



## Concrete Cylinder Test Report

### PROJECT INFO

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

|                          |                               |                   |                   |
|--------------------------|-------------------------------|-------------------|-------------------|
| Client                   | AECOM                         | Date Of Placement | 11/14/2020        |
| Project Name             | PW-7005 Kercheval Streetscape | Specimen Type     | Concrete Cylinder |
| Project Number           | 2019057B                      | Contractor        | Major Cement      |
| Project Location         | Detroit, MI                   | Concrete Supplier | SRM Concrete      |
| MDOT Job Number          |                               | Field Tested By   | Cody Cervelli     |
| MDOT Control Section     |                               | Date Issued       | 12/12/2020        |
| Results Recorded In      | English Units                 |                   |                   |
| Supplier Mix Description | MDOT P-NC - 6" Slump          |                   |                   |

### DESIGN PARAMETER

|                                   |               |                |      |                                    |  |
|-----------------------------------|---------------|----------------|------|------------------------------------|--|
| Mix Design Number                 | 0749 P-NCOM-1 |                |      |                                    |  |
| 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 96.00 +/- yds <sup>3</sup> /ft <sup>3</sup> of concrete at the following location: Islands for roadway on NB Side of Kercheval from Iroquois to McClellan. |           |                      |                           |                                              |               |                          |                       |                   |                                                                         |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|---------------------------|----------------------------------------------|---------------|--------------------------|-----------------------|-------------------|-------------------------------------------------------------------------|
| 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> ) |
| 8:00 AM                                                                                                                                                           | 414       | 5.25                 | 7.20                      | 0.0                                          | 28            | 63                       | 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                     | 81824                 | 4.00          | 12.57                         | 8.27         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 12/12/2020  | 60160                       | 4790                          |
| 1                     | 81825                 | 4.00          | 12.57                         | 8.26         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 12/12/2020  | 59810                       | 4760                          |

**Average 28 Day Compressive Strength (psi): 4775**

\*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: | AECOM(Alan Ostrowski) |
| Report Approved By:  | Matthew Johnson       |



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|                          |                               |                   |                   |
|--------------------------|-------------------------------|-------------------|-------------------|
| Client                   | AECOM                         | Date Of Placement | 11/14/2020        |
| Project Name             | PW-7005 Kercheval Streetscape | Specimen Type     | Concrete Cylinder |
| Project Number           | 2019057B                      | Contractor        | Major Cement      |
| Project Location         | Detroit, MI                   | Concrete Supplier | SRM Concrete      |
| MDOT Job Number          |                               | Field Tested By   | Cody Cervelli     |
| MDOT Control Section     |                               | Date Issued       | 12/12/2020        |
| Results Recorded In      | English Units                 |                   |                   |
| Supplier Mix Description | MDOT P-NC - 6" Slump          |                   |                   |

### DESIGN PARAMETER

|                                   |               |                |      |
|-----------------------------------|---------------|----------------|------|
| Mix Design Number                 | 0749 P-NC0M-1 |                |      |
| Design Compressive Strength (psi) | 3500          |                |      |
| Air (% Max)                       | 8.5           | Slump (in Max) | 6.00 |
| Air (% Min)                       | 5.5           | Slump (in Min) | 3.00 |

### TESTING DATA

Placed 96.00 +/- yds<sup>3</sup>/ft<sup>3</sup> of concrete at the following location: Islands for roadway on NB Side of Kercheval from Iroquois to McClellan.

| 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> ) |
|-------------|-----------|----------------------|---------------------------|----------------------------------------------|---------------|--------------------------|-----------------------|-------------------|-------------------------------------------------------------------------|
| 11:50 AM    | 813       | 4.75                 | 5.80                      | 0.0                                          | 39            | 65                       | 2                     | 0                 | 52                                                                      |

### 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) |
|-----------------------|-----------------------|---------------|-------------------------------|--------------|--------------------|-----------------|---------------------------------|-------------|-----------------------------|-------------------------------|
| 2                     | 81826                 | 4.00          | 12.57                         | 8.49         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 12/12/2020  | 72110                       | 5740                          |
| 2                     | 81827                 | 4.00          | 12.57                         | 8.52         | 2- (Cone/Vertical) | Unbonded Cap    | 28                              | 12/12/2020  | 76270                       | 6070                          |

**Average 28 Day Compressive Strength (psi): 5905**

\*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: | AECOM(Alan Ostrowski) |
| Report Approved By:  | Matthew Johnson       |