Item #4E:

Report On Infrastructure Projects & Reviews:

Report Of Special Village Board Workshop Meeting #1 - Roads

08/20/14

AGENDA
SPECIAL MEETING OF THE BOARD OF TRUSTEES
INFRASTRUCTURE REVIEW WORKSHOP
MONDAY, AUGUST 18, 2014 AT 7:00 P.M.
3100 OLD MCHENRY ROAD (KILDEER COUNTRYSIDE SCHOOL),
LONG GROVE, ILLINOIS 60047

The meeting will not proceed past 10:30 p.m. Those wishing to address the Village Board on an agenda item(s) may do so when the agenda item of interest is opened and prior to Board discussion.

CALL TO ORDER:

DISCUSSION ITEMS:

1. Introductions.
2. Workshop Facilitator Greg Kuhn. Goals & Objectives Of Peer Reviews and Workshops.
   - Infrastructure Maintenance, Finances & Economic Development.
3. Presentation Of Roadway Pavement Analysis - Michael Shrake, Gewalt-Hamilton Associates.
4. Discussion/Questions/Suggestions.
5. Next Infrastructure Review Workshop Meeting - Review Of Village Economic Development - BDI, Inc.

ADJOURNMENT. Next Regular Meeting – August 26, 2014 at 7:00 p.m.

The Village of Long Grove is subject to the requirements of the Americans with Disabilities Act of 1990. Individuals with disabilities who plan to attend this meeting and who require certain accommodations in order to allow them to observe and/or participate in this meeting, or who have questions regarding the accessibility of the meeting or the facilities, are requested to phone David Lothspeich, Long Grove Village Manager at 847-634-9440 or TDD 847-634-9650 promptly to allow the Village of Long Grove to make reasonable accommodations.

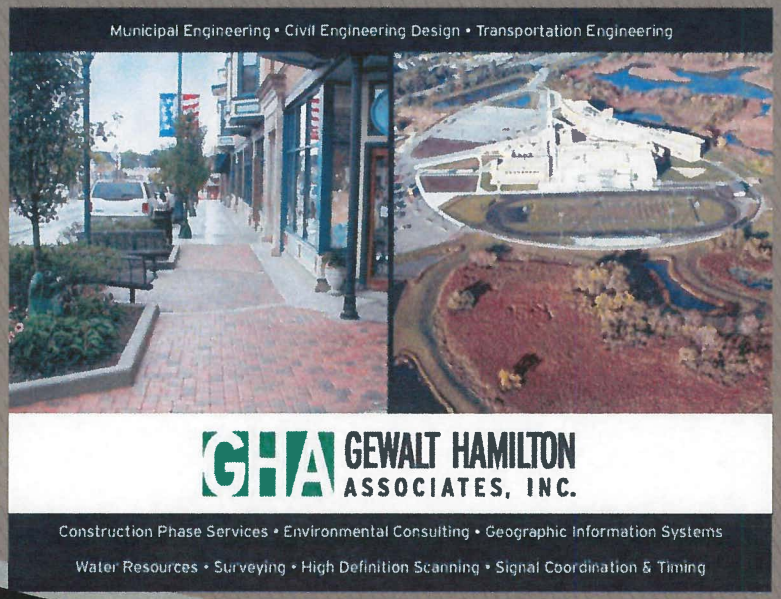
THE VILLAGE OF LONG GROVE

Pavement Condition Study and Proposed 15-Year Road Program

GEWALT HAMILTON ASSOCIATES, INC.

Introduction

- Gewalt Hamilton Associates, Inc.
  - Full Service Consulting Engineering Firm
  - Full Time Village Engineer for 9 Communities (including Kildeer, Deer Park, Lake Barrington, Barrington Hills)
  - Special Consultant to over 40 Additional Municipalities
  - Primary Office in Vernon Hills
  - 80 Full Time Staff, 25 Professional Engineers (PE's)



Report Overview

- Inspected approximately 29 miles of Village maintained streets
- Evaluate Distress using Pavement Condition Index (PCI)
- Analyze 2013 Road Program
- Consider potential cost savings
- Recommend 15 Year Road Program

