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PAVEMENT COMPOSITION AND CONDITION REPORT
PTB 196-016, WO No. 34
IL Route 53 from Arsenal Road to Hoff Road
IL 53 (Baltimore Street) between IL 102 & Kankakee Street
City of Wilmington, Will County, Illinois

Dear Mr. Lane:

Interra, Inc. (INTERRA) is pleased to submit this summary report on pavement composition and condition for Infrastructure Engineering, Inc. (CLIENT) for Illinois Route 53, from Arsenal Road to Hoff Road, and Illinois Route 53/Baltimore Street, from Water Street to Kankakee Street in Will County, Illinois.

Scope of Work

The scope of work consisted of locating and coring a total of twenty (21) full depth pavement cores along Illinois Route 53, measuring the thickness of various layers, and providing photographic documentation.

Field Work

The fieldwork consisted of locating and obtaining seventeen (16) full depth pavement cores on Illinois Route 53 between Arsenal Rd. and Hoff Rd. and four pavement cores on Illinois Route 53/Baltimore St. between Water St. and Kankakee St. in Wilmington, Illinois. In addition, one pavement core was collected from an existing cracked concrete surface for observation and measurement.

Pavement core locations were selected based on general guidelines provided by the CLIENT. The

approximate location of the cores is presented on the attached Pavement Core Location Maps in Appendices A and B. All cores were taken between 3 and 8 feet from the edge of pavement or curb at the locations presented in Tables 1 and 2 – Pavement Core Thickness, in Appendices A and B of this report.

The core locations were marked in the field by INTERRA. Prior to coring, underground utilities were cleared by the coring sub-contractor Hard Rock Concrete Cutters (HARDROCK). During the coring operations, traffic control and protection, was provided by HARDROCK's subcontractor.

All cores were nominal 4 inches in diameter and extended to the full depth of pavement. After recovering the core, INTERRA's field inspector attempted to identify the type of subbase material below the pavement by visual inspection. In general, the subbase consisted of crushed aggregate with fines. Due to the granular nature of the subbase material, sampling or thickness determination could not be performed. Preliminary documentation and photographs were collected in the field by INTERRA before securing and transporting the cores to the laboratory for further examination and documentation. After completion of coring at each location, backfill and patching was performed by HARDROCK using non-shrink grout.

Report

The thicknesses of various layers of the cores were measured in INTERRA's laboratory and the information is presented in Tables 1 and 2 – Pavement Core Thickness, in Appendices A and B. Profile drawings were developed to visually display pavement core thickness, composition, and approximate distance north of Arsenal Rd. for the Illinois Route 53 section and is presented in Appendix A. Similarly, a pavement core profile drawing was provided for the Baltimore St. section and is provided in Appendix B. Photographs of the pavement cores are included in Appendices A and B of this report.

Findings and Observations

Southbound (SB) IL 53 (Cores C-01 through C-06)



- In general, no deterioration was noted within the core itself for the whitetopping concrete at majority of the core locations. The cores were intact.
- C-01 and C-03 cores were performed on existing asphalt patches and both cores indicated full depth hot-mix-asphalt underlain by gravel possibly CA-06 or similar.
- Debonding occurred between concrete surface and underlying asphalt at C-02 and C-06.
- C-04 indicated a lift of weathered asphalt about 4 inches in thickness. This was followed by approximately 1.79" of fractured/cracked asphalt (as seen on the core log). This is the only location that indicated deteriorated hot-mix-asphalt.
- The underlying asphalt layers were comprised of surface and binder. The surface layer was mainly intact and did not indicate high voids. However, the binder layer indicated high air voids possibly due insufficient compaction during placement.
- Interlayer debonding occurred in all locations except for the patched locations at C-01 and C-03.
- The top surface concrete lift ranged from 3.00 to 4.15". Intermediate and bottom asphalt lifts ranged from 6.83 to 14.93". Total unit thicknesses ranged from 10.98 to 17.93" thick except for the patched locations.
- Poor drainage was noticed on the outside lane and shoulder areas.

Northbound (NB) IL 53 (C-07 through C-16A)

- In general, no deterioration was noted within the core itself for the whitetopping concrete at majority of the core locations. The cores were intact.
- Pavement core C-16A was intentionally placed on a cracked concrete surface and the core indicated cracking through the entire depth of the concrete lift see the pavement core log in Attachment A.
- In general, the NB lanes demonstrated increased pavement distress and cracking on from south to north. Also, Lane 2 (outside lane) indicated high severity cracking compared to Lane 1 (inside). Midpanel and edge cracking was also noticed in Lane 2.
- C-07 and C-12 were performed on existing asphalt patches and both cores indicated full depth hot-mix-asphalt underlain by gravel possibly CA-06 or similar.



- The underlying asphalt layers were comprised of surface and binder. The surface layer was mainly intact and did not indicate high voids. However, the binder layer indicated high air voids possibly due to insufficient compaction during placement.
- Debonding was seen between the concrete surface and underlying asphalt at C-09, C-10, C-11, C-14, C-15, C-16, and C-16A.
- Interlayer debonding occurred in all locations except for C-14 and C-15.
- Intermediate and bottom lifts at C-08 through C-15 were relatively thin, ranging from 1.50 to 5.30". The thinnest intermediate/bottom lifts were encountered at C-11 (2.15"), C-14 (1.5"), and C-15 (2.84").
- The top surface concrete lift ranged from 2.87 to 4.42 inches. Intermediate and bottom lifts ranged from 1.50 to 15.51 inches. Total unit thicknesses ranged from 5.39 to 18.38 inches.
- Poor drainage was noticed on the outside lane and shoulder areas.
- It is possible that the pavement is showing failure and high severity cracking due to poor drainage and excessive traffic loadings.

