

Landing on the Cowlitz

Traffic Summary

Introduction

The Landing on the Cowlitz (LOTC) Master Plan was approved in October 2021 with Ordinance 2021-10. An initial Trip Generation Study was prepared by Lancaster Mobley with a summary report dated March 8, 2021. Lancaster Mobley prepared a formal Scoping Memorandum in October 2022 which summarized the team’s approach for the Transportation Impact Study. After reviewing the proposed scope of study, the City of Castle Rock issued a review response in November 2022. A formal Development Agreement Transportation Impact Study (Exhibit A) was prepared by Lancaster Mobley, dated November 2023, utilizing the comments issued from the City of Castle Rock in the scope review memorandum.

Below is a high-level summary of the study findings and an outline of the reservation and trip accounting methodology.

Anticipated Trip Generation

The DA Transportation Impact Study prepared reflects the following trip generation calculations that the project could generate:

Table 1: Trip Generation Summary

Trip Description (Excluding Internal Capture Trips)	AM Peak Hour Trips	PM Peak Hour Trips
Total Trips	1,019	1,522

Based on the results of the operational analysis, three intersections are projected to exceed acceptable levels of operation. These intersections include (1) the site access at Huntington Avenue, (2) SR-411 at Westside Highway, and (3) I-5 Northbound Ramps at Huntington Avenue. Note that SR-411 and I-5 are both WSDOT intersections and mitigation associated at these locations will require further coordination with WSDOT agency staff.

All other study intersections are projected to continue operating acceptably through 2043 with full buildout of the site.

As depicted from the table above, the full buildout of the development is anticipated to generate approximately 1,522 PM peak hour trips excluding internal capture. When the development consumes all reserved PM peak hour trips from the reservation bank, the developer will conduct a new transportation impact study to reassess mitigation.

Additional analysis was conducted utilizing the methodology presented in the Development Agreement Transportation Impact Study to determine that the dual-circulating lane roundabout at the site access at Huntington Avenue would be necessary when 2,445 PM peak hour trip counts are reached. If and/or when the development consumes 80 percent of the PM peak hour trips (1,956 PM peak hour trips) at this intersection, the developer will be required to begin design of the second circulating lane at the roundabout. Any additional right-of-way required for these improvements shall be dedicated to the City of Castle Rock, at no cost to the City, at the time of design as depicted in Exhibit H of the Development

Agreement.

Trip Reservation and Capacity

The City of Castle Rock has reserved transportation capacity for the LOTC development. The LOTC development has been granted an initial 1,000 PM peak hour trips for reservation. Additional transportation capacity, up to 1,750 PM peak hour trips, may be reserved when the development consumes 80 percent (800 PM peak hour trips) of the initial capacity as outlined in the Development Agreement.

Internal Trip Accounting Analysis

Trip accounting will be tracked internally and with each proposed development application. The LOTC developer will supply the City of Castle Rock with an updated Trip Generation and Accounting Analysis during the regularly scheduled working meetings between the developer and city staff. Trip accounting will be comprised of two tracking categories: (1) number of reserved trips not yet allocated within the development and (2) number of trips that have been allocated within the development. Below is an example of how trip balances will be tracked and accounted for:

Table 2: Internal Trip Accounting Analysis Example

1,000 PM Peak Hour Trip Bank			
Project Name	PM Peak Hour Trips Allocated	PM Peak Hour Trips Remaining in Bank	Cumulative PM Peak Hour Trips Consumed from Bank
		1,000	
LOTC Bldg 1	150	850	150
LOTC Bldg 2	78	772	228
Field Data Collection Required at 250 PM Peak Hour Trips			
LOTC Bldg 3	92	680	320
LOTC Bldg 4	125	555	445
Field Data Collection Required at 500 PM Peak Hour Trips			
LOTC Bldg 5	67	488	512
LOTC Bldg 6	138	350	650
LOTC Bldg 7	74	276	724
Field Data Collection Required at 750 PM Peak Hour Trips			
LOTC Bldg 8	93	183	817
Additional Reservation Capacity Request Allowed at 800 PM Peak Hour Trips			

The internal trip accounting analysis will help to guide the mitigation forecast and act as a tool for the developer and City of Castle Rock to estimate the timeline of required improvements. Internal trip collection shall be limited to the site access at Huntington Avenue and at intersections internal to the LOTC development, as determined necessary. The developer will perform actual “on the road” trip counts when increments of 250 cumulative PM peak hour trips are consumed from the bank. These counts are to act as a system of checks and balances for the internal trip accounting analysis.