N Krueger Road

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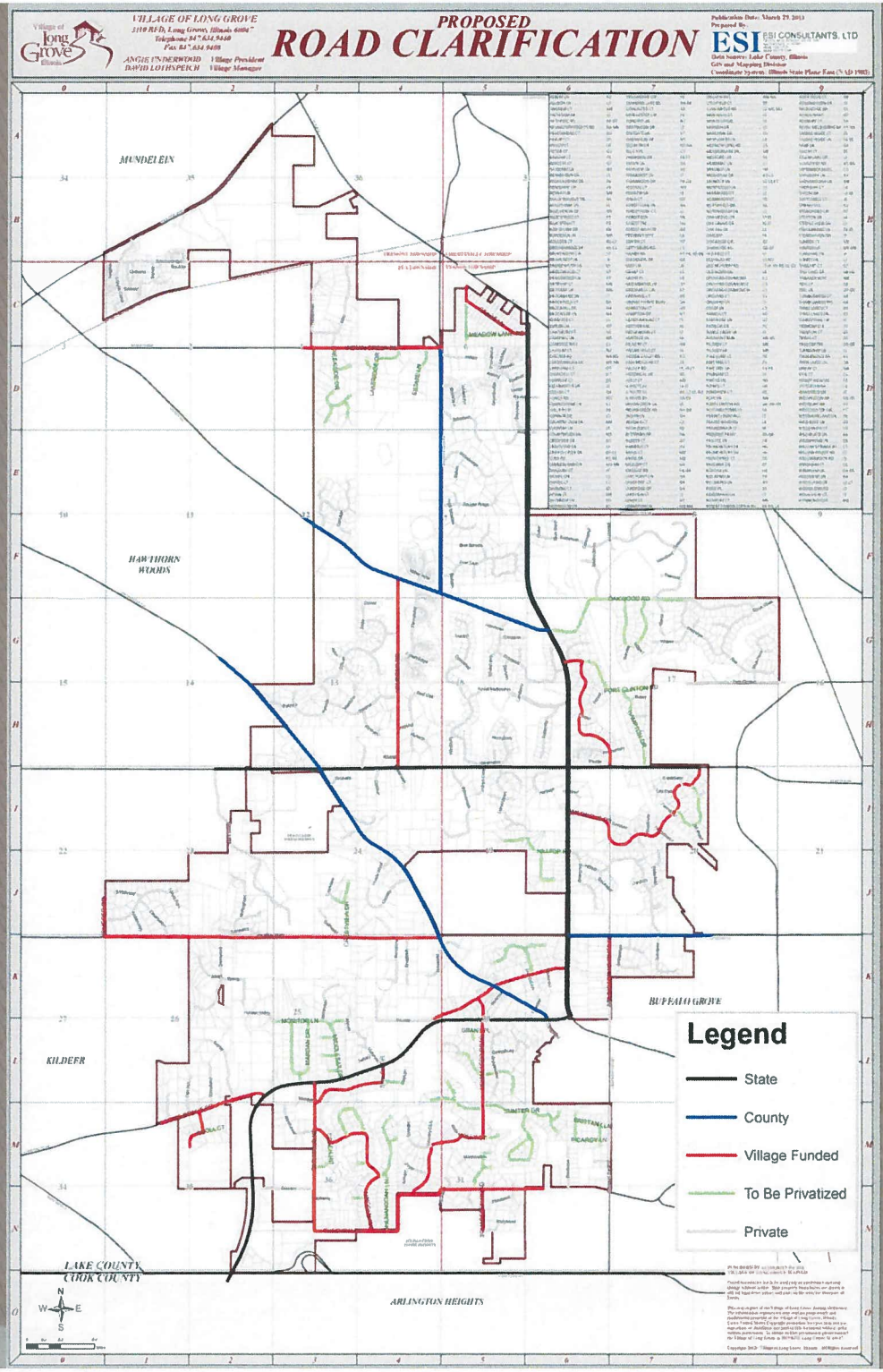
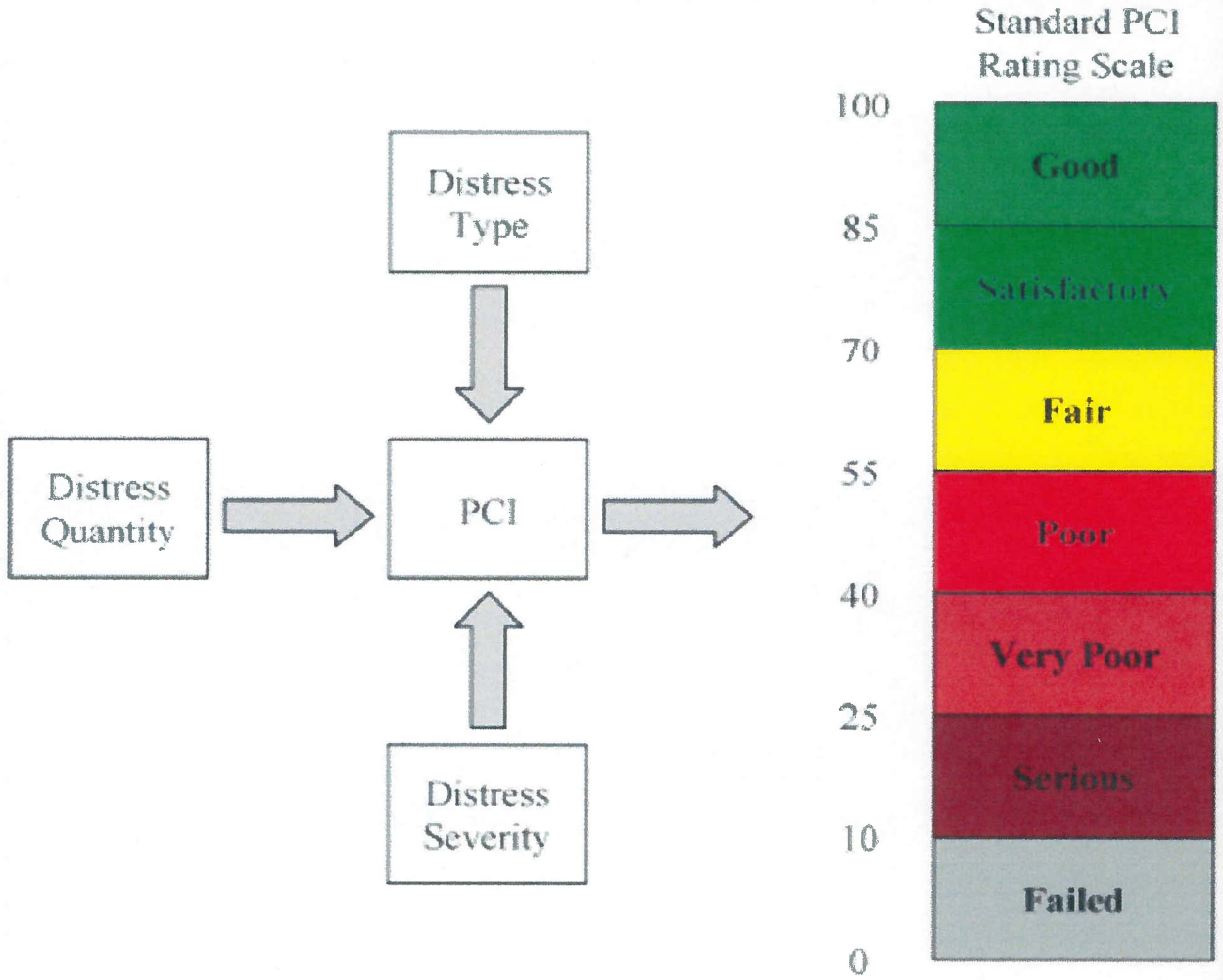
Inspection

