

**Charter Township of Flint**  
**4 YEAR IMPROVEMENT PLAN**  
**For the Local Road System**  
**2013-2016**

**Developed in Cooperation between**  
**Charter Township of Flint**  
**And**  
**Genesee County Road Commission**

Charter Township of Flint  
4 YEAR IMPROVEMENT PLAN  
For the Local Road System 2013-2016

**Introduction**

The following is the proposed Road Improvement Plan for Charter Township of Flint. Although the Plan focuses on the local road system, including limestone roads and the ditches that are integral part of the system, it also encompasses Primary Roads. It does so because, while improvements on the Primary system are prioritized by the Genesee County Road Commission, they are subject to inclusion in the County-wide Transportation Improvement Plan (TIP) and largely beyond the Township's control, the Primary system is a significant part of the Township's transportation system.

Charter Township of Flint is adopting this 4 Year Local Road Plan to assist in the prioritization of its Local road maintenance and construction program. The overarching goal of the plan is to slow the deterioration of the road network. This plan can be revised each fiscal year. During the process of developing the plan several issues are considered. Priorities for chip sealing roads within the townships road network are reassessed each year.

Roads are reviewed and the plan updated annually since some roads may deteriorate quicker than expected, while others may be able to be deferred. Flint Township Road Advisory Committee, with the assistance of Genesee County Road Commission has established a priority system road network. Priorities for these roads are set based on traffic volumes, crash history and the year material was last added. This plan will help the advisory committee in making their recommendations to Township Board to ensure that adequate maintenance is undertaken on its local road network each year.

This plan is divided into three (3) sections and an appendix.

**Section 1. Provides an overview of the township, its road systems and what the township anticipates to accomplish with its Road Improvement Plan.**

It describes the trend of the surface condition of the local roads over the past several years. It briefly describes the criteria officials used to select projects.

**Section 2. Contains a list of all the Paved Local and Primary Roads in the Township.**

Sorted by PASER (Road Rating System) Rating, which is also briefly described here. These lists are useful in helping determine which Local roads and Primary roads the Township and the Road Commission respectively will work on in each year of the plan. Because the lists contain all roads, they help illustrate the “**BIG PICTURE**” of road conditions in the Township.

**Section 3. List of proposed projects sorted by year and type of improvement to be done.**

For the Primary roads system, which is completely maintained by the Road Commission, the list contains only those projects which have been selected and prioritized by the Road commission and chosen for inclusion in the County wide TIP. Some might consider this section to be the actual “plan”.

**The Plan also includes Appendixes, which contains a listing of the various “fixes” that were considered for the roads in the Paved Local Road System (PASER). Also included is “Bylaws of The Charter Township Flint Road Advisory Committee“.**

It is included to show the great variety of maintenance techniques that are available, and the PASER rating of each segment is used to select appropriate fixes. This list also shows the wide range in the cost of these fixes. And makes the value of the comparatively low cost “preservation” techniques quite clear. This is an asset management approach to road maintenance which considers “the right fix at the right place at the right time.”



## SECTION 1 Background

Roads in Charter Township of Flint can be looked at several different ways. One way is by Act 51 Designation. That is, whether the road is a State trunk line, a County Primary Road or a County Local Road.

### **Act 51 Designation**

In Charter Township of Flint, as in most of the townships in Genesee County, there are many more County Local road miles than County Primary miles. **This is significant because County Primary roads are eligible for Federal Aid funding while County Local roads are not.** Furthermore, state law requires that some entity other than the Genesee Road Commission pay at least 50% of the cost of major reconstruction projects on local roads. In this report, which focuses on the local road network, local roads are defined as all public County roads that are outside incorporated cities and villages and are not eligible for federal aid funding.

In Charter Township of Flint there are 34.73 miles of State Trunkline, 42.41 miles of County Primary , and 171.14 miles of County Local.

### **Subdivision Streets**

Another useful way to look at local roads in Genesee County is to consider whether they are subdivision (neighborhood, residential) streets, or the more "mainline" local roads (the mile-type roads). The subdivision streets typically provide more of an access to property function while the mainline local roads function more as through streets. It is important to make this distinction because subdivision streets are built to different standards, have their own usage and wear patterns, and are funded differently than the mainline local roads.

Although the township share's responsibility with the Genesee Road Commission for both mainline local roads and subdivision streets, the Road Commission spends Act 51 maintenance funds to maintain the mainline locals, while maintenance of the subdivision streets is largely the responsibility of the township and the residents. The Road Commission pays only for engineering and inspection of subdivision streets. Nearly all maintenance on these roads is paid by special assessment and/or road millage funds by the adjacent property owners. In Charter Township of Flint, over 68.2% of the Local Road mileage is Subdivision streets.

## **Surface Type**

The road network can also be divided by surface type. Roads may be “paved”, meaning they are hard surfaced with asphalt or concrete (or brick in a few cases, or composite), or they may be “unpaved”, surfaced with gravel, limestone, dirt or earth. This is important when considering PASER ratings, because while paved roads generally follow a fairly well established deterioration process over time, unpaved roads do not. Unpaved roads can change significantly in a very short time under certain conditions of weather and use. For such unstable surfaces, comparison of PASER rating over time is meaningless, and prediction of future surface condition on these roads is impossible.

For this reason the Asset Management Council decided not to collect PASER data on unpaved roads. The Genesee County Road Commission agrees with this position, and beginning in 2006 rates only its paved road system. This is worth noting, particularly when you consider that such a large percentage of the roads in some townships are unpaved . In Charter Township of Flint approximately 83.6% of the Local road system are paved.

## **SECTION 2 Paved Local Roads by PASER Rating**

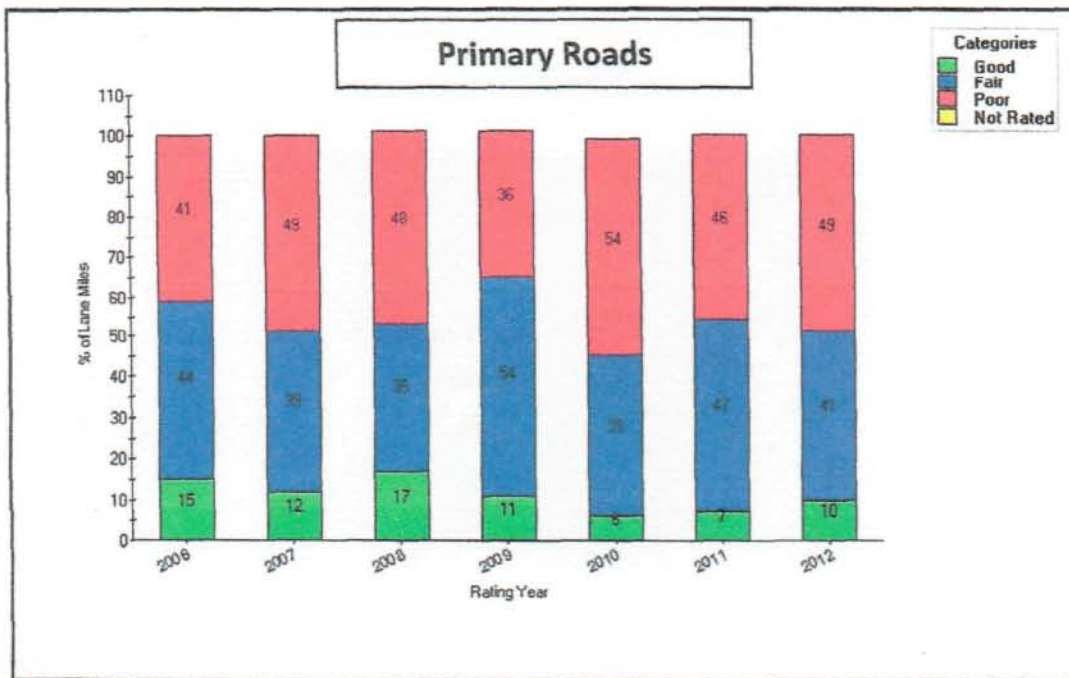
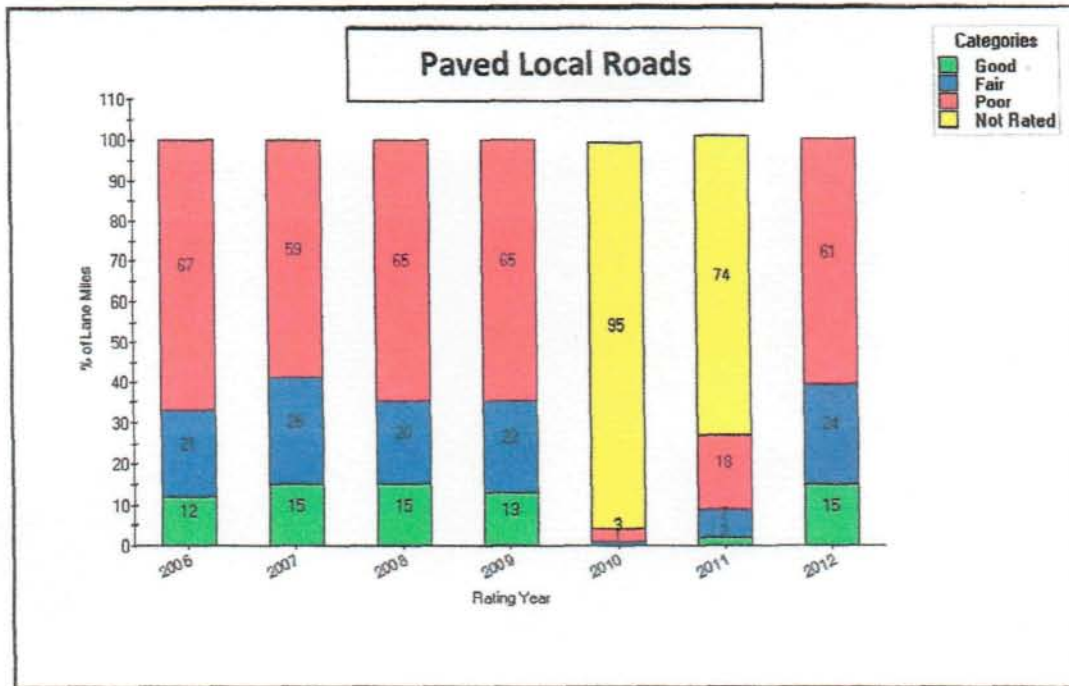
### **Trend**

