SCIP Grant #2

APPLICATION FOR FINANCIAL ASSISTANCE
Revised 4/99

IMPORTANT: Please consult the "Instructions for Completing the Project Application" for assistance in completion of this form.

SUBDIVISION: Columbia Township **CODE#** 061-16882

DISTRICT NUMBER: 2 **COUNTY:** Hamilton **DATE** 09 / 08 / 06

CONTACT: Jennifer Vatter **PHONE #** (513) 721 - 5500

(THE PROJECT CONTACT PERSON SHOULD BE THE INDIVIDUAL WHO WILL BE AVAILABLE ON A DAY-TO-DAY BASISDURING THE APPLICATION REVIEW AND SELECTION PROCESS AND WHO CAN BEST ANSWER OR COORDINATE THE RESPONSE TO QUESTIONS)

FAX (513) 721-0607 **E-MAIL** jvatter@jmaconsult.com

PROJECT NAME: Monning Avenue Improvements

SUBDIVISION TYPE
(Check Only 1)
__1. County
__2. City
_X_3. Township
__4. Village
__5. Water/Sanitary District
(Section 6119 O.R.C.)

FUNDING TYPE REQUESTED
(Check All Requested & Enter Amount)
_X_1. Grant $365,000.00
__2. Loan $_____
__3. Loan Assistance $_____

PROJECT TYPE
(Check Largest Component)
_X_1. Road
__2. Bridge/Culvert
__3. Water Supply
__4. Wastewater
__5. Solid Waste
__6. Stormwater

TOTAL PROJECT COST: $730,000.00

FUNDING REQUESTED: $365,000.00

OFFICE OF NEW BURLINGTON COUNTY ENGINEER
2006 SEP 15 PM 1:32

DISTRICT RECOMMENDATION
To be completed by the District Committee ONLY

GRANT: $ 365,000.00
SCIP LOAN: $_____
RLP LOAN: $_____

LOAN ASSISTANCE: $_____
RATE: _____% **TERM:** _____yrs.
RATE: _____% **TERM:** _____yrs.

(Check Only 1)
X State Capital Improvement Program
___Local Transportation Improvements Program
___Small Government Program

FOR OPWC USE ONLY

PROJECT NUMBER: C_____/C_____
Local Participation _____%
OPWC Participation _____%
Project Release Date: ___/___/___
OPWC Approval: _____

APPROVED FUNDING: $_____
Loan Interest Rate: _____%
Loan Term: _____years
Maturity Date: _____
Date Approved: ___/___/___
SCIP Loan _____ **RLP Loan**

1.0 PROJECT FINANCIAL INFORMATION

1.1 PROJECT ESTIMATED COSTS: (Round to Nearest Dollar)		TOTAL DOLLARS	FORCE ACCOUNT DOLLARS
a.) Basic Engineering Services:		$_____.00	
Preliminary Design	$_____. 00		
Final Design	$_____. 00		
Bidding	$_____. 00		
Construction Phase	$_____. 00		
Additional Engineering Services *Identify services and costs below.		$_____.00	
b.) Acquisition Expenses: Land and/or Right-of-Way		$_____.00	
c.) Construction Costs:		$ 730,000 .00	
d.) Equipment Purchased Directly:		$_____.00	
e.) Permits, Advertising, Legal: (Or Interest Costs for Loan Assistance Applications Only)		$_____.00	
f.) Construction Contingencies:		$_____.00	
g.) TOTAL ESTIMATED COSTS:		$ 730,000 .00	

*List Additional Engineering Services here:

Service: Cost:

1.2 PROJECT FINANCIAL RESOURCES:
(Round to Nearest Dollar and Percent)

		DOLLARS	%
a.)	Local In-Kind Contributions	$_____.00	
b.)	Local Revenues	$ 365,000 .00	50
c.)	Other Public Revenues	$_____.00	
	ODOT	$_____.00	
	Rural Development	$_____.00	
	OEPA	$_____.00	
	OWDA	$_____.00	
	CDBG	$_____.00	
	OTHER _____	$_____.00	
	SUBTOTAL LOCAL RESOURCES:	$ 365,000 .00	50
d.)	OPWC Funds		
	1. Grant	$ 365,000 .00	50
	2. Loan	$_____.00	
	3. Loan Assistance	$_____.00	
	SUBTOTAL OPWC RESOURCES:	$ 365,000 .00	50
e.)	TOTAL FINANCIAL RESOURCES:	$ 730,000 .00	100%

1.3 AVAILABILITY OF LOCAL FUNDS:

Attach a statement signed by the Chief Financial Officer listed in section 5.2 certifying all local share funds required for the project will be available on or before the earliest date listed in the Project Schedule section.

ODOT PID# _____ Sale Date:
STATUS: (Check one)
Traditional
Local Planning Agency (LPA)
State Infrastructure Bank

2.0 PROJECT INFORMATION

If project is multi-jurisdictional, information must be consolidated in this section.

2.1 PROJECT NAME: Monning Avenue Improvements

2.2 BRIEF PROJECT DESCRIPTION - (Sections A through C):

A: SPECIFIC LOCATION:

This project is located in Columbia Township. Project limits are Monning Avenue (Stewart to the corp line). Please see attached location map.

PROJECT ZIP CODE: 45227

B: PROJECT COMPONENTS:

1.) Remove the existing pavement (full depth)
2.) Remove unsuitable subgrade material
3.) Install vertical concrete curbs, type 6
4.) Replace failed storm sewer drainage system
5.) Reconstruct with asphaltic concrete on granular base
6.) Replace 6-inch waterline with 8-inch, and install new fire hydrants

C: PHYSICAL DIMENSIONS / CHARACTERISTICS:

Monning Avenue – 1050'LF x 24'W

D: DESIGN SERVICE CAPACITY:

Detail current service capacity vs. proposed service level.

Road or Bridge: Current ADT 1000 Year: 2002 Projected ADT: _____ Year:

Water/Wastewater: Based on monthly usage of 7,756 gallons per household, attach current rate ordinance. Current Residential Rate: $_____ Proposed Rate: $

Stormwater: Number of households served:

2.3 USEFUL LIFE / COST ESTIMATE: Project Useful Life: 30 Yrs.

Attach Registered Professional Engineer's statement, with original seal and signature confirming the project's useful life indicated above and estimated cost.

3.0 REPAIR/REPLACEMENT or NEW/EXPANSION:

TOTAL PORTION OF PROJECT REPAIR/REPLACEMENT	**$ 730,000 .00**
TOTAL PORTION OF PROJECT NEW/EXPANSION	**$ .00**

4.0 PROJECT SCHEDULE: *

		BEGIN DATE	END DATE
4.1	**Engineering/Design:**	08 /27 /06	06 /01 /07
4.2	**Bid Advertisement and Award:**	06/01/07	07/01/07
4.3	**Construction:**	07/02 /07	12/31/08
4.4	**Right-of-Way/Land Acquisition:**	NA / /	NA/ /

* Failure to meet project schedule may result in termination of agreement for approved projects. Modification of dates must be requested in writing by the CEO of record and approved by the commission once the Project Agreement has been executed. The project schedule should be planned around receiving a Project Agreement on or about July 1st.

5.0 APPLICANT INFORMATION:

5.1 CHIEF EXECUTIVE OFFICER

TITLE	Michael Lemon
STREET	Administrator
CITY/ZIP	5686 Kenwood Road
PHONE	Cincinnati, Ohio 45227
FAX	513-561-6046
E-MAIL	513-561-6981

5.2 CHIEF FINANCIAL OFFICER

TITLE	George Leet
STREET	Clerk
CITY/ZIP	5686 Kenwood Road
PHONE	Cincinnati, Ohio 45227
FAX	513-561-6046
E-MAIL	513-561-6981

5.3 PROJECT MANAGER Michael Lemon

5.4

TITLE	Administrator
STREET	5686 Kenwood Road
CITY/ZIP	Cincinnati, Ohio 45227
PHONE	513-561-6046
FAX	513-561-6981

Changes in Project Officials must be submitted in writing from the CEO.

6.0 ATTACHMENTS/COMPLETENESS REVIEW:

Confirm in the blocks [ ] below that each item listed is attached.

[X] **A certified copy of the legislation by the governing body of the applicant authorizing a designated official to sign and submit this application and execute contracts. This individual should sign under 7.0, Applicant Certification, below.**

[X] **A certification signed by the applicant's chief financial officer stating all local share funds required for the project will be available on or before the dates listed in the Project Schedule section. If the application involves a request for loan (RLP or SCIP), a certification signed by the CFO which identifies a specific revenue source for repaying the loan also must be attached. Both certifications can be accomplished in the same letter.**

[X] **A registered professional engineer's detailed cost estimate and useful life statement, as required in 164-1-13, 164-1-14, and 164-1-16 of the Ohio Administrative Code. Estimates shall contain an engineer's original seal or stamp and signature.**

[NA] **A cooperation agreement (if the project involves more than one subdivision or district) which identifies the fiscal and administrative responsibilities of each participant.**

[NA] **Projects which include new and expansion components and potentially affect productive farmland should include a statement evaluating the potential impact. If there is a potential impact, the Governor's Executive Order 98-VII and the OPWC Farmland Preservation Review Advisory apply.**

[ ] **Capital Improvements Report: (Required by O.R.C. Chapter 164.06 on standard form)**

[X] **Supporting Documentation: Materials such as additional project description, photographs, economic impact (temporary and/or full time jobs likely to be created as a result of the project), accident reports, impact on school zones, and other information to assist your district committee in ranking your project. Be sure to include supplements which may be required by your *local* District Public Works Integrating Committee.**

7.0 APPLICANT CERTIFICATION:

The undersigned certifies that: (1) he/she is legally authorized to request and accept financial assistance from the Ohio Public Works Commission; (2) to the best of his/her knowledge and belief, all representations that are part of this application are true and correct; (3) all official documents and commitments of the applicant that are part of this application have been duly authorized by the governing body of the applicant; and, (4) should the requested financial assistance be provided, that in the execution of this project, the applicant will comply with all assurances required by Ohio Law, including those involving Buy Ohio and prevailing wages.

Applicant certifies that physical construction on the project as defined in the application has NOT begun, and will not begin until a Project Agreement on this project has been executed with the Ohio Public Works Commission. Action to the contrary will result in termination of the agreement and withdrawal of Ohio Public Works Commission funding of the project.

C. Michael Lemon

C. Michael Lemon, Administrator
Certifying Representative

9/13/06

Date Signed

Engineer's Estimate

MONNING AVENUE IMPROVEMENTS

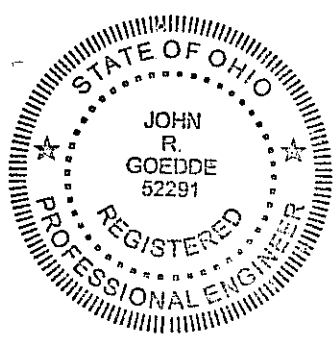
COLUMBIA TOWNSHIP

DESCRIPTION	QUANTITY	UNIT	PRICE	COST
Clearing & Grubbing	1	LS	$ 15,000.00	$ 15,000.00
Excavation/Pavement Removed	2000	CY	$ 22.00	$ 44,000.00
Driveway Apron (remove & replace)	700	SY	$ 60.00	$ 42,000.00
Curb Removed	1300	F	$ 5.00	$ 6,500.00
Catch Basins/Manholes Removed	4	EA	$ 500.00	$ 2,000.00
Pipe Removed	200	F	$ 10.00	$ 2,000.00
Excavation, incl. Embankment (undercut)	900	CY	$ 40.00	$ 36,000.00
Aggregate Base	800	CY	$ 50.00	$ 40,000.00
Asphalt Concrete Base	300	CY	$ 110.00	$ 33,000.00
Asphalt Concrete Surface Course	125	CY	$ 120.00	$ 15,000.00
12"-15" Conduit	500	F	$ 90.00	$ 45,000.00
18"-24" Conduit	400	F	$ 110.00	$ 44,000.00
30"-42" Conduit	500	F	$ 200.00	$ 100,000.00
Catch Basin	10	EA	$ 3,000.00	$ 30,000.00
Manhole	6	EA	$ 3,000.00	$ 18,000.00
Concrete Curb	2100	F	$ 12.00	$ 25,200.00
Maintain Traffic	1	LS	$ 15,000.00	$ 15,000.00
Construction Layout Stakes	1	LS	$ 15,000.00	$ 15,000.00
Seed & Mulch Restoration	3000	SY	$ 1.00	$ 3,000.00
Utility Adjustments - lower waterline facilities	1	LS	$ 124,000.00	$ 124,000.00
Utility Adjustments - sanitary sewer taps	400	F	$ 25.00	$ 10,000.00
Contingencies	1	LS	$ 65,300.00	$ 65,300.00
TOTAL ESTIMATED COST				$ 730,000.00

I hereby certify this to be an accurate estimate of the proposed project. The useful life of this project is 30 years.

John R. Goedde, P.E.
JMA Consultants, Inc.

9-15-06
Date



COLUMBIA TOWNSHIP
Hamilton County, Ohio

5686 Kenwood Road
Cincinnati, Ohio 45227
513/561-6046
Fax 513/561-6981
www.columbiatownship.org

STATUS OF FUNDS CERTIFICATION

Columbia Township will utilize approximately $365,000.00 from its local budget as its participation for the Monning Avenue Improvements project.

