Baystate Roads Program
Local Technical Assistance Program (LTAP)
Tech Notes

Tech Note #28

LTAP Asphalt Paving Inspection Check List

Preliminary Responsibilites

Document Review

- ☐ Bid Specifications.
- ☐ Special Provisions.
- ☐ Construction Manual.
- ☐ Traffic Control Plan. (TCP)

Coordination of Work

- ☐ Utility companies are contacted and work is coordinated.
- ☐ If necessary, manhole elevations are adjusted.
- ☐ Any planned road excavations are completed before paving begins.
- ☐ Local businesses' access times are arranged.
- ☐ Local businesses' entrances and exits are discussed.

Field Review

- ☐ Is appropriate safety gear being worn?
- ☐ Necessary repair areas are marked.
- ☐ Necessary repairs are made before paving begins.

Milling

- ☐ Pavement is milled to proper depth.
- ☐ Milling equipment does not rip or tear the surface.
- ☐ Dust is controlled during milling.

Equipment Inspection

Haul Trucks

- ☐ Back-up alarms working.
- ☐ No fuel or oil leaks.
- ☐ Tarps are used when required (because of dust or haul distance).
- ☐ Releasing agent is drained completely before mix is placed in truck.

Paver

- ☐ Flow control gates are adjusted to allow amount of material flow.
- ☐ Screed surface is smooth.
- ☐ Leading edge of screed is set slightly higher (about 10 mm) than trailing edge.
- ☐ If an extension is used, auger is same length as extention.
- ☐ Depth screws properly set at beginning of operation.
- ☐ Grade and slope set properly.
- ☐ If skis are used, sensing device is mounted between 2 and 3.5 meters ahead of screed.

Rollers

- ☐ Steel-wheel rollers' drums are smooth.
- ☐ Scrapers and mats are in good condition.
- ☐ Steel-wheel rollers' nozzles are working properly.
- ☐ No oil or fuel leaks under roller.
- ☐ Pneumatic-tire rollers' tires properly inflated, within 35 kilopascals of each other.
- ☐ Pneumatic-tire rollers have a working weight capacity of at least 20 kg per cm width of tire tread.

Hand Tools

- ☐ Lutes are used for joint construction, not rakes.
- ☐ Diesel fuel used for tool storage is not spilled on the fresh mat.
- ☐ While in use, hand tools are cleaned with a putty knife, not diesel fuel.

Traffic Control

- ☐ Signs and devices used match traffic control plan.
- ☐ Set-up complies with federal or local agency *Manual on Uniform Traffic Control Devices (MUTCD)*.
- ☐ Flaggers do not hold traffic too long.
- ☐ Unsafe conditions, if any, are reported to supervisor.
- ☐ Signs are removed or covered when they no longer apply.

Weather Requirements

- ☐ Local specs checked for minimum air and surface temperature requirements.
- ☐ Any applicable calendar restrictions are observed.
- ☐ Paving does begin if rain is likely.

Tack Coat

Material

- ☐ Approved type of tack coat is used as specified by contract documents.
- ☐ Tack has been sampled and submitted for testing.

Preliminary

- ☐ Liters of tack in distributor recorded (for application rate and payment purposes).
- ☐ Surface is clean and dry before application.
- ☐ Tack is heated within proper temperature range prior to application.

Equipment

- ☐ Nozzles are clean and unplugged.
- ☐ Nozzles angled in same direction.

Application

- ☐ Tack is applied evenly and uniformly.
- ☐ After application, liters of tack in distributor recorded (for application rate and payment purposes).
- ☐ Tack is applied at specified application rate.
- ☐ More tack is not applied than can be covered in the same day.
- ☐ Traffic and dirt are kept off the tack coat.
- ☐ When emulsions are used, the material loses its water content before the mix is placed (turns from brown to black and becomes sticky and tacky).
- ☐ When asphalt cement is used, paving may begin immediately.
- ☐ When cut-back asphalt is used, tack cures before the mix is placed (material loses oily film and becomes sticky).

Paving Operation

Delivery of Mix

- ☐ Ticket collected from each haul truck.
- ☐ Time mix is received and where it is placed are recorded on ticket.
- ☐ Mix meets minimum temperature requirement (usually 110 to 115 degrees Celsius).
- ☐ There are no lumps, blue smoke, or steam (indications that mix is too hot or cold). If so, may call for rejection.
- ☐ There are no uncoated particles, and the mix is not soupy, stiff, or dull (indications of inadequate asphalt). If so, may call for rejection.
- ☐ There are no pockets of fine or coarse aggregates (indicates segregation). If so, may call for rejection.
- ☐ Station numbers noted to determine amount of material placed.

Example:
Truck load contains 13,600 kilograms of mix. Pavement is 3.8 meters wide, 40 millimeters thick (0.04 meter), and is compacted to 2,310 kilograms per cubic meter.To determine paver yield, first multiply the density by the width by the thickness. Divide the result into weight of one truckload. ***The answer is 38.7 meters.***

- ☐ Haul trucks maintain a constant supply of material to paver.

Placement of Mix

Conventional Method

- ☐ Haul truck stops a half meter ahead of paver.
- ☐ Smooth and even contact between paver and haul trucks. Both rollers make contact. Paver does not bump the truck.
- ☐ Little, if any, material is dumped outside the hopper.
- ☐ Any spoiled material is shoveled up before tractor runs over it.
- ☐ Cold, hard mix does not get used.

Windrow Method

- ☐ Wings and plate are flat on the surface so that almost all mix is picked up.
- ☐ Any material not picked up is shoveled away.

Both Methods

- ☐ Mat is smooth, uniform and free of blemishes and segregation.
- ☐ Mat is placed at proper loose depth (mix will compact about 20%).
- ☐ If depth changes are necessary, they are made gradually.
- ☐ Shoulder at slope specified on typical section sheets.
- ☐ Longitudinal joint is tacked before adjacent lane is placed.
- ☐ When paving an adjacent lane, the paver slightly overlaps the first lane.
- ☐ Handwork is minimal at longitudinal joints.
- ☐ If a ski is used for controlling grade, it pulls straight, while remaining parallel to the longitudinal joint.
- ☐ Slope is properly set and checked with a slope board periodically.

Compaction

- ☐ Longitudinal joints are rolled first.
- ☐ When rollers reverse direction, they stop gradually without scuffing, pushing, or marring the mat.
- ☐ Rollers do not stop on mat (except to reverse direction).
- ☐ Rollers proceed in as straight a line as possible. Turns are smooth and gradual, not sharp.
- ☐ On superelevations, rolling starts on the low side, with each successive pass 15 to 30 cm to the high side.
- ☐ Density is checked and meets agency's minimum requirements.

Constructing Transverse Joints

- ☐ Material is cut away at a point where the required depth and slope are maintained.
- ☐ If paper is used, the paper extends the full length and width of the taper.
- ☐ Transition is formed at the proper taper.
- ☐ Surrounding pavement is clean before paving begins again.
- ☐ Face of joint is vertical.
- ☐ Joint face, and area where the taper was made are tacked.
- ☐ Excess material is removed after paver passes by.
- ☐ Joint receives same compaction as the rest of the mat.
- ☐ Transition is smooth. Any high or low spots are corrected.