May 26, 2015

Ms. Janelle Hitch, P.E.
City of Bainbridge Island
280 Madison Avenue N.
Bainbridge Island, WA 98110

Subject: Sight Distance for Rolling Sunrise Plat - Proposed Access points

Ms. Hitch:

I have field reviewed the proposed accesses for the project in order to address A.(2) of the order issued by Hearing Examiner Stafford Smith from the October 20, 2014 order remanding the application of the subject project for further studies and documentation. Attached to this letter report is an excerpt from the report with his request for additional information.

This limited scope traffic assessment recommending sight distance requirements at the Rolling Sunrise's two connections to the city of Bainbridge Island's public road network, assessing whether such requirements will be met under existing conditions and whether proposed mitigations should be implemented.

As outlined in the AASHTO guidelines, an entering vehicle eye height of 3.5 feet, located 10 feet behind the traveled way, as represented by the edge of roadway and an approaching vehicle height of 3.5 feet should be used in determining entering sight distance. Attached to this letter is an excerpt from the AASHTO guidelines, Exhibit 9-55, which indicates the intersection sight distances for various speeds. The sight distance desired for 15 mph is 170 feet. Each of the accesses is discussed below

**Hyla Avenue Access**

The project access to Hyla Avenue will serve three lots within the Rolling Sunrise project. The roadway is posted at 25 mph, however, operating speeds given the curvilinear nature of the roadway and narrow widths are estimated at approximately 15 mph with lower speeds expected near the several curves along this roadway including the curve which is accessed by the Rolling Sunrise project.

The access to the Rolling Sunrise project is located on the outside of a tight curve with a centerline radius of approximately 50 to 60 feet. Sight distance looking westerly from the connection point exceeds 200 feet.

When looking southerly, a sight distance of 175 feet is achieved assuming tree trimming over the right of way. Additional sight distance when looking south can be achieved depending on the further reduction of vegetation that encroaches into the right of way and sight lines. Because of the vegetation a picture was not taken.

A copy of the Kitsap County assessor map for this area shows the road layout in conjunction with the parcels in the vicinity of Hyla Avenue near the Rolling Sunrise access.

**Recommendations for Hyla Avenue Access**

Based on this field review and assessment, I would recommend the following conditions:

1. Coordinate with city to maintain vegetation within right of way and sight lines.
2. Add signage on Hyla by placing a curve warning sign W1-10 and 10 mph advisory plate in both directions. Both the right turn and left turn version would be installed. See attached excerpt of the sign from the MUTCD.

**Sunrise Drive Access**

The project access to Sunrise Drive proposes to serve four new homes. The proposed access will parallel an existing access located adjacent and just east of the Rolling Sunrise access and connect at the right angle corner of Sunrise Drive NE and NE Duncan Lane. Both accesses tie into this corner of Sunrise and Duncan and are approximately 25 feet apart. This existing access in reviewing Kitsap County Assessor records shows 3 lots using it for access. The operating speeds for Sunrise and Duncan near the vicinity of the Rolling Sunrise connection is approximately 15 mph given the road cross-section and the right angle corner.

When looking easterly on Duncan Lane from the Rolling Sunrise access, sight distance over 170 feet is attainable. When looking east, the driver should be warned that a parallel driveway is present. There is currently vegetation that impairs view of a vehicle traveling parallel with the driver emanating from the Rolling Sunrise access.

**Recommendation for Sunrise Drive Access**

Based on this field review and assessment, I would recommend the following conditions:

1. Remove any encumbering vegetation located adjacent to the project between the two parallel accesses for approximately 75 to 100 feet to enhance visibility.
2. Add a warning sign located approximately 50 to 75 feet south on the Rolling Sunrise access warning that the roads merge. The proposed sign, W4-2, is attached. It is recommended that the sign be placed so that it is visible for both accesses.

Please let me know if further information is required.

Sincerely,

Gregary B. Heath, P.E.

Attachments
- Excerpt Hearing Examiner Report
- AASHTO Exhibit 9-55
- Kitsap County Assessor Map
- MUTCD Sign W1-10 and Sign W4-1
- Site Pictures as labeled

applicant's verbal agreement to make these upgrades to be formalized within a written stipulation. This would both provide clarity as to the respective obligations of the City and the applicant and reduce the potential for future unproductive argument over such elusive legal concepts as appropriate provisions, regulatory nexus and proportionality.