- Length
- Width
- Distress & Severity
  - Alligator Cracking
  - Patches
  - Rutting
  - Potholes
  - Bumps/Sags
  - Edge Cracking
  - Raveling
  - Weathering
  - Etc.



Pavement Condition Index (PCI)



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Pavement Condition Index (PCI)

Long Grove Road

Shenandoah Lane

Schaeffer Road

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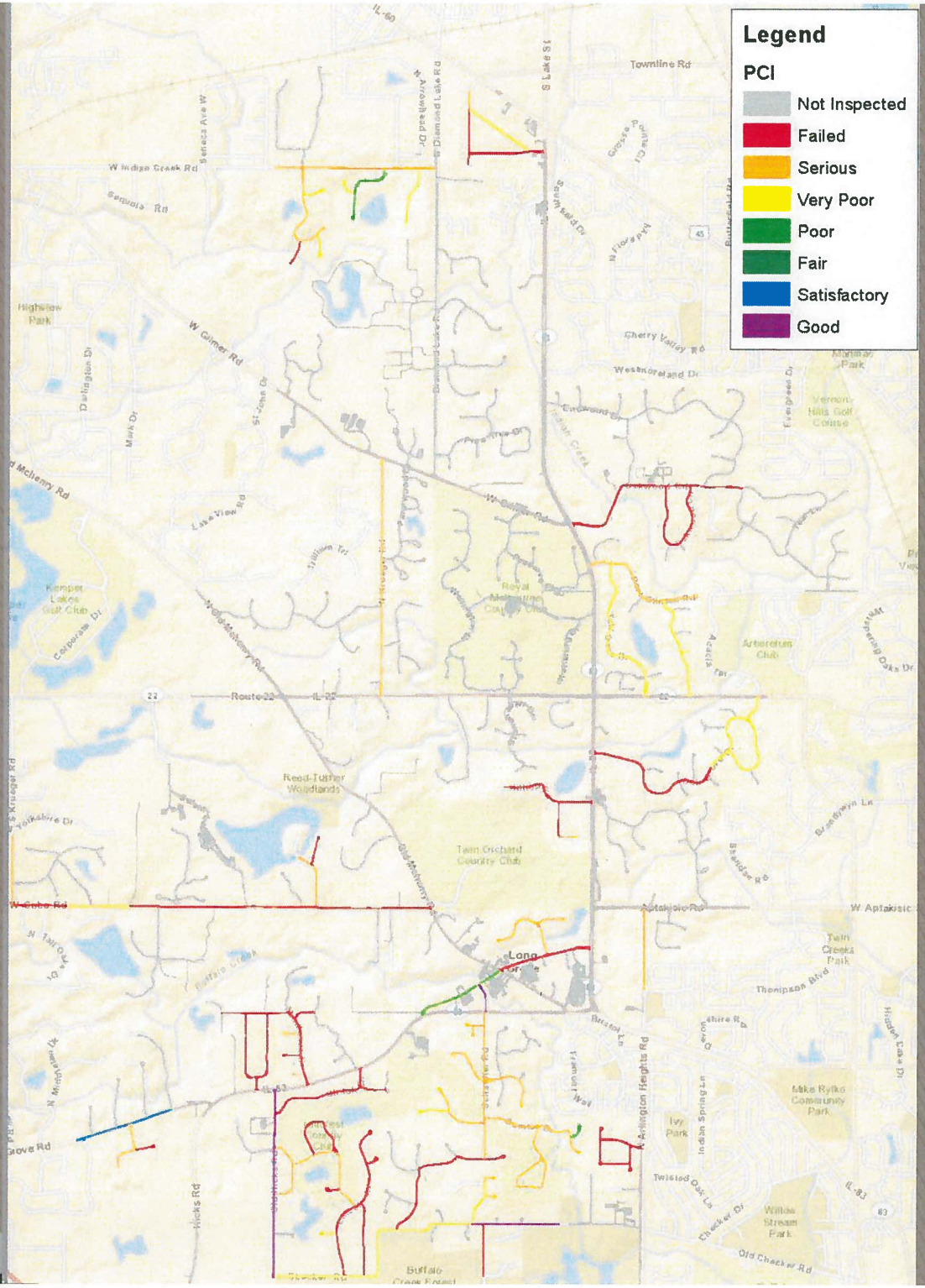
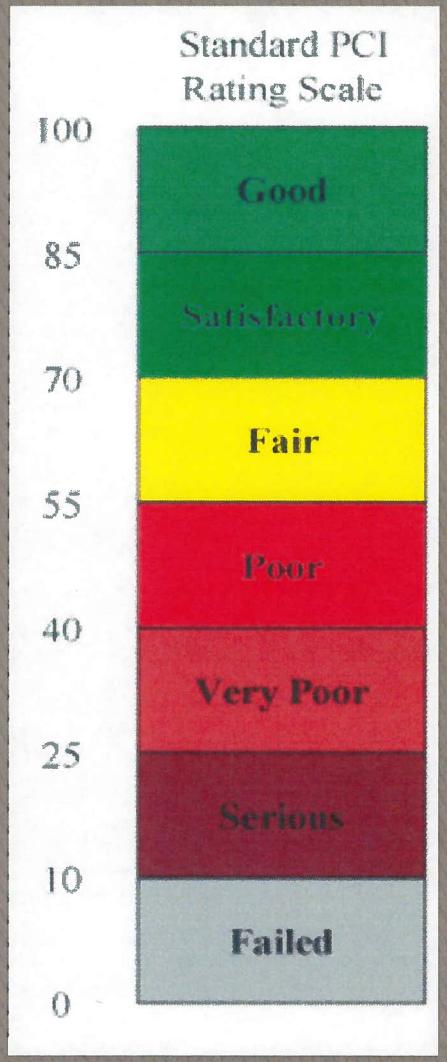
Pavement Condition Index (PCI)



Pavement Condition Index (PCI)

THE VILLAGE OF LONG GROVE

- Good = 3.5%
- Satisfactory = 1%
- Fair = 0%
- Poor = 3.5%
- Very Poor = 16%
- Serious = 33%
- Failed = 43%



