

Welcome to the

WASHINGTON STATE CHAPTER *of* Community Associations Institute

*The leading professional organization providing education, resources,
and advocacy for community association living.*



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Asphalt Maintenance for Community Associations

Stretching your dollars, so you can spend where it counts!



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GOALS

- Build the base: definitions, applications, products, etc.
- Eliminate the "easy questions" to save you time.
- Provide DIY tools for quicker fixes and cheaper projects.

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Disclaimer

The following applications are very broad and very basic.

Asphalt is consistently paved over the worst locations, in the strangest ways. Applications that "work" for decades sometimes fail out of nowhere and it's impossible to know why until you start to dig.

Example: "Church Pothole" on Washington Ave.

*Note: Washington One Call Website (wa.1tic.occinc.com) is quick and easy to use, and can save time and injuries.



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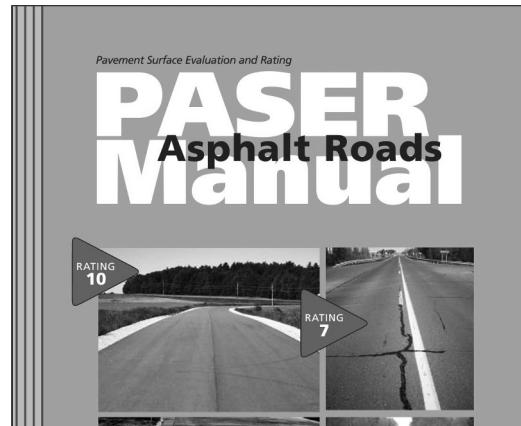
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Stages of Degradation

Although there are many ways that asphalt can degrade, there are strategies of sorting that we can use so we all speak the same language and have a common understanding of WHY the surface is reacting like it is.

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Stages of Degradation: Cracking



Longitudinal (Joint)
-Poor joint construction or location
-Reflective

Longitudinal (Fatigue)
-Wheelpath/load fatigue
-Subgrade failure



Transverse
-Shrinkage of HMA (seasonal changes)
-Reflective

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Stages of Degradation: Cracking



Block

- Aging binder
- Inadequate binder

Edge

- Load fatigue
- Subgrade failure/unsupported shoulder



Reflection

- Caused by HMA layer moving underneath

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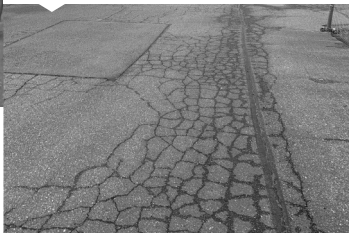
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Stages of Degradation: Cracking



Alligator

- Load fatigue
- Subgrade failure, spreads



Slippage

- Braking, accelerating, turning loads
- Inadequate binder
- Poor bond between surface layer and below

Potholes

- Subgrade breaks down because of water intrusion from cracking

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Stages of Degradation: Other



Raveling

-Loss of bond within HMA, could be caused by bad mix, inadequate compaction, segregation of mix, snow removal

Spalling

-Loss of bond at construction joints typically caused by inadequate compaction or mix issues



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Commercial Applications

So now we know what can happen, but how do we fix it?

The following applications will be focused on commercial asphalt contracting approaches.



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Crackseal

- ¼" - 2" cracks as industry standard, no alligator
- May require compressed air, heat lance, edger or router
- Width and depth of crack dictate amount of material
- "Upside down V" can add material
- Does not hold asphalt together, should be thought of as a "filler".
- Typically quoted: \$/lf, \$/lb, \$/day or lump
- Note: Industry standard is "Crafco Roadsaver 211"



DIRECT FIRE TAR POT

Smaller applications, far cheaper, less crew, more effort.



OIL- JACKETED MELTER

Larger applications, expensive, motor to maintain, more crew, less effort, very efficient.

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Application: Crackseal



Parking Lot Crew

- Multi tar pot / Jacketed melter crew(s)

Mainline Crew

- Typically for roads, but seeing more space for application within parking lots



Alligatored Area

- Industry best practices
- Occasionally get requests for "100%"

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Mastic

- 2"+ cracks
- Can be used as alligator repair
- Labor intensive, but workable
- Typically quoted: \$/gal, \$/day or lump
- Note: Relatively new to our area



PROS

- Cheaper than HMA patch
- No plant needed
- Very strong

CONS

- Slow process, compared to crackseal
- Expensive machine
- Increasing, but weak demand

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Application: Mastic



Large Crack

- Fills entirely
- Comparison to crackseal



Alligator

- Less labor intensive/expensive than patching
- Can be done in "maintenance mode"



Material Type

- Thicker and more aggregate
- Thinner and slicker

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Sealcoat

- Squeegee vs. Spray
- One coat vs. Two
- Truck-mounted spray bar
- Sealcoat buggy - spray or squeegee
- Typically quoted: \$/sf, may have clarification of onsite measurement
- Note: Industry standard is "Armorseal A100-HD"



SQUEEGEE

More labor intensive, not usually feasible for large lots, scrapes off top, fills voids.