George Leet
Fiscal Officer
Columbia Township

Date Signed: 9.12.06

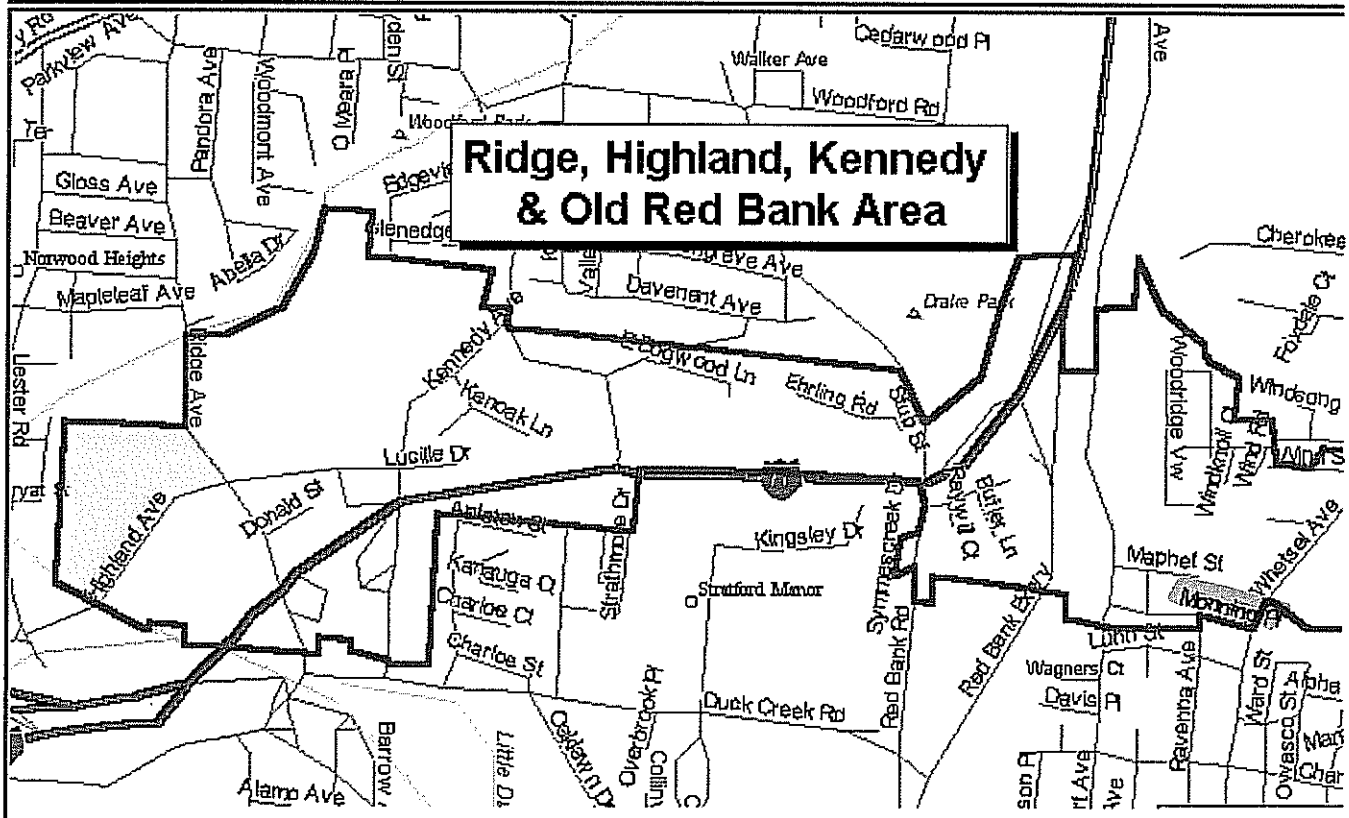
Running Place

Columbia Township

Hamilton County, Ohio

General Information | Elected Officials | Departments | Township Services | Township Map | Contac Informati

(click to return)



General Information | Elected Officials | Departments | Township Services | Township Map | Contact Information

RESOLUTION NO 06-26 2006
COLUMBIA TOWNSHIP, HAMILTON COUNTY, OHIO

AUTHORIZING THE ADMINISTRATOR TO MAKE APPLICATION FOR FISCAL 2007 STATE CAPITAL IMPROVEMENT PROGRAM FUNDS AND IF FUNDS ARE AWARDED TO EXECUTE GRANT AGREEMENTS ON BEHALF OF COLUMBIA TOWNSHIP

WHEREAS, the Board of Trustees has determined that it would be in the best interest of Columbia Township and to promote the general welfare of the Township to apply for 2007 State Capital Improvement Program Funds and if funds are awarded to execute a grant agreement on behalf of the Township;

NOW, THEREFORE, BE IT RESOLVED, the Board of Trustees of Columbia Township, Hamilton County, Ohio, for the benefit and welfare of Columbia Township and its citizens:

Section 1. That the Township Administrator is hereby authorized to make application for State Capital Improvement Program (SCIP) funds for fiscal year 2007.

Section 2. That if funds are awarded, the Township Administrator is hereby authorized to execute a grant agreement on behalf of the Township.

Motion to accept Resolution made by: Mr./Mrs. _____

Seconded by: Mr./Mrs. _____

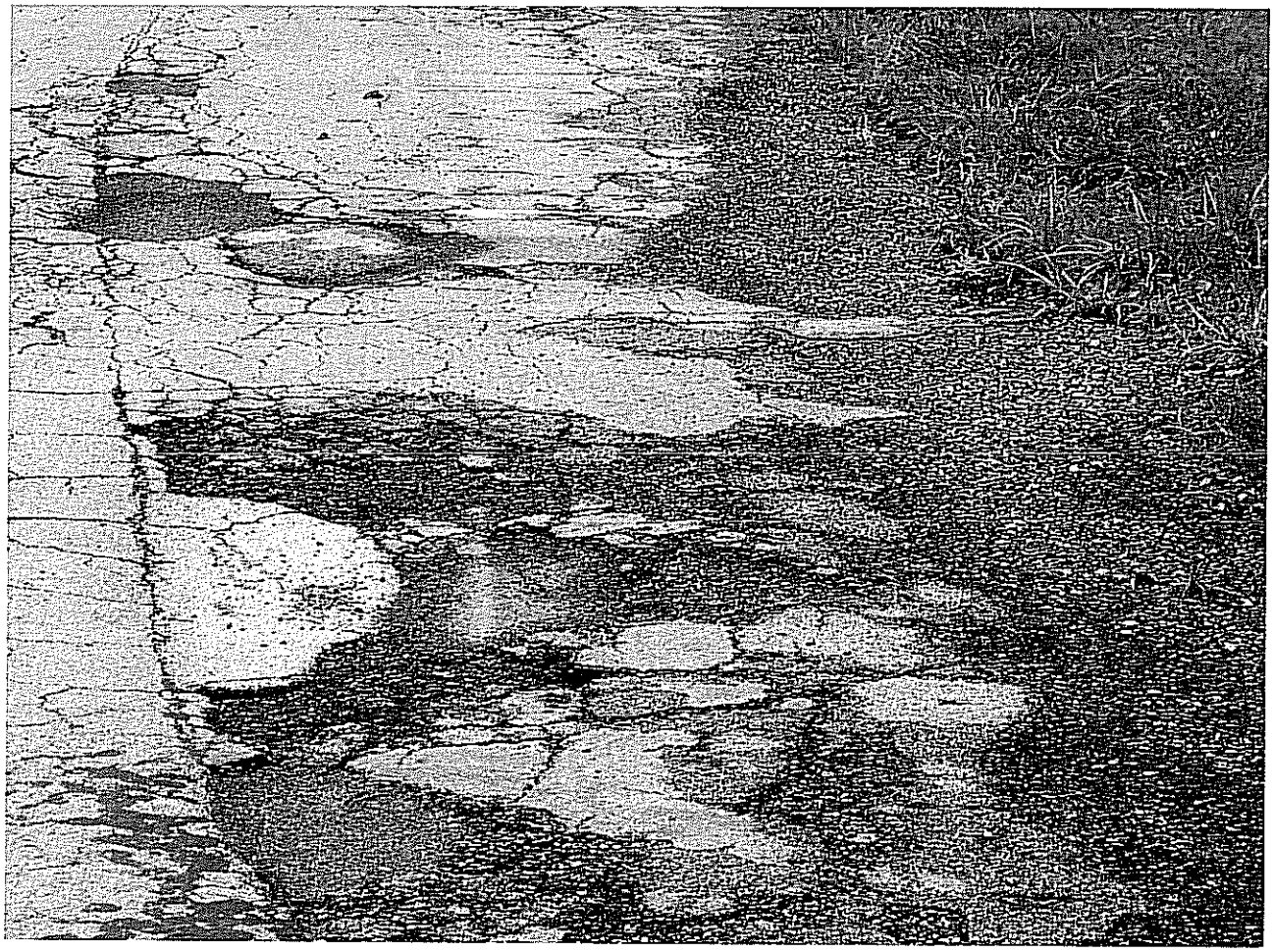
VOTE:

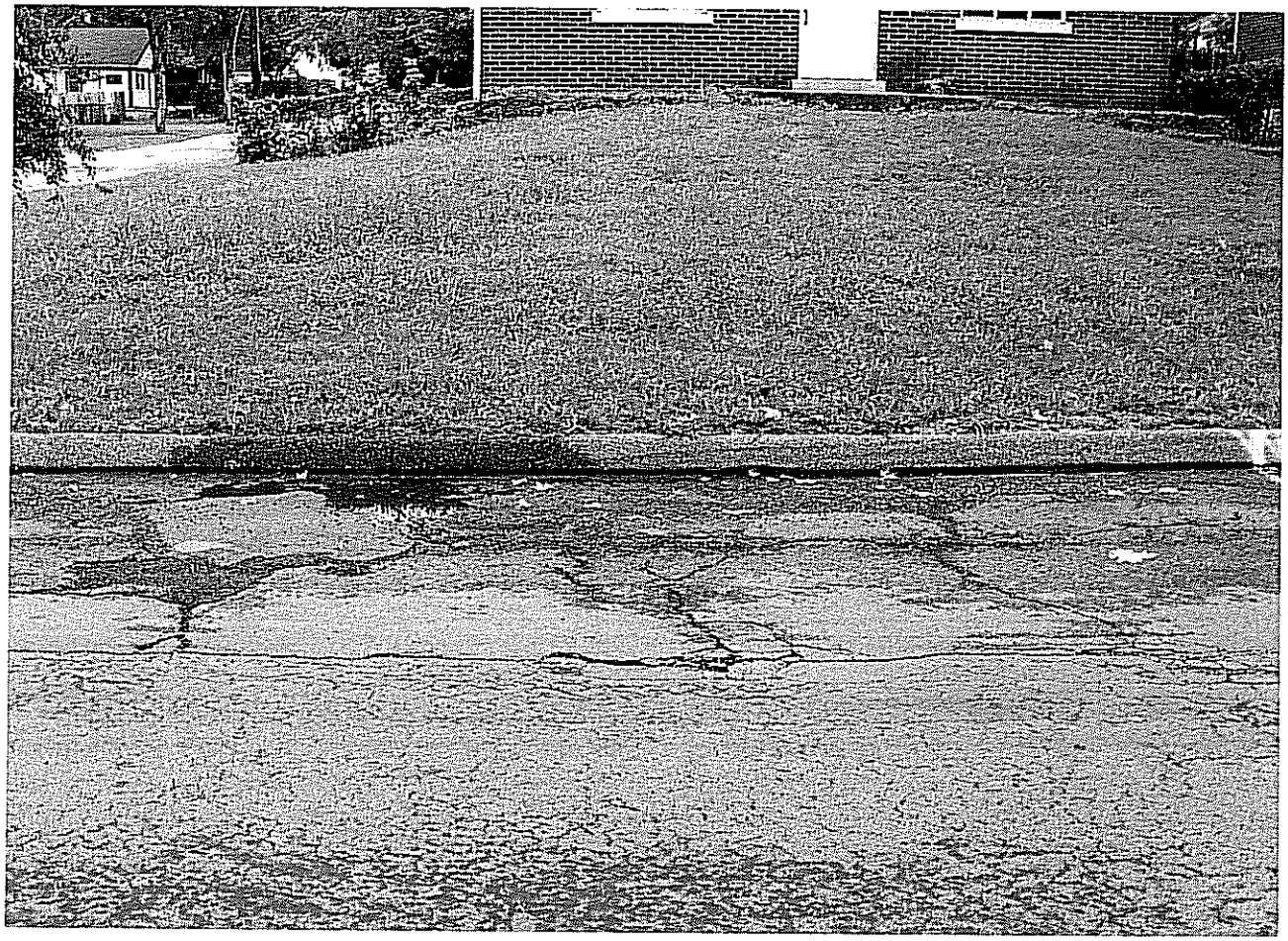
TRUSTEE	**Voting**	**Signature**	**Date**
Stephen Langenkamp, President	Yes	Stephen Langenkamp	9/13/06
Susan Hughes, Vice-President	Yes	Susan Hughes	
Marty Power, Trustee	Yes	Marty Power	9-12-06

ATTEST: _____ 9.12.06
George M. Leet, Clerk

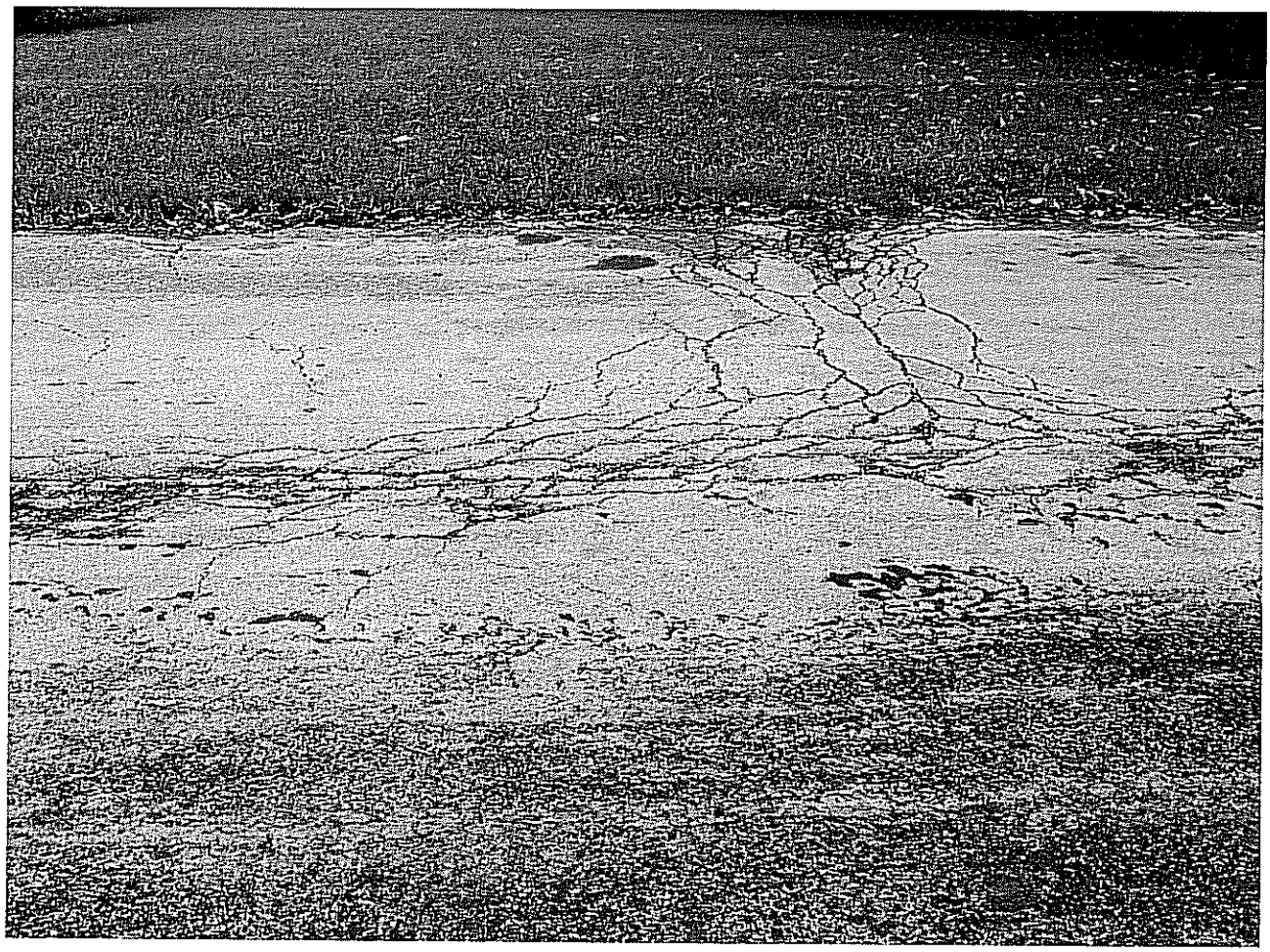
APPROVED as to form: _____ _____
Columbia Township Legal Counsel