**ORDER**

A. The Rolling Sunrise preliminary plat application is REMANDED to City staff for completion of the following additional review and documentation:

(1). Documentation of the application's compliance with Minimum Requirements 1 through 10 of the state Department of Ecology's 2005 Stormwater Management Manual for Western Washington shall be provided. Particular attention should be paid to Minimum Requirement #7. In order to demonstrate the feasibility of the proposed infiltration onsite of 100% of stormwater runoff, site geotechnical conditions will need to be assessed and all post-development surfaces modeled. The plat site plan should be revised, as needed, to accurately depict all required stormwater facilities and their relationship to other plat and relevant offsite development. If 100% of stormwater cannot be infiltrated onsite, downstream flow paths and impacts will need to be described and assessed.

(2). A limited scope Traffic Impact Assessment shall be performed focused on defining the sight distance requirements at the locations of the project's two proposed connections to the City's public road network, assessing whether such requirements will be met under existing conditions, and proposing mitigations to correct any identified deficiencies.

(3). A written stipulation between the City and applicant shall be negotiated identifying the various improvements and maintenance activities as proposed within this proceeding for achieving a minimum of 12 feet in driving width and 13.5 feet of overhead clearance on both Sunrise Drive and Hyla Avenue; the responsibilities for the implementation of these measures; and an overall timeline containing applicable deadlines synchronized with the anticipated stages of plat development (including transport onsite of modular units).

B. The documents described above shall be made publicly available as they are completed, with copies provided to the Hearing Examiner's Office and to the Eberts' attorney. Upon issuance of the final required document City staff shall request that the Examiner reopen the public hearing; provided that, such hearing will not be scheduled to reopen before 30 days after the final required document has been issued. The Examiner may promulgate a written order in advance of the reopened hearing restricting testimony to certain specified issues.

ORDERED October 20, 2014.

Stafford L. Smith, Hearing Examiner
City of Bainbridge Island

| Metric | | | | US Customary | | | |
|---|---|---|---|---|---|---|---|
| Design speed (km/h) | Stopping sight distance (m) | Intersection sight distance for passenger cars: Calculated (m) | Intersection sight distance for passenger cars: Design (m) | Design speed (mph) | Stopping sight distance (ft) | Intersection sight distance for passenger cars: Calculated (ft) | Intersection sight distance for passenger cars: Design (ft) |
| 20 | 20 | 41.7 | 45 | 15 | 80 | 165.4 | 170 |
| 30 | 35 | 62.6 | 65 | 20 | 115 | 220.5 | 225 |
| 40 | 50 | 83.4 | 85 | 25 | 155 | 275.6 | 280 |
| 50 | 65 | 104.3 | 105 | 30 | 200 | 330.8 | 335 |
| 60 | 85 | 125.1 | 130 | 35 | 250 | 385.9 | 390 |
| 70 | 105 | 146.0 | 150 | 40 | 305 | 441.0 | 445 |
| 80 | 130 | 166.8 | 170 | 45 | 360 | 496.1 | 500 |
| 90 | 160 | 187.7 | 190 | 50 | 425 | 551.3 | 555 |
| 100 | 185 | 208.5 | 210 | 55 | 495 | 606.4 | 610 |
| 110 | 220 | 229.4 | 230 | 60 | 570 | 661.5 | 665 |
| 120 | 250 | 250.2 | 255 | 65 | 645 | 716.6 | 720 |
| 130 | 285 | 271.1 | 275 | 70 | 730 | 771.8 | 775 |
| | | | | 75 | 820 | 826.9 | 830 |
| | | | | 80 | 910 | 882.0 | 885 |

Note: Intersection sight distance shown is for a stopped passenger car to turn left onto a two-lane highway with no median and grades 3 percent or less. For other conditions, the time gap must be adjusted and required sight distance recalculated.

