Colorado Asphalt Pavement Association

Suggested Best Practices for PAVER OPERATORS

Safety operates the paver using "Best Practices" procedures, to produce the highest-quality pavement possible.

1. Select a paving speed that balances delivery, paver capacity and the compaction process and pave with few if any extended stops.

2. Work with screed operator in establishing and maintaining the head of material within a plus or minus one inch tolerance.

3. Steer the paver holding to a pre-determined reference.

4. Direct the truck driver to raise bed and exit when empty.

5. Utilize rapid, but smooth start and stops to help prevent end-of-load roughness (if stopping is necessary.)

6. Observe HMA being discharged into paver hopper or insert for changes in characteristics of the mix.

7. Monitor paver for unusual noise or vibration (notify the proper person to take corrective actions).

8. Work with dump person to make sure truck does not bump paver, or let hopper run low.

9. Work as a team member.

For more information contact:

The Colorado Asphalt Pavement Association

(303) 741-6150

www.co-asphalt.com

Colorado Asphalt Pavement Association

Suggested Best Practice for Minimizing Segregation

1. *Aggregate Stockpiles:*
   - ❑ Build in Layers
   - ❑ Avoid any procedure that will allow the aggregate to be pushed or dumped over the side of a stockpile
   - ❑ Separate to prevent intermingling
   - ❑ Aggregate Handling:
     - Loader operator works full face of stockpile
     - Install dividers on the "cold feed" bins to prevent the material from flowing into an adjacent bin
     - DO NOT pile the aggregate so high it flows over the dividers

2. *Loading the Surge Silo: (if the plant has a "batcher or "Gob Hopper" at the top of the silo*
   - ❑ Adjust the conveying devises to deposit the material in the center of the batcher or gob hopper
   - ❑ Keep the gates on the batcher or gob hopper closed unless dropping a load of mix
   - ❑ Close the gate on the batcher or gob hopper before it is empty to prevent the material from dribbling into the silo

3. *Loading Trucks:*
   - ❑ Keep the gates on the bottom of the silo closed so the material does not dribble into the trucks
   - ❑ Take care to center the trucks (left to right) when loading
   - ❑ Consider loading trucks in multiple drops with the first drop at the rear, second at the front and then alternate dumps
   - ❑ If the mix is prone to segregation, you should avoid loading the trucks by "slowly" driving forward while dropping the mix from the silo

4. *Dumping Trucks:*
   - ❑ To provide as surge of material to the paver, when using end dump type trucks, the box should be raised until the mix moves to the rear of the bed charging the tail gate prior to releasing the load
   - ❑ If any mix is spilled on the roadway, in front of the paver while dumping the truck, the spilled mix should be removed from the roadway before the paver moves forward across the mixture on the grade

5. *Laydown Operations:*
    - ❑ Only dump the wings on the paver hopper at the end of the paving day and utilize this material in the night taper joint or waste the material
    - ❑ To provide consistent flow of material to the screed and avoid gradual deceleration/ acceleration, the paver should be started and stopped quickly at normal operating speed
    - ❑ Keep the hopper more than half full at all times and maintain the height within 1 inch the entire paving day
    - ❑ The auger height should be adjusted so the bottom of the auger is at least two (2) inches above the finished surface of the HMA mat
    - ❑ Adjust the feed sensors to keep the material near the center of the auger at all times
    - ❑ Correctly adjust the lead and tail crown of the screed so that the surface of the HMA behind the paver is uniform in appearance and texture
    - ❑ Install or verify the material management kits are installed and functioning properly. This includes the "kick back" paddles under the gear box and outer edges of the auger
    - ❑ Adjust the flow control; gates at the rear of the hopper so that:
        - The slat conveyors run continuously
        - The amount of material being presented to the augers allows for them to run almost continually, (minimum of 80% of the time)
6. *Windrow Elevators:*
    - ❑ When using pickup machines they should be adjusted so that all of the HMA is removed from the surface

7. *Troubleshooting:*
    - ❑ If segregation is observed behind the paver, check the trucks as they arrive and are dumping to see if the mix in the truck is segregated
    - ❑ The risk of causing thermal segregation is increased when paving in cooler temperatures

For more information contact:
The Colorado Asphalt Pavement Association
(303) 741-6150
www.co-asphalt.com

Colorado Asphalt Pavement Association

Suggested Best Practices For Screed Operators

SCREED OPERATIONS – BEST PRACTICES and INNOVATIONS

Must understand the basic principles of paving with the free-floating screed. Should be knowledgeable of each individual paver manufacturers' screed design, operation and adjustments. Must be aware of mix design characteristics and what might change if mix varies throughout the day. Use the knowledge to produce high quality pavements consistently.

1. Set up the screed and paving reference to match given specification (width, crown, slope and depth).

2. Heat the screed properly.

3. Work closely with the paver operator in establishing and maintaining the head of material within a plus or minus
one-inch tolerance.