Local roads in Charter Township of Flint, like many roads in Michigan, have seen some deterioration over the past decade as lack of adequate funding resulted in delayed or deferred maintenance. Road maintenance done as a result of careful stewardship of limited funding did keep many paved local roads in a condition where further preservation techniques are still possible.

The following graphs show the condition of the Township's Local and Primary roads systems from 2006 through 2012 as reflected in the percent of the system rated Good (PASER 8-10, green), Fair (PASER 5-7, blue), and Poor (PASER 1-4, red). The Local road system was not rated in 2010, as indicated by the yellow bar for that year in the top graph.



# Flint Township Surface Condition Trend 2006 – 2012



The following is a list of all the Paved Local roads in the township, sorted by 2012 PASER rating. Unpaved (limestone/gravel) roads are not included on the list because they are not rated. The Michigan Transportation Asset Management Council (TAMC) which promotes and oversees the use of the PASER rating system determined several years ago that because the condition of some unpaved roads can change literally overnight. Nevertheless, unpaved roads are a significant part of the Township's Local road system therefore, are included in part of this Plan.



## Charter Township of Flint Paved Local Roads

### 2012 PASER Ratings

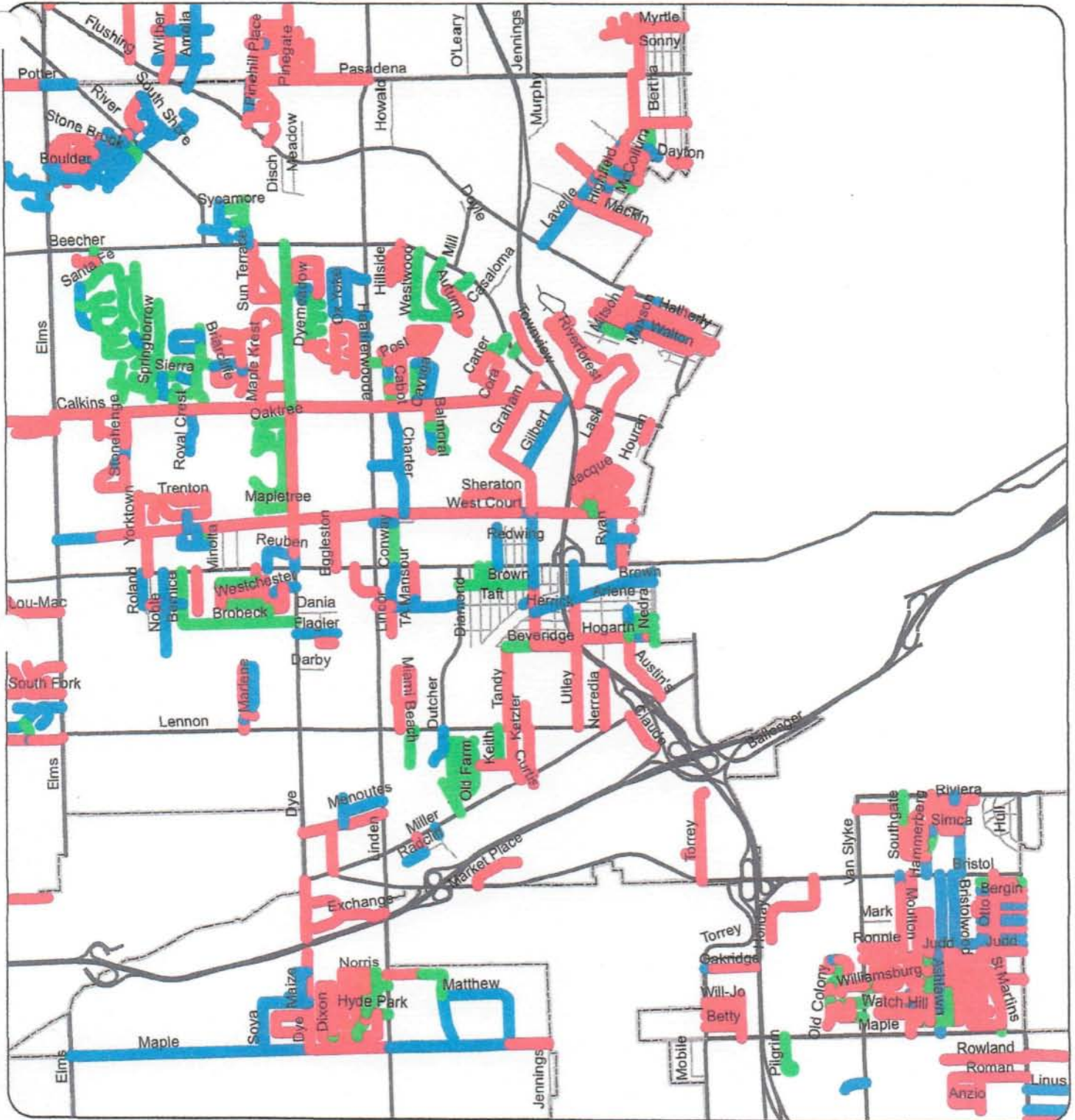
<u>SegmentNam</u>	<u>FromDesc</u>	<u>ToDesc</u>	<u>Rating</u>	<u>Length</u>
Beveridge Rd	S Graham Rd	Lodge Rd	3	0.127
Beveridge Rd	Lodge Rd	Utley	3	0.126
Calkins Rd			3	0.279
Calkins Rd	Ramsgate	Stonehenge Rd	3	0.164
Calkins Rd	Stonehenge Rd	Vivian Trl	3	0.314
Calkins Rd	Vivian Trl		3	0.189
Calkins Rd	Western Hills	S Dye Rd	3	0.543
Claude Ave	Miller		3	0.252
W Court St	west part is asphalt 9 rating; east part is se	Yorktown Dr	3	0.244
W Court St	Yorktown Dr	Dorellen Ave	3	0.044
W Court St	Dorellen Ave	east part is sealcoat over asphalt at 8 rating	3	0.18
W Court St	east part is sealcoat over asphalt at 8 rating	Danbury Dr	3	0.083
W Court St	Danbury Dr	Voller Dr	3	0.056
W Court St	Voller Dr	Mintola St	3	0.161
W Court St	west part is sealcoat at 6 rating	S Dye Rd	3	0.189
W Court St	S Dye Rd	Eggleston Ave	3	0.257
W Court St	Eggleston Ave	Linden	3	0.145
W Court St			3	0.104
W Court St	Linden	Conway St	3	0.127
W Court St	Conway St	Charter Dr	3	0.065
W Court St	Charter Dr	Benard St	3	0.053
W Court St	Benard St	Krsul Dr	3	0.348
W Court St	Krsul Dr	Greenridge	3	0.311
S Dye Rd		Exchange Dr	3	0.06
S Dye Rd	Exchange Dr	Commerce	3	0.167
S Dye Rd	Commerce	Miller	3	0.093
S Dye Rd			3	0.05
Dye Rd	Maple	Sagamore Dr	3	0.142
Dye Rd	Sagamore Dr	Northway	3	0.066
Dye Rd	Northway		3	0.332
Dye Rd	Rhine	Tokay	3	0.027
Dye Rd	Tokay		3	0.033
Fleckenstein Dr			3	0.284
Lynton Ave	Van Slyke		3	0.25
Mackin Rd	Janet Higgins	City/Twp Line	3	0.098
Mackin Rd	City/Twp Line	City/Twp Line	3	0.086
Mackin Rd	City/Twp Line	City/Twp Line	3	0.044
Mackin Rd	City/Twp Line	Highfield Ave	3	0.104
Mackin Rd	Highfield Ave	Lavelle	3	0.149
Maple Ave	Mount Vernon Pass	New Chip seal	3	0.044
Maple Ave	New Chip seal	Linden	3	0.155
Norko Dr	Fleckenstein Dr	Oneal Dr	3	0.083
Norko Dr	Oneal Dr		3	0.261
Utley Rd	Hogarth	Larchmont Ave	3	0.064
Utley Rd	Larchmont Ave	Clairmont Ave	3	0.048
Utley Rd	Clairmont Ave	Herrick	3	0.065