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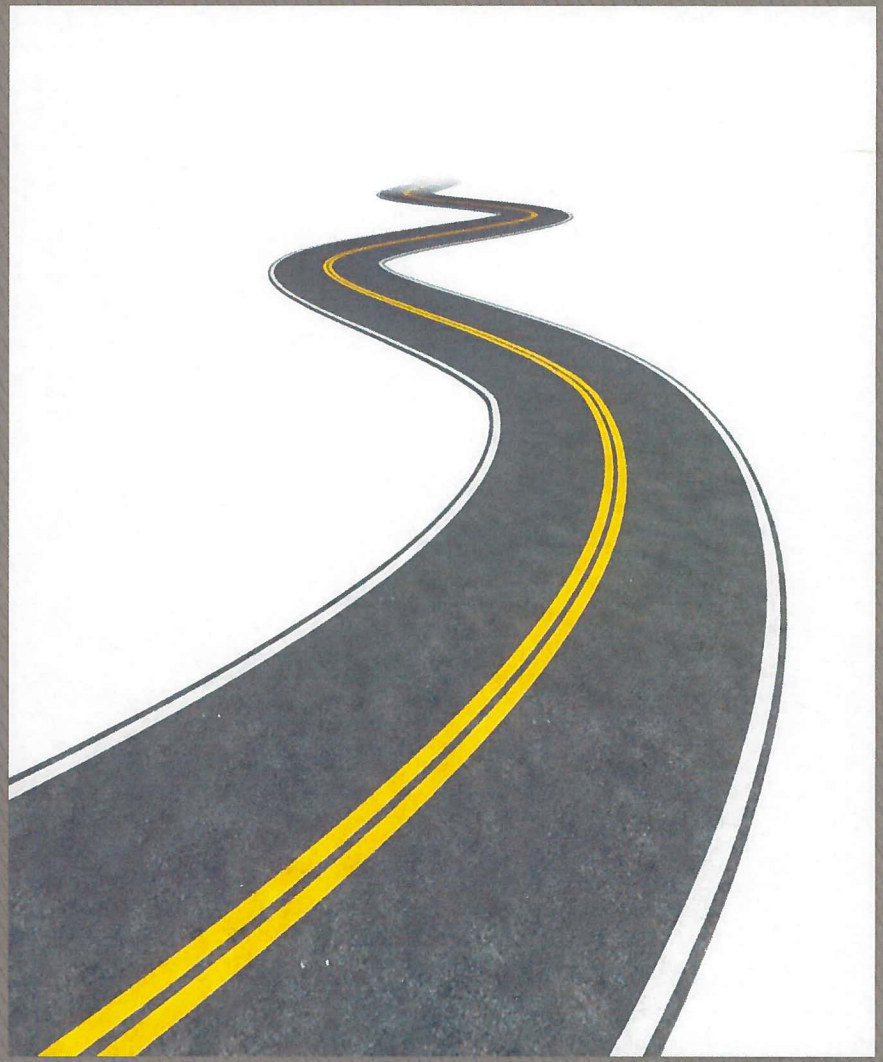
Evaluation of 2013 Road Program

- Substantial surface patching
- Differs from the approach of other Local Villages
- Overall unit prices were reasonable



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Potential Cost Savings

- Combine road programs with other communities
- Pursue grants and outside funding
- Invest in more substantial pavement improvements to provide longer serviceable road life

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Road Program Recommendations

- PCI Ratings used as starting point
- Option 1: Roads grouped geographically
  - Lowers ultimate bid prices
  - Limits number of residents affected
- Option 2: Roads grouped strictly off PCI
  - Roads repaired solely in order of distress severity
- Typical Sections
  - Patching (4"-6"), Leveling Binder (1"), Surface (2")
  - Full Depth Reclamation, Binder (2.25"), Surface (2")
  - Very Similar SY price for both Options

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Option 1

PROGRAMMED IMPROVEMENTS
VILLAGE OF LONG GROVE
2016 ROAD PROGRAM

GEWALT HAMILTON ASSOCIATES, INC.

Subdivision or Collector	Street	From	To	Length (ft)	Width (ft)	Area (sy)	PCI	2016 Rehabilitation Cost	2015 Rehabilitation Cost
MardenEst	Monitor	Middlesax Dr	Allison Ln	535	24	1427	1	$48,849.07	$45,653.33
MardenWood	EMardan	cra	Monitor Ln	1834	21	4279	1	$146,524.37	$136,938.67
MardenWood	WMardan	Mardan Dr	Monitor Ln	1943	20	4318	2	$147,840.71	$138,168.89
MardenWood	Monitor Ln	Hidden Valley	Middlesax Dr	1659	19	3502	4	$119,919.89	$112,074.67
Skycrest	Hilltop	IL Rt 83	Terminus	2343	19	4946	4	$169,362.45	$158,282.67
MardenEst	Middlesax	IL Rt 53	Monitor Ln	951	22	2325	9	$79,596.59	$74,389.33
MardenEst	Monticello	Middlesax Dr	Terminus	583	16	1036	9	$35,487.86	$33,166.22
MardenWood	Mardan	IL Rt 53	E/W Mardan Dr	260	22	636	10	$21,761.42	$20,337.78
Skycrest	Golf	Hilltop Rd	Sunshine Ln	846	15	1410	10	$48,278.40	$45,120.00
MardenEst	Mayflower	Middlesax Dr	Terminus	319	16	567	11	$19,417.88	$18,147.56
Skycrest	Sunshine	Golf Rd	Terminus	473	15	788	11	$26,992.53	$25,226.67
MardenEst	Merrimac	Middlesax Dr	Terminus	580	18	1160	17	$39,718.40	$37,120.00

