



## Concrete Cylinder Test Report

### PROJECT INFO

ASTM C31, ASTM C39, AASHTO T23, AASHTO T22, ASTM C172, AASHTO R60

|                          |                                     |                   |                      |
|--------------------------|-------------------------------------|-------------------|----------------------|
| Client                   | WSP                                 | Date Of Placement | 08/20/2020           |
| Project Name             | PW-7018 HMA Mill & Resurfacing 2020 | Specimen Type     | Concrete Cylinder    |
| Project Number           | 2020073E                            | Contractor        | WEST SIDE            |
| Project Location         | Detroit, MI                         | Concrete Supplier | McCoig Materials LLC |
| MDOT Job Number          |                                     | Field Tested By   | jaden Riley          |
| MDOT Control Section     |                                     | Date Issued       | 09/17/2020           |
| Results Recorded In      | English Units                       |                   |                      |
| Supplier Mix Description | MDOT P1 S35 MR                      |                   |                      |

### DESIGN PARAMETER

|                                   |            |                |      |                                    |  |
|-----------------------------------|------------|----------------|------|------------------------------------|--|
| Mix Design Number                 | 0770 P1-SM |                |      |                                    |  |
| Design Compressive Strength (psi) | 3500       |                |      |                                    |  |
| Air (% Max)                       | 8.5        | Slump (in Max) | 6.00 | Unit Weight (lbs/ft <sup>3</sup> ) |  |
| Air (% Min)                       | 5.5        | Slump (in Min) | 3.00 |                                    |  |

### TESTING DATA

|             |           |                                                                                                                         |                           |                                              |               |                          |                       |                   |                                                                         |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------|---------------|--------------------------|-----------------------|-------------------|-------------------------------------------------------------------------|
| Placed      | 30.00     | +/- yds <sup>3</sup> /ft <sup>3</sup> of concrete at the following location: Sidewalks on Wyoming Ave 6 mile to 8 mile. |                           |                                              |               |                          |                       |                   |                                                                         |
| Time Tested | Truck Num | Slump ASTM C143 (in)                                                                                                    | Air ASTM C231 or C173 (%) | Unit Weight ASTM C138 (lbs/ft <sup>3</sup> ) | Air Temp (°F) | Mix Temp ASTM C1064 (°F) | Concrete Cylinder Set | Water Added (gal) | Cumulative Concrete Placed At Test (yds <sup>3</sup> /ft <sup>3</sup> ) |
| 10:30 AM    | 2446      | 4.50                                                                                                                    | 7.00                      | 0.0                                          | 74            | 78                       | 1                     | 0                 | 1                                                                       |

### MATERIAL DATA

|                       |                       |               |                               |              |                    |                 |                                 |             |                             |                               |
|-----------------------|-----------------------|---------------|-------------------------------|--------------|--------------------|-----------------|---------------------------------|-------------|-----------------------------|-------------------------------|
| Concrete Cylinder Set | Concrete Cylinder Num | Diameter (in) | X-Sec Area (in <sup>2</sup> ) | Weight (lbs) | Fracture Type      | Capping Process | Age Of Concrete Cylinder (Days) | Date Tested | Total Load At Failure (lbs) | Cumulative Strength (psi/mpa) |
| 1                     | 79715                 | 4.00          | 12.57                         | 8.33         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 09/17/2020  | 51190                       | 4070                          |
| 1                     | 79716                 | 4.00          | 12.57                         | 8.27         | 3-(Vertical)       | Unbonded Cap    | 28                              | 09/17/2020  | 48710                       | 3880                          |

**Average 28 Day Compressive Strength (psi): 3975**

\*Cylinders tested with Unbonded Caps followed ASTM C1231, cylinders tested with Bonded Caps followed ASTM C617.

\*All Air Content % tests were performed per C231 unless otherwise noted in the remarks.

\*Inspector was notified of non-conformance items, if any.

\*Average Compressive Strength results did meet project specifications.

|                      |                          |
|----------------------|--------------------------|
| Remarks:             |                          |
| Results Reported To: | WSP(Jason Lukasik, P.E.) |
| Report Approved By:  | Matthew Johnson          |