Baltimore Street (C-17 through C-20)

- C-18 was collected from full depth asphalt patch underlain by gravel base.
- Debonding occurred between asphalt surface and underlying concrete at C-17, C-19, and C-20.
- Interlayer debonding was noticed at C-18.
- Rebar was encountered in C-17 at 6.84".
- Visible void spaces were encountered in the asphalt binder at C-18 and concrete at C-20.
- Asphalt surface ranged from 1.9 to 2.5" thick. Intermediate and bottom lifts ranged from 6.84 to 10.89" thick. Total unit thicknesses ranged from 8.74 to 13.20" thick.

Compressive Strength of Existing Concrete

Cores C-06, C-11, C-15 were cleaned and capped for compressive strength. After the breaks were completed the final strengths were adjusted based upon the L/D Ratio as per the ASTM C-39.



Appendix A

IL 53 Between Arsenal Road & Hoff Road

Pavement Core Location Maps

Table 1 – Pavement Core Thickness Summary

Pavement Core Profiles

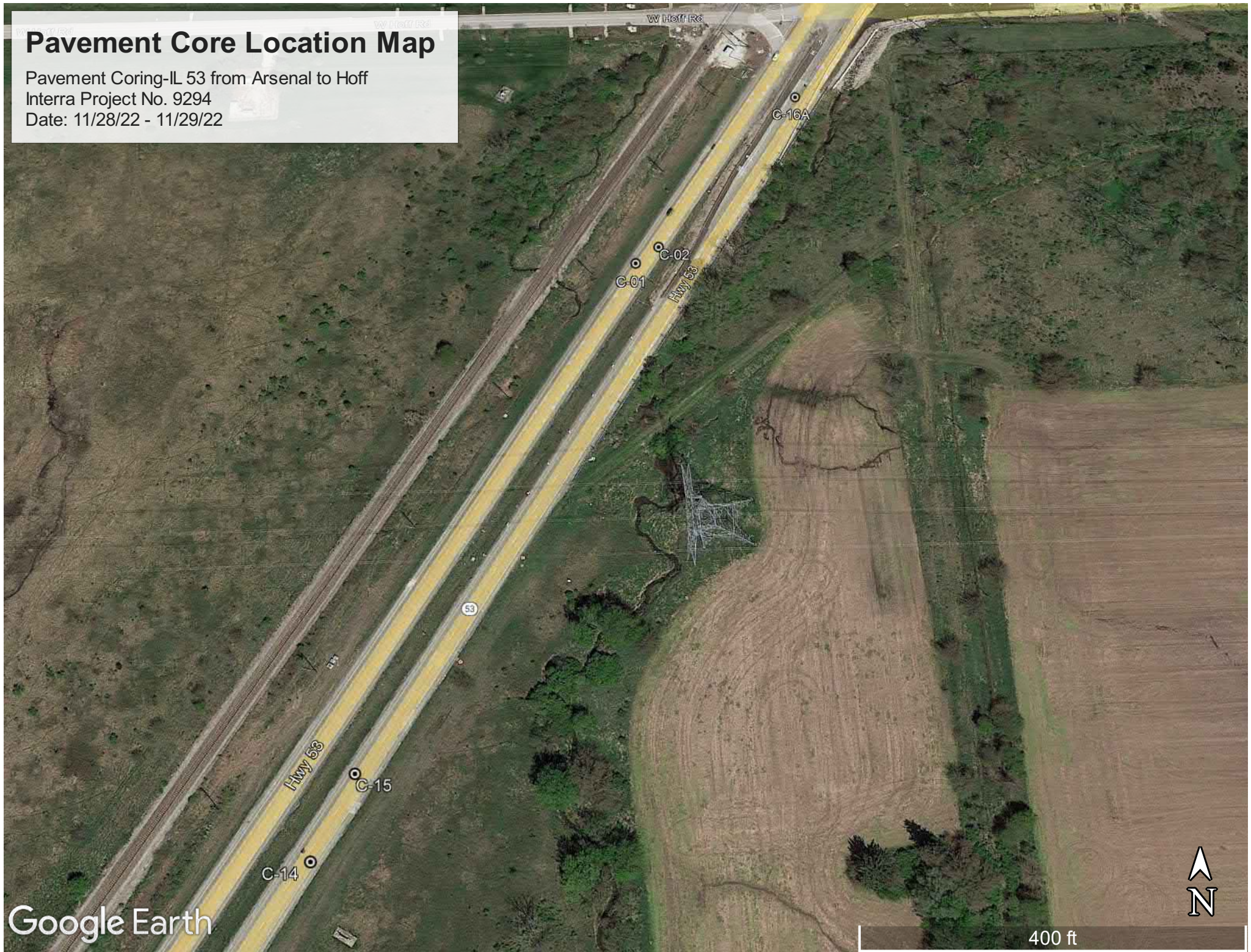
Pavement Core Photo Logs

Concrete Compressive Strength Test Photos

Pavement Core Location Maps

Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



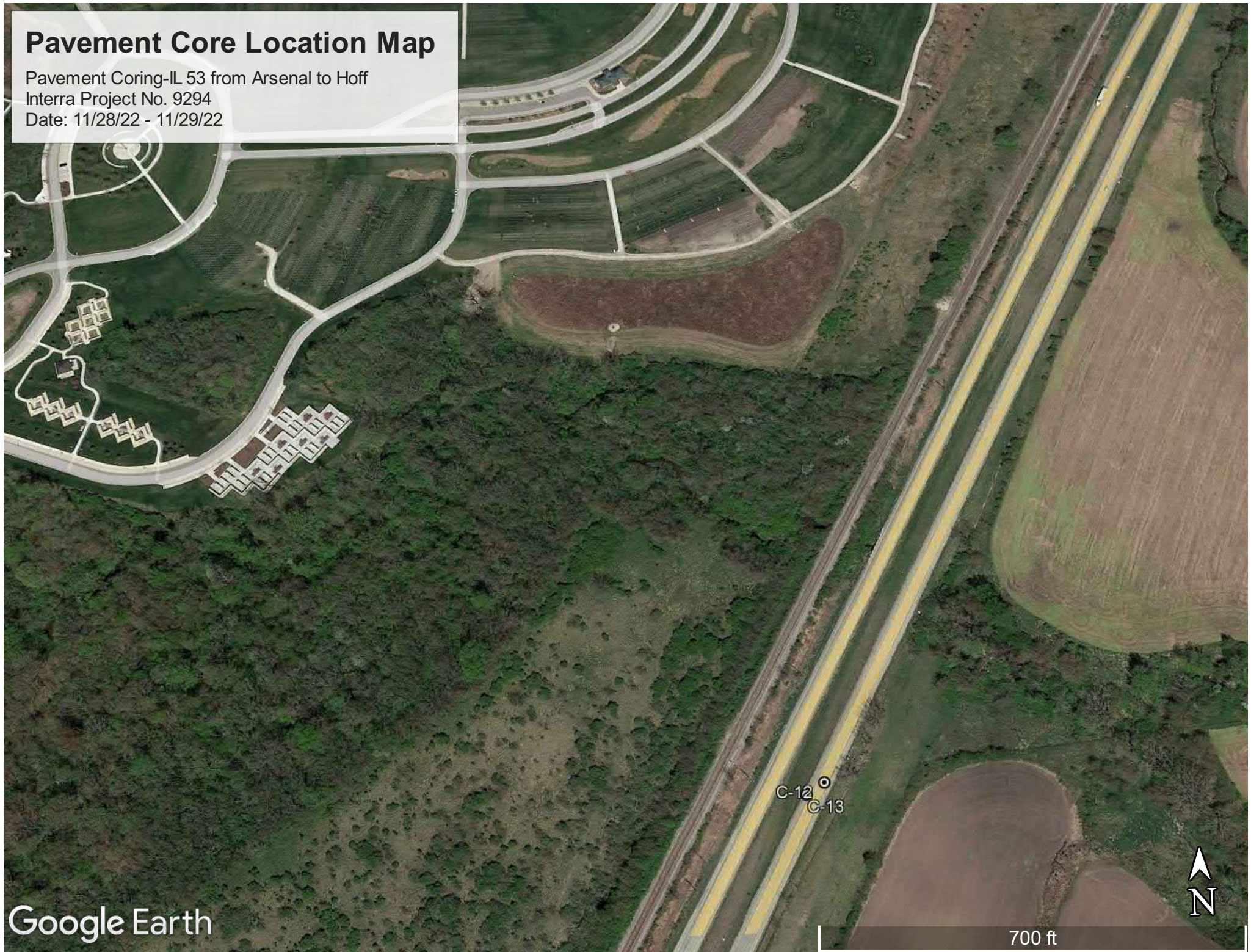
Google Earth

400 ft



Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



Google Earth

C-12
C-13



700 ft

Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



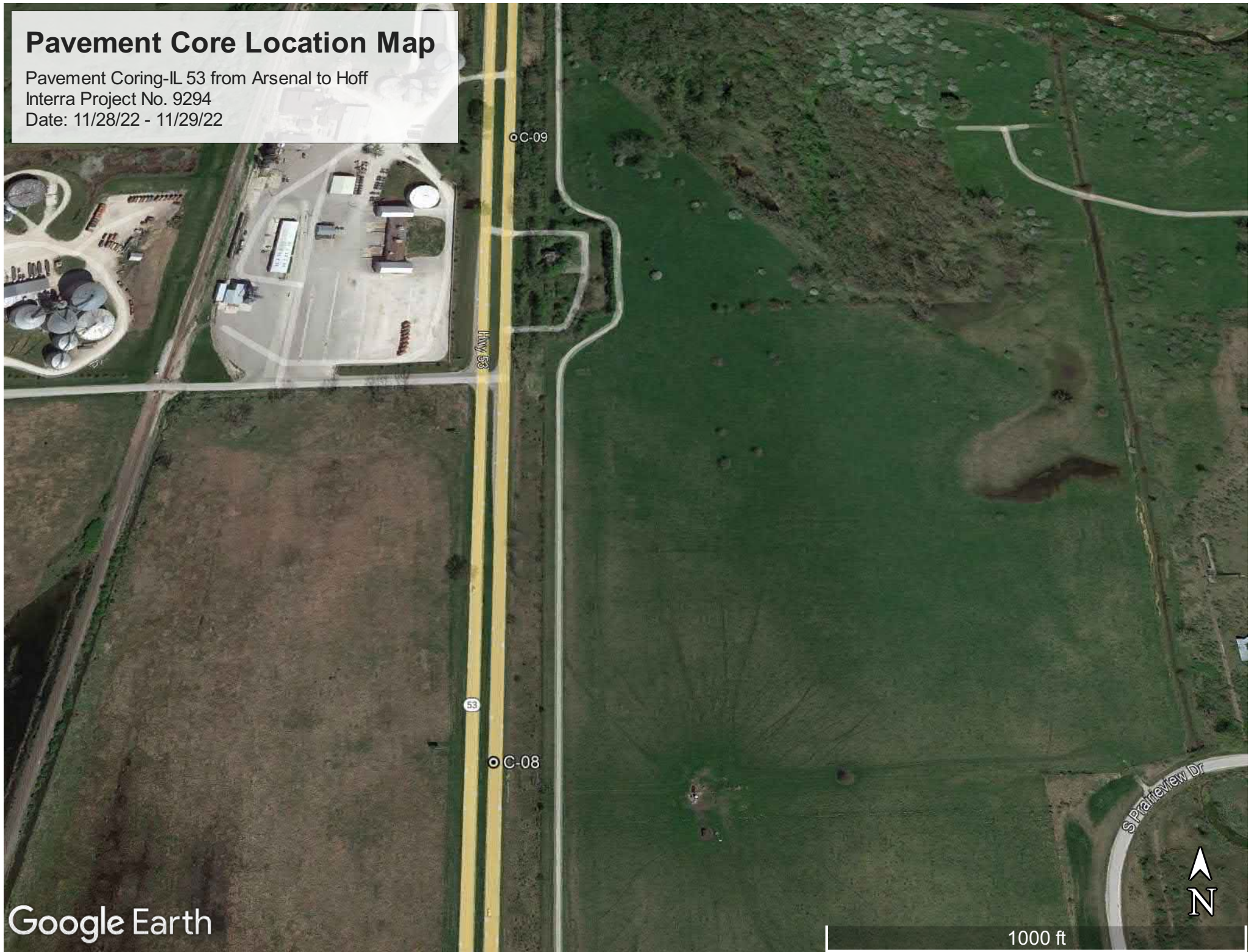
Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



