
Exhibit F: Driveway Sight Distance Analysis



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Date: 4/22/2021

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Project Name: 1610 Lancaster Drive SE, Salem

AKS Job No.: 8106

Subject: Driveway Sight Distance Analysis

This memorandum is being provided in response to the request from Public Works to provide sight distance analysis for a proposed multi-family driveway, as part of our request for an adjustment to the 10-foot by 50-foot vision clearance area required under Salem Revised Code (SRC) Chapter 805.005, Section (b)(1)(B). The adjustment is requested because an existing structure on the property to the south was not constructed per current setback requirements and creates a visibility encroachment using this standard vision clearance area.

The property at 1610 Lancaster Drive SE ("Property") currently has "double frontage" with Lancaster Drive SE, a major arterial roadway per the Salem Transportation System Plan (TSP), on the west; and 40th Place SE, a local street per the TSP, on the east. As a requirement of the proposed development of the Property, the applicant is required to provide driveway access onto 40th Place, as the lower classification of street (per SRC 804.035). This proposed driveway approach is discussed in the analysis.

40th Place measures 34 feet in width, curb-to-curb, with effective travel lanes 11 feet wide on either side of the centerline and permitted on-street parking. There are currently no sidewalks on the development side of the street, and a property-line sidewalk on the opposite side. The street intersects with Carson Drive SE, with 40th Place stop-controlled at the intersection, approximately 150 feet south of the Property. To the north, the street makes a sharp right angle (115-degrees) approximately 75 feet north of the Property and turns into Campbell Drive SE. Since this is a local street, a design speed of 25 miles per hour (mph) was used in this analysis, though with the nearby intersection and bend in the roadway, vehicles making common-sense traffic maneuvers should not approach this speed.

The proposed driveway location is located near the south side of the Property, set back from the south property line per zoning requirements and applicable adjustments. It will be constructed per City of Salem Public Works Design Standards, along with a new curb-line sidewalk along the Property frontage. The driveway is located approximately 165 feet from the Carson Drive intersection, and approximately 160 feet from the north bend into Campbell Drive.