Utley Rd	Herrick	Arlene Ave	3	0.058
Utley Rd	Arlene Ave	Augusta	3	0.023
Utley Rd	Lennon	Beveridge	3	0.508
			<b>3 Total</b>	<b>7.655</b>
Calkins Rd	S Dye Rd	Cabot Dr	4	0.634
Calkins Rd	Cabot Dr	Graham	4	0.848
Calkins Rd	Graham	Beecher	4	0.204
W Court St	Mintola St	west part is sealcoat at 6 rating	4	0.259
W Court St		S Graham Rd	4	0.011
W Court St			4	0.201
W Court St	Bridge 2500	Court Cir	4	0.072
W Court St	Court Cir	Foxboro Ln	4	0.095
W Court St	Foxboro Ln	Court Cir	4	0.025
W Court St	Court Cir	Ryan St	4	0.09
W Court St	Ryan St	Houran	4	0.066
W Court St	Houran	Media	4	0.063
W Court St	Media	City/Twp Line	4	0.01
Maple Ave	Dye Rd	Mount Vernon Pass	4	0.299
Norko Dr		Fleckenstein Dr	4	0.177
Utley Rd	Augusta	Canadian National Railway	4	0.038
Warner Rd	Flushing	Pinewood	4	0.046
			<b>4 Total</b>	<b>3.138</b>
W Court St	Greenridge	Graham	5	0.082
Maple Ave	Elms	Soya Ave	5	1.22
Maple Ave	Soya Ave	Dye Rd	5	0.288
			<b>5 Total</b>	<b>1.59</b>
W Court St	S Graham Rd	Bridge 2500	6	0.01
W Maple Ave	Jennings	Airport Entrance	6	0.037
W Court St	City/Twp Line	Sunday St	6	0.073
			<b>6 Total</b>	<b>0.12</b>
W Court St	Elms	west part is asphalt 9 rating; east part is se	7	0.277
Gilbert Rd	Graham	Beecher	7	0.517
Ryan St	Corunna	Orr St	7	0.163
Ryan St	Orr St	Court	7	0.162
Utley Rd	Canadian National Railway	Brown St	7	0.051
Utley Rd	Brown St	Corunna	7	0.12
Warner Rd	Pinewood	Redwood Dr	7	0.147
Warner Rd	Redwood Dr	Pasadena	7	0.065
			<b>7 Total</b>	<b>1.502</b>
Beveridge Rd	Tandy	Lambden Rd	9	0.067
Beveridge Rd	Lambden Rd	S Graham Rd	9	0.116
			<b>9 Total</b>	<b>0.183</b>
			<b>Grand Total</b>	<b>14.188</b>



# 2012 Paser Ratings Paved Local Roads

Flint Township



1 inch = 4,500 feet

### Legend

#### PASER SURFCOND

- █ Structural Improvement
- █ Capital Preventative Maintenance
- █ Routine Maintenance

#### County Mainlines Road\_Sys, Type\_Road

- Primary, Paved
- Local, Paved
- Local, Unpaved

#### Sub\_Streets ROAD\_TYPE

- Paved
- Unpaved
- Other



The following is a list of all primary roads in the Township, sorted by the Road Commission's project Priority Scoring System. In addition to PASER rating, this system takes into account the traffic volume on the segment (which isn't usually available for Local roads) and the year of last improvement. The Road Commission selects candidate projects from this and presents them to the County Metropolitan Planning Commission (MPO) where they compete for federal aid funding and inclusion on the County-wide Transportation Improvement Program (TIP) with projects presented by the various cities and villages and the Michigan Department of Transportation. Given this lack of Township control of funding for these roads, they cannot be included in the listing of Local road system projects in this plan.

# Local Road Rating Flint Township 2012

<u>TotalPnts</u>	<u>FENAME</u>	<u>LOCATION</u>	<u>Length</u>	<u>ADT</u>	<u>ADT Pnts</u>	<u>DIFF</u>	<u>HIST</u>	<u>HIST PNTS</u>	<u>LaneWidth</u>	<u>LanePnts</u>	<u>PASER</u>	<u>PaserPnts</u>	<u>TotalPnts</u>
85	Dye	Reuben St to W. Court St	0.208	8218	15	10	20	10	10	3	40	85	
85	Graham	Gilbert St to Calkins Rd	0.613	7522	15	17	20	10	10	3	40	85	
80	Graham	W. Court St to 550' N.	0.104	7522	15	11	20	12	5	3	40	80	
80	Graham	550' N. of W. Court St to Gilbert St	0.177	6206	10	17	20	10	10	3	40	80	
75	Beveridge	Tandy Dr to Graham Rd	0.183	0	0	15	20	15	5	2	50	75	
75	Graham	Corunna Rd to 475' S. of W. Court St	0.243	11207	20	21	20	12	5	4	30	75	
75	Graham	475' S. of W. Court to W. Court St	0.090	11207	20	11	20	12	5	4	30	75	
75	Mackin	Lavelle Rd E'ly to Flint	0.481	2281	5	21	20	10	10	3	40	75	
75	West Court	Graham Rd E'ly 450'	0.085	9043	20	11	20	13	5	4	30	75	
70	Beveridge	Graham Rd to Utley Rd	0.253	0	0	15	20	10	10	3	40	70	
70	Dye	I-69 to Miller Rd	0.370	1736	5	30	20	13	5	3	40	70	
70	Dye	W. Court St to Calkins Rd	0.711	448	0	10	20	10	10	3	40	70	
70	Graham	Beveridge Rd to Corunna R	0.501	1753	5	16	20	12	5	3	40	70	
70	Graham	Calkins Rd to Beecher Rd	0.140	0	0	17	20	10	10	3	40	70	
70	Lavelle	Begole St to Pasadena Ave	0.621	7003	15	42	20	15	5	4	30	70	
70	Lavelle	Flushing Rd to Mackin Rd.	0.350	7139	15	12	20	15	5	4	30	70	
70	Lavelle	Mackin Rd to Begole St	0.277	6861	15	12	20	15	5	4	30	70	
70	Utley	Lennon Rd to Beveridge Rd	0.508	0	0	17	20	10	10	3	40	70	
70	West Court	450' W of Graham to Graham Rd	0.085	8481	15	11	20	13	5	4	30	70	
65	Claude	Miller Rd S'ly to end	0.252	56	0	35	20	15	5	3	40	65	
65	Dye	Maple Ave to I-69	0.600	0	0	10	20	13	5	3	40	65	
65	Lynton	Van Slyke Rd E'ly to end	0.250	0	0	32	20	13	5	3	40	65	
65	Norko	Dye Rd to Linden Rd	0.521	1609	5	17	20	0	0	3	40	65	
65	Utley	Hogarth St to Corunna Rd	0.467	0	0	17	20	15	5	3	40	65	
60	Torrey	Bristol Rd N'ly to end	0.560	2368	5	43	20	12	5	4	30	60	
60	West Court	Dye Rd to Linden Rd	0.506	5715	10	5	0	10	10	3	40	60	
60	West Court	Ryan St to Flint City Limits	0.205	9348	20	5	0	10	10	4	30	60	
60	West Court	450' E. of Graham Rd to Ryan St	0.418	9043	20	5	0	10	10	4	30	60	
55	West Court	Linden Rd to 450' W. Graham	0.912	7510	15	5	0	10	10	4	30	55	
50	Calkins	Dye Rd to Linden Rd	0.503	4810	10	5	0	10	10	4	30	50	