Google Earth

1000 ft



Pavement Core Location Map

Pavement Coring-IL 53 from Arsenal to Hoff
Interra Project No. 9294
Date: 11/28/22 - 11/29/22

○ C-05

○ C-06

○ C-07



Table 1 – Pavement Core Thickness Summary



Table 1 - PAVEMENT CORE THICKNESS WORKSHEET

| | |
|---|--|
| File No : 9294 | Pavement Coring - IL 53 from Arsenal to Hoff - Wilmington - PTB 196-016 |
| County : Will | Technician : Bipin Kumar Patel/Paul Sponaugle |
| Section: IL Route 53 from Aresenal Rd. to Hoff Rd. | Cores Taken on : 11/28/2022 & 11/29/22 |

| Core No. | Location | Offset ¹ | Coordinates | | Top Lift Thickness (inches) | Top Lift Pavement Type | Intermediate/Bottom Lifts Thickness (inches) | Intermediate/Bottom Lifts Pavement Types ² | Total Thickness (inches) |
|----------|------------------|---------------------|-------------|------------|-----------------------------|------------------------|--|---|--------------------------|
| | | | Northing | Easting | | | | | |
| C-01 | SB IL 53, Lane 2 | 1.4' LT | 41.391890 | -88.117390 | 5.03 | Asphalt Surface | 0.00 | N/A | 5.03 |
| C-02 | SB IL 53, Lane 1 | 5.3' RT | 41.391960 | -88.117280 | 3.00 | Concrete | 14.93 | Asphalt Surface, Asphalt Binder, Concrete | 17.93 |
| C-03 | SB IL 53, Lane 2 | 6.3' LT | 41.376440 | -88.129280 | 6.20 | Asphalt Surface | 0.00 | N/A | 6.20 |
| C-04 | SB IL 53, Lane 1 | 5.0' RT | 41.361660 | -88.134150 | 4.15 | Concrete | 6.83 | Asphalt Surface, Weathered Asphalt, Asphalt Surface, Asphalt Binder | 10.98 |
| C-05 | SB IL 53, Lane 2 | 4.8' LT | 41.341930 | -88.133390 | 4.05 | Concrete | 7.40 | Asphalt Surface, Asphalt Binder | 11.45 |
| C-06 | SB IL 53, Lane 1 | 2.0' RT | 41.340290 | -88.133270 | 4.15 | Concrete | 8.25 | Asphalt Binder | 12.40 |
| C-07 | NB IL 53, Lane 2 | 8.1' LT | 41.337660 | -88.133020 | 3.00 | Asphalt Surface | 14.52 | Asphalt Binder | 17.52 |
| C-08 | NB IL 53, Lane 1 | 5.8' RT | 41.345990 | -88.133320 | 4.25 | Concrete | 5.30 | Asphalt Surface, Asphalt Binder, Asphalt Surface | 9.55 |
| C-09 | NB IL 53, Lane 2 | 2.7' LT | 41.351730 | -88.133450 | 3.15 | Concrete | 5.24 | Asphalt Surface, Asphalt Binder, Asphalt Surface | 8.39 |
| C-10 | NB IL 53, Lane 2 | 4.7' LT | 41.360770 | -88.133770 | 3.63 | Concrete | 4.22 | Asphalt Binder, Asphalt Surface | 7.85 |
| C-11 | NB IL 53, Lane 2 | 2.8' LT | 41.375330 | -88.129690 | 4.42 | Concrete | 2.15 | Asphalt Surface, Asphalt Binder | 6.57 |
| C-12 | NB IL 53, Lane 2 | 5.2' LT | 41.383640 | -88.123380 | 4.29 | Asphalt Surface | 4.45 | Asphalt Binder, Asphalt Surface | 8.74 |
| C-13 | NB IL 53, Lane 1 | 3.1' RT | 41.383586 | -88.123497 | 4.42 | Concrete | 4.18 | Asphalt Binder, Asphalt Surface | 8.60 |



Table 1 - PAVEMENT CORE THICKNESS WORKSHEET

| | |
|---|--|
| File No : 9294 | Pavement Coring - IL 53 from Arsenal to Hoff - Wilmington - PTB 196-016 |
| County : Will | Technician : Bipin Kumar Patel/Paul Sponaugle |
| Section: IL Route 53 from Aresenal Rd. to Hoff Rd. | Cores Taken on : 11/28/2022 & 11/29/22 |

| Core No. | Location | Offset ¹ | Coordinates | | Top Lift Thickness (inches) | Top Lift Pavement Type | Intermediate/Bottom Lifts Thickness (inches) | Intermediate/Bottom Lifts Pavement Types ² | Total Thickness (inches) |
|----------|------------------|---------------------|-------------|------------|-----------------------------|------------------------|--|---|--------------------------|
| | | | Northing | Easting | | | | | |
| C-14 | NB IL 53, Lane 2 | 5.8' LT | 41.389800 | -88.118670 | 3.89 | Concrete | 1.50 | Asphalt Surface, Asphalt Binder | 5.39 |
| C-15 | NB IL 53, Lane 1 | 5.1' RT | 41.390070 | -88.118560 | 4.03 | Concrete | 2.84 | Asphalt Binder | 6.87 |
| C-16 | NB IL 53, Lane 2 | 13.3' LT | 41.392650 | -88.116570 | 2.87 | Concrete | 15.51 | Asphalt Surface, Asphalt Binder | 18.38 |
| C-16A | NB IL 53, Lane 2 | 13.3' LT | 41.392645 | -88.116570 | 3.19 | Concrete | 15.24 | Asphalt Surface, Asphalt Binder | 18.43 |

¹ Offset measured from the outside/inside edge of pavement.

