



Information Item

Date: February 10, 2009

To: Mayor and City Council

From: Lee E. Swain, Director, Department of Public Works
Eileen Fogarty, Director, Planning & Community Development

Subject: Driveway Safety and Parking Analysis - Bicknell Avenue "Green Street"
Demonstration Project

Introduction

During the presentation to City Council on the schematic design of the Bicknell Avenue "Green Street" Project (project), a concern was raised regarding safe egress from driveways on Bicknell Avenue. This report transmits the results of staff's investigation into this matter as requested by Council.

Background

On [September 16, 2008](#), City Council approved the final design concept for the Bicknell Avenue "Green Street" Project but requested that staff review the safety concerns that were expressed regarding ingress and egress for the driveways leading to the large parking garage at 2021 Ocean Avenue and report back to City Council.

Discussion

In response to the Council's request for additional review of safe driveway access, Kimley-Horn Associates, the design consultant for the project, prepared an analysis of the path of travel of vehicles entering and exiting all driveways on the block. The analysis indicates that with the proposed street configuration, motorists can make right turns onto the street from all driveways and Neilson Way without crossing the centerline. The street configuration proposed would be similar to many other locations in the City.

Currently, by City policy, red curb is installed at driveways only if it is necessary to provide adequate access to the driveway for entering and exiting vehicles. The project proposed for Bicknell Avenue would not alter the existing conditions at the driveway, and a review of the accident history for the last three years on this block reveals that there have been no accidents involving vehicles entering or exiting Bicknell Avenue from driveways. If American Association of State Highway and Transportation Officials (AASHTO) intersection line of sight guidelines were applied as a justification for restricting street parking, approximately half of the parking spaces on the street would need to be removed. Staff is not recommending changing current City policy with regard to red curb; however, to address the concerns of the residents of the adjacent apartment building at 2021 Ocean Avenue, one parking stall will be removed to the east of the driveway just west of Neilson Way once the project is constructed.

There is no existing City policy related to sight distance requirements for driveways. Kimley-Horn Associates performed a line of sight analysis using the AASHTO standards for sight distance at an intersection. The analysis delineates "sight triangles" that provide the recommended obstruction free distances for drivers entering an intersection. In this case, sight triangles were calculated from each of the driveways intersecting Bicknell Avenue between Ocean Avenue and Neilson Way. Within a sight triangle, any object that would obstruct the driver's view should be removed. AASHTO describes the objects as including: buildings, parked vehicles, highway structures, roadside hardware, hedges, trees, bushes, unmowed grass, tall crops, walls, fences, and terrain. The analysis considers both horizontal and vertical alignment assuming that 1) the average driver's eye is 3.5 feet above the roadway surface, and that 2) objects at or above this height, and within the sight triangle, are considered obstructions. The AASHTO defines a vehicle height as 4.35 feet, which represents the near-maximum height for vehicles in the current passenger car population.

The line of sight analysis shows that few of the driveways on Bicknell meet the AASHTO stopping sight distance guidelines as they currently exist, and about half of the existing street parking would have to be eliminated in order to conform to this guideline.

The City does not currently use this guideline to determine when on-street parking is allowable because it would eliminate many needed street parking spaces—in this case about half of the supply—and would not provide significant improvements in the safety record. Over the last three years, there have been no reported accidents in the project area involving vehicles entering and exiting the driveways and other vehicles.

In summary, the driveway access conditions related to parking are unchanged by, and independent of, the project. Implementing a policy to utilize AASHTO standards for sight distance at driveways that would result in the loss of approximately half of the City's on-street parking spaces is not justified.

Recently, the Public Works Director coordinated a staff review of the location and discussion with the manager of the building located at 2021 Ocean Avenue. The manager expressed concern over the safety of vehicles exiting the apartment building, particularly for left-hand turns. Although this location is not determined to be hazardous, and is similar to many in the City in terms of the width of the proposed future street and the width of the driveway, staff noted that the driveway is relatively close to an intersection with a street which has a relatively high volume of traffic and no on-street parking. To address the residents' concerns, one parking stall will be removed to the east of the driveway just west of Neilson Way, once the project is constructed.

The manager also raised concerns about his ability to maintain access for solid waste pick-up and moving vans. He requested the City paint an additional red curb to accommodate bins and moving vans. As a matter of policy, the City does not remove street parking to provide for bin storage. Parking adjacent to a red curb is illegal, so a curb marking of this type would not facilitate loading of moving vans. The City does however provide residents an opportunity to obtain signs in advance and thereby reserve parking for moving vans. For a fee, the City also provides trash pick-up from within a building rather than from the street.

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