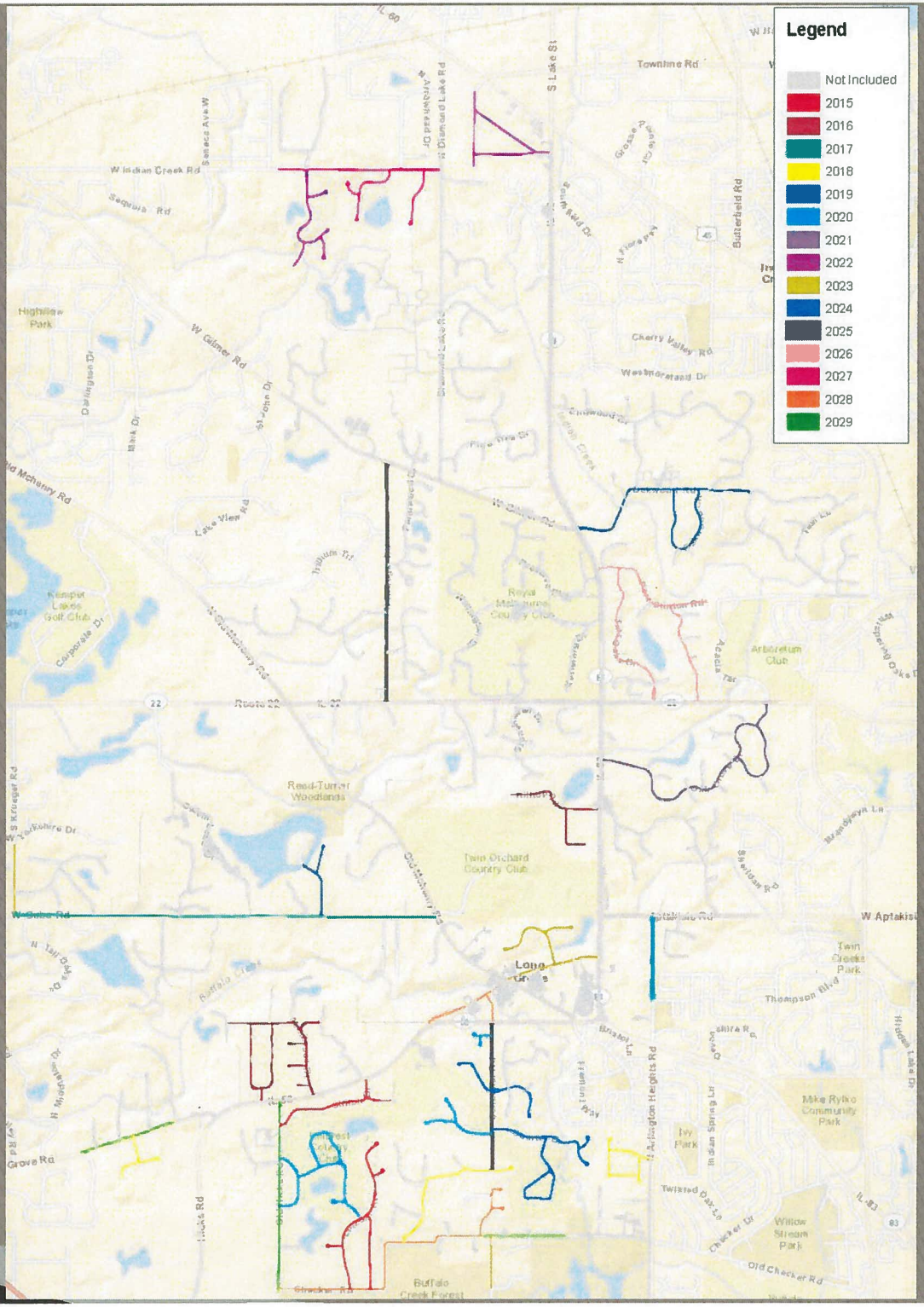
7% Annual Inflation Compounded:		$59,123.80
Construction Cost:	$903,749.58	$844,625.78
8% Engineering:	$72,299.97	$67,570.06
7% Contingency:	$63,262.47	$59,123.80
Total:	**$1,039,000.00**	**$971,000.00**

(Note: Totals Rounded to nearest $1,000)

Total Length (FT)	12326
Total Length (Miles)	2.33

GEWALT HAMILTON ASSOCIATES, INC.

