TREATMENT QUANTITY AND COST DATABASE REPORT INFORMATION AND TERMINOLOGY

Reports are displayed in both US units with US Dollars as well as Metric units with Canadian Dollars. The main report on the homepage contains all treatment data. Reports for individual treatment types are available by clicking the appropriate link at the bottom of the page. All reports can be exported to Microsoft Excel (.xls) or .csv format by clicking the appropriate icon on the upper right-hand side of the desired report.

Terminology:

1. **Cost Per Lane Mile/Kilometer-** The total cost of placing the treatment inclusive of material cost but also costs unrelated to the material such as traffic control, striping, and mobilization divided by the number of lane miles/kilometers placed.
2. **Total Material Cost-** The total cost of major materials on the project (e.g. emulsion and aggregate on a chip seal) but exclusive of preparation activities, mobilization, traffic control, etc.
3. **Quantity #1/Quantity #2-** The major material quantities associated with the treatment. Some treatments may be provided as one material, while others may be reported as two. For example, in some entries chip seals may be reported as square yards of chip seal, while in other entries chip seals are reported as tons of aggregate and gallons of emulsion.
4. **Treatment Service Life**-The total number of years, or range of years, the treatment is expected to remain in place and be effective (provide a benefit).
5. **Estimated Life Extension**- The total number of years, or range of years, the treatment will provide. This is added or extended life to the pavement structure due to the placement of the treatment.

Treatment Definitions:

Cape Seal - This treatment consists of a chip seal followed by a slurry seal or micro-surfacing treatment to cover the aggregate and provide a smoother wearing surface.

Chip Seal – A treatment where asphalt emulsion is applied directly to the pavement surface followed by the application of aggregate, which are immediately rolled to embed the aggregate into the emulsion and interlock the aggregate together. This treatment can be applied in multiple layers (e.g., double chip seals).

Cold-in-Place Recycling (CIR) - CIR is the process of in-place recycling of an asphalt pavement. During this process, the reclaimed asphalt pavement (RAP) is sized, mixed with additives (e.g., asphalt binder, emulsion, rejuvenator, virgin aggregate), and re-laid. The recycled pavement is then typically resurfaced with a surface treatment or HMA overlay.

Concrete Pavement Restoration – A combination of full depth repairs, diamond grinding, and other treatments to improve the surface condition of a concrete pavement.

Crack Filling (Asphalt)- Crack filling is the process of placing material into non-working cracks to substantially reduce the infiltration of water and to reinforce the adjacent pavement. Crack filling is characterized by minimal crack preparation such as only blowing out debris in the cracks. Lower quality bituminous filler materials are used with this treatment.

Crack Sealing (Asphalt) - Crack sealing is the process of placing higher-quality material into "working" cracks (i.e., those that open and close with changes in temperature) in order to reduce water infiltration into the pavement. In contrast to crack filling, crack sealing requires more preparation such as crack routing. Thermosetting and thermoplastic materials are both used for crack sealing.

Diamond Grinding - Diamond grinding consists of removing surface irregularities from concrete pavements that are often caused by faulting, curling, and warping of the slabs. The main benefits of using this technique include smoother ride, reduced road noise, and improved friction.

Dowel Bar Retrofit – The installation of dowel bars at existing transverse joints or cracks in order to restore the effective transfer of wheel loads across the joints and reduce slab deflections.

Fog Seal - Fog seals are very light applications of a diluted asphalt emulsion placed directly on the pavement surface with no aggregate cover. This treatment is intended to address the oxidation of the HMA surface and help waterproof the pavement.

Hot-in Place Recycling (HIR) - A process that involves correcting HMA pavement surface distress by softening the existing surface with heat, mechanically loosening the pavement surface, mixing the loosened surface material with recycling agent, aggregate, rejuvenators, or HMA, and relaying the recycled material without removing it from the site. HIR processes include surface recycling (e.g., heater scarification), repaving, and remixing.

Joint Resealing (Concrete) - Resealing transverse joints in PCC pavements is intended to minimize the infiltration of surface water into the underlying pavement structure and to prevent the intrusion of incompressible materials into the joint. A range of materials from bituminous to silicone are used in various configurations when sealing concrete joints and cracks.

Micro Milling - Micro milling uses a specialized milling drum with three to four times as many cutting teeth as a standard milling drum. It can be used either as the final surface or as a treatment before applying a thin overlay or other preservation treatment. Micro milling can be used to remove many of the same distresses that standard milling can remove, although usually to a shallower depth. A micro milled surface has a uniform finish with reduced road noise compared to standard milling.

Micro Surfacing - Consists of a mixture of latex-modified emulsified asphalt, mineral aggregate, mineral filler, water, and additives. Micro-surfacing material is mixed in specialized, compartmented, self-powered trucks and placed on the pavement using an augered screed box.

Otta Seal- An application of a thick layer of emulsion on the existing pavement surface followed by the application of graded aggregate, similar to that of a chip seal. Often placed on very low volume roads.

Rejuvenator Fog Seal - A spray treatment of specialized emulsions that contain a rejuvenating agent intended to improve the flexibility of the existing asphalt binder and reduce the effects of environmental aging.

Scrub Seal - An application similar to a chip seal treatment where asphalt emulsion and crushed aggregate are placed on an asphalt pavement surface. The asphalt emulsion is applied by a distributor to the road surface and pushed down into the pavement surface through a series of brooms placed at different angles. These brooms guide the asphalt emulsion into the pavement distresses to ensure sealing the road surface followed closely by a layer of aggregate which is then rolled to embed the aggregate into the emulsion.

Slurry Seal - Slurry seals are a mixture of crushed well-graded aggregate (e.g., fine sand, mineral filler) and asphalt emulsion that is spread over the entire pavement surface with either a squeegee or spreader box attached to the back of a truck. Thickness is generally less than 0.5 in. (12.5 mm).

Thin HMA Overlay (1"< Thickness <2" or 25 mm < T < 50 mm) – Various HMA overlays and overlays using highly modified binders that are not intended to add structure to the pavement.

Ultra-Thin HMA (Thickness ≤ 1" or T ≤ 25 mm) – Treatments such as Ultra-Thin Bonded Wearing Courses.