² Refer to attached core logs for details.

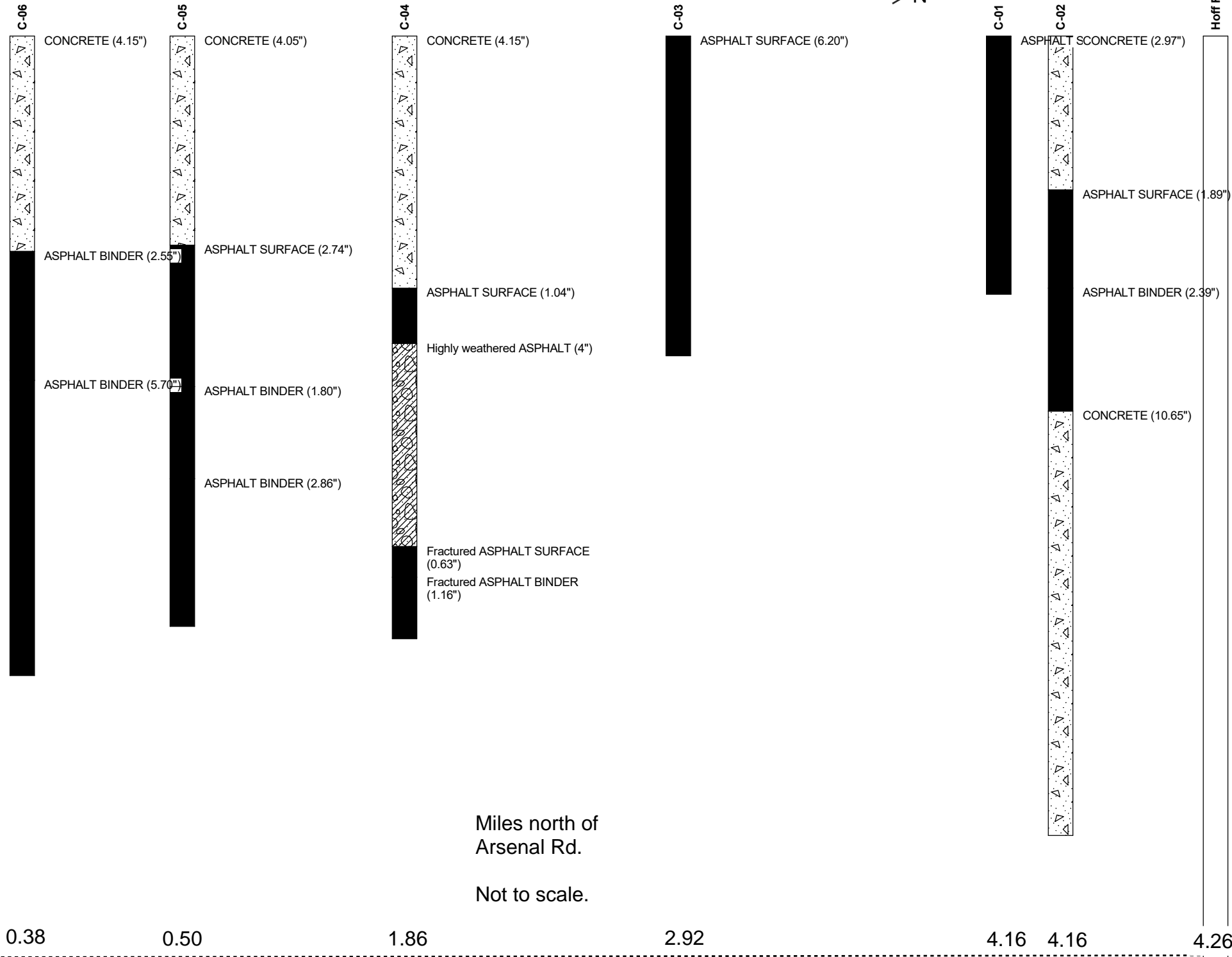
Pavement Core Profiles

Arsenal Rd

IL 53 Southbound



Hoff Rd



Miles north of Arsenal Rd.

Not to scale.