Road Program: Option 1



Option 1

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget (7% Inflation)
2015	$976,000	$976,000
2016	$971,000	$1,039,000
2017	$945,000	$1,082,000
2018	$931,000	$1,141,000
2019	$913,000	$1,197,000
2020	$1,010,000	$1,417,000
2021	$848,000	$1,272,000
2022	$967,000	$1,552,000
2023	$864,000	$1,484,000
2024	$920,000	$1,691,000
2025	$885,000	$1,740,000
2026	$966,000	$2,034,000
2027	$926,000	$2,085,000
2028	$1,042,000	$2,511,000
2029	$983,000	$2,536,000
Total Expenditures (2015 dollars)- $14,147,000 Total Expenditures (Adjusted) - $23,757,000 2015-2029 Mileage Rehabilitated 28.99 Miles		

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Option 2

PROGRAMMED IMPROVEMENTS
VILLAGE OF LONG GROVE
2016 ROAD PROGRAM

GEWALT HAMILTON ASSOCIATES, INC.

Subdivision or Collector	Street	From	To	Length (ft)	Width (ft)	Area (sy)	PCI	2016 Rehabilitation Cost	2015 Rehabilitation Cost
Collector	Oakwood	IL Rt 83	Partridge Ln	4344	24	11584	2	$396,636.16	$370,688.00
CCEstates	Shenandoah	Lincoln Ave	Checker Rd	1838	22	4493	3	$153,836.52	$143,772.44
CCEstates	Sheridan	Shiloh Dr	Stayton Ln	911	22	2227	3	$76,248.68	$71,260.44
CCEstates	Shiloh	Old Hicks Rd	IL Rt 53	2773	22	6778	3	$232,093.94	$216,910.22

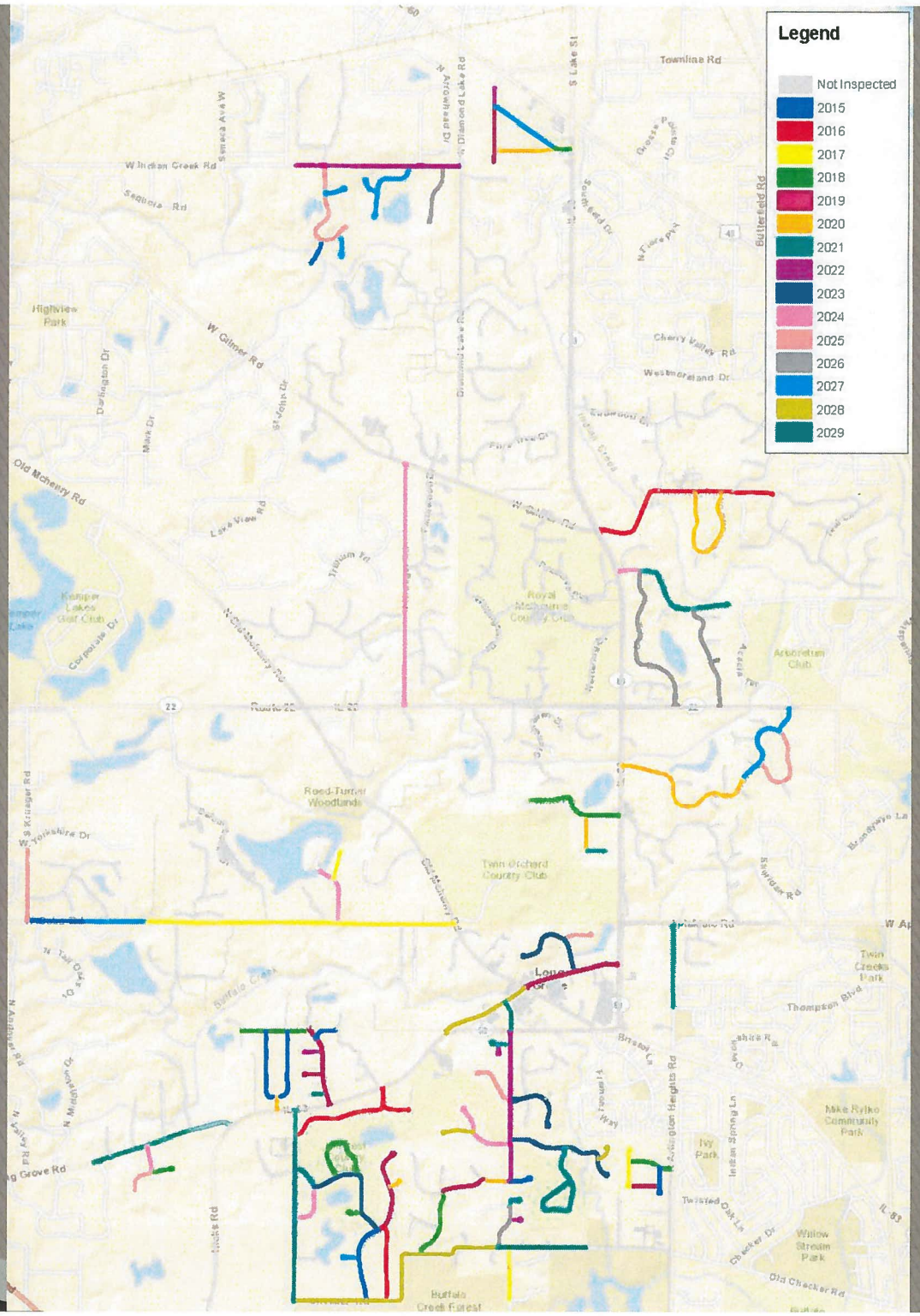
7% Annual Inflation Compounded:		$56,184.18
Construction Cost:	$858,815.29	$802,631.11
8% Engineering:	$68,705.22	$64,210.49
7% Contingency:	$60,117.07	$56,184.18
Total:	**$988,000.00**	**$923,000.00**