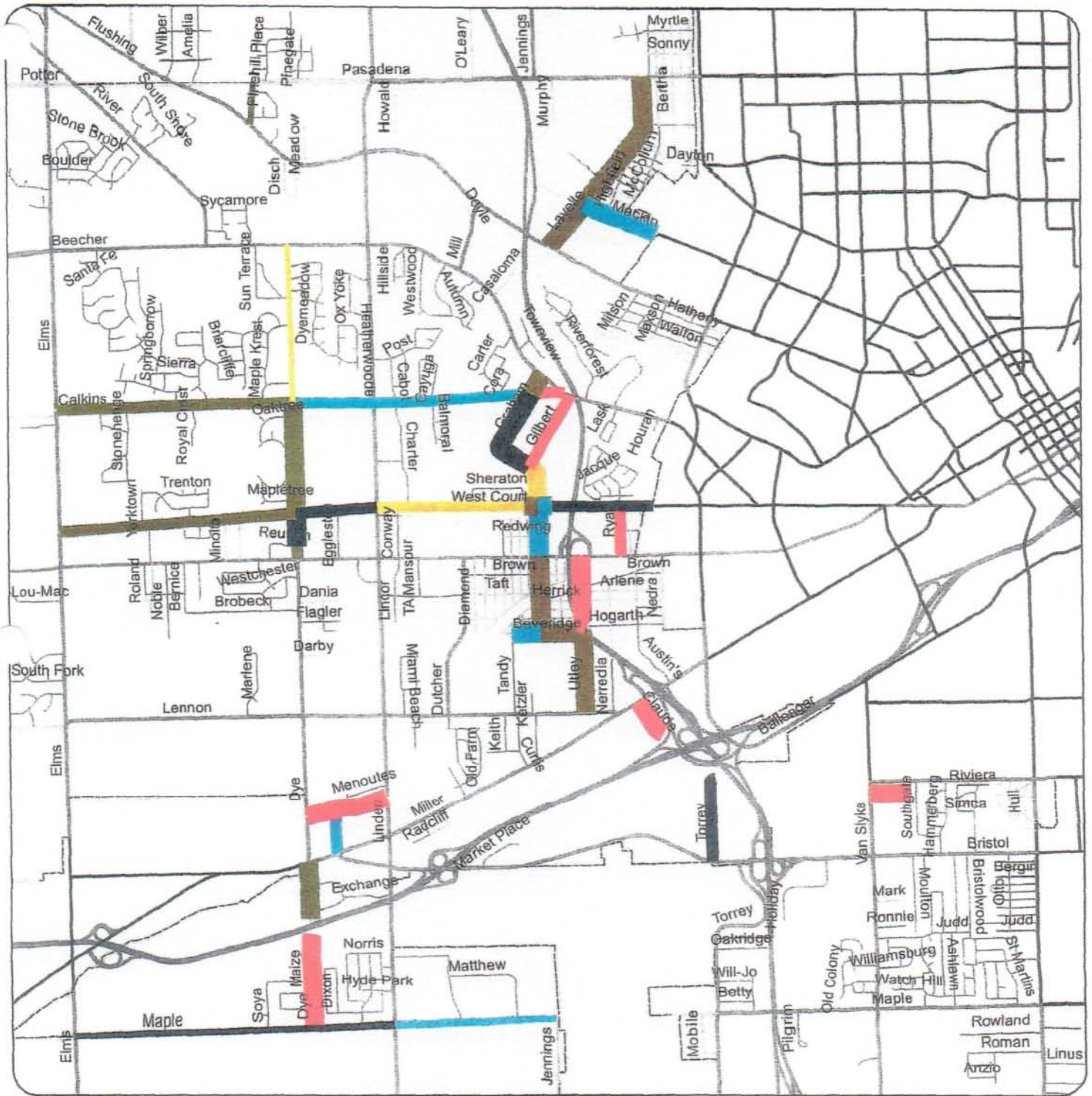
# Local Road Rating Flint Township 2012

<u>TotalPnts</u>	<u>FENAME</u>	<u>LOCATION</u>	<u>Length</u>	<u>ADT</u>	<u>ADT Pnts</u>	<u>DIFF</u>	<u>HIST</u>	<u>HIST PNTS</u>	<u>LaneWidth</u>	<u>LanePnts</u>	<u>PASER</u>	<u>PaserPnts</u>	<u>TotalPnts</u>	
<b>50</b>	Calkins	Linden Rd to Graham Rd	0.979	5247	<b>10</b>		5	<b>0</b>	10	<b>10</b>		4	<b>30</b>	<b>50</b>
<b>50</b>	Fleckenstein	Miller Rd to Norko Dr	0.284	958	<b>0</b>		17	<b>20</b>	0	<b>0</b>		4	<b>30</b>	<b>50</b>
<b>45</b>	Calkins	Elms Rd to Dye Rd	1.489	2595	<b>5</b>		5	<b>0</b>	10	<b>10</b>		4	<b>30</b>	<b>45</b>
<b>45</b>	Dye	Corunna Rd to Reuben St	0.091	0	<b>0</b>		10	<b>20</b>	12	<b>5</b>		5	<b>20</b>	<b>45</b>
<b>45</b>	West Court	Elms Rd to Dye Rd	1.493	1859	<b>5</b>		5	<b>0</b>	10	<b>10</b>		4	<b>30</b>	<b>45</b>
<b>30</b>	Calkins	Graham Rd to Beecher Rd	0.204	0	<b>0</b>		5	<b>0</b>	0	<b>0</b>		4	<b>30</b>	<b>30</b>
<b>30</b>	Gilbert	Graham Rd to Beecher Rd	0.517	3152	<b>5</b>		13	<b>20</b>	11	<b>5</b>		7	<b>0</b>	<b>30</b>
<b>30</b>	Ryan	Corunna Rd to W. Court St	0.325	0	<b>0</b>		13	<b>20</b>	10	<b>10</b>		7	<b>0</b>	<b>30</b>
<b>25</b>	Maple	Dye Rd to Linden Rd	0.498	2253	<b>5</b>		3	<b>0</b>	10	<b>10</b>		6	<b>10</b>	<b>25</b>
<b>25</b>	Maple	Elms Rd to Dye Rd	1.508	1351	<b>5</b>		3	<b>0</b>	10	<b>10</b>		6	<b>10</b>	<b>25</b>
<b>20</b>	Dye	Calkins Rd to Beecher Rd	1.020	5057	<b>10</b>		2	<b>0</b>	10	<b>10</b>		9	<b>0</b>	<b>20</b>
<b>15</b>	Maple	Linden Rd to Jennings Rd	1.003	297	<b>0</b>		6	<b>0</b>	11	<b>5</b>		6	<b>10</b>	<b>15</b>
<b>5</b>	Warner	Flushing Rd to Pasadena R	0.258	0	<b>0</b>		2	<b>0</b>	12	<b>5</b>		7	<b>0</b>	<b>5</b>



# 2011 Local Road Ratings Paved Local Roads

Flint Township



1 inch = 4,500 feet

### Legend

TotalPnts	Color	County Mainlines	Sub_Streets
85	Dark Grey	30	ROAD_TYPE
80	Yellow	25	Primary, Paved
75	Blue	20	Local, Paved
70	Brown	15	Local, Unpaved
65	Red	10	Paved
60	Dark Grey	5	Unpaved
55	Yellow	5	Other
50	Blue		
45	Brown		

**SECTION 3 List of Projects by Year**

The Preservation scenario, adjusted for local references, inclusion of other road needs, opportunities and constraints, is listed in the following pages. This 3 Year Road Improvement Plan is recommended for approved by the Charter Township of Flint Board. The first 3 years of this plan will be approved by Genesee County of Road Commissioners in fulfillment of the requirements for receipt of funding.