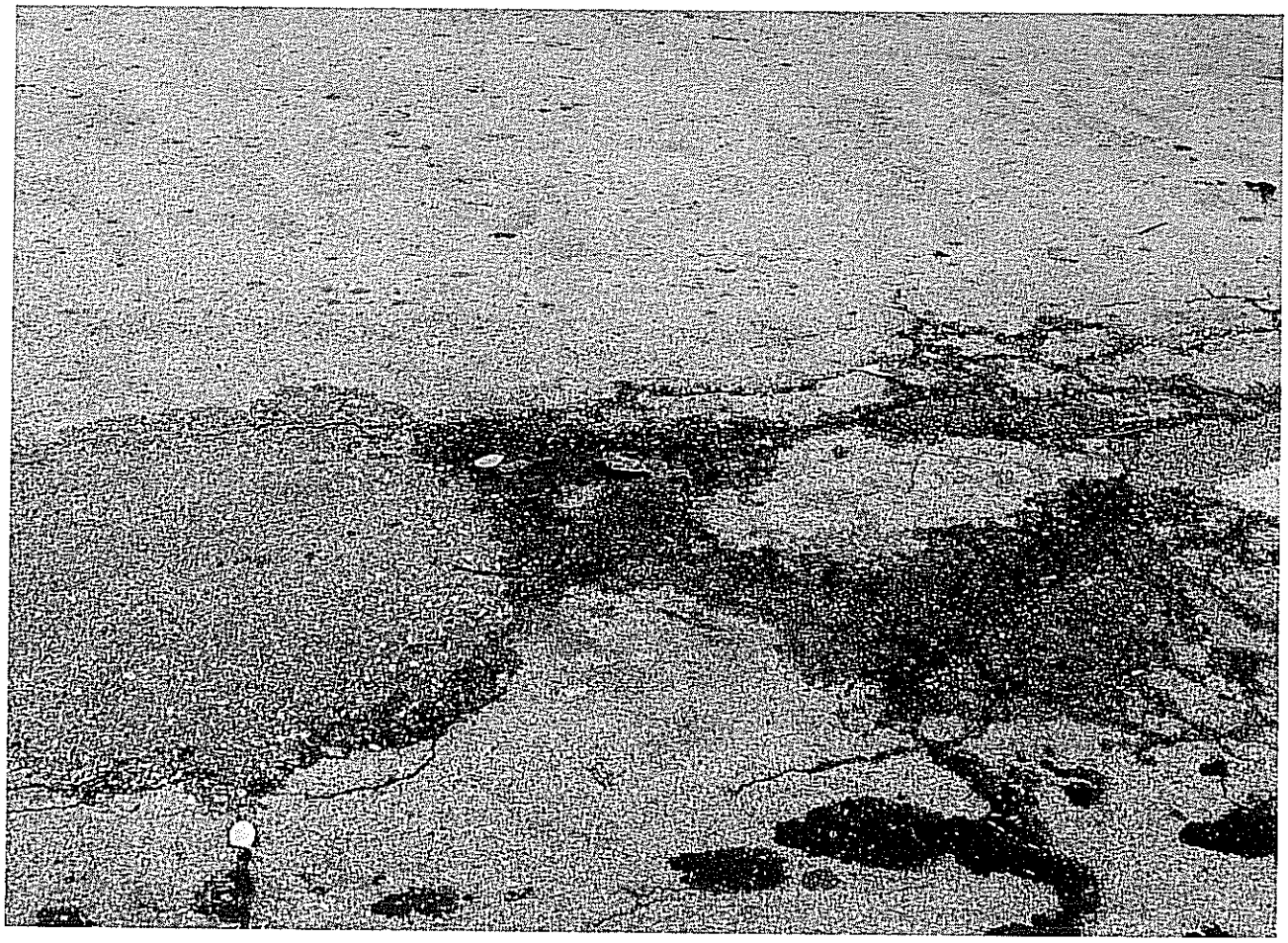
Manning Ave.





Manning Ave.





Manning Ave.

Manning Ave.

PAVEMENT EVALUATION

MONNING PLACE, MAPHET STREET & EBERSOLE AVENUE

COLUMBIA TOWNSHIP, OHIO

Prepared for: **Columbia Township**
Thelen Project No.: **060862NE**

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers

1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers

○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

September 7, 2006

Columbia Township
5686 Kenwood Road
Cincinnati, Ohio 45227

Attention: Mr. C. Michael Lemon

Re: Pavement Evaluation
Monning Place, Maphet Street & Ebersole Avenue
Columbia Township, Ohio

Ladies and Gentlemen:

Enclosed herein is our pavement and subgrade evaluation report for proposed improvements to Monning Place, Maphet Street and Ebersole Avenue in Columbia Township, Ohio. Our services were requested and authorized by Ms. Jennifer Vatter, JMA Consultants Inc. (JMA), on behalf of Columbia Township, in a telephone conversation with our Mr. J. Dale Proffitt on August 17, 2006.

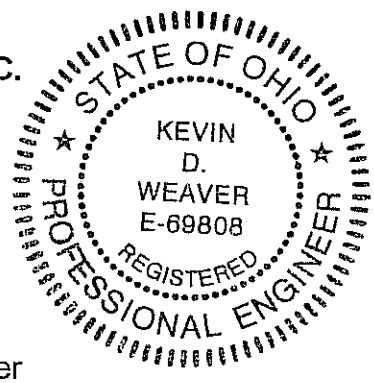
We are enclosing with this report a reprint of "Important Information about your Geotechnical Engineering Report", published by the ASFE, Professional Firms Practicing in the Geosciences, which our firm would like to introduce to you at this time.

We appreciate the opportunity to provide the pavement evaluation for this project. Should you have any questions concerning the information, conclusions or recommendations contained in this report, or if we may be of additional assistance to you during the design or construction of the pavement remediation, please do not hesitate to contact us.

Respectfully submitted,
THELEN ASSOCIATES, INC.

9-7-06
Kevin D. Weaver, P.E.
Staff Materials Engineer

Arthur T. Sturbaum, P.E.
Senior Geotechnical Engineer



KDW:ATS:bkm
060862NE

Copies submitted: 2 - Client
2 - JMA Consultants Inc.
Attn: Ms. Jennifer Vatter

TABLE OF CONTENTS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

September 7, 2006

PAVEMENT EVALUATION
MONNING PLACE, MAPHET STREET & EBERSOLE AVENUE
COLUMBIA TOWNSHIP, OHIO

1.0 INTRODUCTION

This report consists of a pavement evaluation performed for Monning Place extending from its intersection with Stewart Avenue to the Columbia Township Corporation Line, Maphet Street from its intersection with Stewart Avenue to the eastern terminus, and Ebersole Avenue extending from Monning Place to Maphet Street, Columbia Township, Ohio. The evaluation was accomplished by performing an engineering reconnaissance of the site, as well the completion of three test borings along Maphet Street, one test boring on Ebersole Avenue and three test borings along Monning Place. The test borings, included pavement cores with base thickness measurements and shallow subgrade soil sampling.

2.0 SCOPE

The purpose of this pavement evaluation was to determine the condition of the existing pavement and subgrade soils and to relate their engineering properties, that is their thickness, strength, classification and compressibility characteristics, to the serviceability of the present streets, and to provide limited recommendations pertaining to potential improvements.

The project streets are currently under consideration for rehabilitation. To our knowledge, it has not yet been determined whether rehabilitation will consist of complete removal and replacement of pavements or if existing pavements may be improved by an overlay

3.0 EXISTING PAVEMENT CONDITIONS

The pavement surface for the project streets consists of full-depth asphaltic concrete. The condition of the existing pavement varies from poor to very poor at the surface. Portions of the streets have been patched, and random, moderate to heavy cracking is present throughout the entire pavement surface. The pavement is heavily worn, such that the asphalt aggregates are exposed at the surface.

Along the streets, the asphalt pavement is bound with intermittent rounded asphalt curbing. The pavement is typically drained off pavement with crowned pavement sections to divert water to the pavement edges. In areas in which curbing has not deteriorated or separated from the pavement edge, the pavement is drained to storm sewer inlets, typically located near street intersections.

The pavement surface along Maphet Street is characterized by moderate to heavy cracking with numerous patches. Surface drainage along Maphet Street is diverted to the pavement edge in which intermittent asphalt curbing directs storm water to inlets at street intersections.

The pavement surface of Ebersole Avenue is heavily cracked with numerous patches. The overall pavement surface is uneven. Drainage along Ebersole Avenue is directed along asphalt curbing to sewer inlets at its intersection with Monning Place and to the swale located on the south side of Monning Place at its intersection with Ebersole Avenue.

Along Monning Place, the pavement surface is characterized by numerous patches with areas of the surface course of asphalt separating from the underlying courses. The

pothole patches and utility patches along the entire street create joints and discontinuities. The overall profile of Monning Place is crowned to divert water to the pavement edges, but the pavement surface is uneven due to the heavy cracking. There is a limited area of asphalt curb along Monning Place on its north side between Ebersole Avenue and Ravenna Street. Due to the uncontrolled surface drainage to the pavement edge, the edges of the pavement are deteriorating more rapidly than the remainder of the pavements.

4.0 FIELD EXPLORATION

To supplement the engineering reconnaissance, seven (7) pavement cores and shallow test borings were performed within the subject streets. The locations of the individual pavement cores and test borings are indicated on each Log of Pavement Core and Test Boring included in the Appendix to this report, referencing the street address adjacent to the test boring.

The pavement cores were made with a 4-inch diameter diamond-tipped core barrel. The test borings were then extended with 2-inch O.D. continuous split-spoon samples driven according to the procedures of ASTM D1586. This procedure is described as the standard drive sample method and results in the standard penetration test. In addition, 3-inch diameter Shelby tube samples were obtained in accordance with ASTM D1587 at locations selected by the Project Geotechnical Engineer. The recovered split-spoon samples were placed in glass jars and the Shelby tube samples were capped and taped to maintain the soils at their in situ moisture contents. All samples were marked in the field for proper identification.

Concurrent with the drilling operation, the Drilling Technician prepared field test boring logs of the subsurface profile noting pavement and base thicknesses, soil stratifications, standard penetration test resistances (N-values), groundwater levels or the lack thereof and other pertinent data.

5.0 LABORATORY REVIEW

Following the completion of the test borings, the samples were returned to our Soil Mechanics Laboratory where they were reviewed and visually classified by the Project Geotechnical Engineer. Core samples of the pavements were visually reviewed and measured for thickness. The composition and condition of the cores are described on the Logs of Pavement Core and Test Boring, included in the Appendix. Terms used in the review consisted of fractured and disintegrated. Fractured is defined as generally intact with few random cracks. Disintegrated is defined as broken to aggregate size with some matrix remaining. Photographs of the recovered cores are included in the Appendix.

Representative soil samples were selected for natural moisture content and Atterberg limit classification tests. A tabulation of the laboratory test results is included in the Appendix.

Based on the Drilling Technician's field logs, the results of the laboratory tests, the measurements of the core samples and the Engineer's visual classification of the samples, the final test boring logs were prepared. Copies of these logs are included in the Appendix along with a Soil Classification Sheet describing the terms and symbols used in their preparation. Unified Soil Classification System (USCS) and Ohio Department of Transportation (ODOT) classifications, as determined by laboratory testing, are indicated on the test boring logs.

The dashed lines on the Log of Pavement Core and Test Boring identify the changes between pavements or soil which were interpolated between the samples and should be considered to be approximate. Only changes which occur within samples can be precisely determined and are indicated by solid lines on the logs. The transition between soil types may be abrupt or gradual.

6.0 PAVEMENT AND SUBGRADE CONDITIONS

6.1 Maphet Street

Test Borings 1, 2 and 3 were performed along Maphet Street. Pavement thicknesses ranged between 5 inches in Test Boring 1 to 10-1/2 inches in Test Boring 2. Pavement Core 1 was fractured for its entire depth with 2 apparent courses. Pavement Core 2 was 10-1/2 inches and remained intact during coring, with 5 apparent courses. Pavement Core 3 was 7 inches thick. The bottom 3-1/2 inches of the core disintegrated during coring. Test Boring 1 encountered 2 inches of a granular base beneath the pavement core. The base consisted of fine to coarse gravel.

Below the pavement section in Test Borings 1 and 3, stiff to very stiff native silty clay and clay was encountered to 4.0 and 3.5 feet, respectively. The natural moisture content within these native soils ranged between 20.3 percent to 27.2 percent, averaging 23.0 percent. The clay in Test Boring 1 had an Atterberg liquid limit of 53 percent with a plasticity index (liquid limit minus plastic limit) of 33 percent, classifying the subgrade soil as a fat clay, CH (USCS)/A-7-6 (ODOT). The silty clay in Test Boring 3 had an Atterberg liquid limit of 48 percent with plasticity index of 26 percent, classifying this soil as a lean clay of moderate plasticity, CL (USCS)/A-7-6 (ODOT). An undisturbed sample from Test Boring 1 was found to have a natural dry density of 96.9 pounds per cubic foot (pcf) with an unconfined compressive strength of 2,960 pounds per square foot (psf).

Below the pavement section in Test Boring 2, medium dense granular utility backfill was encountered. The utility backfill consisted of fine to coarse sand and fine gravel. This utility backfill was sampled to a depth of 3.0 feet below the pavement surface.