Trip counts shall be conducted at a time that is mutually agreed upon by the developer and the City of Castle Rock. The following considerations shall be made when scheduling the data collection:

- Data shall be collected no less than 2 weeks before or after a major holiday.
- Data collection shall avoid summer months when school is not in session, if possible.
- Counts shall be collected over a three-day period (Tuesday – Thursday).

An average of the collected counts shall be taken and used to update the internal trip accounting analysis. The averaged field data collected shall replace the existing balance within the trip accounting analysis for cumulative trips consumed from the bank.

Transportation Compliance Letter Requirements

In addition to the internal trip accounting analysis, each private site development will prepare and submit a Transportation Compliance Letter, including trip generation and accounting analysis. Refer to Exhibit B for an example of the Transportation Compliance Letter. The compliance letter shall include the incorporate the following elements:

- Provide a calculation of total, primary, and pass-by trips generated by the development application.
- Apply an internal trip capture rate of 6% to AM peak hour trips and 13% to PM peak hour trips and average weekday trips generated.
- Provide a summary of the current LOTC trip accounting analysis in addition to the anticipated total trips generated by the proposed development to ensure the total PM peak hour trip reservation is not exceeded.
- Provide a trip impact analysis to determine if/when mitigation thresholds will be met at the intersections of SR 411 at Westside Highway, Site Access at Huntington Avenue, and the I-5 Northbound Ramps and Huntington Avenue. Trip impacts to these intersections shall be applied in a manner consistent with the DA TIS.
- The letter shall utilize the following applications at each intersection listed below:
 - SR-411 at Westside Highway – Apply only externally generated primary trips.
 - Site Access at Huntington Avenue – Apply externally generated primary and pass-by trips.
 - I-5 Northbound Ramps at Huntington Avenue – Apply externally generated primary and pass-by trips.
- Each letter shall provide a trip assignment figure depicting each intersection above.

Mitigation Trip Impact Tracking

Mitigation trip accounting will be tracked internally and with each proposed development application. The LOTC developer will supply the City of Castle Rock with an updated Mitigation Trip Impact Summary during the regularly scheduled working meetings between the developer and city staff. Mitigation will be accounted for using the internal trip accounting analysis and by performing actual “on the road” traffic counts from existing development within the LOTC, as described above, and again during the interim traffic analysis period as described below and agreed-upon with City of Castle Rock staff.

The DA Transportation Impact Study outlines the potential mitigation measures that will be necessary to the existing transportation system as trips from the LOTC development are incorporated into the system. Utilizing these known thresholds, the developer will supply the City of Castle Rock with an updated Mitigation Trip Impact Summary, as requested during the working meetings. Below is an example of how

mitigation impacts will be tracked and summarized:

Table 3: Mitigation Trip Impact Summary Example

Transportation Facility	Planned Mitigation	Peak Hour Trigger	Mitigation Threshold (Trips)	Total Impacts (Trips)	Threshold Exceeded (Y/N)
Huntington Avenue at Site Access	Single-Lane Roundabout with By-Pass Lane	PM	657		

As discussed within the full DA TIS, all other intersections under the City of Castle Rock’s purview will operate acceptably by full buildout of the LOTC project. The developer shall consult directly with the Washington State Department of Transportation (WSDOT) for all required mitigation measures associated with Interstate 5 and SR-411.

An interim traffic study shall be performed when internal accounting shows that approximately 500 PM peak hour trips have been consumed within the bank. The interim traffic study shall include the following intersections:

- Huntington Avenue at Site Access
- SR-411 at Westside Highway
- Interstate 5 Northbound Ramps at Huntington Avenue

Interim traffic studies shall include an updated 2043 analysis, consistent with the current DA TIS.

Summary

The master developer will submit a copy of the Trip Accounting and Mitigation Trip Impact summaries to the City of Castle Rock, as requested during the working meetings, to document the status of capacity and mitigation used for the LOTC development. If the total net new peak trips generated by the LOTC development exceed the thresholds listed in the tables above, the applicant will prepare a new traffic impact analysis to assess the impact of the anticipated excess trips and corresponding mitigation measures.

Please refer to the enclosed Development Agreement Transportation Impact Study and example Transportation Compliance Letter for more information.

Enclosed:

Exhibit A – Development Agreement Transportation Impact Study

Exhibit B – Example Transportation Compliance Letter