### Charter Township Of Flint 4 Year Road Improvement Plan

The list contains projects using the following money: road millage funds, 50-50 funds, and CDBG. The total cost of a project may not be reflected by the dollar amount as some totals include matching funds from GCRC. Colors under road heading are road groupings in one area each year. Colors under treatment heading are for re-occurring yearly improvements

Year	Treatment	Road	From	To	Paser Rating	Length	Estimated Cost road Funds	Comment
2013	Widen and resurface	Dye	Court	Calkins	3		\$60,000	Total cost \$105,771.09 using 50-50
	Paving & Milling	Dye Meadows	Briarcrest	Scenicvue	2	0.5	\$115,698	These streets are grouped as one estimate. This reduces drop fees.
	Paving & Milling	Senicvue	Dye	Dye Meadows	2	0.208		
	Paving & Milling	Heatherwoode rd	Millcreek	Northgate	2	0.159		
	Paving & Milling	Squire Hill	Dye	Dye Meadows		0.208		
	Paving & Milling	Heatherwoode ct	Heatherwoode rd	x	2	0.039		
	Paving & Milling	Lancaster	Danbury	Just east of Trenton	2	0.2	\$69,367	Near corner
	Paving & Milling	Yorktown	Danbury	around corner to Cul-de-sac		0.21		
	Paving & Milling	Dyekrest	Dye	Maplekrest	3	0.165	\$79,108	
	Paving & Milling	Maplekrest	Dye	Dyekrest	3	0.496		
	Signal improvement	Dutcher	at Lennon Rd				\$7,320	Signal improvement
	Snow Removal	Snow plow					\$27,500	pilot
	Crack seal	Various locations					\$10,000	
Total 2013					Total Estimate		\$368,993	Budget projections \$375,000

12/31/2012



Year	Treatment	Road	From	To	Paser Rating	Length	Estimated Cost road Funds	Comment
2014	Paving & Milling	Calkins	Linden	Graham	4	1	\$113,000	Possible 50-50 money to reduce millage expense
	Paving & Milling	Rivera	Renault	Van Camp Rd	2	0.192	\$111,273	These streets are grouped as one estimate. This reduces drop fees.
	Paving & Milling	Simca	Renault	Van Camp Rd	2	0.1		
	Paving & Milling	Renault	Rivera	Simca	2	0.184		
	Paving & Milling	Catalina	Renault	Van Camp Rd	2	0.125		
	Paving & Milling	Bel Air	Renault	Van Camp Rd	2	0.127		
	Paving & Milling	River Valley			2			
	Paving & Milling	River Forest			2		? CDBG	then asphalt over
	Paving & Milling	Cambrian	Meadowcrest	Westchester	2	0.136	\$66,000	
	Paving & Milling	Litchfield	Kenwood	Cambrian	2	0.239		
	Snow Removal	Snow plow					\$27,500	pilot
Total 2014							\$290,273	Budget projections \$223,000 + 50-50 money

12/31/2012

Year	Treatment	Road	From	To	Paser Rating	Length	Estimated Cost	Comment
2015	Paving & Milling	Calkins	Elms	Dye	4	1.5	\$166,000	Possible 50-50 money to reduce millage expense
	Paving & Milling	Townview	Both ways from Daleview		2	0.312	\$54,482	2 sections (.166 & .146)
	Paving & Milling	Lask	Ethel	Beecher	2	0.095	\$25,495	
	Snow removal	Snow plow	program				\$27,500	
Total 2015							\$273,477	Budget projections \$223,000 + 50-50 money

12/31/2012

These are projected projects for the year of 2016 if funding is available as future revenue and estimates are evaluated

Year	Treatment	Road	From	To	Paser Rating	Length	Estimated Cost road Funds	Comment
2016	Paving & Milling	Calkins	Linden	Dye	4	0.48		
	Paving & Milling	Cater Dr	Cora	Cora Dr	3	0.29		
	Paving & Milling	Brookgate	Hammerberg		2	0.365		
	Paving & Milling	Curtis	Miller	Lennon	3	0.346		
	Paving & Milling	Louis	Keith	Curtis	2	0.086		
	Paving & Milling	Kingswood	New pavement	Westminster	2	0.197		
	Paving & Milling	Whispering Oak	Judd	Charter Oak	3	0.331		
	Paving & Milling	Old Colony	Huntington Ave.	@	2	0.181		To Cul-de-sac and corner
	Paving & Milling	Ashlawn	Judd	Peachwood	3	0.269		2 sections (.199 & .07)
	Snow removal	Snow plow	program				\$27,500	
Total 2016							\$27,500	Budget projections \$223,000 + 50-50 money

12/31/2012



List of future road projects in 2017 or added to current projects with surplus funds or with tax renewal funds

Year	Treatment	Road	From	To	Paser Rating	Length	Estimated Cost road Funds	Comment
	Paving & Milling	Holiday	Bristol		3	0.616		Industrial-concrete
	Paving & Milling	Exchange	City/Twp line	Dye	3	0.502		Industrial
	Paving & Milling	Linden Creek Pky			3	0.174		Industrial
?	Paving & Milling	Court	Linden	Graham				County? Not in Paser bk
?	Paving & Milling	Post	Cabot	Donal	2	0.412		
	Paving & Milling	Dorellen	Court	Corunna	3	0.252		
	Paving & Milling	Graham	Beecher	Court		1.04		County? Not in Paser bk
	Paving & Milling	Tandy	Beverage	Lennon	3	0.509		
	Paving & Milling	Gerard	Van Slyke	New Pavement	2	0.109		
	Paving & Milling	Knollridge	Peachwood	Thrushfield	3	0.14		Pickwick
	Paving & Milling	Charter Oak	Judd		3	0.259		Pickwick-concrete
	Paving & Milling	Ketzler	Lennon	Miller	3	0.3		
	Paving & Milling	T.A. Mansour	Taft	Lowes entrance	3	0.153		
	Paving & Milling	Taft	LinCor	Linden		0.1		
	Paving & Milling	Austin Pky	Hogarth/Harwine	Miller	3	0.444		.148 is concrete
	?	Southgate	Hammerberg	Hemphill		0.345		concrete
	Paving & Milling	Healthsource	Corunna	Linden	2	0.257		

12/31/2012

**Ditching projects for the years of 2013- 2016**

Year	Treatment	Road	CDBG funds	242 Money	Road Millage Funds estimate	Comment
2013	Ditching	Various ditching projects as per the advice of the GCRC	NA	See Note 3	\$40,000	No CDBG funds available for this year
2014	Ditching	Various ditching projects as per the advice of the GCRC	See Note 1	See Note 3	\$42,000	
2015	Ditching	Various ditching projects as per the advice of the GCRC	See Note 2	See Note 3	\$42,000	
2016	Ditching	Various ditching projects as per the advice of the GCRC	See Note 2	See Note 3	\$42,000	

Note 1: CDBG Funds that are available are planned to be used on the roads in the River Forest area if that area qualifies for use of funds

Note 2: CDBG Funds that are available will be used for ditching as per the advice of the Supervisor of the GCRC Swartz Creek garage and allowed under CDBG guidelines.

Note 3: 242 money are funds that the Township receives for various ditching projects and projects are determined by the GCRC Swartz Creek garage.

The Road millage sets funds each year out of the budget for ditching and those funds for ditching are estimated dollars from the Income/expenses projection of Road Millage Funds Report

12/31/2012



**Flint Township  
4 Year Road Improvement Plan  
2013-2016**

**Proposed Improvements**

**Plan\_13\_16**




**YEAR, TYPE**

-  2013, Widen & Resurface
-  2013, Paving & Milling
-  2014, Paving & Milling
-  2015, Paving & Milling
-  2016, Paving & Milling
-  Signal Improvement