0.38

0.50

1.86

2.92

4.16

4.16

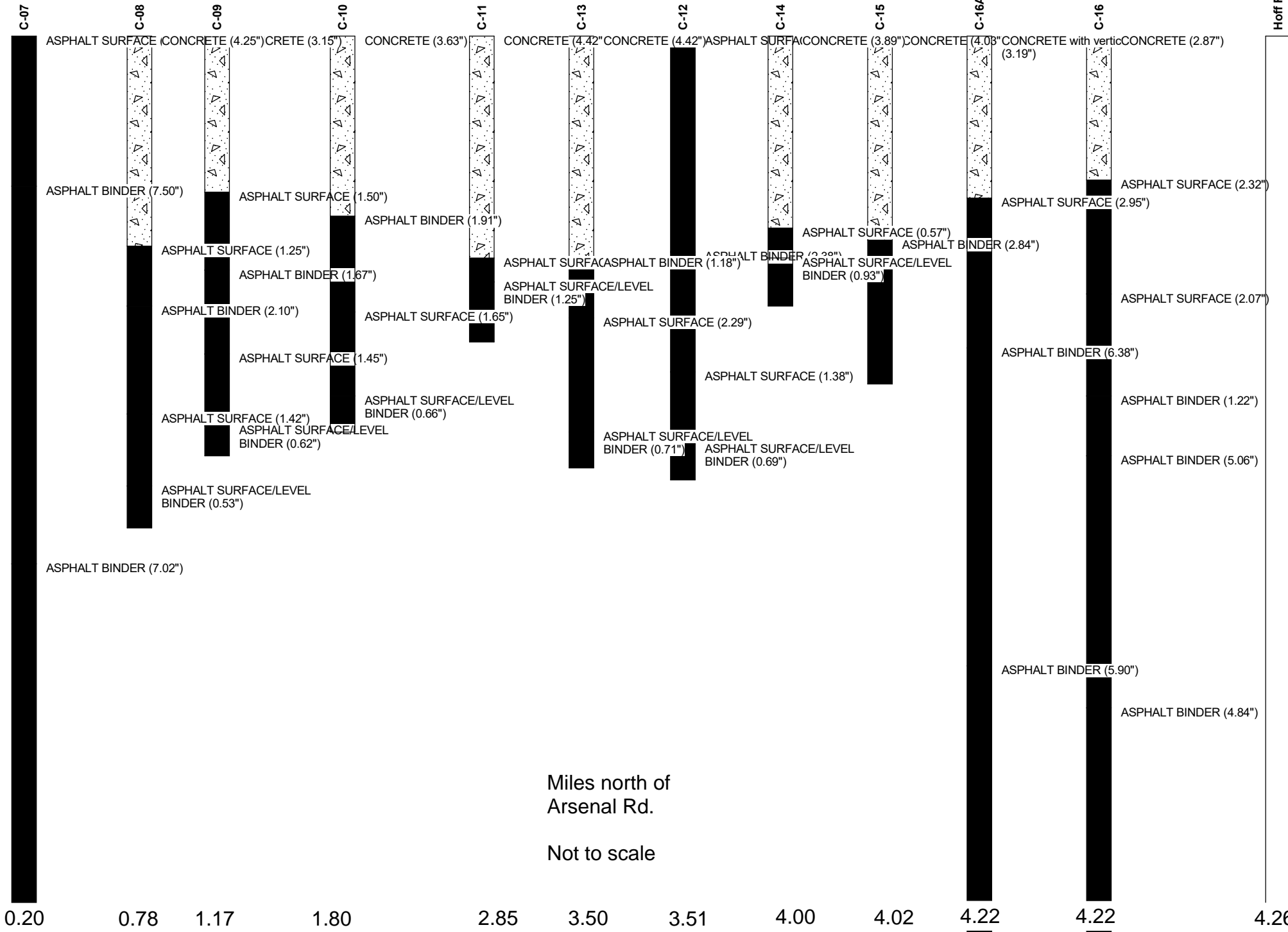
4.26

Arsenal Rd

IL 53 Northbound



Hoff Rd



Miles north of Arsenal Rd.

Not to scale

Pavement Core Photo Logs

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No.: | C-01 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | SB IL 53, Lane 2, N41.391890, E-88.117390 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 5.03 | Notes: | | | |



Asphalt Surface - 5.03"

C-01 cored in an asphalt patch. Once the core barrel passed through asphalt, it no longer advanced at usual production rate due to CA-6 or similar below asphalt.

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-02 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | SB IL 53, Lane 1, N41.391960, E-88.117280 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 17.93 | Notes: | | | |



Separation/Debonding

Separation/Debonding



Concrete - 2.97"

Asphalt Surface - 1.89"

Asphalt Binder - 2.39"

Concrete - 10.65"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No.: | C-03 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | SB IL 53, Lane 2, N41.376440, E-88.129280 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 6.20 | Notes: | | | |



Asphalt Surface - 6.20"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-04 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | SB IL 53, Lane 1, N41.361660, E-88.134150 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | ~10.98 | Notes: | | | |



Separation/Debonding



Concrete - 4.15"

Asphalt Surface - 1.04"

Weathered/Fractured Asphalt - ~4"
Thickness based on operator observation.

Fractured Asphalt Surface - 0.63"

Fractured Asphalt Binder - 1.16"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No.: | C-05 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | SB IL 53, Lane 2, N41.341930, E-88.133390 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 11.45 | Notes: | | | |



Separation/Debonding

Separation/Debonding



Concrete - 4.05"

Asphalt Surface - 2.74"

Asphalt Binder - 1.80"

Asphalt Binder - 2.86"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No.: | C-06 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | SB IL 53, Lane 1, N41.340290, E-88.133270 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 12.40 | Notes: | | | |



Separation/Debonding

Separation/Debonding



Concrete - 4.15"

Asphalt Binder - 2.55"

Asphalt Binder - 5.70"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-07 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 2, N41.337660, E-88.133020 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 17.52 | Notes: | | | |



Separation/Debonding

Separation/Debonding



Asphalt Surface - 3.00"

Asphalt Binder - 7.50"

Asphalt Binder - 7.02"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-08 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 1, N41.345990, E-88.133320 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 9.55 | Notes: | | | |



Separation/Debonding

Separation/Debonding



Concrete - 4.25"

Asphalt Surface - 1.25"

Asphalt Binder - 2.10"

Asphalt Surface - 1.42"

Asphalt Surface/Level Binder - 0.53"

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|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-09 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 2, N41.351730, E-88.133450 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 8.39 | Notes: | | | |



Separation/Debonding

Separation/Debonding

Separation/Debonding



Concrete - 3.15"

Asphalt Surface - 1.50"

Asphalt Binder - 1.67"

Asphalt Surface - 1.45"

Asphalt Surface/Level Binder - 0.62"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-10 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 2, N41.360770, E-88.133770 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 7.85 | Notes: | | | |



Separation/Debonding



Concrete - 3.63"