**Exhibit 9-55. Design Intersection Sight Distance—Case B1—Left Turn from Stop**

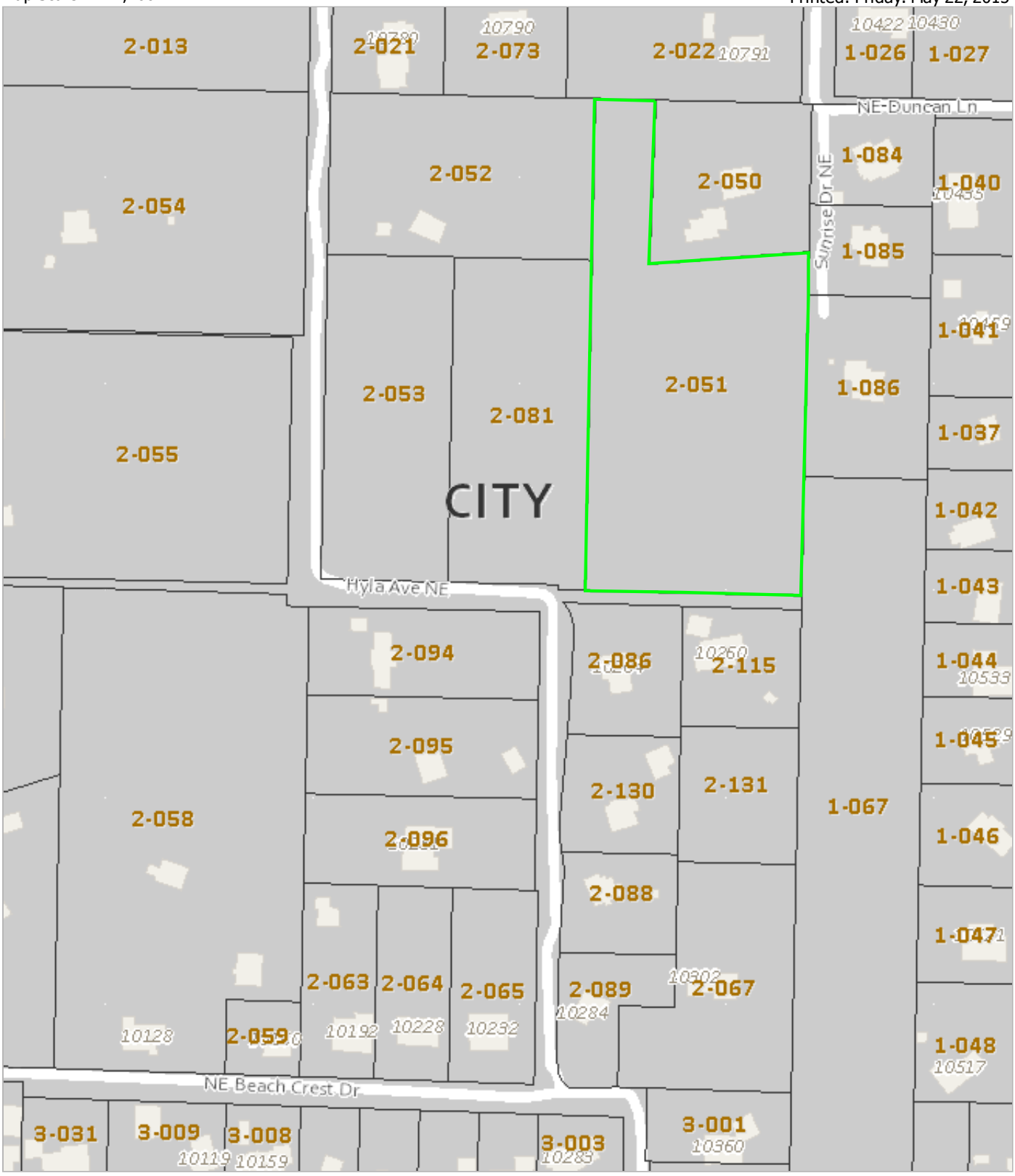
Sight distance design for left turns at divided-highway intersections should consider multiple design vehicles and median width. If the design vehicle used to determine sight distance for a divided-highway intersection is larger than a passenger car, then sight distance for left turns will need to be checked for that selected design vehicle and for smaller design vehicles as well. If the divided-highway median is wide enough to store the design vehicle with a clearance to the through lanes of approximately 1 m [3 ft] at both ends of the vehicle, no separate analysis for the departure sight triangle for left turns is needed on the minor-road approach for the near roadway to the left. In most cases, the departure sight triangle for right turns (Case B2) will provide sufficient sight distance for a passenger car to cross the near roadway to reach the median. Possible exceptions are addressed in the discussion of Case B3.

If the design vehicle can be stored in the median with adequate clearance to the through lanes, a departure sight triangle to the right for left turns should be provided for that design vehicle turning left from the median roadway. Where the median is not wide enough to store the design vehicle, a departure sight triangle should be provided for that design vehicle to turn left from the minor-road approach.

The median width should be considered in determining the number of lanes to be crossed. The median width should be converted to equivalent lanes. For example, a 7.2-m [24-ft] median should be considered as two additional lanes to be crossed in applying the multilane highway adjustment for time gaps in Exhibit 9-54. Furthermore, a departure sight triangle for left turns

Map Scale: 1 : 2,400

Printed: Friday. May 22, 2015




** This map is not a substitute for field survey **

0 100 200ft

Comments

N W E S

**Figure 2C-1. Horizontal Alignment Signs and Plaques**

Note: Turn arrows and reverse turn arrows may be substituted for the curve arrows and reverse curve arrows on the W1-10 series signs where appropriate.

**Figure 2C-8. Merging and Passing Signs and Plaques**

At Sunrise Entrance Looking North

At Sunrise Entrance Looking West

At Sunrise Entrance Looking East

At 200 feet West Looking at Hyla Entrance