**Road System**




**County Mainlines**

**System, Surface**

-  Primary, Paved
-  Local, Paved
-  Local, Unpaved




**County Subs**

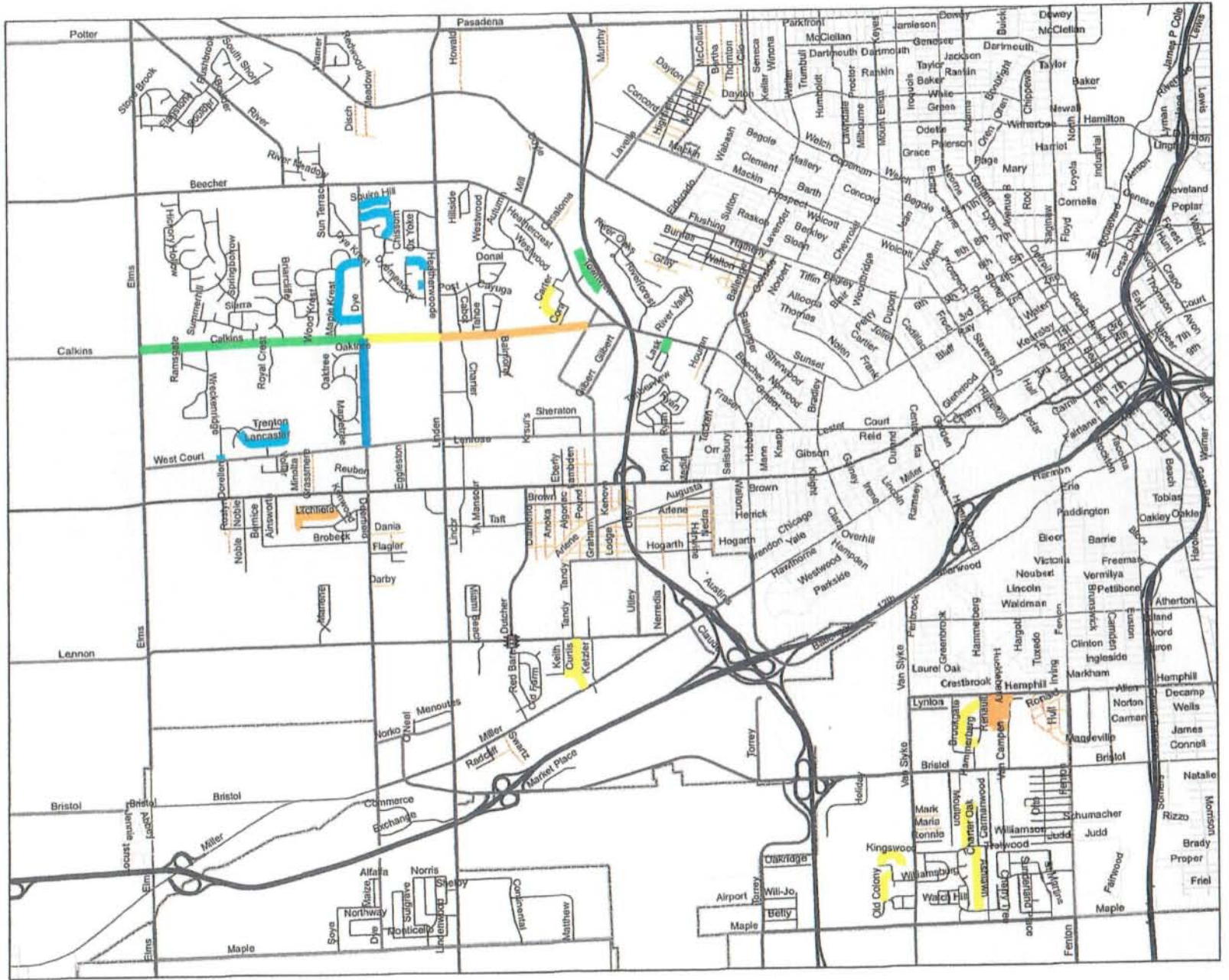
**ROAD\_TYPE**

-  Paved
-  Unpaved
-  Other

**Roads\_Other**

**LEGALSYSTE**

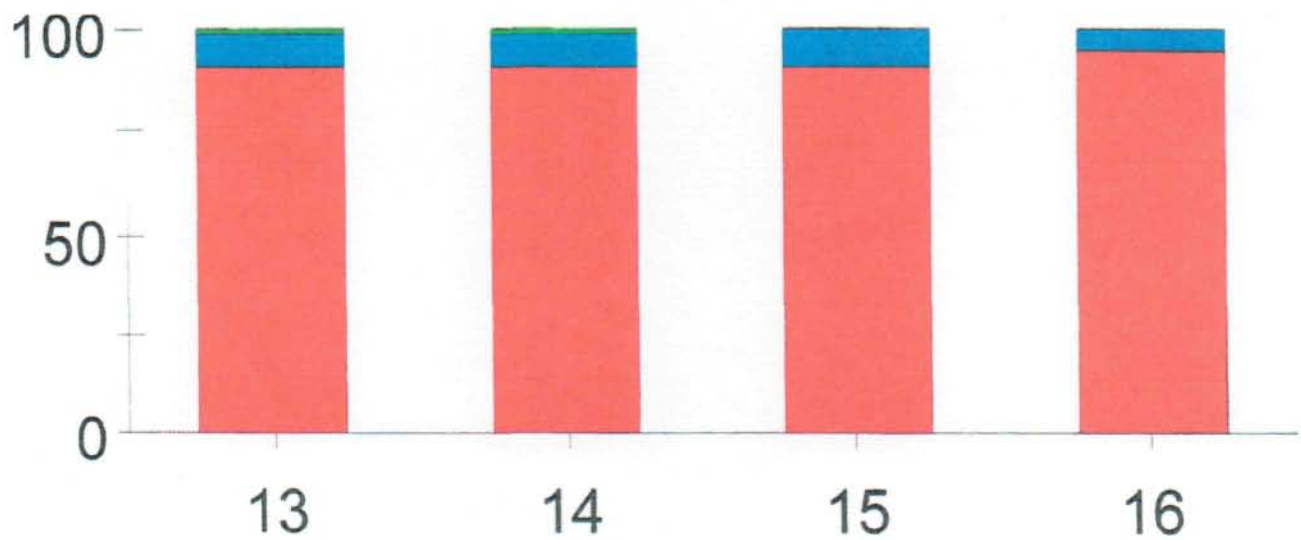
-  City Minor
-  City Major
-  Trunklines



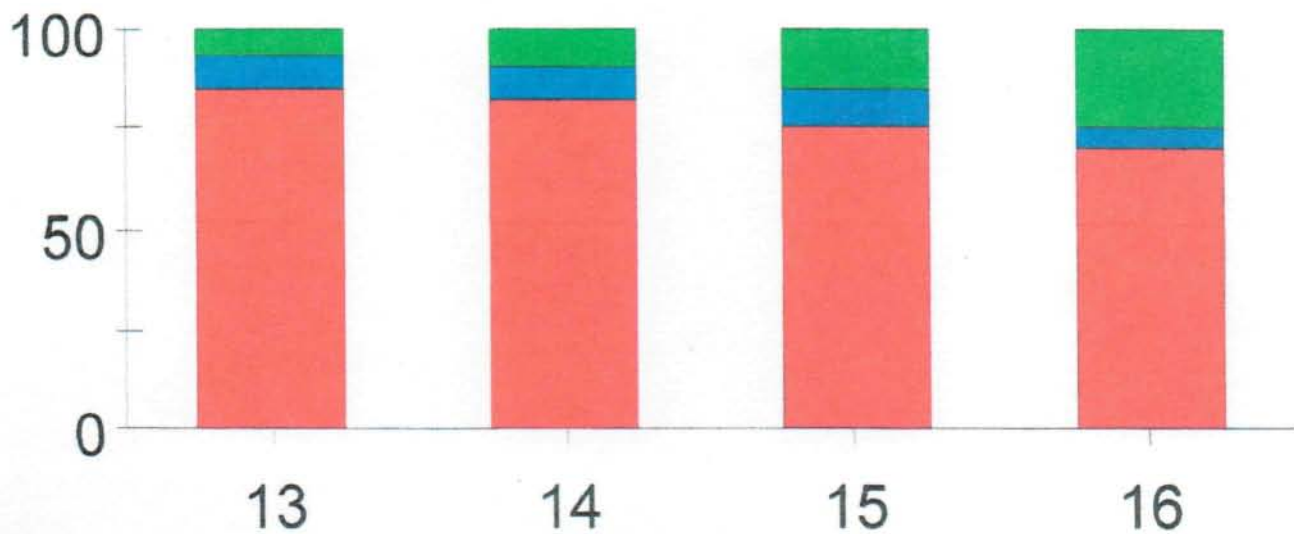


The following charts compare the projected condition of the Charter Township of Flint Local Road System under two different scenarios, **“Do Nothing”** vs. the **“Preservation”** approach proposed in this plan. Clearly the Do Nothing approach is unacceptable, since by 2016 nearly 100% of the local road system will be in Poor condition (red) and require full reconstruction. With the Plan’s preservation approach on the other hand, roads are kept in Fair (blue) condition and the condition of the overall Local road System is slowly improved until by 2016 less than 75% of the system is in Poor condition. Then, heavier construction activities undertaken at the end of this Plan period will return roads in poor condition to Good condition and green will start show a remarkable increase.

