2018 ISSA President’s Award for Excellence

Brett Gaither, Business Development Director
Microsurfacing Contractors, LLC.
2018 ISSA President’s Award for Excellence Nomination

IDOT No. 149 Madison County Micro-Surfacing

MICROSURFACING CONTRACTORS, LLC
IDOT No. 149 Madison County
I-270 East & West Bound from IL Rte. 3 to I-55
(11 miles each direction)
Fox 2 News Announcement of East Bound I-270 Closing 8/11/17

Click on above video
Fox 2 News Announcement of West Bound I-270 Closing
8/18/17
Click on above video
Agency Contact Information

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Specific Location of the Project

- FAI Route 270 from Illinois Route 3 East and West Bound to Interstate 55
- 11 miles east bound & 11 miles west bound
- Load site located at Illinois Rte. 111
Roadway Description & Need for Treatment

- East & West bound Interstate 270, from Illinois route 3 to Interstate 55, in Madison County, Illinois where existing hot mix asphalt roads paved in 2008

- Illinois Department of Transportation was concerned about the condition of the existing road surface - Interstate had raveling, polishing, loss of friction, pavement defects and ride-ability issues

- IDOT wanted a uniform final surface texture installed prior to winter
Roadway Description & Need for Treatment

- IDOT was looking for the best application to seal their existing roads
- IDOT was willing to allow a total shutdown to occur over 5 weekends
- IDOT was wanting a high quality, economical way to extend the life of the asphalt surface
IDOT selected a double pass of Type II Micro-surfacing applied at 32 lbs. per square yard
Project Expectations

- The contractor will be required to complete all micro-surfacing under weekend closures. They must conduct and coordinate the construction for this section in a timely manner, to cause minimal interference or inconvenience to the motoring public and to maintain traffic as herein specified.

- The contractor shall submit a closure and detour plan to The Department prior to the Pre-Construction Conference.

- The length of each closure shall not exceed more than what can be completed during that weekend closure. If the contractor’s closure plan breaks the closures into smaller segments between state routes, the closure plan should clarify that no interchange shall be fully closed more than one weekend.

- Illinois Department of Transportation would only allow five weekends of closures.

- Closure time would be 9:00 pm Friday evening and opened by 5:00 am Monday.

- Minority expectations was 14.7% & Female 6.9% (We achieved 26.5% and 8.9%)
Microsurfacing Contractors’ Scope

- 400,000 square yards of Micro-surfacing
- 32 lbs. Double Pass
- Tack-Coat applied in advance of Micro-surfacing
- Asphalt repairs $166K
- Crack seal 200,000 LF
- Remove & replace pavement markings
- Traffic control with message boards, lights and detour routes
- Total closure of East and West bound 270: 5 weekends max
- Cost $4.8M
Project Photos
East Bound Lanes Completed
West Bound Lanes Closed
Copy of Mix Design

RECOMMENDED MIX DESIGN: Microsurfacing Contractors, LLC  DATE: February 16, 2017
PROJECT: 2017 Madison County, I-270 Microsurfacing - Contract #76K23

TESTING: The following data is based on aggregate samples supplied by the contractor or material sources and works under laboratory conditions and testing. Many variables in field conditions may alter the design or results. Laboratory tests are performed according to ISSA Design Technical Bullentins as well as AASHTO & ASTM standards. Based on our laboratory test results, the job mix design will work with aggregate supplied and the engineered emulsion from Tri State Asphalt, LLC on the above project.

AGGREGATE SOURCE: IDOT AGCS# 033FM21MS (Granite City / Beelman FA6 Slag)

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<td>15</td>
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<td>No. 200</td>
<td>5 - 15</td>
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Mix Time at 25°C (120 Seconds min) 240

COHESION RESULTS

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<tr>
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<th>Result (kg-cm)</th>
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<tr>
<td>60 Minutes</td>
<td>26</td>
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<tr>
<td>90 Minutes</td>
<td>26</td>
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<td>120 Minutes</td>
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In-place Specific Gravity 1.75

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Classification Compatibility Points 12

RECOMMENDED MIXED DESIGN

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<tr>
<th>Portland Cement</th>
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<th>Emulsion</th>
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<tr>
<td>1.0%</td>
<td>9.0%</td>
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EMULSION TYPE: CSS-1hLM
EMULSION SOURCE: Tri State Asphalt, LLC
RESIDUAL ASPHALT: Minimum 62%
IDOT No. 149 Madison County
Specifications and Plans

Specifications.pdf

Plans.pdf
List of raw materials and the suppliers of those materials

- **Aggregate**: US Steel - Granite City (Beelman Logistics)
- **Emulsified Asphalt**: Tri-State Asphalt
- **Hot Mix Asphalt**: Asphalt Sales and Products
- **Portland Cement**: Holcim
- **Hot Poured Joint Sealer**: Crafco
- **Pavement Marking Paint**: Swarco
- **Temporary Pavement Tape**: 3M, Briteline
Project Challenges

- We safely and efficiently re-routed traffic around our work zone (50,000 vehicles per day)
- We paved 27 lane miles each weekend
- Work was performed between 9:00 pm Friday through 5:00 am on Monday.
- Major roadway to metropolitan St. Louis.
- We had 5 weekends to complete - NO exceptions
- Shut-down of Interstate and all exit and entrance ramps to that segment - Zero Traffic
Project Challenges