SPRAY

More efficient, more even coat, doesn't fill voids.

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Application: Sealcoat



Squeegee Edges

- Necessary for non-open edges, especially concrete borders
- Step 1 for spraying

Truck: Spray/Dump and Squeegee
-Most common application vehicle for commercial projects because of versatility



Sealcoat Buggy

- Efficient as sprayer
- Good for tight locations
- Squeegee needs flat surfaces

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Sealcoat Alternatives (not the same)

- Fog seal: asphalt emulsion
- Chip seal: asphalt emulsion, chips
- Slurry seal: asphalt emulsion, water, fine agg, mineral filler
- Microsurfacing: like slurry, but with a polymer-modified asphalt emulsion for flex
- Cape seal: chip seal followed by slurry seal
- Scrub seal: like a chip seal, but brushes are used to "scrub" the emulsion deeper into the asphalt/cracks

Asphalt Emulsion: liquid asphalt, water, emulsifying (suspending) agent



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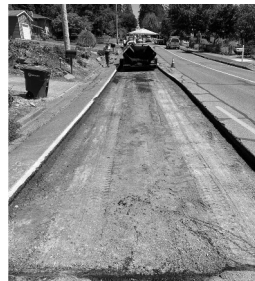
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Patching

- Typically quoted: \$/sf, may have clarification of onsite measurement.
- Small square footage can be done without paver mobe.
- 8'+ width can be done with standard paver, typically making it cheaper/sf.
- Economy of scale (try to get a lot done while contractor is there).



DEMO/PREP

Subgrade is always a question mark on a project.



PATCH

Sawcut? Tack/sand? Crackseal? Any paint?



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Application: Patching



Small Area

- Paying for mobilization and opportunity cost.
- Quilt effect



Joint Finishing

- Industry standard is "tack and sand"
- Some elect for cracksealed joints; more money, should be organized ahead of time.

Please Don't

- The easier the patch is for the contractor (rectangles) the cheaper you will be \$/sf. This job could likely cover the additional sf if it was straight and paver width.



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Grind + Overlay

- Very difficult to know what you'll find, therefore often quoted with contingencies.
- Maintains water flow in parking lot.
- Opportunity for more extensive patching in specific areas.
- Reflection cracking
- Delaminating



GRIND

- Anything less than full depth
- Complications of thin base after grind



OVERLAY

- Requires tack coat
- Sometimes requires patching or slurry to address underlying problems and avoid reflection



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Mill + Pave

- Allows for redesign of entire lot and water flow
- Consider other elements: curbing, landscaping, catch basins, ADA access, etc.
- Typically quoted with an "unsuitable subgrade" contingency, with idea of repair cost per foot of depth.
- Note any old drawings or plans for the lot, check for any obstruction or "landmine" that may have been buried by old overlays.



FULL DEPTH MILL

Mills all the way through asphalt mat to subgrade.



PAVE ON PREP/BASE LIFT

Pave on prep allows for grading and rework of subgrade to facilitate flow. Paving on base lift allows for construction period or tight final lift.

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Application: Mill + Pave



Prep

- Full depth mill and pave requires regrading of rock even with perfect subgrade.

Depth = More Lifts

- Industry standard is 3" max per lift
- Difference between 3" and 4" is 1" material + an additional time across the entire area.



Compaction

- Subgrade breaks down because of water intrusion from cracking

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DIY

Here are some ways to do it yourself and solve some of those small, annoying problems without blowing the budget.



AQUAPHALT

Similar to cold patch, sets in wet/cold, environmentally friendly.



TORCH-DOWN CRACKSEAL

Great for small jobs, especially in visible or critical areas. Labor intensive for large jobs.



TORCH-DOWN THERMO

Thermoplastic stencils keep well in cool, dry locations and are ready to use whenever.



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DIY

Here are some ways to do it yourself and solve some of those small, annoying problems without blowing the budget.



COMMON STENCILS

Stencils are easy to order, and you can custom order whatever you need.



TRIP HAZARD GRINDER

\$3k+ depending on model. Can eliminate trip hazards on asphalt, concrete, roots, etc.



SCAG WINDSTORM

This rig has been an absolute game changer. If you're paying for lots/paths etc. ~15k



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Appealing to Contractors

- 1 Have a strong explanation of your scope with clear expectations, timelines, and parameters.
- 2 Do your research and know your budget. Nobody likes a \$10k base bid with 5 alternates. Shoot for what you know you can handle and keep it simple.
- 3 Be sure to communicate any changes quickly to everyone bidding the work. Nothing slows a bid down faster than inaccurate info! Public or otherwise.
- 4 If you're not familiar with mix types, subgrade, prep depths etc reach out and get some help! Host a site visit and ask questions, rely on the experts to guide. It will save you time and effort.

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Questions?

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Locally & Nationally

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1-888-224-4321

This course is approved by Community Association Managers International Certification Board (CAMICB) to fulfill continuing education requirements for the CMCA® certification

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