**Percent of Good(grn) Fair(blue) Poor(red) by Year  
- Do Nothing**



**Percent of Good(grn) Fair(blue) Poor(red) by Year  
- Proposed Strategy (Paving and Milling)**

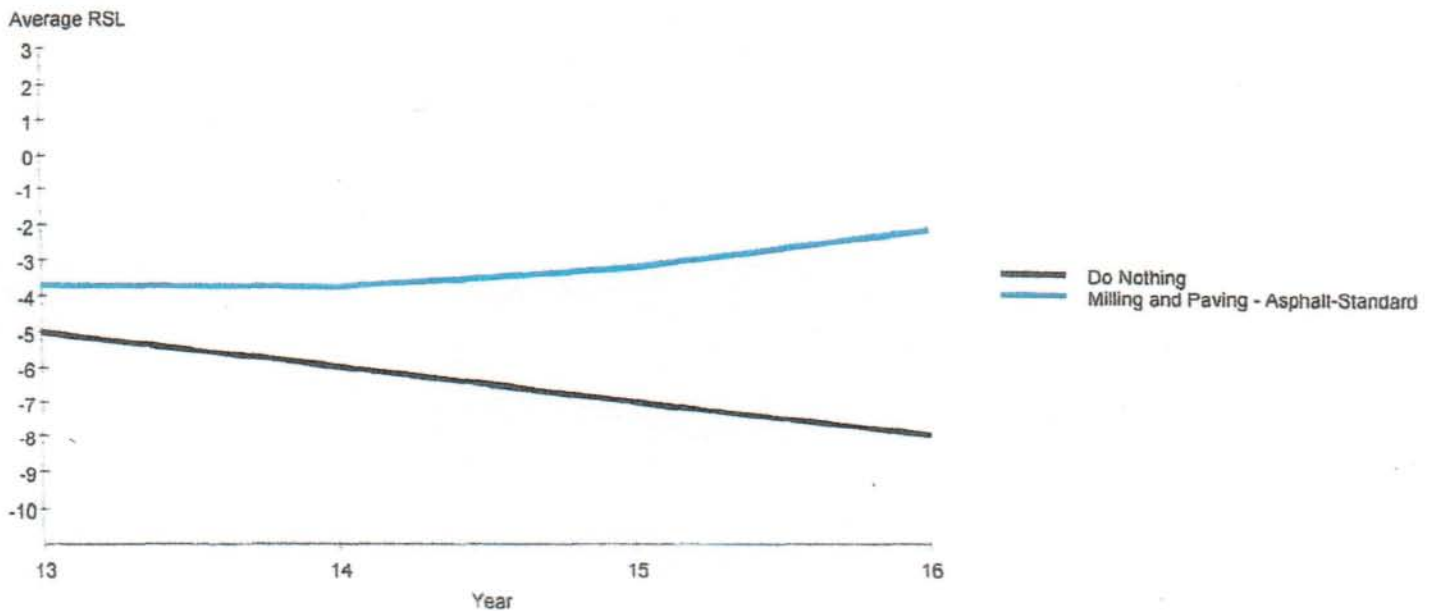


## Summary

The intent of this plan is to guide Charter Township of Flint officials in a strategy of preservation of the Local Road System. It is a strategy of preserving paved roads that are still in Fair condition while the Township builds up funds to do more heavy reconstruction of that have PASER ratings of 4 or lower.

The following graph of the Remaining Service Life (RSL) of the Local road network illustrates the success of the Plan's preservation approach. It show that this approach accomplishes what the Township set out to do -- preserve the Local Road System in a smooth and safe condition until it can be systematically rebuilt. (A road's RSL is considered to be 0 when it reaches its Critical Distress Point, which is a PASER Rating of 4. That's is how the average RSL of the local road network is a minus 5.0 in 2013). The preservation approach (the blue Line) essentially keeps the RSL steady moving up from 2013 to 2016, the Do Nothing Approach would allow it to decrease during this same time period.

Average Remaining Service Life Comparison





# Appendix

## **Appendix A PASER ROAD RATING SYSTEM**

This section describes the PASER Road Rating System including a brief description of the various fixes indicated by the rating numbers, and the per mile cost of each treatment.

PASER is a surface condition rating system developed by the University of Wisconsin and used in Michigan since 2004. Roads are rated on a 1-10 scale based on the surface distresses visible to trained rater, where 10 is a newly constructed or reconstructed road and a 1 is a road that has completely deteriorated.

### **Roads with PASER ratings of 1-4:**

These roads require Structural Improvements. This category includes work identified as rehabilitation and reconstruction, which address the structural integrity of the road. These are typically large, expensive projects necessary when the road has reached or is near the end of its service life.

### **Roads with PASER ratings of 5-7:**

These roads require Capital Preventive Maintenance. Capital preventive maintenance is defined as a planned set of cost effective treatments to an existing roadway system and its appurtenances that preserves, retards future deterioration and maintains or improves the functional condition of the system without significantly increasing structural capacity. The purpose of capital preventive maintenance is to protect the pavement structure, slow the rate of pavement deterioration and/or correct pavement surface deficiencies. Surface treatments are targeted at pavement surface defects primarily caused by the environment and by pavement material deficiencies.

### **Roads with PASER ratings of 8-10:**

These roads require only Routine Maintenance. Routine maintenance is the day-to-day scheduled maintenance activities, such as street sweeping, drainage clearing, shoulder gravel grading, and crack sealing.



## Cost per Mile - APPENDIX "B"

The cost per mile of the various types of fixes indicated by each of the PASER Ratings (1-10) is presented in the table below. Note that as the road deteriorates, as indicated by lower PASER ratings, the cost of the fixes goes up substantially. much more extensive – and expensive – repairs are available for each of the PASER ratings.

Charter Township of Flint		
Estimated Cost per 2 Lane Road Mile by PASER Rating		
Asphalt Standard or Asphalt/Soil Cement		
2012		
PASER	Fix Indicated by Rating	Cost/Mile (2 lane road)
10	No maintenance necessary. New road.	\$0
9	No maintenance necessary. Smooth surface.	\$0
8	Crack filling or shoulder patching.	?
7	General crack sealing and/or minor patching.	?
6	Chip Seal	\$19,000
6	Microsurface	\$50,000
6	Ultrathin HMA	\$65,000
6	2" HMA Resurfacing	\$160,000
6	Mill and HMA 2" Resurfacing	\$250,000
5	Chip Seal	\$19,000
5	Pavement Repair and Chip Seal	\$28,000
5	Microsurface	\$50,000
5	Ultrathin HMA	\$65,000
5	3" HMA Resurfacing	\$220,000
5	Mill and 3" HMA Resurfacing	\$300,000
4	Pavement Repair and Chip Seal	\$30,000
4	3" HMA Resurfacing	\$220,000
4	Mill and 3" HMA Resurfacing	\$300,000
4	2' trench widening w/ 3" HMA Resurfacing	\$330,000
4	Base Crush and Shape w/ 5" HMA Resurfacing	\$460,000
3	Pavement Repair and Chip Seal	\$30,000
3	3" HMA Resurfacing	\$220,000
3	Mill and 3" HMA Resurfacing	\$300,000
3	2' trench widening w/ 3" HMA Resurfacing	\$330,000
3	Base Crush and Shape w/ 5" HMA Resurfacing	\$460,000
3	Reconstruction.	\$500,000 +
2	Base Crush and Shape w/ 5" HMA	\$460,000
2	Reconstruction. Very poor condition.	\$500,000 +
1	Base Crush and Shape w/ 5" HMA Resurfacing	\$460,000
1	Reconstruction. Failed Road Surface.	\$500,000 +



**Appendix C Charter Township of Flint Road Advisory Committee**

**Mission:** On August 8, 2006, Voters of the township passed “**Flint Township Road Millage Proposal**”.

“Shall the authorized charter millage and tax limitation imposed under Article IX, Sec. 6 of the Michigan Constitution on general ad valorem taxes within the Charter Township of Flint, Genesee County, Michigan, be increased for said Township in an amount not to exceed .5 mill (\$.50 on each \$1,000 of taxable value) against all taxable real and tangible personal property for a period of ten (10) years, 2006 to 2015, inclusive to provide funds for road maintenance and improvement; and shall the township levy the Charter township of Flint will collect if the millage is approved and levied by the Township in the 2006 calendar year is approximately \$566,800”.

The By-Laws for this committee (**Appendix C-1**) contain name of committee, and its purpose. Qualification of members. Officers, their election and duties. Meetings of the committee and how to amend the by-laws.

C-1

By-Laws

BYLAWS  
OF  
THE CHARTER TOWNSHIP OF FLINT  
ROAD ADVISORY COMMITTEE

Article One

Name, Location and Offices

1.1 Name. The name of the Committee shall be the Road Repair Advisory Committee, (hereinafter referred to as the "Committee.")

1.2 Office and Records. The Committee shall use the Charter Township of Flint, (hereinafter referred to as the "Township"), Township Hall for its meetings. The Township Clerk shall keep Committee records.

Article Two

Purpose

2.1 Purpose. The Committee was organized to study how and where the Township should spend funds it receives from a 0.5 millage passed August 8, 2006 for the purpose of improving and maintaining roads within the Township. The Committee shall periodically, or when requested by the Township Board of Trustees, report in writing to the Township Board the results of its study.

