

## LID ELEMENT #10: MINIMIZE DRIVEWAY SURFACE

### OBJECTIVE

Minimize the amount of impervious surface associated with driveways.

### CONSIDERATIONS

Reductions in both driveway width and length are potential ways to minimize impervious surface. Permeable paving options for driveways are discussed in Element 14 (Permeable Paving) and are therefore not included here.

For purposes of this memorandum, driveways include the area from the edge of street pavement to the garage for a single family residential home and from the edge of street pavement to the parking area for commercial type uses. The area of the driveway on a commercial facility between the edge of the right-of-way and the parking area is known as the throat length. It should be noted that this “definition” for driveways does not match with City technical codes but is typical of the public understanding of driveway areas.

### RELATED ELEMENTS

Element 4 Restrict Maximum Impervious Surface Coverage

Element 5 Reduce Impervious Surface Associated with On-site Parking

“As much as 20 percent of impervious cover in a residential subdivision can be attributed to driveways.”

*Low Impact Development  
Technical Guidance  
Manual for Puget Sound  
(2012)*

### TRADITIONAL APPROACH TO DRIVEWAYS

Typically, each parcel is allowed a single driveway. For residential lots, driveways are typically the width of about 2 cars, or 20 feet. Commercial driveways have variable sizes depending on the amount of expected traffic and turning movement restrictions. In the City of Olympia, maximum allowable driveway widths are dependent on the proposed property use and the classification of the street that is accessed. Driveways are usually constructed of concrete or other hard surface.

### CODES AND STANDARDS REVIEWED

Engineering Design and Development Standards (EDDS) Chapter 4

Olympia Municipal Code (OMC) Section 18.38 (Parking and Loading)

### BENEFITS OF REDUCING IMPERVIOUS SURFACES ASSOCIATED WITH DRIVEWAYS

Many of the benefits related to reducing the impervious surfaces associated with driveways are the same as those of Element 4 – Restrict Maximum Impervious Surface Coverage. Reduced impervious area allows opportunities for increased green space that enhances treatment and infiltration.

## OLYMPIA CODE ANALYSIS

A driveway, as defined by this memo (edge of pavement to the building or parking area), is regulated by two different City codes. A driveway *approach* is the area of the driveway within the public right-of-way and is governed by the requirements of the EDDS. The EDDS also regulates some on-site (on private property) area for high volume driveways (the throat length). The rest of the driveway that is between the right-of-way and the building or parking area is regulated by the OMC.

### Driveway Approaches

The design requirements for driveway approaches are specified in Chapter 4 of the EDDS and standard details 4-7A through D. Specific design requirements include:

- Driveways are to be constructed of Portland Cement Concrete.
- Joint use driveways servicing adjacent parcels are allowed.
- One driveway is allowed per parcel (adjacent parcels in single ownership are considered a single parcel and allowed one driveway).
- Maximum driveway widths vary by use and type of street and are generally 24 feet for residential, 26 to 30 feet for commercial, and 35 feet for industrial uses.
- High volume access points have specified minimum throat lengths based on the proposed land use.

### Driveway from Right-of-Way to Building or Parking

The portion of the driveway on private property is governed by OMC Section 18.38. Specific design requirements include:

- Driveways outside of the right-of-way are referred to as drive aisles and have variable width depending on several factors. Generally the driveway area has a 26 foot minimum width for 2-way traffic.
- The Site Plan Review Committee (SPRC) has the authority to determine the location, width, and manner of approach of a vehicular ingress and egress from a building or parking area to the public street.
- Surfacing must be pavement which can include permeable paving.

### *Typical Residential Driveway Components*



## HURDLES TO REDUCING IMPERVIOUS SURFACE AREA BY MINIMIZING DRIVEWAY SURFACE

This low impact design strategy presents the following challenges:

Residential Driveways Provide Vehicle Storage and Other Functions in Addition to Access – Typical residential driveways are a minimum of 20 feet wide by 20 feet long (outside of public right-of-way). These are the typical dimensions to facilitate direct backing up onto a street from either stall of a 2-car garage, as well as parking for two additional vehicles on a homeowner's parcel. Although it can be argued that parking is provided in the garage, many homeowners use their garages for storage or work space, guest parking, storing of boats and recreational vehicles, or they may simply own more vehicles than fit in the garage. For a large parcel where the length of the driveway is well in excess of 20 feet, a narrower access lane could be provided for the driveway length outside of the 20 feet adjacent to the garage. However, smaller lots are more common, and do not typically have driveway lengths that warrant a variable width.

In addition to access and vehicle storage, residential driveways can also provide other functions such as emergency access or recreation. Homeowners often use driveways for a myriad of other uses such as a basketball court, barbeque spot, and play area for kids.

