

# Overlay & Paving

## Traffic Signals and Street Maintenance



Bellevue's street overlay program provides major street maintenance for 1,067 lane miles of roadway. This maintenance includes street overlays, pavement rehabilitation, curb and sidewalk repair and appropriate Americans with Disabilities (ADA) retrofit work. Pavement overlay projects also replace pavement markings and vehicle detection for traffic signals. In addition, the program provides for the federally required condition inspections and maintenance of 19 bridges that carry traffic or cross over city roadways. For its annual overlay program, the city allocates a certain amount of dollars each year to pave roadways.

### What is the overlay process?

- 1) Crews repair broken curbs, ADA sidewalks, and rebuild the sidewalk ramps to meet the most current ADA (Americans with Disabilities Act) guidelines, which makes the ramps to the sidewalks easily accessible to all users.
- 2) If crews are constructing sidewalk ramps at signalized intersections, new ADA compliant signal equipment may also be installed when the old concrete is removed.
- 3) After the curb and sidewalk repairs are completed, crews prepare the roadway for the asphalt overlay. Defects or cracking in the asphalt may be removed and patched.
- 4) Crews then mill and grind the roadway to allow for the placement of the new asphalt surface to match the existing gutters and median islands.
- 5) When resurfacing occurs, dump trucks bring hot asphalt to the project site. A paving machine lays down hot asphalt, and large rollers compact the asphalt as it cools. Manhole covers and other utility covers in the roadway must be raised to the top of the new asphalt. To get as smooth of a surface as possible, the paving equipment paves directly over the top of manhole covers and water or gas valves. The pavement is then cut away from around the existing utility covers and adjusted to the new roadway elevation.
- 6) When the street reaches its optimum compaction and has cooled enough to safely carry traffic, crews reopen travel lanes.
- 7) At signalized intersections, crews cut new loop detectors into the pavement so that the traffic signal equipment can recognize when cars reach the intersection. Bicycle symbols are added at the loop detectors to indicate the best location for a cyclist or motorcycle to stop and be detected by the traffic signals.
- 8) Finally, crews add new lane markers, crosswalk stripes and arrows.



For more information on Overlay & Paving, visit [www.bellevuewa.gov/overlay.htm](http://www.bellevuewa.gov/overlay.htm).

Contact Teresa Becker, Pavement Management Program Manager at [tbecker@bellevuewa.gov](mailto:tbecker@bellevuewa.gov) or 425-452-7942.



### Why is overlay important?

When streets are regularly maintained, the city is able to keep them in a safe condition and generally will only need to replace the top layer of asphalt in its annual overlay program. If a roadway is neglected too long, all of the old asphalt must be removed, and then replaced by six to ten inches of new asphalt depending on the roadway type and level of use. This complete rebuild can cost up to three times as much as an overlay.

### How are streets chosen for overlay?

Projects are selected through a computerized Pavement Management System, which travels the city's 1,067 lane miles and selects roadway candidates for maintenance at the most cost-effective time in the pavement's lifecycle. The system prioritizes the streets based on their functional classification (neighborhood/residential, arterials, etc.), roadway defects and current street ratings to create a five-year overlay plan.

### Overlay coordination with utilities in the roadway

Once determined, the five-year candidate plan is coordinated with the city's Utilities Department and cable, gas and power franchise utilities companies to allow them to construct any upgrades to their facilities prior to any scheduled pavement overlay construction. By coordinating our plans with these utility projects, we avoid having recently resurfaced streets dug up and the longevity of the new pavement surface compromised. This is one of the main reasons drivers will see work in the roadway before a pavement overlay job.

### Construction Impacts

The pavement overlay process can be an inconvenience to businesses and residents. City staff take care to keep the public informed about current and upcoming overlay projects through the process.

There are many items of work to overlay a roadway. Our goal is to perform the work as efficiently as possible. However, there are many factors that influence how long these activities may take, such as weather, size of the location, equipment and labor availability, materials availability and unknown site conditions that change how the work is to be performed. These unforeseen factors may sometimes delay the pavement overlay process.

Typically, notification signs are placed in overlay areas prior to work being performed to alert the public of the upcoming paving operation. These signs also prevent parking in the area so that crews can do their work as efficiently and quickly as possible. For work on major thoroughfares and intersections, variable message boards may be used to provide information for the public.

During the repair and resurfacing of the roadway, flaggers and police officers will direct traffic through the construction site or detour motorists to predetermined routes around the site.



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