6.2 Ebersole Avenue

Test Boring 4 was performed on Ebersole Avenue between Monning Place and Maphet Street. Pavement Core 4 encountered 9 inches of asphalt pavement. The top 3-3/4 inches of the pavement core was intact. The bottom 5-1/4 inches of the core disintegrated during coring.

Test Boring 4 encountered very moist stiff native silty clay immediately below the pavement section extending from 0.8 feet to the bottom of the test boring at 4.4 feet. Natural moisture contents were 24.2 and 29.0 percent. A sample of the native silty clay was found to have an Atterberg liquid limit of 45 percent with a plasticity index of 26 percent, classifying this soil as a lean clay of moderate plasticity, CL (USCS)/A-7-6 (ODOT). An undisturbed sample was found to have a natural dry density of 102.2 pcf with unconfined compressive strength of 2,670 psf.

6.3 Monning Place

Along Monning Place from Stewart Avenue to the Columbia Township Corporation Line, Test Borings 5, 6 and 7 were performed. The pavement cores encountered 4 to 6 inches of asphalt pavement. In Test Boring 5, the pavement core remained intact. The pavement core in Test Boring 6 was intact for the top 4 inches, however the bottom 2 inches disintegrated during coring. Pavement Core 7 was fractured for its 4 inch thickness with 2 apparent courses. Test Boring 5 encountered 1 inch of granular base consisting of fine to coarse gravel beneath the pavement section.

Test Borings 5 and 7 encountered native stiff silty clay and clay to 4.0 feet and 3.3 feet, the bottom of the test borings, respectively. Natural moisture contents within these native soils ranged between 21.5 percent and 27.4 percent, averaging 24.3 percent. A sample of the silty clay in Test Boring 5 was found to have an Atterberg liquid limit of 47 percent with a plasticity index of 23 percent, classifying this soil as lean clay, CL (USCS)/A-7-6 (ODOT). A sample of the native clay in Test Boring 7 was found to have an Atterberg liquid limit of 53 percent with a plasticity index of 32 percent, classifying this soil as a fat clay, CH (USCS)/A-7-6 (ODOT). An undisturbed sample of the native silty clay in Test Boring 5 was found to have a natural dry density of 105.5 pcf with an unconfined compressive strength of 3,630 psf.

Test Boring 6 encountered soft fill, consisting primarily of silty clay extending from the bottom of the pavement section at 0.5 feet to the bottom of the test boring at 2.0 feet. This fill had a moisture content of 23.7 percent.

7.0 CONCLUSIONS AND RECOMMENDATIONS

7.1 General

Based upon our engineering reconnaissance of the site, the pavement cores and test borings, a visual examination of the samples, the laboratory tests, our understanding of the proposed construction, and our experience as Consulting Soil Engineers in the Greater Cincinnati Area, we have reached the following conclusions and make the following recommendations.

The conclusions and recommendations of this report have been derived by relating the general principles of the discipline of Geotechnical Engineering to the proposed construction outlined by the Project Characteristics section of this report. Because changes in surface, subsurface, climatic and economic conditions can occur with time and location, we recommend for our mutual interest that the use of this report be restricted to this specific project.

Our understanding of the proposed design and construction is based on conversations with JMA. We recommend that our office be retained to consult during preparation of any documents, plans and specifications for rehabilitation of the pavements in light of the conclusions and recommendations of this pavement evaluation. Any subsequent changes or modifications which are made in the field during the construction phase which alter site grading, infrastructure or other related site work should also be reviewed by our office prior to their implementation.

If conditions are encountered in the field during remediation which vary from the facts of this report, we recommend that our office be contacted immediately to review the changed conditions in the field and make appropriate recommendations.

The scope of our services did not include any environmental assessment or investigation for the presence or absence of hazardous or toxic materials, on, below or around this site.

We have performed the test borings and laboratory tests for our evaluation of the site conditions and for the formulation of the conclusions and recommendations of this report. We assume no responsibility for the interpretation or extrapolation of the data by others.

The subgrade recommendations of this report presume that the subgrade preparation will be monitored continuously by an Engineering Technician under the direction of a Registered Professional Geotechnical Engineer from Thelen Associates, Inc.

For Maphet Street, Ebersole Avenue and Monning Place, the pavement sections consist primarily of a full-depth asphalt pavement ranging between 4 inches in Test Boring 7 to 10-1/2 inch in Test Boring 2. The pavement cores were generally intact with the bottom 2 to 5-1/4 inches of the pavement cores in Test Borings 3, 4 and 6 disintegrating during coring. The pavement surface is characterized by moderate to heavy cracking throughout, and the surface of the pavement is uneven. The pavement surface throughout is heavily worn, such that the asphalt aggregates are exposed.

The streets appear to have been overlaid following the placement of the original asphalt pavement, as the pavement cores ranged between 4 to 10-1/2 inches in thickness with up to 5 apparent asphalt courses noted. The pavement surface will continue to deteriorate with time.

The surface drainage and runoff is not adequately controlled and diverted to the storm sewer inlets due to only intermittent asphalt curbing and poorly defined pavement edges.

Surface water will filter through the fractured pavement and pond on the clayey subgrade beneath the pavement. The lack of a continuous drained granular base provides no outlet for accumulated surface water. The combination of fractured pavement and saturated, soft subgrade will result in further fracturing of the pavement surfaces as the softened subgrade deflects under wheel loading which will ultimately result in rutted pavements and depressions in areas where the subgrade soils have become weakened. The soft, saturated subgrade soils will require reconditioning if the existing pavement sections are removed. The subgrade soils are above their optimum moisture contents and will need to be moisture-conditioned and recompacted or removed and replaced to prepared a suitable soil subgrade for placing new pavements.

It is our opinion based on an engineering reconnaissance of the pavements and a review of the pavement cores and subgrade soils that these pavements are beyond their design service life. Assuming that the streets will be replaced with a new pavement section, we provide the following recommendations.

7.2 Soil Subgrade Preparation

Following the removal of the asphalt pavement surface and any granular base materials, the exposed subgrades should be proofrolled with a piece of heavy equipment in the presence of the Project Geotechnical Engineer or a representative thereof. This equipment should consist of a loaded single-axle dump truck or accepted equal. Any yielding areas noted during the proofroll should be undercut to stiff soils or to a maximum depth of 3.0 feet below final grades.

The base of all undercuts should be proofrolled with a heavy piece of equipment. Should additional yielding be noted, the Engineer should be consulted to assess whether further undercutting or additional measures should be implemented. The accepted proofrolled surface should then be compacted in place to a minimum dry density of 95 percent of the

maximum dry density as obtained by the standard Proctor moisture-density test, ASTM D698.

In some instances, we have found that shallow utilities prevent or limit the undercut depths discussed above. In these cases, areas which yield under proofrolling may have to be improved using additional granular soils and the integration of geogrids, or by the complete redesign of pavement sections. If shallow utilities exist in the areas of poor subgrade, we recommend that the Design Engineer and/or the Geotechnical Engineer be consulted.

New fill for support of pavements should consist of approved soil from the undercuts or approved borrow with a liquid limit less than 60 percent and a plasticity index less than 35 percent. This fill should be placed in shallow, level layers, 6 to 8 inches in thickness, and should be compacted with appropriate equipment, such as a sheepsfoot roller or self-propelled compactor for clayey soils. If granular fill is used, it should be permanently drained and compacted with vibratory equipment.

All fill should be placed at a moisture content between 2 percent below and 3 percent above the optimum moisture content, ASTM D698. The laboratory tests indicate that the natural moisture contents of many of the subgrade materials are above the optimum moisture required for compaction, such that significant moisture conditioning will be necessary during construction.

Immediately prior to placing the pavement section, including the placement of any granular base course, the soil subgrade should be proofrolled and any yielding areas should be undercut and replaced with compacted fill as outlined above. The subgrade surface should then be manipulated as needed to bring the moisture content to within 2 percent of the optimum moisture content. The prepared subgrade should then be compacted in place to at least 100 percent, ASTM D698.

The criteria presented above for subgrade remediation are, in our opinion, the minimum acceptable levels for satisfactory performance of the project. Local regulations may necessitate specifications which are more stringent than those presented in this report.

7.3 Pavement Design

The pavement section should be constructed with continuous curbing, crowned subgrades and pavement profiles such that all surface drainage is diverted along the curbing to storm sewer inlets. The pavement surface should be graded such that water is not able to pond on the pavement surface following rain events.

We recommend that the pavements for the project be designed in accordance with the expected axle loads, frequency of loading and the properties of the subgrade soils. The subgrade properties for use in formal pavement design should be determined from field California Bearing Ratio (CBR) tests or plate-load tests from a correlation between USCS/ODOT classifications and laboratory CBR tests. In lieu of these formal tests, the Design Engineer for the pavement may elect to assume a CBR value based upon index properties for the soils, applying the laboratory testing data provided herein. The materials encountered at subgrade are generally silty clay and clay soils, which classify A-7-6 according to the Ohio Department of Transportation (ODOT) classification system. These soils are relatively weak and typically have relatively low CBR values. Any assumed CBR values should be confirmed by field or laboratory testing prior to pavement placement.

KDW:ATS:bkm
060862NE

APPENDIX

ASFE Report Information

Tabulation of Laboratory Tests

Unconfined Compressive Strength Test Forms

Pavement Core Photographs

Pavement Core and Test Boring Logs

Soil Classification Sheet

Important Information About Your

Geotechnical Engineering Report

Subsurface problems are a principal cause of construction delays, cost overruns, claims, and disputes.

The following information is provided to help you manage your risks.

Geotechnical Services Are Performed for Specific Purposes, Persons, and Projects

Geotechnical engineers structure their services to meet the specific needs of their clients. A geotechnical engineering study conducted for a civil engineer may not fulfill the needs of a construction contractor or even another civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared *solely* for the client. No one except you should rely on your geotechnical engineering report without first conferring with the geotechnical engineer who prepared it. *And no one — not even you* — should apply the report for any purpose or project except the one originally contemplated.

Read the Full Report

Serious problems have occurred because those relying on a geotechnical engineering report did not read it all. Do not rely on an executive summary. Do not read selected elements only.

A Geotechnical Engineering Report Is Based on A Unique Set of Project-Specific Factors

Geotechnical engineers consider a number of unique, project-specific factors when establishing the scope of a study. Typical factors include: the client's goals, objectives, and risk management preferences; the general nature of the structure involved, its size, and configuration; the location of the structure on the site; and other planned or existing site improvements, such as access roads, parking lots, and underground utilities. Unless the geotechnical engineer who conducted the study specifically indicates otherwise, do not rely on a geotechnical engineering report that was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

Typical changes that can erode the reliability of an existing geotechnical engineering report include those that affect:

- the function of the proposed structure, as when it's changed from a parking garage to an office building, or from a light industrial plant to a refrigerated warehouse,
- elevation, configuration, location, orientation, or weight of the proposed structure,
- composition of the design team, or
- project ownership.

As a general rule, *always* inform your geotechnical engineer of project changes—even minor ones—and request an assessment of their impact. *Geotechnical engineers cannot accept responsibility or liability for problems that occur because their reports do not consider developments of which they were not informed.*

Subsurface Conditions Can Change

A geotechnical engineering report is based on conditions that existed at the time the study was performed. *Do not rely on a geotechnical engineering report* whose adequacy may have been affected by: the passage of time; by man-made events, such as construction on or adjacent to the site; or by natural events, such as floods, earthquakes, or groundwater fluctuations. *Always* contact the geotechnical engineer before applying the report to determine if it is still reliable. A minor amount of additional testing or analysis could prevent major problems.

Most Geotechnical Findings Are Professional Opinions

Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. Geotechnical engineers review field and laboratory data and then apply their professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ—sometimes significantly—from those indicated in your report. Retaining the geotechnical engineer who developed your report to provide construction observation is the most effective method of managing the risks associated with unanticipated conditions.

A Report's Recommendations Are *Not* Final

Do not overrely on the construction recommendations included in your report. *Those recommendations are not final,* because geotechnical engineers develop them principally from judgment and opinion. Geotechnical engineers can finalize their recommendations only by observing actual

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756

COLUMBIA TOWNSHIP
PAVEMENT EVALUATION
MONNING PLACE, MAPHET STREET & EBERSOL AVENUE
COLUMBIA TOWNSHIP, OHIO
060862NE

TABULATION OF LABORATORY TESTS

Boring Number	Sample Number	Depth, ft.		Moisture Content, %	Atterberg Limits, %			Natural Dry Density, pcf	Unconfined Compression Strength, psf	USCS/ODOT Classification
		From	To		LL	PL	PI			
1	PT-1	0.5	2.0	27.2	53	20	33	96.9	2,960	CH/A-7-6
	2	2.5	4.0	20.3						
3	1	0.5	2.0		48	22	26			CL/A-7-6
	2	2.0	3.5	21.4						
										CL/A-7-6
4	PT-1	0.8	2.1	24.2	45	19	29	102.2	2,670	
	2	2.8	4.4	29.0						
5	PT-1	0.6	1.2	21.5						
	PT-1	1.5	2.5	24.5	47	24	23	105.5	3,630	CL/A-7-6
	2	2.5	4.0	23.7						
6	1	0.5	2.0	23.7						
7	1	0.3	1.7		53	21	32			CH/A-7-6
	2	1.7	3.3	27.4						

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOIL, ASTM - D2166
UNIT WEIGHT AND NATURAL MOISTURE

CLIENT : **Columbia Township**
PROJECT : **P. E., Monning Pl., Maphet St. & Ebersole Ave.**
LOCATION : **Columbia Township, Ohio**

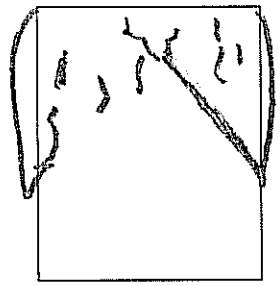
PROJECT NUMBER : **060862NE** LAB NUMBER :
BORING NUMBER : **1** SAMPLE NUMBER : **PT - 1** DEPTH (FT.): **1.5** to **2.0**
SAMPLE DESCRIPTION : **Brown, trace gray moist stiff SILTY CLAY with iron oxide stains**

SAMPLE OBTAINED BY : **SHELBY TUBE** CONDITION **UNTRIMMED** DATE : **08/29/06**

NATURAL UNIT WEIGHT

AVERAGE DIAMETER (in.)	2.84
HEIGHT (in.)	5.59
HEIGHT TO DIAMETER RATIO	1.97
AVERAGE AREA (sq. ft.)	0.0440
VOLUME (cu. ft.)	0.0205
WET WEIGHT (lbs.)	2.52
DRY WEIGHT (lbs.)	1.98
DRY DENSITY (pcf)	**96.9**

