Third Party QA Testing

CONTRACTOR'S LESSONS LEARNED

Project Overview

218,000+ tons of HMA

- SMA Binder 12.5 (Main Line)
  - 76 mix samples
  - 413 core samples
- SMA Surface 12.5 (Main Line)
  - Use of friction aggregate
    - 81 mix samples
    - 416 core samples

PFP

158,000 tons

(2017 average contract was 25,800 tons)

- Poly Level Binder (Ramps)
- N70 Binder (Shoulders)
  - 8 mix samples
  - 325 core samples
- N70 Surface 'E' Mix (Ramps)
- N70 Surface (Shoulders)
  - 8 mix samples
  - 325 core samples

QCP

60,000 tons

(2017 average contract was 5,660 tons)

All volumetric testing was performed by MLS

Project Challenges

Difficult Conditions

- Large scope + tight timeline
- Night paving
- Heavy traffic

High Volume

- Large quantites tons of SMA per night
- Entire mix lot (10,000 tons) on the ground in under a week

QA Turnaround

- Average five day turnaround for PFP + QCP samples

The introduction of third party testing had the potential to minimize this risk

MSL
Material Solutions Laboratory

Advantage of Third Party Testing

Test results were received prior to the start of the next day's production

Big D (Gmm)

- Improved Accuracy:
  - Daily Nuke Density Tests
  - Core Calculations

Voids & AC Content

- Improved ability to ensure plant mix is in spec by assisting with mix adjustments

Reduced Exposure

Less unverified volume on the road minimized the risk of significant rework, lost materials, and timeline adjustments

Timely Pay Factor Results

Procedures

- ✓ K-Five QC personnel conducted sampling
- ✓ Splitting of samples was performed on-site
- ✓ MSL took job samples directly from job site
- ✓ Results were returned at the competition of testing

Disputes: Challenge tests are conducted by IDOT Springfield

Recommendation

K-Five Construction recommends **increasing the frequency of third party QA testing** on PFP & QCP projects as a means of increasing turn-around time on sample results, ultimately **reducing contractor exposure**