

NEBPP Peer Exchange – Surface Preparation of Concrete Prior to Asphalt Overlays

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Types of Overlays

- CTDOT
 - Spray-on membrane with 3" overlay
 - Shot blasting for surface preparation (be extra careful for UHPC)
 - Traffic control is an issue
- PennDOT
 - PPC & LMC overlays for retrofits
- MassDOT
 - Spray-applied membrane for new decks, hot rubberized or sheet for rehabs
 - Waterproofing course & surface course for retrofits

Environmental Factors (e.g. temperature, humidity...)

- MEDOT
 - Want the deck dry, typically torch applied with contractor option for spray-applied membrane
 - Not concerned with maximum temperature but very concerned with minimum temperature – paving has to be completed by October 1 in northern Maine and by 10/15 for the rest of the state. Dates can be adjusted with approval based on daily temperature averages.
- CTDOT
 - Moisture is key – obtaining a dry surface is critical

What happens at discontinuities (joints, scuppers, headers, curbs...)?

- MEDOT
 - Place membrane as close as they can seal as best as they can up the curb
 - Headers at joints can be an issue due to plow damage
- CTDOT
 - Uses a lot of asphaltic plug joints so they can pave across the joint; uses headers at other joint types
- MassDOT
 - Perforate the membrane at deck drains
 - Waterproof asphalt over membrane where they can – either 12.5 or 9.5 followed by surface course of 1-3/4"

Do you perform checks on maximum overlay thickness and for equipment?

- MEDOT
 - Check are left up to the contractor
- CTDOT
 - Checks performed by OSOW Permits Group
- MassDOT

- Has a Milling specification that limits the equipment size.
 - Bridge Inspection group documents curb heights
- Variation in thickness of overlay a concern for various states – good recommended practice to check curb heights

If a bridge is being resurfaced, what do you do with respect to deck repairs?

- MEDOT
 - Try to communicate with resurfacing projects relative to joints, seals and headers
 - Mill & Fill – if there is a Capital project they try to put repairs in to take advantage of the traffic control
 - Will do full depth cores to check for sound concrete
- General comment: there is a challenge in seeing the deck deterioration when resurfacing due to not being able to strip the prior overlay completely clean.