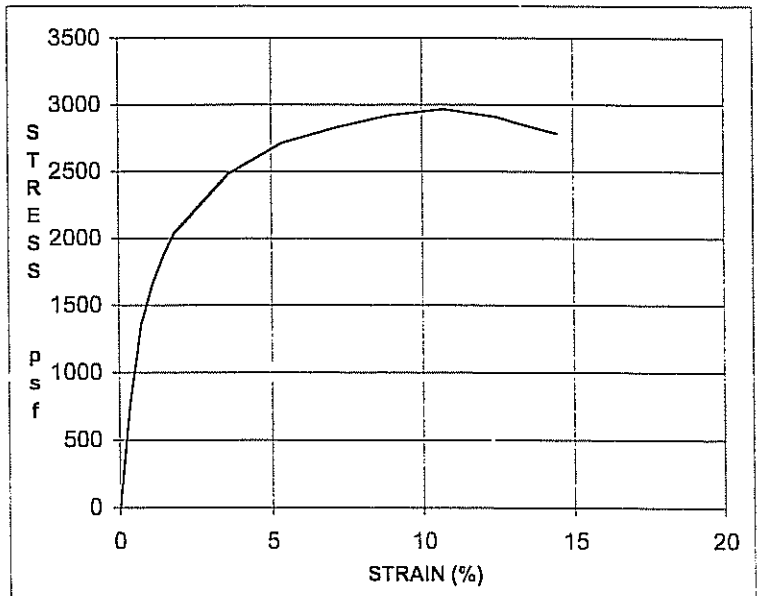
FAILURE SHAPE



WATER CONTENT AFTER SHEAR

CAN NUMBER	OH5
WET WEIGHT + CAN (lbs.)	3.00
DRY WEIGHT + CAN (lbs.)	2.46
WEIGHT WATER (lbs.)	0.54
WEIGHT CAN (lbs.)	0.48
WEIGHT SOLID (lbs.)	1.98
MOISTURE (%)	**27.2**
LOAD CELL NUMBER	CELL

DEFORM DIAL .001 IN.	LOAD CELL	LOAD LBS.	STRAIN %	CORR. AREA SQ. FT.	STRESS PSF
0	0	0	0	0.0440	0
20	35.0	35.0	0.4	0.0441	793
40	60.0	60.0	0.7	0.0443	1355
60	73.0	73.0	1.1	0.0445	1642
80	83.0	83.0	1.4	0.0446	1860
100	91.0	91.0	1.8	0.0448	2032
200	113.0	113.0	3.6	0.0456	2478
300	126.0	126.0	5.4	0.0465	2712
400	134.0	134.0	7.2	0.0474	2829
500	141.0	141.0	8.9	0.0483	2920
600	146.0	146.0	10.7	0.0493	2964
700	146.0	146.0	12.5	0.0503	2904
730	145.0	145.0	13.1	0.0506	2867
770	144.0	144.0	13.8	0.0510	2823
810	143.0	143.0	14.5	0.0514	2781



AVERAGE RATE OF STRAIN TO FAILURE (% per minute)	1.1
STRAIN AT FAILURE (%)	10.7
UNCONFINED COMPRESSIVE STRENGTH (psf)	2,960
SHEAR STRENGTH (psf)	1480

REMARKS :

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOIL, ASTM - D2166
UNIT WEIGHT AND NATURAL MOISTURE

CLIENT : **Columbia Township**
PROJECT : **P. E., Monning Pl., Maphet St. & Ebersole Ave.**
LOCATION : **Columbia Township, Ohio**

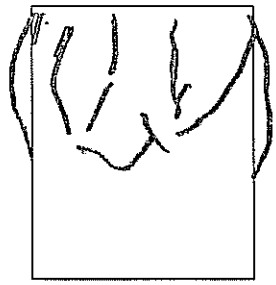
PROJECT NUMBER : **060862NE** LAB NUMBER :
BORING NUMBER : **4** SAMPLE NUMBER : **PT - 1** DEPTH (FT.): **1.3** to **1.8**
SAMPLE DESCRIPTION : **Mottled brown and gray very moist stiff SILTY CLAY, trace fine to coarse sand**

SAMPLE OBTAINED BY : **SHELBY TUBE** CONDITION **UNTRIMMED** DATE : **08/29/06**

NATURAL UNIT WEIGHT

AVERAGE DIAMETER (in.)	2.84
HEIGHT (in.)	5.59
HEIGHT TO DIAMETER RATIO	1.97
AVERAGE AREA (sq. ft.)	0.0440
VOLUME (cu. ft.)	0.0205
WET WEIGHT (lbs.)	2.60
DRY WEIGHT (lbs.)	2.10
DRY DENSITY (pcf)	**102.2**

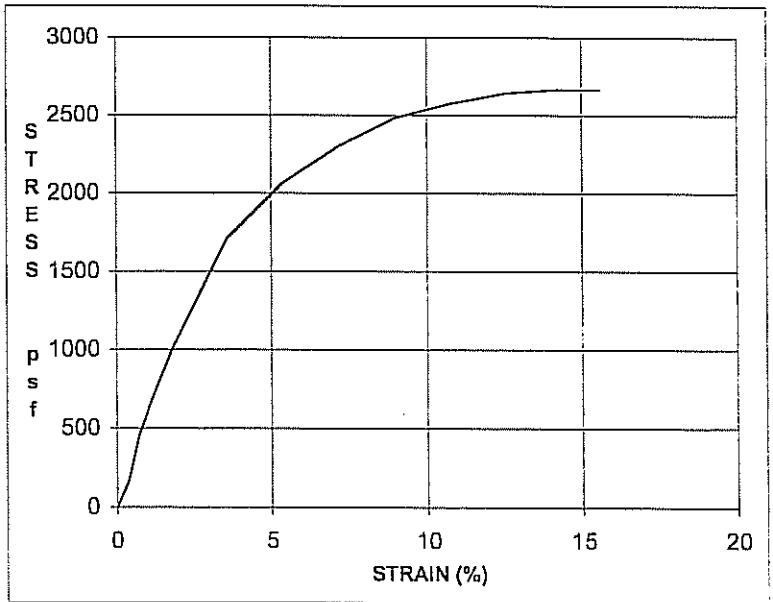
FAILURE SHAPE



WATER CONTENT AFTER SHEAR

CAN NUMBER	F
WET WEIGHT + CAN (lbs.)	2.92
DRY WEIGHT + CAN (lbs.)	2.42
WEIGHT WATER (lbs.)	0.51
WEIGHT CAN (lbs.)	0.33
WEIGHT SOLID (lbs.)	2.09
MOISTURE (%)	**24.2**
LOAD CELL NUMBER	CELL

DEFORM DIAL .001 IN.	LOAD CELL	LOAD LBS.	STRAIN %	CORR. AREA SQ. FT.	STRESS PSF
0	0	0	0	0.0440	0
20	7.0	7.0	0.4	0.0442	158
40	20.0	20.0	0.7	0.0444	451
60	29.0	29.0	1.1	0.0445	651
80	37.0	37.0	1.4	0.0447	828
100	45.0	45.0	1.8	0.0448	1004
200	78.0	78.0	3.6	0.0457	1708
300	96.0	96.0	5.4	0.0465	2063
400	109.0	109.0	7.2	0.0474	2298
500	120.0	120.0	9.0	0.0484	2481
600	127.0	127.0	10.7	0.0493	2574
700	133.0	133.0	12.5	0.0503	2642
750	135.0	135.0	13.4	0.0509	2654
800	137.0	137.0	14.3	0.0514	2665
870	139.0	139.0	15.6	0.0522	2665



AVERAGE RATE OF STRAIN TO FAILURE (% per minute)	**1.1**
STRAIN AT FAILURE (%)	**14.3**
UNCONFINED COMPRESSIVE STRENGTH (psf)	**2,670**
SHEAR STRENGTH (psf)	**1335**

REMARKS :

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

UNCONFINED COMPRESSIVE STRENGTH OF COHESIVE SOIL, ASTM - D2166
UNIT WEIGHT AND NATURAL MOISTURE

CLIENT : **Columbia Township**
PROJECT : **P. E., Monning Pl., Maphet St. & Ebersole Ave.**
LOCATION : **Columbia Township, Ohio**

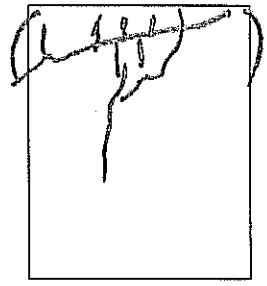
PROJECT NUMBER : **060862NE** LAB NUMBER :
BORING NUMBER : **5** SAMPLE NUMBER : **PT - 1** DEPTH (FT.): **0.6** to **1.8**
SAMPLE DESCRIPTION : **Brown and gray very moist stiff SILTY CLAY, trace fine to coarse sand and fine gravel**

SAMPLE OBTAINED BY : **SHELBY TUBE** CONDITION **UNTRIMMED** DATE : **08/29/06**

NATURAL UNIT WEIGHT

AVERAGE DIAMETER (in.)	2.84
HEIGHT (in.)	5.51
HEIGHT TO DIAMETER RATIO	1.94
AVERAGE AREA (sq. ft.)	0.0438
VOLUME (cu. ft.)	0.0201
WET WEIGHT (lbs.)	2.58
DRY WEIGHT (lbs.)	2.12
DRY DENSITY (pcf)	**105.5**

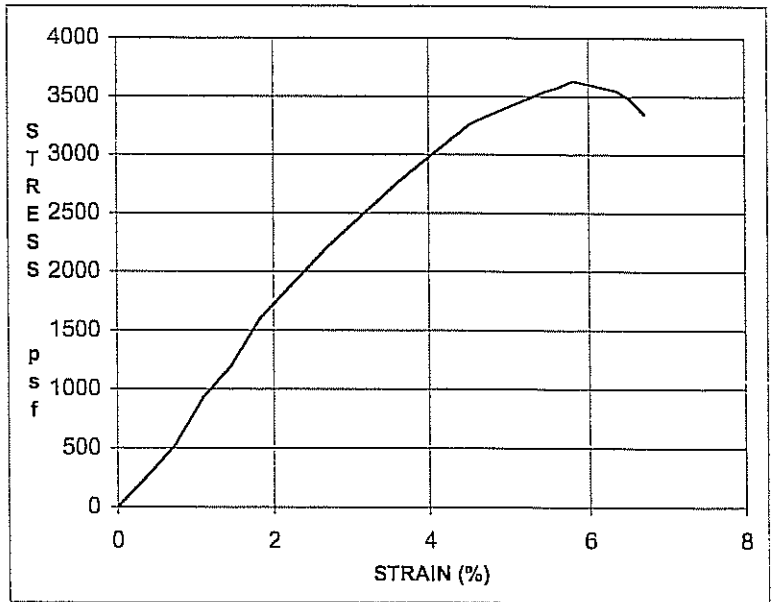
FAILURE SHAPE



WATER CONTENT AFTER SHEAR

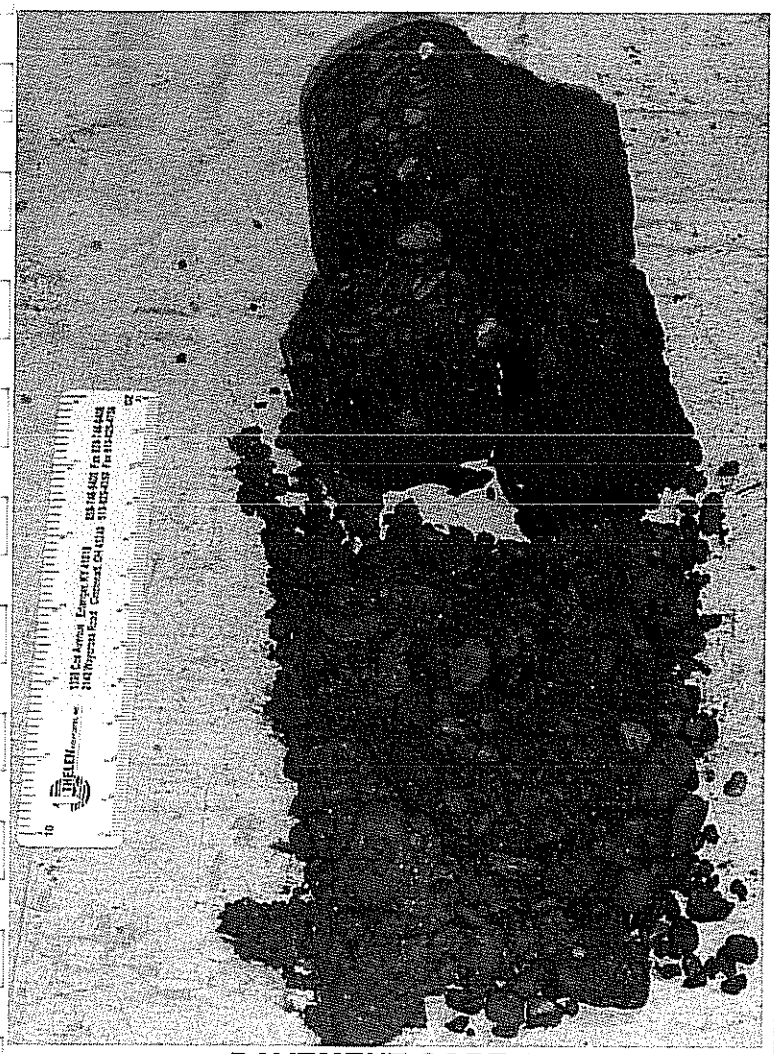
CAN NUMBER	A-3
WET WEIGHT + CAN (lbs.)	2.93
DRY WEIGHT + CAN (lbs.)	2.47
WEIGHT WATER (lbs.)	0.46
WEIGHT CAN (lbs.)	0.35
WEIGHT SOLID (lbs.)	2.12
MOISTURE (%)	**21.5**
LOAD CELL NUMBER	CELL

DEFORM DIAL .001 IN.	LOAD CELL	LOAD LBS.	STRAIN %	CORR. AREA SQ. FT.	STRESS PSF
0	0	0	0	0.0438	0
20	11.0	11.0	0.4	0.0440	250
40	23.0	23.0	0.7	0.0442	521
60	41.0	41.0	1.1	0.0443	925
80	53.0	53.0	1.5	0.0445	1191
100	71.0	71.0	1.8	0.0447	1590
150	100.0	100.0	2.7	0.0451	2218
200	126.0	126.0	3.6	0.0455	2769
250	150.0	150.0	4.5	0.0459	3266
300	164.0	164.0	5.4	0.0464	3536
310	166.0	166.0	5.6	0.0465	3573
320	169.0	169.0	5.8	0.0466	3630
350	166.0	166.0	6.4	0.0468	3545
360	163.0	163.0	6.5	0.0469	3474
370	157.0	157.0	6.7	0.0470	3340