Although not as common, some residential homes have 3 car garages which require larger driveway widths than 2 car garage homes. Currently, the driveway approach is limited to 24 feet but the driveway outside of the right-of-way has no limitation on width. Driveways may flare out to provide paving in front of each garage bay. Any changes to reduce the allowed width from the edge of the street to the garage would create potential design challenges for homes with wider garages.

High Volume Accesses Require Minimum Throat Length - In order to ensure free flow of traffic on the main street, driveways need to provide sufficient throat length for vehicle queuing within the driveway. The throat length required is based on the proposed use and building size. Reductions in required throat length are allowed in the EDDS for specific situations and locations. General, blanket reductions in throat length to reduce impervious surface area could result in vehicle queuing on the street and traffic congestion.

Two Track Driveways Not Favored – One way to reduce paving associated with driveways is to pave only the portion where the vehicle wheels touch. Two track driveways are permitted in Olympia but are not typical, are more costly to construct, and can be perceived as hard to drive on. Two track driveways also require on-going mowing and potentially other maintenance such as grass replacement. If maintenance is not provided, soil erosion, compaction and sedimentation could result.

Maneuvering Area Reduced – Narrower driveway approaches would require more careful maneuvering when backing out of dead-end driveways. This could result in driving across planter strips, and in vehicles entering streets less safely. For example, focusing on the maneuver could lead a driver to not notice a pedestrian.

## OPTIONS CONSIDERED

The following options were considered:

- Option 1: No change.
- Option 2: Reduce single family residential driveway maximum allowed width from 24 to 20 feet.
- Option 3: Reduce one-way access driveway widths specified in EDDS Section 4I.140 - residential uses to 12 feet, commercial uses to 15 feet, and industrial uses to 20 feet.
- Option 4: Establish land use based driveway width maximums.



*Shared driveways are already allowed within the City of Olympia.*

## ANALYSIS

Minimizing impervious surfaces is one of the three main goals of the Department of Ecology Phase II NPDES permit. Reducing the impervious area associated with driveways could assist in meeting this goal.

Option 1 (no change) would maintain the status quo. Olympia already has implemented LID strategies for driveways. Shared driveways are currently allowed for use by adjacent parcels if a written agreement between the parties is recorded as a joint use easement. The City also allows permeable pavement driveways.

Implementation of Option 2 (reduce residential driveway width) will require updates to EDDS section 4I.140 to restrict driveway approaches. It would also require modification to OMC Section 18.38 to define and then restrict the area from the right-of-way to the building (in this case the garage). Given that local access roads have been reduced to a 20 foot width, a commensurate reduction in residential driveway width from 24 to 20 feet is appropriate. Twenty feet will provide sufficient width for both vehicle parking and maneuvering. If wider driveways are desired (such as for 3 car garages), areas outside of the 20 feet could be constructed but only using permeable paving.

For a 33 foot long driveway (13 foot approach plus 20 feet on-site), the impervious area reduction suggested by Option 2 is 132 square feet for one driveway. For a 50 lot plat, this is a reduction of 6,600 square feet of impervious area.

Option 3 (change one-way driveway widths) would require updates to the EDDS Section 4I.140 to restrict driveway approaches. It would also require modification to OMC Section 18.38 to define and then restrict the area from the right-of-way to the building or parking area. One-way access should be approximately  $\frac{1}{2}$  the width of a two access driveway. Current standards allow for 24 ft., 30 ft., and 35 ft. driveways for full access residential, commercial, and industrial respectively. One-way access driveways

can be 20 ft., 20 ft., and 25 ft. for residential, commercial and industrial respectively. Therefore, the current code allows about 85% of a full access driveway width for one-way driveways. The proposed reductions would provide about 50-60% of the full access width for a one-way driveway. This should be more than sufficient for most uses. If a specific use requires wider drives, current code already allows for special requests for uses with a volume of oversized trucks.

Option 4 (establish land use based driveway width maximums) would require updates to the EDDS and the Olympia Municipal Code. Currently, driveway width requirements are broken down by residential, commercial and industrial. Therefore, the maximum allowable driveway width for a 100,000 square foot retail store is the same as what is allowed for a 2,000 square foot office. The large retail driveway needs to accommodate large trucks and provide for high volume usage which demands a larger width than a small professional office with limited users and turnover. It is likely that the smaller office will not request a large driveway as it would increase site costs. However, since the code widths are specified as maximums, a larger driveway is not precluded.

#### RECOMMENDATION

Staff recommends Option 2. Single family driveways are the most common driveways and restrictions on the amount of impervious area associated with these driveways would have the most impact on impervious area reductions. Option 1 would not affect any change. One-way driveways are infrequent so Option 3's impervious area changes would be minimal. Option 4 would require the creation of land use specific driveway widths which largely would only affect commercial uses and would not have a large impact.

