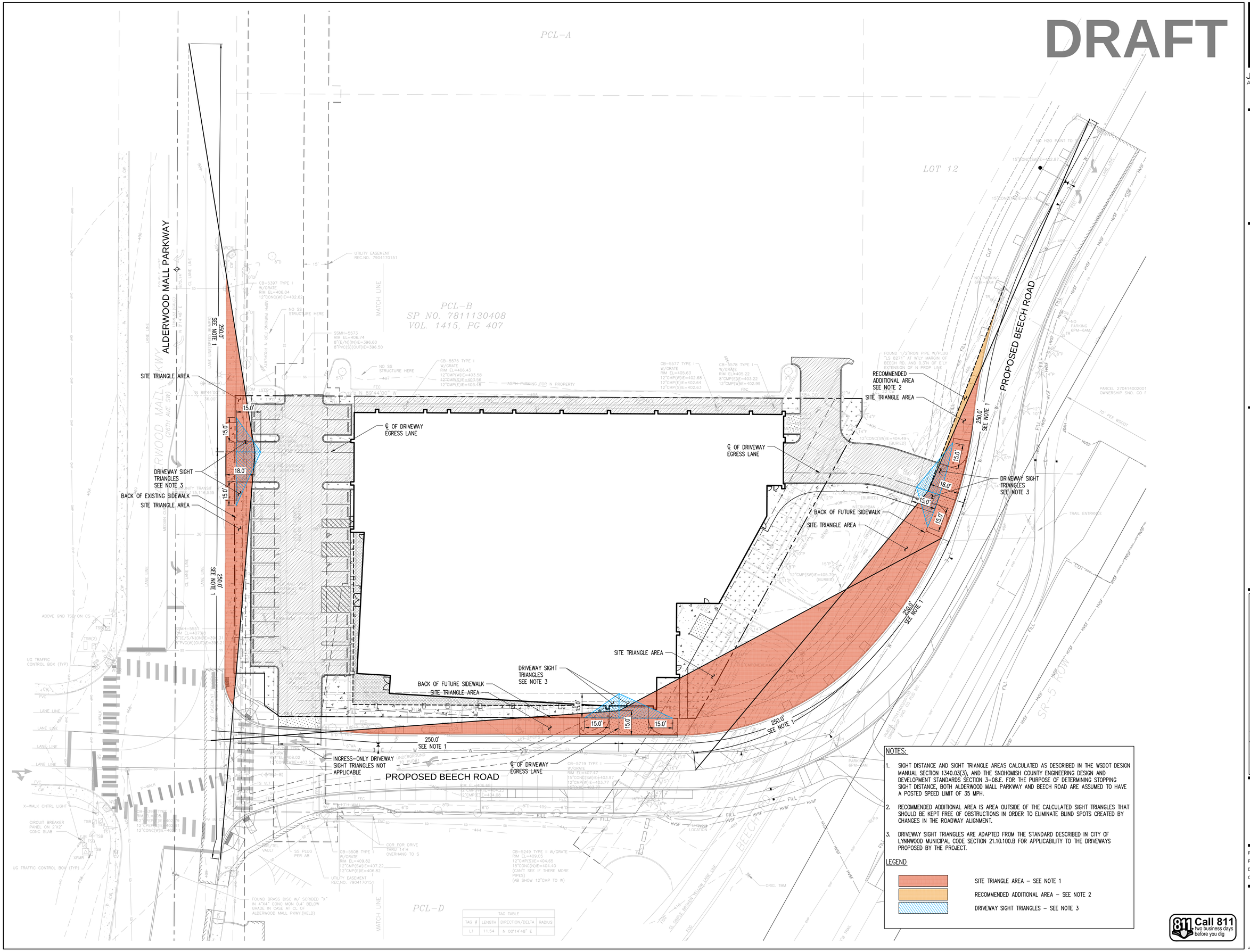
Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

# ATTACHMENT C

## Sight Distance Evaluation Exhibits

# DRAFT




NOTES:

1. SIGHT DISTANCE AND SIGHT TRIANGLE AREAS CALCULATED AS DESCRIBED IN THE WSDOT DESIGN MANUAL SECTION 1340.03(3), AND THE SNOHOMISH COUNTY ENGINEERING DESIGN AND DEVELOPMENT STANDARDS SECTION 3-08.E. FOR THE PURPOSE OF DETERMINING STOPPING SIGHT DISTANCE, BOTH ALDERWOOD MALL PARKWAY AND BEECH ROAD ARE ASSUMED TO HAVE A POSTED SPEED LIMIT OF 35 MPH.
2. RECOMMENDED ADDITIONAL AREA IS AREA OUTSIDE OF THE CALCULATED SIGHT TRIANGLES THAT SHOULD BE KEPT FREE OF OBSTRUCTIONS IN ORDER TO ELIMINATE BLIND SPOTS CREATED BY CHANGES IN THE ROADWAY ALIGNMENT.
3. DRIVEWAY SIGHT TRIANGLES ARE ADAPTED FROM THE STANDARD DESCRIBED IN CITY OF LYNNWOOD MUNICIPAL CODE SECTION 21.10.100.B FOR APPLICABILITY TO THE DRIVEWAYS PROPOSED BY THE PROJECT.

LEGEND

- SITE TRIANGLE AREA – SEE NOTE 1
- RECOMMENDED ADDITIONAL AREA – SEE NOTE 2
- DRIVEWAY SIGHT TRIANGLES – SEE NOTE 3

TAG TABLE

| TAG # | LENGTH | DIRECTION/DELTA | RADIUS |
|---|---|---|---|
| L1 | 11.54 | N 00°14'48" E | |

Call 811 two business days before you dig


JACKSON | MAIN ARCHITECTURE
311 FIRST AVENUE SOUTH
SEATTLE, WA 98104
t 206.324.4800

kpff
1601 5th Avenue, Suite 1600
Seattle, WA 98101
206.622.5822
www.kpff.com


ALDERWOOD PROFESSIONAL BUILDING LLC

i-VISTA@ALDERWOOD

18631 ALDERWOOD MALL PARKWAY
LYNNWOOD, WA 98037

| DATE | NO. | DESCRIPTION |
|---|---|---|

04/20/2022

| | |
|---|---|
| PROJECT NO.: | 2200091 |
| PROJECT MGR.: | BCR |
| DRAWN BY: | DC |
| CHECKED BY: | TJE |

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Apr 20, 2022 – 8:43am brodyr \\kpff.com\Civil\2200091-2209999\2200091 Alderwood Tower\Design\Engineer\BCR\2022 04 18 Sight Triangles\Drawing1.dwg