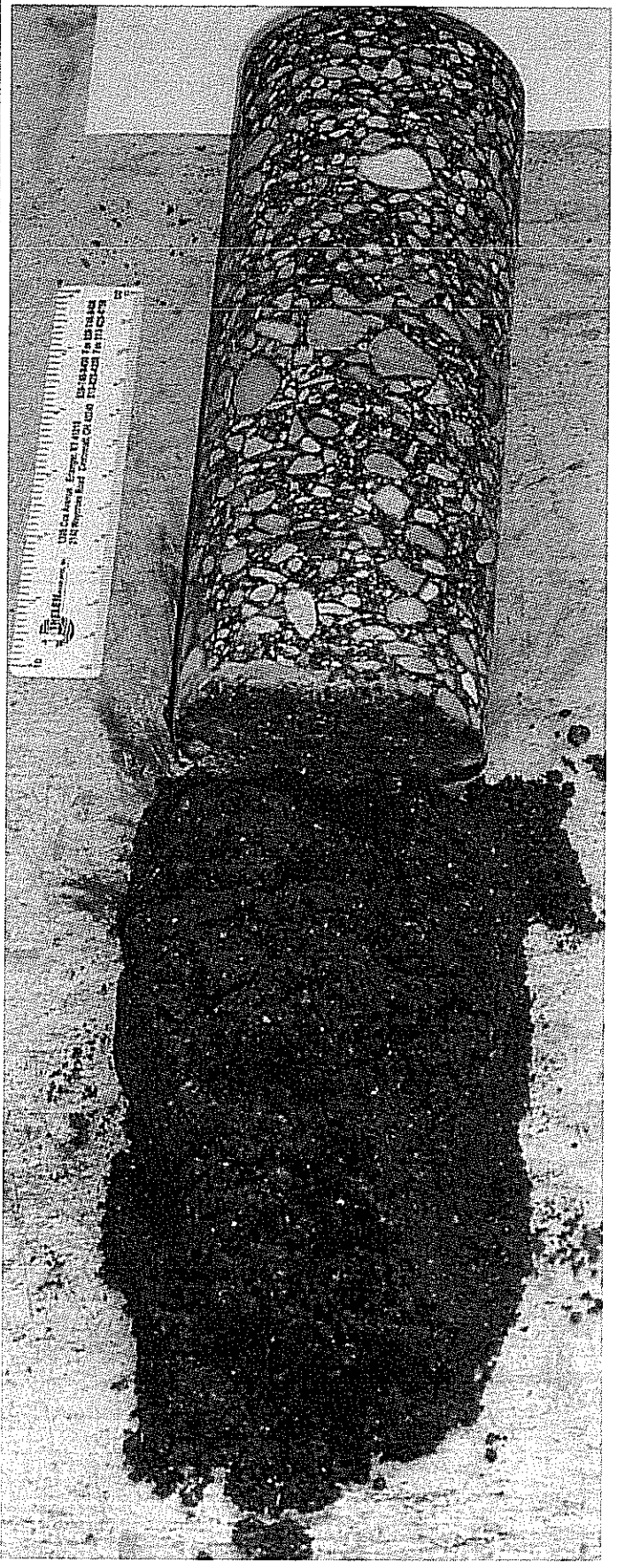
AVERAGE RATE OF STRAIN TO FAILURE (% per minute)	**1.1**
STRAIN AT FAILURE (%)	**5.8**
UNCONFINED COMPRESSIVE STRENGTH (psf)	**3,630**
SHEAR STRENGTH (psf)	**1815**

REMARKS :



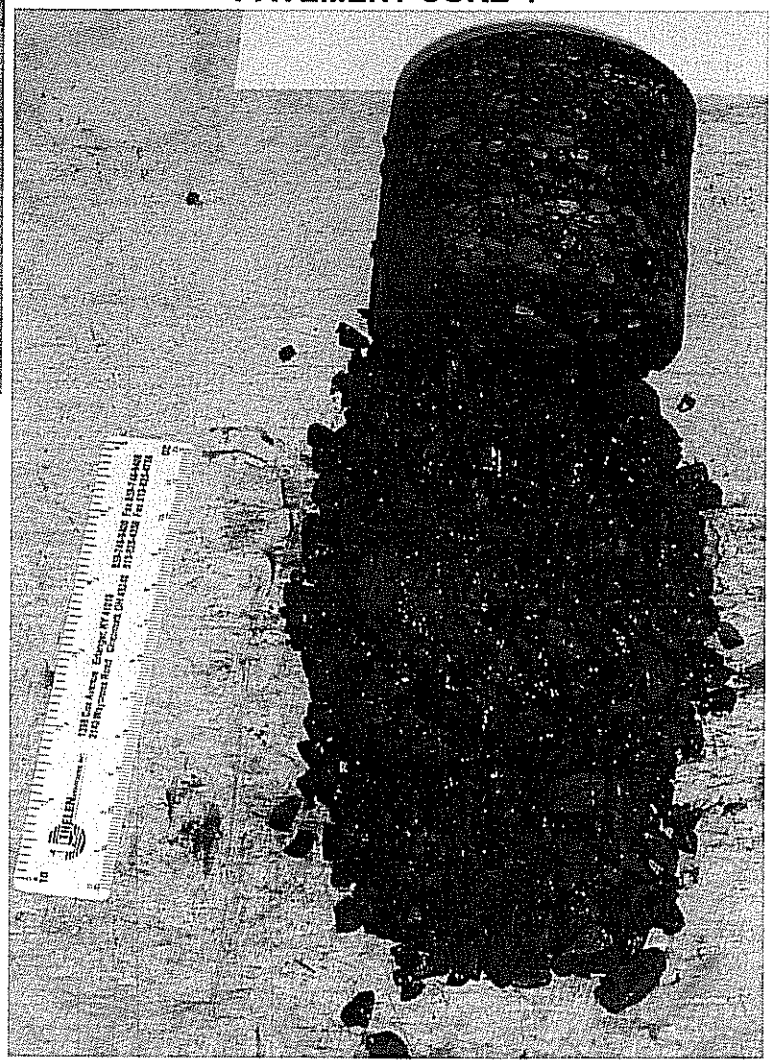
PAVEMENT CORE 1

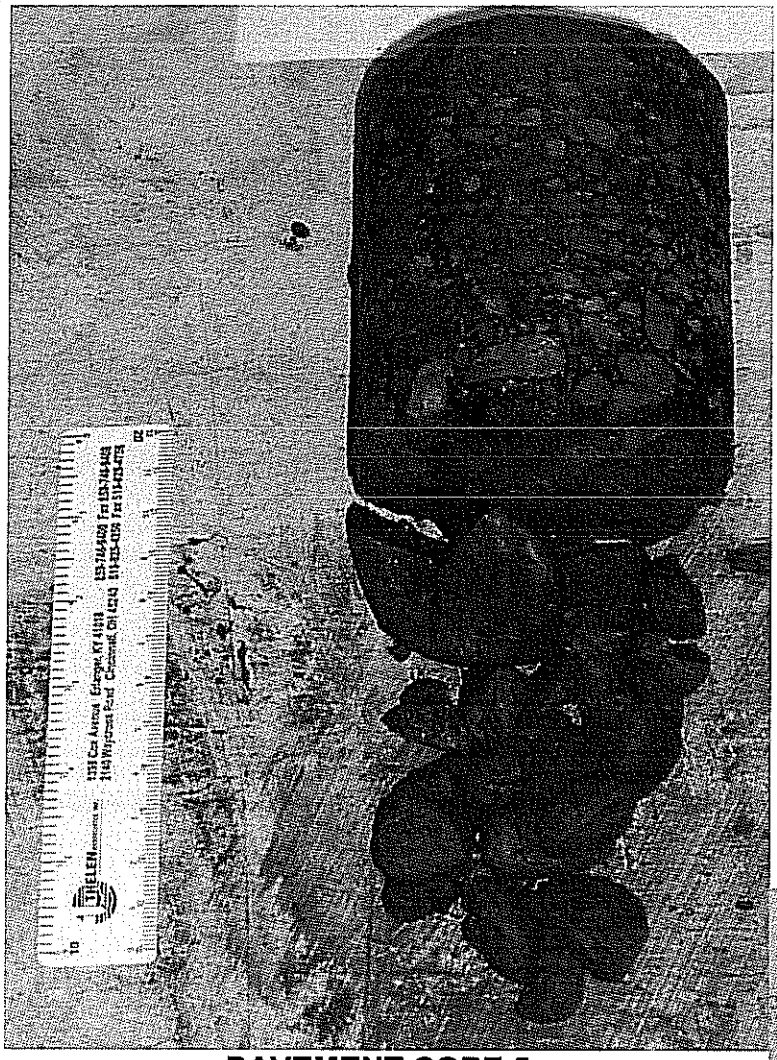
PAVEMENT CORE 2



PAVEMENT CORE 3

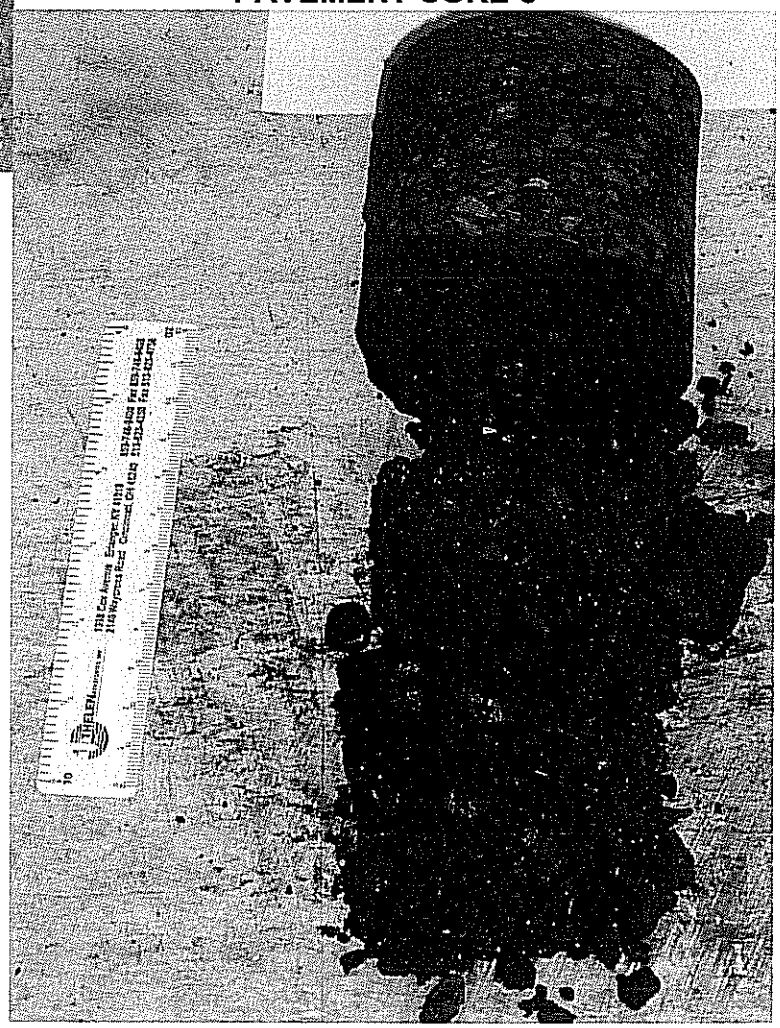
PAVEMENT CORE 4





PAVEMENT CORE 5

PAVEMENT CORE 6



PAVEMENT CORE 7

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 1

PROJECT: Pavement Evaluation, Monning Pl., Maphet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5556 Maphet Street

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (5", Fractured, 2 apparent courses)	0.4		PC				
Gray moist dense GRAVEL (2" GRANULAR BASE)	0.5						
		1	U		1	PT	24"/24"
		2					
		3	I	6/10/14	2	DS	18
Brown, trace gray moist stiff to very stiff CLAY with iron oxide stains (CH/A-7-6).	4.0	4					
Bottom of test boring at 4.0 feet.		5					
		6					
		7					
		8					
		9					

Datum _____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. _____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-23-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-23-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER _____ hrs. _____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 2

PROJECT: Pavement Evaluation, Monning Pl., Maphet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5701 Maphet Street

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (10½", Intact, 5 apparent courses)	0.9		PC				
Brown moist medium dense FILL, fine to coarse samd and fine gravel (utility backfill).	3.0	1 2 3	I	7/8/7	1	DS	
Bottom of test boring at 3.0 feet.		4 5 6 7 8 9					

Datum ____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. ____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-23-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-23-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER ____ hrs. ____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 3

PROJECT: Pavement Evaluation, Monning Pl., Mophet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5801 Mophet Street

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (7", Top 3½" intact, bottom 3½" disintegrated)	0.5		PC				
		1	I	3/3/6	1	DS	18
		2	I	5/6/5	2	DS	18
Brownish gray moist very stiff SILTY CLAY with hairlike roots (CL/A-7-6).	3.5	3					
Bottom of test boring at 3.5 feet.		4					
		5					
		6					
		7					
		8					
		9					

Datum ____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. ____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-23-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-23-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER ____ hrs. ____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
✓ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 4

PROJECT: Pavement Evaluation, Monning Pl., Maphet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5601 Ebersole Avenue

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (9", Top 3¾" intact, bottom 5¼" disintegrated)	0.8		PC				
		1	U		1	PT	15"/24"
		2					
		3	I	3/4/5	2	DS	18
Mottled brown and gray very moist stiff SILTY CLAY, trace fine to coarse sand (CL/A-7-6).	4.4	4					
Bottom of test boring at 4.4 feet.		5					
		6					
		7					
		8					
		9					

Datum ____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. ____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-24-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-24-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER ____ hrs. ____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 5

PROJECT: Pavement Evaluation, Monning Pl., Maphet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5609 Monning Avenue

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (4¾", Intact)	0.4		PC				
Brown fine to coarse GRAVEL (1" GRANULAR BASE)	0.5						
		1	U		1	PT	24"/24"
		2					
		3	I	5/6/8	2	DS	
Brown, trace gray moist stiff SILTY CLAY, trace fine to coarse sand with iron oxide stains (CL/A-7-6).	4.0	4					
Bottom of test boring at 4.0 feet.		5					
		6					
		7					
		8					
		9					

Datum _____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. _____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-24-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-24-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER _____ hrs. _____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers

