

Use of 3rd Party QA Testing – I-55 Lessons Learned

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About I-55



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Interstate 55 (I-55) is a major north-south Interstate Highway in the U.S. state of Illinois that connects the St. Louis, Missouri, and Chicago metropolitan areas.

I-55 enters the Chicago metro area as the Stevenson Expressway and provides easy access to downtown Chicago via both the I-90/I-94 (Dan Ryan Expressway) interchange and US 41 (Lake Shore Drive) at the northern terminus of I-55, near Cermak Road and the lakefront.

About I-55

I-55 within Chicagoland carries heavy traffic, with an ADT of more than 165,000.

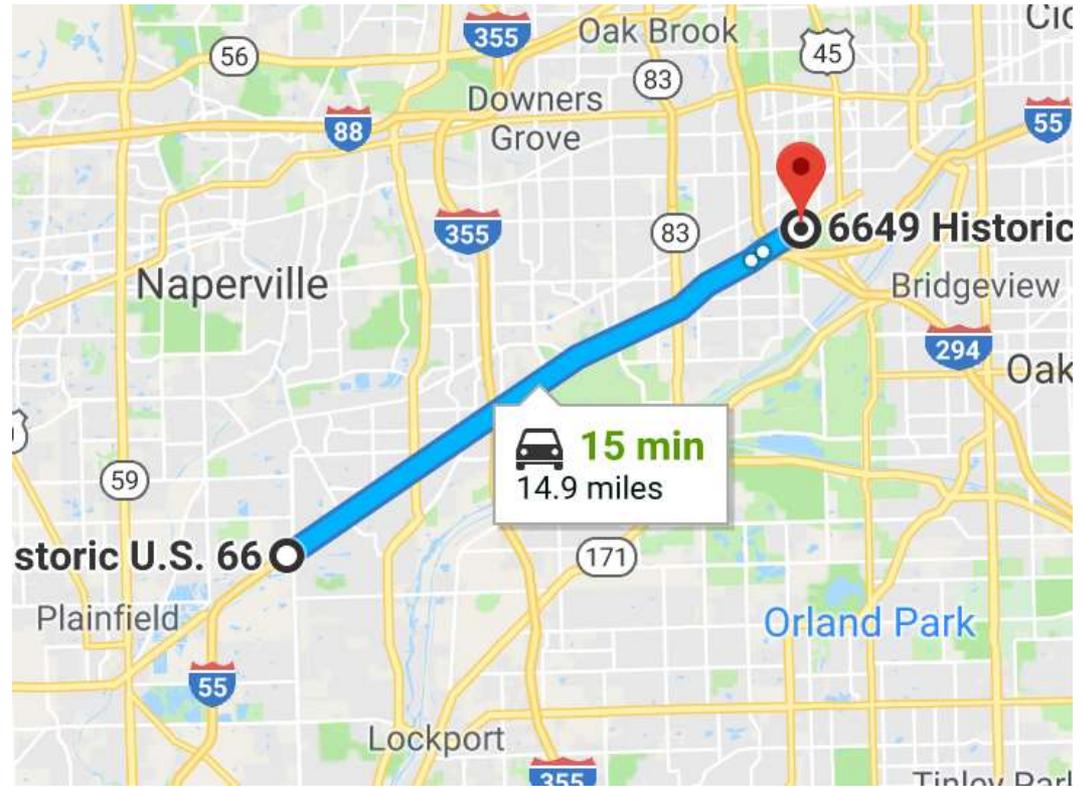
Any delays will have a significant impact to commuters.



60Y65

I-55 from Weber Road to Willow Springs

Mix Type	PFP (Tons)	QCP (Tons)
SMA N80 SC 12.5	82,000	
SMA N80 BC 12.5	75,000	
Poly Level Binder		6,000
N70 BC		23,500
N70 D SC		30,000
N70 E SC		1,500
	157,000	61,000
Total	218,000	



Challenges

Performance Based Management

For both the Department and the Contractor, successful risk management is all about identifying challenges and determining appropriate responses.



"IF EVERYTHING IS IMPORTANT, THEN
NOTHING IS IMPORTANT. IF
EVERYTHING IS A PRIORITY, THEN
NOTHING IS A PRIORITY,"

Garr REYNOLDS

Challenges

The District lab must also process all the other performance based projects (15 PFP and 140 QCP) for 2017.

The District lab processes several thousand samples annually.

Challenges

218,000 tons of Performance based HMA.

Due to high traffic volume, majority of paving at night.

K-Five typically paved 2 to 3 thousand tons of HMA per night.

Contractors could easily have an entire mix lot on the ground before getting results for the majority of the paving lot (10,000 Tons).

How to Handle Risk



How To Handle Risk

FOR BOTH THE DISTRICT AND THE CONTRACTOR, THIS INVOLVES BALANCING RISKS.

WHAT MATTERS IS WHAT WE DO ABOUT THESE RISKS.

IDOT District 1 Materials Lab Among the Elite

IDOT's District 1 Materials Laboratory in Schaumburg recently earned the AASHTO (American Association of State Highway and Transportation Officials) accreditation for testing hot mix asphalt. AASHTO re:source (formerly AMRL) is the largest accrediting body in the construction materials industry. Accreditation puts the District 1 lab in an elite group of materials testing labs worldwide!



3rd Party Testing

On this project IDOT had 2 knowledgeable Phase III consultants who both had extensive experience with IDOT performance based contracts.

- Wight brings experience from IL Route 56 (Butterfield Road).
- MSL has worked for the District on a number of PFP projects.



Proficiency Program

IDOT Central Bureau of Materials, IDOT District 1 & MSL have been part of the statewide round robin for several years.

- Modeled after the AASHTO re:source Proficiency Sample Program. (formerly AMRL)

District One has operated it's own round robin program as well.

- MSL & K5 have been a part for years.
- Helps ensure uniformity of means and methods among contractors and consultants in the District.
- Gives more Contractors and Consultants the opportunity to participate.
- Helps all involved to develop better baselines with the District and Central Office.

How to Handle Risks

1

Consultant better able to set staffing for rapid results.

- Rapid sample turnaround aided both IDOT and K-Five in identifying, assessing and solving issues.

2

Consultant did comparisons between QC and QA.

3

Quality Index sent out at the end of each mix lot and end of each core lot.

How to Handle Risks

Contractor knew ahead of time the consultant machine would be used for testing.

Contractor can make use of Round Robin Results to eliminate guesswork.



How to Handle Risks

Night Paving

- The Contractor can focus on one mix for one job.
 - Daytime paving normally entails multiple mixes and mix changes
- Night traffic volumes are much lower allowing for steady supply to the project.
- Night paving is normally the Contractors “A” Team.
- Contractor must still follow “Good” Practices.



Benefits

Benefits

Consistent turn around time on mix samples and cores

Enabled DOT lab to provide more consistent turn around time on all the other performance based contracts in the District.

K-Five had test results before paving the next night.

Supplement IDOT's staff to help implement IDOT's Multi-Model Multi-Year Transportation Improvement Program