(Note: Totals Rounded to nearest $1,000)

Total Length (FT)	9866
Total Length (Miles)	1.87

GEWALT HAMILTON ASSOCIATES, INC.

Road Program: Option 2



Option 2

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget (7% Inflation)
2015	$847,000	$847,000
2016	$923,000	$988,000
2017	$922,000	$1,055,000
2018	$915,000	$1,122,000
2019	$935,000	$1,226,000
2020	$1,003,000	$1,407,000
2021	$958,000	$1,438,000
2022	$888,000	$1,426,000
2023	$908,000	$1,560,000
2024	$1,405,000	$1,921,000
2025	$933,000	$1,835,000
2026	$922,000	$1,942,000
2027	$971,000	$2,187,000
2028	$952,000	$2,294,000
2029	$1,024,000	$2,640,000
Total Expenditure (2015 dollars)- $14,147,000		
Total Expenditure (Adjusted) - $23,888,000		
2015-2029 Mileage Rehabilitated 28.99 Miles		

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Federal Funding Potential

- Takes 15-18 months for Phase I and Phase II Process
- FAU Designated Routes (Potential 50% Savings)*
  - Cuba Road $410k
  - Indian Creek $165k
  - Long Grove Road $165k
  - * Did not Include Arlington Heights Road
- Option 1A Includes the $740k savings spread evenly over 15 years.

- Potential FAU Routes
  - N. Krueger $230k
  - S. Krueger $30k
  - Need to go through the designation process
- Option 1B Includes the $1 million dollars in savings spread evenly over 15 years.

Option 1A

$740,000 Federal Dollars = $1,424,000 Cost Savings

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget (7% Inflation)
2015	$919,000	$919,000
2016	$915,000	$979,000
2017	$888,000	$1,017,000
2018	$874,000	$1,071,000
2019	$856,000	$1,122,000
2020	$954,000	$1,337,000
2021	$791,000	$1,187,000
2022	$910,000	$1,461,000
2023	$807,000	$1,387,000
2024	$863,000	$1,587,000
2025	$828,000	$1,629,000
2026	$910,000	$1,915,000
2027	$869,000	$1,958,000
2028	$985,000	$2,375,000
2029	$927,000	$2,389,000

Total Expenditures (2015 dollars)- $13,296,000

*Total Expenditures (Adjusted) - $22,333,000

2015-2029 Mileage Resurfaced- 28.99 Miles

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Option 1B

$1,000,000 Federal Dollars = $1,926,000 Cost Savings

Year	Preliminary Budget (2015 dollars)*	Adjusted Preliminary Budget (7% Inflation)
2015	$899,000	$899,000
2016	$895,000	$957,000
2017	$868,000	$994,000
2018	$854,000	$1,047,000
2019	$836,000	$1,096,000
2020	$934,000	$1,309,000
2021	$771,000	$1,157,000
2022	$890,000	$1,429,000
2023	$787,000	$1,352,000
2024	$843,000	$1,551,000
2025	$808,000	$1,589,000
2026	$890,000	$1,873,000
2027	$849,000	$1,913,000
2028	$965,000	$2,327,000
2029	$907,000	$2,338,000
Total Expenditures (2015 dollars)- $12,996,000		
*Total Expenditures (Adjusted) - $21,831,000		
2015-2029 Mileage Resurfaced- 28.99 Miles		

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Conclusions

- PCI Ratings allow for comparative assessment
- 15-Year Program to be used as a tool for planning and budgeting
- Potential Annual Savings (2014 dollars)
  - Federal Funding ($67,000)
  - Combine Road Program with Other Agencies ($43,000)
  - Reduction in Engineering Fee (2% Non FAU Routes) ($18,000)

Potential Cumulative Annual Savings $128k

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Questions