○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 6

PROJECT: Pavement Evaluation, Monning Pl., Maphet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5715 Monning Avenue

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (6", Top 4" intact, bottom 2" disintegrated)	0.5		PC				
Mixed brown moist soft FILL, silty clay, some fine to coarse sand, trace limestone fragments and gravel.	2.0	1	I	3/2/1	1	DS	4
Bottom of test boring at 2.0 feet.		2 3 4 5 6 7 8 9					

Datum _____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. _____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-24-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-24-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER _____ hrs. _____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

LOG OF PAVEMENT CORE AND TEST BORING

CLIENT: Columbia Township BORING # 7

PROJECT: Pavement Evaluation, Monning Pl., Mophet St. & Ebersole Ave, Columbia Township, Ohio JOB # 060862NE

LOCATION OF BORING: In front of 5812 Monning Place

SUBSURFACE MATERIAL DESCRIPTION COLOR, MOISTURE, DENSITY, PLASTICITY, SIZE, PROPORTIONS	STRATA DEPTH (in.)	DEPTH SCALE (ft.)	SAMPLE Cond	Blows/6"	No.	Type	Rec. (in.)
SURFACE	0.0						
ASPHALT (4", Fractured, 2 apparent courses)	0.3		PC				
		1	I	1/2/3	1	DS	18
		2	I	3/3/3	2	DS	18
Brownish gray moist stiff CLAY, trace fine to coarse sand (CH/A-7-6).	3.3	3					
Bottom of test boring at 3.3 feet.		4					
		5					
		6					
		7					
		8					
		9					

Datum ____ Hammer Wt. 140 lb Hole Diameter 5 in. Foreman BR

Surf. Elev. ____ Hammer Drop 30 in. Pvmt. Core Dia. 4 in. Engineer KDW

Date Started 8-24-06 Pipe Size 2 in. O.D. Boring Method CFA Date Completed 8-24-06

SAMPLE CONDITIONS
D – DISINTEGRATED
I – INTACT
U – UNDISTURBED
L – LOST

SAMPLE TYPE
DS – DRIVEN SPLIT SPOON
PT – PRESSED SHELBY TUBE
CA – CONTINUOUS FLIGHT AUGER
PC – PAVEMENT CORE

GROUND WATER DEPTH
FIRST NOTED None ft.
AT COMPLETION Dry ft.
AFTER ____ hrs. ____ ft.
BACKFILLED Immed. hrs.

BORING METHOD
CCB– CONCRETE CORE BARREL
CFA– CONTINUOUS FLIGHT AUGERS
DC – DRIVING CASING
HA – HAND AUGER

* STANDARD PENETRATION TEST – DRIVING 2" O.D. SAMPLER 1' WITH 140# HAMMER FALLING 30"; COUNT MADE AT 6" INTERVALS

THELEN ASSOCIATES, INC.
Geotechnical • Testing Engineers
○ 1398 Cox Avenue / Erlanger, Kentucky 41018-1002 / 859-746-9400 / Fax 859-746-9408
☑ 2140 Waycross Road / Cincinnati, Ohio 45240-2719 / 513-825-4350 / Fax 513-825-4756
www.thelenassoc.com

SOIL CLASSIFICATION SHEET

NON COHESIVE SOILS
(Silt, Sand, Gravel and Combinations)

Density

Very Loose	- 5 blows/ft. or less
Loose	- 6 to 10 blows/ft.
Medium Dense	- 11 to 30 blows/ft.
Dense	- 31 to 50 blows/ft.
Very Dense	- 51 blows/ft. or more

Relative Properties

Descriptive Term	Percent
Trace	1 – 10
Little	11 – 20
Some	21 – 35
And	36 – 50

Particle Size Identification

Boulders	- 8 inch diameter or more	
Cobbles	- 3 to 8 inch diameter	
Gravel	- Coarse	- 3/4 to 3 inches
	- Fine	- 3/16 to 3/4 inches
Sand	- Coarse	- 2mm to 5mm (dia. of pencil lead)
	- Medium	- 0.45mm to 2mm (dia. of broom straw)
	- Fine	- 0.075mm to 0.45mm (dia. of human hair)
Silt		- 0.005mm to 0.075mm (Cannot see particles)

COHESIVE SOILS
(Clay, Silt and Combinations)

Consistency	Field Identification	Unconfined Compressive Strength (tons/sq. ft.)
Very Soft	Easily penetrated several inches by fist	Less than 0.25
Soft	Easily penetrated several inches by thumb	0.25 – 0.5
Medium Stiff	Can be penetrated several inches by thumb with moderate effort	0.5 – 1.0
Stiff	Readily indented by thumb but penetrated only with great effort	1.0 – 2.0
Very Stiff	Readily indented by thumbnail	2.0 – 4.0
Hard	Indented with difficulty by thumbnail	Over 4.0

Classification on logs are made by visual inspection.

Standard Penetration Test – Driving a 2.0" O.D., 1 3/8" I.D., sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and making the tests are recorded for each 6 inches of penetration on the drill log (Example – 6/8/9). The standard penetration test results can be obtained by adding the last two figures (i.e. 8+9=17 blows/ft.). Refusal is defined as greater than 50 blows for 6 inches or less penetration.

Strata Changes – In the column "Soil Descriptions" on the drill log, the horizontal lines represent strata changes. A solid line (————) represents an actually observed change; a dashed line (— — — —) represents an estimated change.

Groundwater observations were made at the times indicated. Porosity of soil strata, weather conditions, site topography, etc., may cause changes in the water levels indicated on the logs.

ADDITIONAL SUPPORT INFORMATION

For Program Year 2007 (July 1, 2007 through June 30, 2008), jurisdictions shall provide the following support information to help determine which projects will be funded. Information on this form must be accurate, and where called for, based on sound engineering principles. Documentation to substantiate the individual items, as noted, is required. The applicant should also use the rating system and its' addendum as a guide. The examples listed in this addendum are not a complete list, but only a small sampling of situations that may be relevant to a given project.

IF YOU ARE APPLYING FOR A GRANT, WILL YOU BE WILLING TO ACCEPT A LOAN IF ASKED BY THE DISTRICT? ___✓___YES _____NO (ANSWER REQUIRED)

Note: Answering "Yes" will not increase your score and answering "NO" will not decrease your score.

1) **What is the physical condition of the existing infrastructure that is to be replaced or repaired?**

Give a statement of the nature of the deficient conditions of the present facility exclusive of capacity, serviceability, health and/or safety issues. If known, give the approximate age of the infrastructure to be replaced, repaired, or expanded. Use documentation (if possible) to support your statement. Documentation may include (but is not limited to): ODOT BR86 reports, pavement management condition reports, televised underground system reports, age inventory reports, maintenance records, etc., and will only be considered if included in the original application. Examples of deficiencies include: structural condition; substandard design elements such as widths, grades, curves, sight distances, drainage structures, etc.

The existing pavement consists of deteriorated asphalt and exhibits severe alligator cracking throughout the entire limits. Potholes and or intermittent patching are evident throughout the project limits. The existing curb on these streets is severely crumbling in some areas and either buried or non-existent in other areas. As verified by the attached geotechnical report, the pavement is beyond its design service life (page 9) and should be completely reconstructed. The pavement cores (excluding the core taken in the utility trench which had recent full depth repair) demonstrate a failed base, and disintegrated during coring (reference pages 6, 8, and pictures in report). Milling and resurfacing is not an option due to existing pavement thickness (page 8) and condition. As indicated on Page 9 of the report, the subgrade soils are soft and saturated. This is in part due to the fractured pavement and the lack of sufficient curb to control runoff. The stormwater runoff is filtering into the pavement subgrade resulting in a soft, saturated subgrade condition. The pavement section is extremely irregular which precludes a solution of just adding curbing and catch basins. To fix the problem, the entire existing pavement will be removed and replaced with a crowned section. Additionally, the wet subgrade will be removed and replaced where necessary.

The existing storm system is sub-standard based upon current acceptable design parameters and will be upgraded to meet current standards. In conjunction, curbing will be added over the entire length of the project and catch basins added to adequately control runoff.

Developing a crowned pavement section with curb and positive drainage to the street will require significant lowering a portion of the roadway resulting in substandard waterline cover. The

waterline will need to be replaced with the roadway improvements. These lines are 6-inch lines and do not provide adequate fire protection based on current standards.

2) How important is the project to the safety of the Public and the citizens of the District and/or service area?

Give a statement of the projects effect on the safety of the service area. The design of the project is intended to reduce existing accident rate, promote safer conditions, and reduce the danger of risk, liability or injury. (Typical examples may include the effects of the completed project on accident rates, emergency response time, fire protection, and highway capacity.) Please be specific and provide documentation if necessary to substantiate the data. The applicant must demonstrate the type of problems that exist, the frequency and severity of the problems and the method of correction.

As referenced in the attached photos, there are areas that have ponding water, causing icing conditions in winter months. This creates a potential for accidents increasing liability and injury for the traveling public. An improved drainage system will alleviate this condition throughout the project. The irregular pavement section does not allow safe driving conditions at the posted speeds. An improved, smooth driving surface will promote safer driving conditions. Currently the surface is rough with potholes in some areas, causing an increase for accidents and liability. In addition, the 6-inch waterlines, which do not provide adequate fire protection, will be replaced with 8-inch lines, and new hydrants will be added to ensure proper fire protection.

3) How important is the project to the health of the Public and the citizens of the District and/or service area?

Give a statement of the projects effect on the health of the service area. The design of the project will improve the overall condition of the facility so as to reduce or eliminate potential for disease, or correct concerns regarding the environmental health of the area. (Typical examples may include the effects of the completed project by improving or adding storm drainage or sanitary facilities, replacing lead jointed water lines, etc.). Please be specific and provide documentation if necessary to substantiate the data. The applicant must demonstrate the type of problems that exist, the frequency and severity of the problems and the method of correction.

The existing storm drainage system is substandard, with insufficient catch basins. A new improved system to current design standards will be installed. New curbs will be constructed together with new/additional catch basins connected to the pipe system to control drainage.

4) Does the project help meet the infrastructure repair and replacement needs of the applying jurisdiction?

The jurisdiction must submit a listing in priority order of the projects for which it is applying. Points will be awarded on the basis of most to least importance.

Priority 1 Monning Avenue Improvements

Priority 2 Maphet & Ebersole Improvements

Priority 3

Priority 4

Priority 5

5) To what extent will the user fee funded agency be participating in the funding of the project?

(example: rates for water or sewer, frontage assessments, etc.)

No participation – Zero (0)%

6) **Economic Growth – How will the completed project enhance economic growth**

Give a statement of the projects effect on the economic growth of the service area (be specific).

No significant impact on economic growth

7) **Matching Funds - LOCAL**

The information regarding local matching funds is to be filed by the applicant in Section 1.2 (b) of the Ohio Public Works Association's "Application For Financial Assistance" form.

8) **Matching Funds - OTHER**

The information regarding local matching funds is to be filed by the applicant in Section 1.2 (c) of the Ohio Public Works Association's "Application For Financial Assistance" form. If MRF funds are being used for matching funds, the MRF application must have been filed by Friday, September 1, 2006 for this project with the Hamilton County Engineer's Office. List below all "other" funding the source(s).

Local funds are used as the match for this project.

9) **Will the project alleviate serious traffic problems or hazards or respond to the future level of service needs of the district?**

Describe how the proposed project will alleviate serious traffic problems or hazards (be specific).

No increase in LOS

For roadway betterment projects, provide the existing and proposed Level of Service (LOS) of the facility using the methodology outlined within AASHTO'S "Geometric Design of Highways and Streets" and the 1985 Highway Capacity Manual.

Existing LOS _____ Proposed LOS _____

If the proposed design year LOS is not "C" or better, explain why LOS "C" cannot be achieved.

_____

_____

_____

_____

10) If SCIP/LTIP funds were granted, when would the construction contract be awarded?

If SCIP/LTIP funds are awarded, how soon after receiving the Project Agreement from OPWC (tentatively set for July 1 of the year following the deadline for applications) would the project be under contract? The Support Staff will review status reports of previous projects to help judge the accuracy of a jurisdiction's anticipated project schedule.

Number of months __2__

a.) Are preliminary plans or engineering completed? Yes __X__ No _____ N/A _____

b.) Are detailed construction plans completed? Yes _____ No __X__ N/A _____

c.) Are all utility coordination's completed? Yes _____ No __X__ N/A _____

d.) Are all right-of-way and easements acquired (if applicable)? Yes _____ No _____ N/A __X__

If no, how many parcels needed for project? _____ Of these, how many are: Takes _____

Temporary _____

Permanent _____

For any parcels not yet acquired, explain the status of the ROW acquisition process for this project.

_____

e.) Give an estimate of time needed to complete any item above not yet completed. __4__ Months.

11) Does the infrastructure have regional impact?

Give a brief statement concerning the regional significance of the infrastructure to be replaced, repaired, or expanded.

The project will primarily affect the residents of Columbia Township and the City of Cincinnati, which borders this street.

_____

_____

12) What is the overall economic health of the jurisdiction?

The District 2 Integrating Committee predetermines the jurisdiction's economic health. The economic health of a jurisdiction may periodically be adjusted when census and other budgetary data are updated.

13) Has any formal action by a federal, state, or local government agency resulted in a partial or complete ban of the usage or expansion of the usage for the involved infrastructure?

Describe what formal action has been taken which resulted in a ban of the use of or expansion of use for the involved infrastructure? Typical examples include weight limits, truck restrictions, and moratoriums or limitations on issuance of building permits, etc. The ban must have been caused by a structural or operational problem to be considered valid. Submission of a copy of the approved legislation would be helpful.

No ban

Will the ban be removed after the project is completed? Yes _____ No _____ N/A X

14) What is the total number of existing daily users that will benefit as a result of the proposed project?

For roads and bridges, multiply current Average Daily Traffic (ADT) by 1.20. For inclusion of public transit, submit documentation substantiating the count. Where the facility currently has any restrictions or is partially closed, use documented traffic counts prior to the restriction. For storm sewers, sanitary sewers, water lines, and other related facilities, multiply the number of households in the service area by 4. User information must be documented and certified by a professional engineer or the jurisdictions' C.E.O.

Traffic: ADT 800 X 1.20 = 960 Users

Water/Sewer: Homes _____ X 4.00 = _____ Users

15) Has the jurisdiction enacted the optional $5 license plate fee, an infrastructure levy, a user fee, or dedicated tax for the pertinent infrastructure?

