#### SKAGIT COUNTY ROAD STANDARDS

# **APPENDIX E**

# Resurfacing, Reconstruction and Rehabilitation ("3-R") Projects

## **Definitions**

**Resurfacing.** The addition of a layer or layers of paving material to provide additional structural integrity or improved serviceability and rideability.

**Restoration.** Work performed on pavement or bridge decks to render them suitable for an additional stage of construction. This may include supplementing the existing roadway by increasing surfacing and paving courses to provide structural capability, widening up to a total of 10 feet, and installing localized safety improvements. Restoration will generally be performed within the existing right-of-way.

**Rehabilitation.** Similar to "Restoration" except the work may include, but is not limited to, the following:

- ?? Reworking or strengthening the base or subbase.
- ?? Recycling or reworking existing materials to improve their structural integrity.
- ?? Adding underdrains.
- ?? Replacing or restoring malfunctioning joints.
- ?? Substantial pavement under-sealing when essential for stabilization.
- ?? Pavement grinding to restore smoothness, providing adequate structural thickness remains.
- ?? Removing and replacing deteriorated materials.
- ?? Crack and joint sealing but only when the required shape factor is established by routing or sawing.
- ?? Improving or widening shoulders.

Rehabilitation may require acquisitions of additional right-of-way.

#### Safety Improvements. Safety improvements include:

- ?? Upgrading existing substandard roadway design elements roadway design elements are the physical characteristics of the highway such as alignment, grades, widths, sight distance, clearances, bridges, and the pavement structure including surface texture.
- ?? Improving existing operational features operational features include traffic control devices, left and right turn lanes, lighting, and pedestrian

- accommodations that provide for the safe and efficient movement of vehicles and pedestrians.
- ?? Reducing the potential hazard of existing roadside features roadside features include sideslopes, ditches, drainage facilities, barrier systems, sign supports, luminaires, trees, utility poles, and other features adjacent to the roadway.
- ?? Upgrading bridge safety features bridge rails, approach rails, connections, and terminals are considered bridge safety features.

## **General Discussion**

Funding restrictions and other considerations do not always allow improvement of all existing roads and streets to the standards desirable for new construction. Therefore, when pavement condition deteriorates to the level of minimal standards, a cost-effective pavement improvement is needed. A project becomes 3-R when the proposed improvement consists of resurfacing, restoration, or rehabilitation to preserve and extend the service life of the roadway, or enhances the safety of the traveling public. 3-R projects primarily involve work on an existing roadway surface and/or subsurface. Their purpose includes extending the service life, providing additional pavement strength, restoring or improving the original cross-section, increasing skid resistance, decreasing noise, improving the ride of the roadway, and enhancing safety.

Many factors influence the scope of 3-R projects, including:

- ?? Roadside conditions.
- ?? Funding constraints.
- ?? Environmental concerns.
- ?? Changing traffic and land use patterns.
- ?? Deterioration rate of surfacing.
- ?? Accidents or accident rates.

Normally, all 3-R improvements are made within the existing right-of-way, although acquiring right-of-way and/or easements should be considered when practical. Each 3-R project should be considered in context with the entire route between logical termini and within the constraints imposed by limited funding and other considerations.