

VTrans Bituminous Concrete Field Sampling Policy

Effective 6/15/23

Field sampling of HMA loose mixture shall be performed in accordance with AASHTO R 97, Subsection 5.10, unless otherwise specified.

Sampling Equipment:

- Gloves
- Clean Square ended shovel (Contractor Provided)
- HMA probe thermometer or Infrared thermometer (Contractor Provided)
- Agency supplied HMA sample boxes
 - o VTrans Standard boxes are 13"x13"x4", 1 per sample
 - o Previous Box is 11.75"x7.25"x4.75", 2 per sample

Note: Sampling shovel shall be clean and free from any contaminants that may compromise the HMA sample. If cleaned or coated with release agent, allow excess to drain off and work back and forth through mix prior to sampling. The use of petroleum- based products to clean the sampling tools will not be permitted.

Sampling shall be conducted or witnessed by a Qualified VTrans Representatives. If Contractor Staff conduct sampling, it must be witnessed by VTrans Representatives. **All sampling shall be done from the MTV or Paver Hopper.** Any Contractor desired deviation or alterations of the Field Sampling Policy shall be discussed and approved by the Resident Engineer at the Pre-pave meeting or in advance of sampling.

Sampling Preparation & Procedure:

- Random sample locations shall be determined by tonnage.
 - o All sampling will be conducted with stratified random sampling. Sample points will be determined by VTrans Materials or VTrans Construction prior to HMA production and placement. Sample locations will **not** be shared with Contractor QC staff in advance. **Only replicate sampling conducted at the same time and location will be entertained in QA Lot dispute resolution. For Small Quantity and Method samples, QC plant samples taken the same day will be considered for dispute.**
- The procedure for notifying the Contractor's representative of "intent to sample" should be addressed and discussed at the pre-paving meeting. It should include the following:
 - o Verify the random location or tonnage is approaching.
 - o Identify and notify the Contractor the haul unit carrying the HMA mix where the random sample is located, making sure that the haul unit is has departed the plant or on-site prior to notification.
 - o Ensure the haul unit driver is notified they will be asked to accommodate sampling.
- Process for filling hopper and removing truck
 - o Identify haul unit to be sampled.
 - o When in the center of the load (middle 1/3), fill the hopper.
 - o Communicate to the truck driver to pull ahead, and designate one person to be responsible for directing the truck and ensuring they don't back up during sampling.
 - o If MTV is present:
 - Fill the MTV hopper.
 - Park the MTV and Paver, lower the truck body or stop the belt, and advance the Truck forward a minimum of 30 ft and park and shutoff the truck.
 - Follow steps below for sampling.
 - o If no MTV present:
 - Ensure the paver hopper is full.
 - Park the Paver, lower the truck body or stop the belt, and advance the truck forward a minimum of 30 ft and park and shutoff the truck.
 - Follow steps below for sampling.

- Process for sampling
 - Warm the shovel and scraper by inserting it into the mix.
 - Measure temperature of the mix in the hopper and record the temperature.
 - Identify the center of the hopper and determine three potential sample sites, do not sample within 1.5 ft of the sides.
 - Sampling will be done in three even increments, so based on the sample container size, adjust the increment sizes accordingly.
 - Using a clean square shovel, remove at least 6 inches from the top of the pile, keeping the top of the shovel up.
 - Scrape the face of the pile to remove the top layer to expose the undisturbed core, keeping the top of the shovel up. Avoid disturbing the top of the pile. The face should be made wide enough to obtain the three sample increments.
 - Press the shovel horizontally straight into the undisturbed core of the pile. Do not overfill the shovel to minimize spillage.
 - Lift and extract the shovel in a manner that will minimize disturbance of the pile and avoid having mix cascade off the shovel or pile.
 - Place the increment of material into the sample box. Ensure no spillage of material.
 - Repeat as needed to sample the remaining increments from the other designated locations.
 - Do not scrape the shovel into the box.
- The Agency shall determine cooperatively, with the onsite Contractor representative, whether the sample is acceptable. If VTrans determined that the sample is compromised, the sampled material will be discarded, and a new representative sample taken from the same haul unit.
- Clean the mix from in front of the paver tracks to ensure that it does not disturb the paver.
- Box up the sample and label it with the Project name and number, RE's name, date, time, sample ID with Lot and Sublot if available, station, truck/ticket number, VTrans representative responsible for sampling, contractor who sampled if applicable, mix temperature, mix type and Mix Design ID.

The sample shall be stored in a secure and dry location until transport to the laboratory. The sample will be transported by VTrans representatives to the Central laboratory.