The applying jurisdiction shall list what type of fees, levies or taxes they have dedicated toward the type of infrastructure being applied for. (Check all that apply)

Optional $5.00 License Tax yes

Infrastructure Levy yes Specify type Roadway Levy

Facility Users Fee _____ Specify type _____

Dedicated Tax _____ Specify type _____

Other Fee, Levy or Tax _____ Specify type _____

SCIP/LTIP PROGRAM
ROUND 21 - PROGRAM YEAR 2007
PROJECT SELECTION CRITERIA
JULY 1, 2007 TO JUNE 30, 2008

NAME OF APPLICANT: Columbia Township

NAME OF PROJECT: Monroe Ave

RATING TEAM: 1

General Statement for Rating Criteria

Points awarded for all items will be based on engineering experience, field verification, application information and other information supplied by the applying agency, which is deemed to be relevant by the Support Staff. The examples listed in this addendum are not a complete list, but only a small sampling of situations that may be relevant to a given project.

CIRCLE THE APPROPRIATE RATING

1) **What is the physical condition of the existing infrastructure that is to be replaced or repaired?**

25 - Failed
23 - Critical
20 - Very Poor
17 - Poor
15 - Moderately Poor
10 - Moderately Fair
5 - Fair Condition
0 - Good or Better

Appeal Score _____

Criterion 1 - Condition

Condition of the particular infrastructure to be repaired, reconstructed or replaced shall be a measure of the degree of reduction in condition from its original state. Capacity, serviceability, safety and health shall not be considered in this criterion. Any documentation the Applicant wishes to be considered must be included in the application package.

Definitions:

Failed Condition –requires complete reconstruction where no part of the existing facility is salvageable. (E.g. Roads: complete reconstruction of roadway, curbs and base; Bridges: complete removal and replacement of bridge; Underground: removal and replacement of an underground drainage or water system.

Critical Condition - requires partial reconstruction to maintain integrity. (E.g. Roads: reconstruction of roadway/curbs can be saved; Bridges: removal and replacement of bridge with abutment modification; Underground: removal and replacement of part of an underground drainage or water system.

Very Poor Condition - requires extensive rehabilitation to maintain integrity. (E.g. Roads: extensive full depth, partial depth and curb repair of a roadway with a structural overlay; Bridges: superstructure replacement; Underground: repair of joints and/or replacement of pipe sections.

Poor Condition - requires standard rehabilitation to maintain integrity. (E.g. Roads: moderate full depth, partial depth and curb repair to a roadway with no structural overlay needed or structural overlay with minor repairs to a roadway needed; Bridges: extensive patching of substructure and replacement of deck; Underground: insituform or other in ground repairs.

Moderately Poor Condition - requires minor rehabilitation to maintain integrity. (E.g. Roads: minor full depth, partial depth or curb repairs to a roadway with either a thin overlay or no overlay needed; Bridges: major structural patching and/or major deck repair.

Moderately Fair Condition - requires extensive maintenance to maintain integrity. (E.g. Roads: thin or no overlay with extensive crack sealing, minor partial depth and/or slurry or rejuvenation; Bridges: minor structural patching, deck repair, erosion control.)

Fair Condition - requires routine maintenance to maintain integrity. (E.g. Roads: slurry seal, rejuvenation or routine crack sealing to the roadway; Bridges: minor structural patching.)

Good or Better Condition - little to no maintenance required to maintain integrity.

Note: **If the infrastructure is in "good" or better condition, it will NOT be considered for SCIP/LTIP funding unless it is an expansion project that will improve serviceability.**

2) **How important is the project to the safety of the Public and the citizens of the District and/or service area?**

25 - Highly significant importance
20 - Considerably significant importance
15 - Moderate importance
10 - Minimal importance
5 - Poorly documented importance
0 - No measurable impact

Appeal Score _____

Criterion 2 – Safety
The applying agency shall include in its application the type, frequency, and severity of the safety problem that currently exists and how the intended project would improve the situation. For example, have there been vehicular accidents attributable to the problems cited? Have they involved injuries or fatalities? In the case of water systems, are existing hydrants non-functional? In the case of water lines, is the present capacity inadequate to provide volumes or pressure for adequate fire protection? **In all cases, specific documentation is required.** Mentioned problems, which are poorly documented, shall not receive more than 5 points.

Note: Each project is looked at on an individual basis to determine if any aspects of this category apply. **Examples given above are NOT intended to be exclusive.**

3) **How important is the project to the health of the Public and the citizens of the District and/or service area?**

25 - Highly significant importance
20 - Considerably significant importance
15 - Moderate importance
10 - Minimal importance
5 - Poorly documented importance
0 - No measurable impact

Appeal Score _____

Criterion 3 – Health
The applying agency shall include in its application the type, frequency, and severity of the health problem that would be eliminated or reduced by the intended project. For example, can the problem be eliminated only by the project, or would routine maintenance be satisfactory? If basement flooding has occurred, was it storm water or sanitary flow? What complaints if any are recorded? In the case of underground improvements, how will they improve health if they are storm sewers? How would improved sanitary sewers improve health or reduce health risk? **In all cases, quantified documentation is required.** Mentioned problems, which are poorly documented, shall not receive more than 5 points.

Note: Each project is looked at on an individual basis to determine if any aspects of this category apply. **Examples given above are NOT intended to be exclusive.**

4) **Does the project help meet the infrastructure repair and replacement needs of the applying agency?**
Note: Applying agency's priority listing (part of the Additional Support Information) must be filed with application(s).

25 - First priority project
20 - Second priority project
15 - Third priority project
10 - Fourth priority project
5 - Fifth priority project or lower

Appeal Score _____

Criterion 4 – Jurisdiction's Priority Listing
The applying agency must submit a listing in priority order of the projects for which it is applying. Points will be awarded on the basis of most to least importance. The form is included in the Additional Support Information.

5) **To what extent will a user fee funded agency be participating in the funding of the project?**

10 – Less than 10%
9 – 10% to 19.99%
8 – 20% to 29.99%
7 – 30% to 39.99%
6 – 40% to 49.99%
5 – 50% to 59.99%
4 – 60% to 69.99%
3 – 70% to 79.99%
2 – 80% to 89.99%
1 – 90% to 95%
0 – Above 95%

Appeal Score _____

Criterion 5 – User Fee-funded Agency Participation
To what extent will a user fee funded agency be participating in the funding of the project? (Example: rates for water or sewer, frontage assessments, etc.). The applying agency must submit documentation.

6) **Economic Growth – How the completed project will enhance economic growth (See definitions).**

10 – The project will directly secure new employment
5 – The project will permit more development
0 – The project will not impact development

Appeal Score _____

Criterion 6 – Economic Growth
Will the completed project enhance economic growth and/or development in the service area?
Definitions:
Secure new employment: The project as designed will secure development/employers, which will immediately add new permanent employees to the jurisdiction. The applying agency must submit details.
Permit more development: The project as designed will permit additional business development/employment. The applying agency must supply details.
The project will not impact development: The project will have no impact on business development.

Note: **Each project is looked at on an individual basis to determine if any aspects of this category apply.**

7) **Matching Funds - LOCAL**

10 - This project is a loan or credit enhancement
10 – 50% or higher
8 – 40% to 49.99%
6 – 30% to 39.99%
4 – 20% to 29.99%
2 – 10% to 19.99%
0 – Less than 10%

List total percentage of "Local" funds 50 **%**

Criterion 7 – Matching Funds – Local

The percentage of matching funds which come directly from the budget of the applying agency. Ten points shall be awarded if a loan request is at least 50% of the total project cost. (If the applying agency is not a user fee funded agency, any funds to be provided by a user fee generating agency will be considered "Matching Funds – Other")

8) Matching Funds – OTHER

List total percentage of "Other" funds _____%

10 – 50% or higher
8 – 40% to 49.99%
6 – 30% to 39.99%
4 – 20% to 29.99%
2 – 10% to 19.99%
1 – 1% to 9.99%
(0) – Less than 1%

List below each funding source and percentage

_____ _____%
_____ _____%
_____ _____%
_____ _____%
_____ _____%

Criterion 8 – Matching Funds - Other

The percentage of matching funds that come from funding sources other than those mentioned in Criterion 7. A letter from the outside funding agency stating their financial participation in the project and the amount of funding is required to receive points. For MRF, a copy of the current application form filed with the Hamilton County Engineer's Office meets the requirement.

9) **Will the project alleviate serious capacity problems or hazards or respond to the future level of service needs of the district?**

10 - Project design is for future demand.
8 - Project design is for partial future demand.
6 - Project design is for current demand.
4 - Project design is for minimal increase in capacity.
(2) - Project design is for no increase in capacity.

Appeal Score

_____

Criterion 9 – Alleviate Capacity Problems

The applying agency shall provide a narrative, along with pertinent support documentation, which describe the existing deficiencies and showing how congestion will be reduced or eliminated and how service will be improved to meet the needs of any expected growth or development. A formal capacity analysis accompanying the application would be beneficial. Projected traffic or demand should be calculated as follows:

Formula:

Existing users x design year factor = projected users

Design Year	Design year factor		
	Urban	Suburban	Rural
20	1.40	1.70	1.60
10	1.20	1.35	1.30

Definitions:

Future demand – Project will eliminate existing congestion or deficiencies and will provide sufficient capacity or service for twenty-year projected demand or fully developed area conditions. Justification must be supplied if the area is already largely developed or undevelopable and thus the projection factors used deviate from the above table.

Partial future demand – Project will eliminate existing congestion or deficiencies and will provide sufficient capacity or service for ten-year projected demand or partially developed area conditions. Justification must be supplied if the area is already largely developed or undevelopable and thus the projection factors used deviate from the above table.

Current demand – Project will eliminate existing congestion or deficiencies and will provide sufficient capacity or service only for existing demand and conditions.

Minimal increase – Project will reduce but not eliminate existing congestion or deficiencies and will provide a minimal but less than sufficient increase in existing capacity or service for existing demand and conditions.

No increase – Project will have no effect on existing congestion or deficiencies and provide no increase in capacity or service for existing demand and conditions.

10) **Readiness to Proceed - If SCIP/LTIP funds are granted, when would the construction contract be awarded?**

5 - Will be under contract by December 31, 2007 and no delinquent projects in Rounds 18 & 19
3 - Will be under contract by March 31, 2008 and/or one delinquent project in Rounds 18 & 19
0 - Will not be under contract by March 31, 2008 and/or more than one delinquent project in Rounds 18 & 19

Criterion 10 – Readiness to Proceed
The Support Staff will assign points based on engineering experience and status of design plans. A project is considered delinquent when it has not received a notice to proceed within the time stated on the original application and no time extension has been granted by the OPWC. An applying agency receiving approval for a project and subsequently canceling the same after the bid date on the application will receive zero (0) points under this round and the following round.

11) **Does the infrastructure have regional impact? Consider origination and destination of traffic, functional classifications, size of service area, and number of jurisdictions served, etc.**

10 – Major Impact **Appeal Score**
8 – Significant Impact
6 – Moderate Impact _____
4 – Minor Impact
2 – Minimal or No Impact

Criterion 11 - Regional Impact
The regional significance of the infrastructure that is being repaired or replaced.
Definitions:

Major Impact – Roads: Major Arterial: A direct connector to an Interstate Highway; Arterials are intended to provide a greater degree of mobility rather than land access. Arterials generally convey large traffic volumes for distances greater than one mile. A major arterial is a highway that is of regional importance and is intended to serve beyond the county. It may connect urban centers with one another and/or with outlying communities and employment or shopping centers. A major arterial is intended primarily to serve through traffic.

Significant Impact – Roads: Minor Arterial: A roadway, also serving through traffic, that is similar in function to a major arterial, but operates with lower traffic volumes, serves trips of shorter distances (but still greater than one mile), and may provide a higher degree of property access than do major arterials.

Moderate Impact – Roads: Major Collector: A roadway that provides for traffic movement between local roads/streets and arterials or community-wide activity centers and carries moderate traffic volumes over moderate distances (generally less than one mile). Major collectors may also provide direct access to abutting properties, such as regional shopping centers, large industrial parks, major subdivisions and community-wide recreational facilities, but typically not individual residences. Most major collectors are also county roads and are therefore through streets.

Minor Impact – Roads: Minor Collector: A roadway similar in functions to a major collector but which carries lower traffic volumes over shorter distances and has a higher degree of property access. Minor collectors may serve as main circulation streets within large, residential neighborhoods. Most minor collectors are also township roads and streets and may, or may not, be through streets.

Minimal or No Impact - Roads: Local: A roadway that is primarily intended to provide access to abutting properties. It tends to accommodate lower traffic volumes, serves short trips (generally within neighborhoods), and provides connections preferably only to collector streets rather than arterials.

12) **What is the overall economic health of the jurisdiction?**

10 Points
8 Points
6 Points
4 Points
2 Points

Criterion 12 – Economic Health
The District 2 Integrating Committee predetermines the applying agency's economic health. The economic health of a jurisdiction may periodically be adjusted when census and other budgetary data are updated.

13) **Has any formal action by a federal, state, or local government agency resulted in a partial or complete ban of the usage or expansion of the usage for the involved infrastructure?**

10 - Complete ban, facility closed
8 – 80% reduction in legal load or 4-wheeled vehicles only
7 – Moratorium on future development, *not* functioning for current demand
6 – 60% reduction in legal load
5 - Moratorium on future development, functioning for current demand
4 – 40% reduction in legal load
2 – 20% reduction in legal load
0 – Less than 20% reduction in legal load

Appeal Score _____

Criterion 13 - Ban
The applying agency shall provide documentation to show that a facility ban or moratorium has been formally placed. The ban or moratorium must have been caused by a structural or operational problem. Points will only be awarded if the end result of the project will cause the ban to be lifted.

14) **What is the total number of existing daily users that will benefit as a result of the proposed project?**

10 - 16,000 or more
8 - 12,000 to 15,999
6 - 8,000 to 11,999
4 - 4,000 to 7,999
2 - 3,999 and under

Appeal Score _____

Criterion 14 - Users
The applying agency shall provide documentation. A registered professional engineer or the applying agency's C.E.O must certify the appropriate documentation. Documentation may include current traffic counts, households served, when converted to a measurement of persons. Public transit users are permitted to be counted for the roads and bridges, but only when certifiable ridership figures are provided.

15) **Has the applying agency enacted the optional $5 license plate fee, an infrastructure levy, a user fee, or dedicated tax for the pertinent infrastructure? *(Provide documentation of which fees have been enacted.)***

5 - Two or more of the above
3 - One of the above
0 - None of the above

Appeal Score _____

Criterion 15 – Fees, Levies, Etc.
The applying agency shall document (in the "Additional Support Information" form) which type of fees, levies or taxes they have dedicated toward the type of infrastructure being applied for.