- Shut down occurred during the Solar Eclipse
- We had to maintain road closures, traffic control and personnel at all entrance ramps throughout the weekend.
- Aggregate supplier would not deliver aggregate over the weekend.
- Weather and breakdowns could NOT stop construction.
- Coordinate the delivery of 6,400 tons of aggregate
- Coordinate the delivery of 195,000 gallons of emulsion
Innovation

- Over a month was spent planning the logistics of this project
- We believed we could complete all of our work in 2 weekends, instead of the 5 weekends that IDOT estimated; saving the State and traveling public money, time and aggravation
- Secured a load site for all staging and materials - 1 month before starting the job
Innovation Continued

- Prescreened and stockpiled aggregate 2 weeks before shutdown
- Mobilized 2 pavers, 12 support vehicles, 2 frac tanks, & 2 emulsion tanks
- Used one tank to slowdown set time & one tank to speed it up. (We did this to insure we could adjust the formulas if necessary)
- We had a night and daytime formula
2 Micro Pavers 12 Support Trucks
Innovation Continued

- During off peak hours, we removed all striping and made pavement repairs
- Traffic control and message boards were set up to detour all traffic the night of the shut down
- Each entrance ramp had traffic control barricades and a person to insure complete shut down during the weekend
- We provided Porta-Potties and light plants at each access point, so no one would leave
Innovation Continued

- We offset our crews on 12 hour shifts starting at 9:00 pm Friday
- Micro-surfacing was being applied around the clock during the weekend shutdown
Innovation Continued

- Opened East and West bound lanes Monday at 1:00 am
- Completed the work, each weekend, 4 hours early
- IDOT is incorporating our idea of including a person at each closed entrance into their specifications
- Employed 50 people for this project
- 26.9% Minority participation
- 8.9% Female participation
Safety

- Total Interstate Closure
- Daily safety meetings
- Safety meetings were conducted before each crew began their shift.
- Implementation of near miss reporting.
- Each on-ramp access point was barricaded, lit and staffed around the clock.
- Zero accidents
Award Worthy Pavement Preservation Project

✓ This particular project is what the ISSA is all about...preserving and extending the service life of existing infrastructure while producing a high quality product in a quick and efficient manner that delivers minimal inconveniences to the traveling public.

✓ Microsurfacing Contractors, LLC. was able to shut down an interstate highway that services over 50,000 vehicles per day. Our detour plan was easy to follow, with no major traffic backups or incidents - Our detour was successful even on a busy weekend with people traveling into town to view the total eclipse.

✓ The old-way, would have taken us 2 months, with greater risk to our employees and to the traveling public. Not to mention, the protracted time to complete.
Award Worthy Pavement Preservation Project

✔ IDOT used this job as a “pilot-project” throughout the State to justify total interstate closures - and it was a major success for all. They were very impressed with how we planned, communicated, and executed this project, and IDOT is now adopting our innovative ideas into their specifications.

✔ IDOT didn’t believe this project could be completed in 2 weekends. They were ecstatic when we were able to cut 3 weekends out of this total surfacing project, with little inconvenience to the motorists.

✔ IDOT thought the finished product was of exceptional quality - our crews exceeded their expectations in quality, safety, communication, professionalism and team collaboration.

✔ There were ZERO accidents or safety violations.

✔ Our approach to this project saved the State a lot of time and money!
November 2, 2017

SUBJECT: CONSTRUCTION
FAD Route 270 (I-270)
60-(4,5), 1RS-6
Madison County
Contract No. 76K23
11.9 miles of micro-surfacing on I-270 from 0.5 miles east of IL 3 to
0.5 miles east of I-65/70;

Microsurfacing Contractors, LLC
13940 St. Charles Rock Road
St. Louis, MO 63044

Dear Contractor:

The Illinois Department of Transportation would like to commend you for the cooperation and planning that was done in order to complete the I-270 microsurfacing project in a very short period of time. This project was one of the first in which District 8 implemented weekend Interstate closures. The Department allowed five weekend closures to complete the project. Due to your extensive planning, you were able to complete it in two weekends, thus reducing the effects to the traveling public. Your project manager made sure to keep the lines of communication open. There were many discussions about the contractor’s schedules and other issues before and during the project. Your superintendent and workforce were very cooperative throughout the project. When approached about possible problems, they listened and made changes to eliminate the issue. Not only did you complete the work quickly, the quality was exceptional too. The two-lift microsurfacing that was applied rode smoothly and the edge lines were straight and neat.

One other thing that was an interest to the Department was your attention to worker and public safety. For example, you provided a laborer at each closure throughout the 11.9-mile project. This was not required by specifications, but it was an excellent idea. The laborers kept motorists from going around barricades and gave directions to people that could not find their way through the detour routes. The Department liked this idea so much that we intend to add it to the specifications on similar future projects.

In closing, the Department is pleased with the work that was done by your company and looks forward to working on other projects with you in the near future.

Sincerely,

Jeffrey L. Keim, P.E.
Region Five Engineer

Acctw/76K23 Letter of Appreciation
To: Steve Bollman
File
Thank you!

WWW.Mirco-surfacing.com