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November 29, 2010

Larry and Laura Luethe
13225 NW McNamee Road
Portland Oregon

Re: Luethe Property
Sight Distance Certification For Easterly Access Point
Revised

The easterly access for the Luethe Property proposed development is located near the northeast corner of the project. There is no posted speed limit along NW McNamee Road. In 1999, Multnomah County did a comprehensive survey of NW McNamee Road and determined the centerline of the traveled way. This survey was recorded as Survey No. 59579. Centerline radii for NW McNamee Road range from 130' to 400', with most being near 150'. Based on the attached Table 3-15 of the 2004 Geometric Design of Highways and Streets published by American Association of State Highway and Transportation Officials (AASHTO) this road has a design speed of 25mph, however a higher design speed of 55 miles-per-hour has been used based on County code.

The intersection sight distance was evaluated based on Multnomah County requirements listed in the Multnomah County Design Standards section 2.3.7 (see attached). Sight distance from the proposed access to NW McNamee Road was measured to be 375 feet to the north of the access for a right hand turn and 190 feet to the southeast of the access for a left hand turn. The County standards require 246 feet (75 m) in either direction for intersection sight distance at a design speed of 55 miles per hour (90 km/hr). These measurements were taken with an eye height of 3.5 feet and an object height of 4.25 feet above the road; and it was assumed that the front of a stopped vehicle was 10 feet from the near edge of the pavement. (Actual measurement was taken 15 feet from pavement edge.)

In conclusion, I hereby certify that Multnomah County sight distance requirements are met for the easterly access on NW McNamee Road.

Sincerely,
MGH Associates

Laura Standridge, P.E.
Associate



EXPIRES: 6/30/12

Enclosures (2)

2.3.5 Through Lane Tapers

Street width transitions shall follow the guidelines set forth by Current AASHTO Standards and Current MUTCD Manual. For streets with through traffic lanes being added or dropped, the length of the transition taper shall be determined as follows:

$$L = 0.6(W \times S) \quad \text{for } S = 70 \text{ km/h or more}$$

$$L = \frac{W \times S^2}{155} \quad \text{for } S = \text{less than } 60 \text{ km/h}$$

- Where:
- L = minimum length of taper (meters)
 - S = design speed (km/h)
 - W = width of lane being added or dropped (meters)

2.3.6 Minimum Intersection Angle

The interior angle at intersecting streets shall be kept as near to ninety (90) degrees as possible, and in no case shall it be less than seventy five (75) degrees. Regardless of the intersection angle, a tangent section shall be carried a minimum of 15 meters each side of intersecting right-of-way lines.

2.3.7 Corner Intersection Sight Distance

Corner intersection sight distance shall be in accordance with the procedures stated in current AASHTO Standards. Sight distance should be measured from a driver’s eye 1.07 m high and 4.5m from the near edge of the nearest lane to an object height of 1.3 m above the street pavement. Table 2.3.2 below summarizes the minimum required intersection sight distance for minor streets of a two-way stop-controlled intersection.

**Table 2.3.2
Minimum Corner Intersection Sight Distance**

Design Speed of Major Street (km/h)	Minimum Corner Intersection Sight Distance (meters.)
30	25
40	35
50	40
60	50
70	60
80	65
90	75

Where the minimum corner intersection sight distance shown in Table 2.3.2 can not be met, the minimum sight distance should be no less than the stopping sight distance on the major street. Stopping sight distance requirements are shown in Section 2.4.1 of the Design portion of this manual.