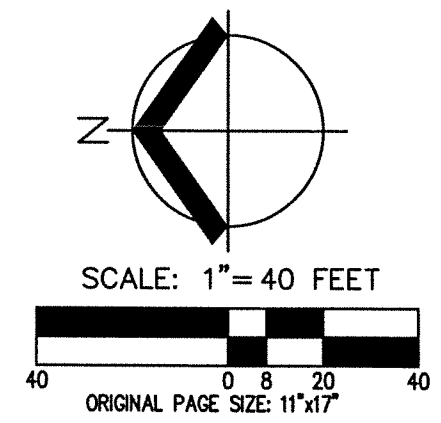
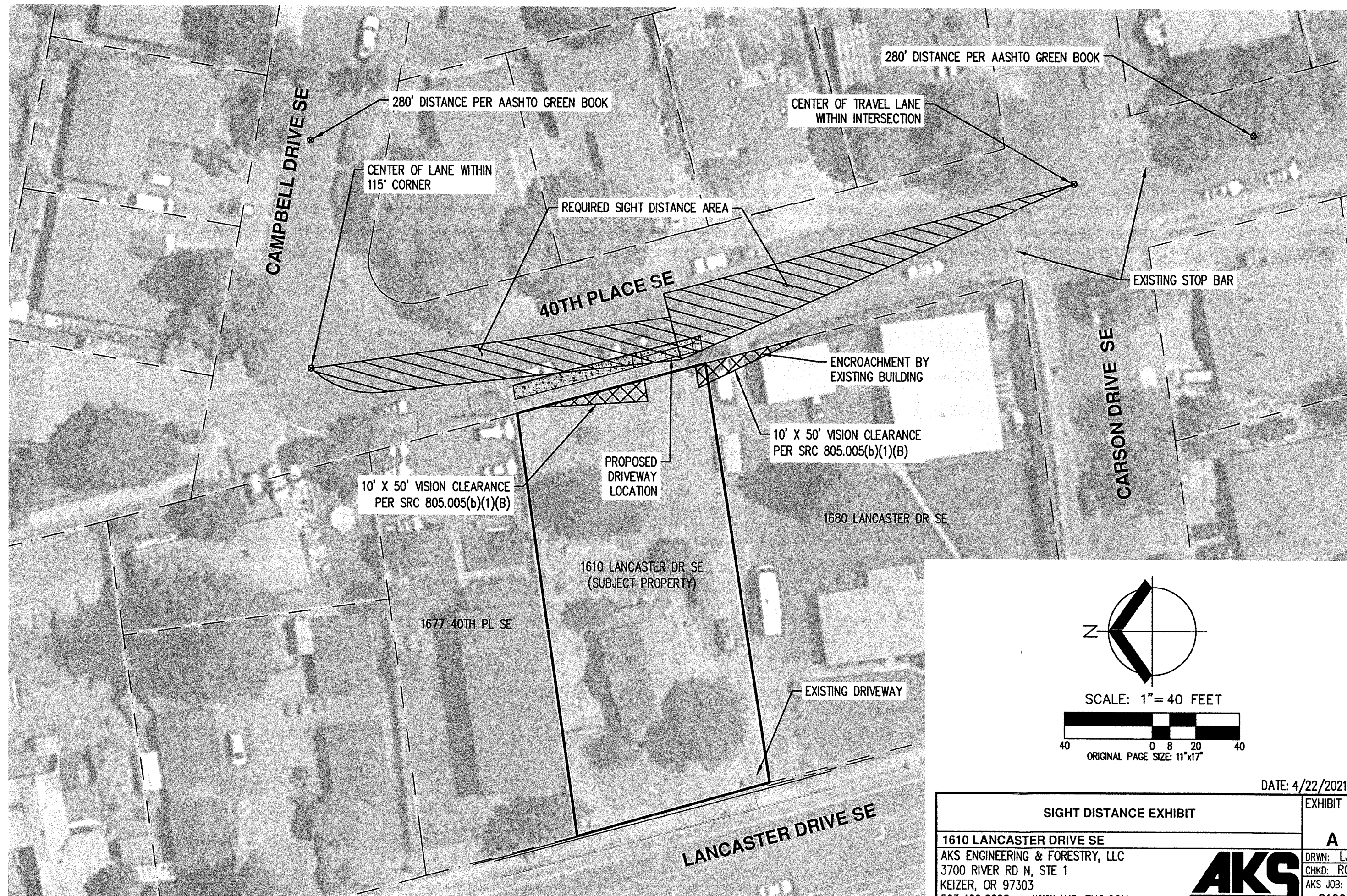
Per Section 9.5 of the *AASHTO Policy on Geometric Design of Highways and Streets* (Green Book), 2018 Edition, the required sight distance for this driveway approach onto 40th Place, at a 25-mph design speed, 280 feet in both the left (north) and right (south), per Case B-1 and Table 9-7. This required design distance is to provide intersection sight distance for a driver's eye (3.5 feet above ground) to see an object that is 3.5 feet above the ground, from a "decision point" location 14.5 feet from the near edge of the nearest travel lane.

As defined in the Green Book, in the case of 40th Place, the near edge of the travel lane is 11 feet from the centerline of the roadway, which puts the required decision point 8.25 feet from the existing face of the west curb. Using this decision point for the start of the departure sight triangle, the length of the sight triangle along the driveway approach is 20 feet (14.5 feet plus 5.5 feet) to identify vehicles approaching from the left, and the driveway leg of the triangle for vehicles approaching from the right is 31 feet (14.5 feet plus 16.5 feet). As noted above, the Green Book requirement for the leg along 40th Place is 280 feet in both directions. However, since each of these points are beyond the extent of the roadway itself, the sight distance area endpoints are established based on the point where vehicles enter onto 40th Place, in their respective travel lanes.

As shown in the attached Exhibit A, the sight distance area required by the AASHTO Green Book will not be impaired by any existing structures or the structures proposed with this application. The required intersection sight distance can be provided at the proposed driveway location and conforms to the requirements set forth in the Green Book.

Attachment: Exhibit A - Sight Distance Exhibit





DATE: 4/22/2021

SIGHT DISTANCE EXHIBIT		EXHIBIT
1610 LANCASTER DRIVE SE		A
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