2.2 Governing Instrument. The Committee was formed pursuant to a resolution passed by the Township's Board of Trustees on March 19, 2007. The Committee is not a corporate body politic separate from the Township. The Committee has no authority to render any decision regarding public policy.

2.3 Duration. The Committee shall exist at the pleasure of the Township's Board of Trustees and may by vote of that Board be terminated at any time for any reason or for no reason.

Article Three

Members

3.1 Number. There shall be nine members of the Committee, one of which shall be the Township's Supervisor. The Township Board of Trustees shall appoint the remaining eight members.

3.2 Term. The term of the eight appointed members shall expire December 31, 2016. Subsequent appointments shall be for a term of three years. The person occupying the position of Township Supervisor shall serve as an ex officio member of the Committee without a term and without a vote unless necessary to break a tie. There is no limit to the number of successive terms a member may serve. The terms here specified assume the continued existence of



the Committee. Should the Committee be terminated pursuant to Section 2.3 the terms of the members shall be also be terminated effective at the same time as the termination of the Committee.

3.3 Removal. Other than the Supervisor the Township Board of Trustees may, for cause, remove any member.

3.4 Vacancies. Any vacancy on the Committee, other than Supervisor, arising any time and from any cause may be filled for the unexpired term by the Township's Board of Trustees. Each member so appointed shall hold office until the expiration of his/her term, or the unexpired terms of his/her predecessor, as the case may be, and until his/her successor is appointed.

3.5 Conflict of Interest. A member who has a direct or indirect personal or financial interest in any matter before the Committee shall disclose his or her interest prior to any discussion of the matter by the Committee, which disclosure shall become part of the record of the Committee's meeting. The disclosure shall be made by written instrument. The interested member shall further refrain from participation in the Committee's action relating to the matter.

#### Article Four

##### Meetings of the Committee

4.1 Regular Meetings. Meetings of the Committee shall be held when called by the Chairperson. Notice of the time and place of each meeting shall be given by the Secretary either personally or by telephone or by mail not less than three nor more than thirty days before such meeting. The meetings of the Committee shall be public and the appropriate notice of such meetings provided to the public. Notice of all meetings of the Committee shall be given in accordance with the Open Meetings Act, 1976 P.A. 267, as amended.

4.2 Quorum. A majority of the Committee shall be required to constitute a quorum for the transaction of business. The Committee shall act by a majority vote of those entitled to vote at which a quorum is present.

4.3 Conduct of Meetings. The conduct of all meetings shall be in accordance with these Bylaws, the statutes of the State of Michigan and Robert's Rules of Order Newly Revised. The Committee may decide upon rules other than Robert's.

#### Article Five

##### Officers

5.1 Number and Qualifications. The officers of the Committee shall be a Chairperson and a Secretary. The Chairperson of the Committee shall be the Supervisor of the Township. The Secretary shall be selected by a majority vote of the members of the Committee entitled to vote.

5.2 Chairperson. The Chairperson shall call and preside over all meetings of the Committee.

5.3 Secretary.

- (a) The Secretary shall attend all meetings of the Committee and record all votes, actions and the minutes of all proceedings in a book to be kept for that purpose. The book shall be kept in the office of the Township Clerk.
- (b) The Secretary shall give, or cause to be given, notice of all meetings of the Committee.
- (c) The Secretary shall be responsible for written correspondence with other group's or persons as directed by the Chairperson. All communication received by the Secretary shall be brought to the attention of the Committee at the meeting following receipt of the communication.
- (d) The Secretary shall be responsible for maintaining an attendance record for each member of the Committee and shall report those records annually to the Chairperson.
- (e) The Secretary shall preside over any meeting which the Chairperson is unable to attend.

Article Six  
Miscellaneous

6.1 Employees. The Committee may not employ or otherwise contract for the services of any staff.

6.2 Contracts. The Committee may not enter into any contract or execute and deliver any instrument in the name of and on behalf of the Committee.

6.3 Amendments. These bylaws may be amended only by the Township's Board of Trustees.



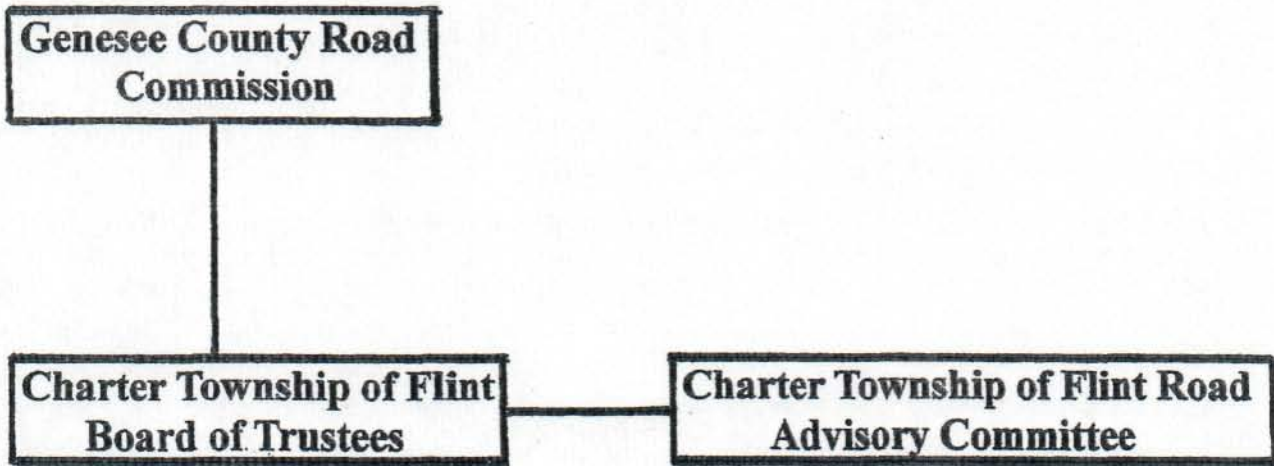
C-2

# Organizational Chart



**CHARTER TOWNSHIP OF FLINT**  
**ROAD ADVISORY COMMITTEE**

**ORGANIZATION CHART**



C-3

Committee Member  
Roster

## Flint Township Road Advisory Committee Members (9)

	Home	Cell	Email
<u>Chairman</u>			
1) <i>Karyn Miller</i>	810-820-9301	810-241-2570	kmiller@flinttownship.org
2319 Flagstone Dr. Flushing, MI 48433			
<u>Secretary</u>			
2) <i>John Whiteside</i>	810-732-0514	810-516-3946	john11wh@aol.com
2161 Elms Rd. Swartz Creek, MI 48473			
3) <i>Wayne Nierman</i>	810-732-6209	810-240-0880	wlnier2000@comcast.net
5378 Mapletree Dr. Flint, MI 48532			
4) <i>Dave Huffman</i>	810-230-9088	810-938-3755	huffmandave@comcast.net
2483 Warner Rd. Flushing, MI 48433			
5) <i>James Rouse</i>	810-732-0329	810-516-9989	jjdrouse@aol.com
1285 River Forest Dr. Flint, MI 48532			
6) <i>Betty Wilkins</i>	810-732-2719	810-444-6946	bettena@att.net
5455 Corunna Rd. Flint, MI 48532			
7) <i>David Arceo</i>	810-732-5857	810-964-5465	davarc22@comcast.net
5352 Maple Ave Swartz Creek, MI 48473			
8) <i>Tony Wilk</i>		248-787-6870	Barb1tony2@yahoo.com
1063 Jacob Trail Flint, MI 48532			
9) <i>Ken Grover</i>	810-732-4768	810-597-2457	
1326 Graham Rd. Flint, MI 48532			



# Charter Township of Flint

## FOUR YEAR IMPROVEMENT PLAN

### For the Local Road System

### 2013-2016

The following individuals, official representatives of Charter Township of Flint and the Genesee County Road Commission do, by their signatures below, approve this plan for and on behalf of their respective agencies in fulfillment of requirements for the receipt of 50/50 Program Funds for Local road improvements.

Karyn Miller  
Representing Charter Township of Flint

Chapce L. Diefers  
Representing Genesee County Road Commission

Karyn Miller  
Supervisor

Chair  
Title

2-7-2013  
Date

2/19/13  
Date

Subscribed and sworn before me, this 7th  
day of Feb, 2013, a Notary Public  
in and for Genesee County,  
State of Michigan.

Jacqueline Donovan  
(Signature)  
NOTARY PUBLIC  
My Commission expires Aug 3, 2013