Asphalt Binder - 1.91"

Asphalt Surface - 1.65"

Asphalt Surface/Level Binder - 0.66"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-11 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 2, N41.375330, E-88.129690 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 6.57 | Notes: | | | |



Separation/Debonding



Concrete - 4.42"

Asphalt Surface - 0.90"

Asphalt Surface/Level Binder - 1.25"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No.: | C-12 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 2, N41.383640, E-88.123380 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 8.74 | Notes: | | | |



Separation/Debonding



Asphalt Surface - 4.29"

Asphalt Binder - 2.38"

Asphalt Surface - 1.38"

Asphalt Surface/Level Binder - 0.69"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-13 | Date Cored: | 11/28/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | BKP |
| Core Location: | NB IL 53, Lane 1, N41.383586, E-88.123497 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 8.60 | Notes: | | | |



Separation/Debonding



Concrete - 4.42"

Asphalt Binder - 1.18"

Asphalt Surface - 2.29"

Asphalt Surface/Level Binder - 0.71"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-14 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | NB IL 53, Lane 2, N41.389800, E-88.118670 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 5.39 | Notes: | | | |



Separation/Debonding



Concrete - 3.89"

Asphalt Surface - 0.57"

Asphalt Surface/Level Binder - 0.93"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-15 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | NB IL 53, Lane 1, N41.390070, E-88.118560 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 6.87 | Notes: | | | |



Separation/Debonding



Concrete - 4.03"

Asphalt Binder - 2.84"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-16 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | NB IL 53, Lane 2, N41.392650, E-88.116570 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 18.38 | Notes: | | | |



Separation/Debonding

Separation/Debonding

Separation/Debonding



Concrete - 2.87"

Asphalt Surface - 2.32"

Asphalt Surface - 2.07"

Asphalt Binder - 1.22"

Asphalt Binder - 5.06"

Visible void spaces

Asphalt Binder - 4.84"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-16A | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | NB IL 53, Lane 2, N41.392645, E-88.116570 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 18.43 | Notes: | | | |

View N: operator coring at C-16



Separation/Debonding

Separation/Debonding

Separation/Debonding

View N: C-16A location 5' S of C-16



Concrete - 3.19"

Vertical crack throughout

Asphalt Surface - 2.95"

Asphalt Binder - 1.20"

Asphalt Binder - 5.18"

Asphalt Binder - 5.90"

All measurements are average.

Concrete Compressive Strength Test Photos

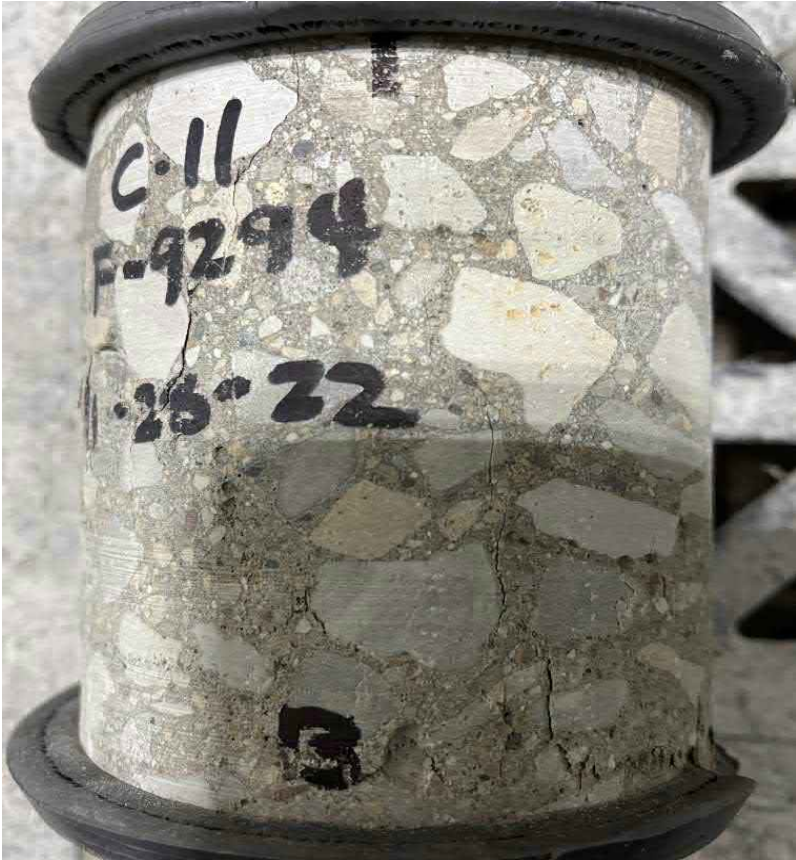
Concrete Compressive Strength Testing
12/9/22



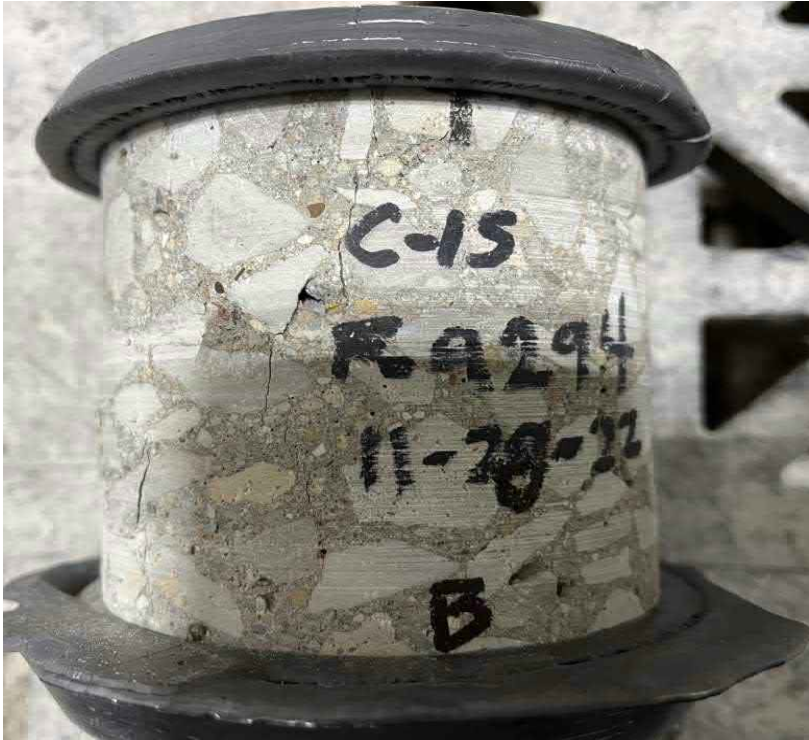
C-06, C-11, and C-15 concrete prior to testing.