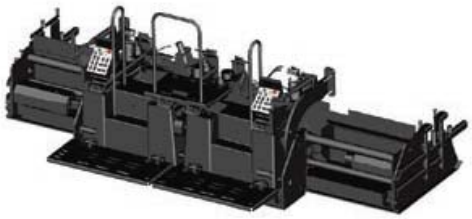
4. Operate the grade and slope system, utilizing the designated references. Check occasionally that mat being laid is being held to the established reference and meets job specifications.

5. Make screed adjustments to produce a consistent textured mat.

6. Follow “Best Practices” in making sound longitudinal and transverse joints.

7. Work as a team.

For more information contact:
The Colorado Asphalt Pavement Association
(303) 741-6150
www.co-asphalt.com



Colorado Asphalt Pavement Association

Suggested Best Practice

Lute Person Responsibilities

The lute person is the last person to touch the HMA surface before rolling. Any mat deficiencies that are present must be corrected.

1. Hand works any area of the mat which cannot be placed by the paver.

2. Repair all pavement imperfections.

3. Prepare transverse and longitudinal joints for compaction.

4. Prepare end-of-pass wedge or taper (for traffic run off) for compaction.

5. Assist in cleaning the paver at end of shift.

6. Must have an eye for quality and how the finished job must look. Communicate problems to responsible person when they arise.

For more information contact:
The Colorado Asphalt Pavement Association
(303) 741-6150
www.co-asphalt.com

Colorado Asphalt Pavement Association

Suggested Best Practices for Finish Roller Operation

1. Communicate – with paving crew, foreman and breakdown roller operator for job requirements.

2. Confirm maintenance and water system checks – done on a daily basis to rollers.

3. Be aware of material temperature – avoid “tender zone.”

4. Determine rolling drum mode – vibratory or static depending upon requirements to achieve density and smoothness.

5. Optimize water system controls – to avoid material pick-up and eliminate excessive water usage.

6. Establish proper rolling pattern, – determined by paving width, roller drum width, unsupported edges, and drum overlap.

7. Coordinate final rolling process with QA / QC personnel.

8. Monitor rolling temperature – and work within optimum temperature zones.

9. Make required rolling coverage’s – to achieve density requirements and to remove drum edge marks.

10. Maintain consistency throughout the entire shift.

For more information contact:

The Colorado Asphalt Pavement Association

(303) 741-6150

www.co-asphalt.com

Colorado Asphalt Pavement Association

Suggested Best Practices for
BREAK DOWN ROLLER OPERATORS

1. Communicate – with paving crew and foreman for job requirements prior to the arrival of asphalt.

2. Confirm maintenance and water system checks – done on a daily basis to rollers.

3. Determine lift thickness – base or surface riding course.

4. Be aware of material temperature – at delivery to paver and behind screed.

5. Determine rolling drum mode – vibratory or static.

6. Make required amplitude adjustments both roller drums – depending on mix design, material thickness, and temperature zone.

7. Optimize water system controls – to avoid material pick-up and eliminate excessive water usage.

8. Establish proper rolling pattern – determined by paving width, roller drum width, unsupported edges, and drum overlap.

9. Determine rolling speed – to achieve proper impact spacing and meet smoothness requirements.

10. Monitor rolling temperature – and work within optimum temperature zones.

11. Make required rolling coverages – to achieve density requirements.

12. Adjust rolling operations – to satisfy density, smoothness, and production rates.

13. Maintain consistency throughout the entire shift.

For more information contact:

The Colorado Asphalt Pavement Association

(303) 741-6150

www.co-asphalt.com

Colorado Asphalt Pavement Association

Suggested Best Practices for LONGITUDINAL JOINT CONSTRUCTION

Developed by: The Joint CAPA/CDOT Longitudinal Joint Task Force

1. **BE CONSISTANT:** Decide on a plan and stick with it.
2. **COMMIT TO A GOOD JOINT:** Quality contractors build quality joints.
3. **MAINTAIN A PROPER TAPER**: Tapers range from near vertical to 12:1. Regardless of what taper is used, keep it consistent. Vertical edges and notches as vertical as possible. Keep edges confined as long as possible. Maintain a Proper “Head of Material”
4. **MAINTAIN PROPER OVERLAP:** Keep overlap consistent typically from 0-1.5 inches. Place proper amount of HMA at the joint: Too little will allow water to enter the joint. Too much will cause a ridge which will carry water and interfere with compaction. **DO NOT RAKE THE JOINT!** If raking to correct improper amount of material, just bump the joint, DO NOT BROADCAST loose material across the mat.
5. **USE PROPER ROLLING TECHNIQUES!**

For more information contact:

Colorado Asphalt Pavement Association

303-741-6150

www.co-asphalt.com