C-06 after break



C-11 after break



C-15 after break

Appendix B

IL Route 53/Baltimore Street Between Water Street and Kankakee Street

Pavement Core Location Maps

Table 2 – Pavement Core Thickness Summary

Pavement Core Profile

Pavement Core Photo Logs

Pavement Core Location Maps

Pavement Core Location Map

Pavement Coring-IL 53 from Water to Kankakee, Wilmington, IL
Interra Project No. 9294
Date: 11/28/22 - 11/29/22



Table 1 – Pavement Core Thickness Summary



Table 2 - PAVEMENT CORE THICKNESS WORKSHEET

| | |
|--|--|
| File No : 9294 | Pavement Coring - IL 53 from Arsenal to Hoff - Wilmington - PTB 196-016 |
| County : Will | Technician : Bipin Kumar Patel/Paul Sponaugle |
| Section: IL Route 53/Baltimore St. from Water St. to Kankakee St. | Cores Taken on : 11/29/22 |

| Core No. | Location | Offset ¹ | Coordinates | | Top Lift Thickness (inches) | Top Lift Pavement Type | Intermediate/Bottom Lifts Thickness (inches) | Intermediate/Bottom Lifts Pavement Types ² | Total Thickness (inches) |
|----------|----------------------------|---------------------|-------------|------------|-----------------------------|------------------------|--|---|--------------------------|
| | | | Northing | Easting | | | | | |
| C-17 | WB IL 53/Baltimore, Lane 1 | 6.9' LT | 41.308511 | -88.144832 | 1.90 | Asphalt Surface | 6.84 | Concrete | 8.74 |
| C-18 | WB IL 53/Baltimore, Lane 1 | 4.6' LT | 41.308162 | -88.145983 | 2.27 | Asphalt Surface | 10.89 | Asphalt Binder | 13.16 |
| C-19 | EB IL 53/Baltimore, Lane 1 | 6.2' LT | 41.307894 | -88.146570 | 2.51 | Asphalt Surface | 10.69 | Asphalt Binder, Concrete | 13.20 |
| C-20 | EB IL 53/Baltimore, Lane 1 | 4.0' LT | 41.308276 | -88.145392 | 2.36 | Asphalt Surface | 7.18 | Asphalt Surface, Concrete | 9.54 |

¹ Offset measured from the outside/inside edge of pavement.

² Refer to attached core logs for details.

Pavement Core Profiles

Water St

Kankakee St

IL 53/Baltimore Wilmington

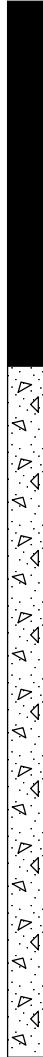


C-19

ASPHALT SURFACE (2.51")

ASPHALT BINDER (2.08")

CONCRETE (8.61")



C-18

ASPHALT SURFACE (2.27")

ASPHALT BINDER (3.09")
Visible void spaces

ASPHALT BINDER (7.80")
Visible void spaces



C-20

ASPHALT SURFACE (2.36")

ASPHALT SURFACE (0.44")

CONCRETE (6.74")
Visible void spaces



C-17

ASPHALT SURFACE (1.90")

CONCRETE (6.84")

Rebar at 5.44"



80

270

435

610

660

Feet east of
Water St.

Not to scale

Table 1 – Pavement Core Thickness Summary

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-17 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | WB Baltimore, Lane 1, N41.308511, E-88.144832 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 8.74 | Notes: | | | |



Separation/Debonding

Break at rebar



Asphalt Surface - 1.90"

Concrete - 6.84"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-18 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | WB Baltimore, Lane 1, N41.308162, E-88.145983 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 13.16 | Notes: | | | |



Separation/Debonding



Asphalt Surface - 2.27"

Asphalt Binder - 3.09"
Visible void spaces

Asphalt Binder - 7.80"
Visible void spaces

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-19 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | EB Baltimore, Lane 1, N41.307894, E-88.146570 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 13.20 | Notes: | | | |



Separation/Debonding



Asphalt Surface - 2.51"

Asphalt Binder - 2.08"

Concrete - 8.61"

| | | | | | | | |
|----------------------------|---|--------------------------|---|------------------|----------------------------|---------------------|-----------|
| File No.: | 9294 | Project Name: | Pavement Coring -IL 53 from Arsenal Road to Hoff Road, Wilmington, Illinois | | | | |
| Client: | Infrastructure Engineering, Inc. | | | | | | |
| Core No. | C-20 | Date Cored: | 11/29/22 | Cored By: | Hard Rock Concrete Cutters | Measured By: | Sponaugle |
| Core Location: | EB Baltimore, Lane 1, N41.308276, E-88.145392 (See attached location map) | | | | | | |
| Core Diameter (in): | 3.74 | Core Height (in): | 9.54 | Notes: | | | |



Separation/Debonding



Asphalt Surface - 2.36"

Asphalt Surface - 0.44"

Concrete - 6.74"

Visible void spaces