# City of Columbia Transportation & Public Works Department Neighborhood Traffic Management Program

- 1. **Mission Statement:** It shall be the mission of the Public Works Department Traffic Engineering Division to provide traffic calming solutions where appropriate in order to influence vehicle operation, improve the neighborhood quality of life, and create more livable local streets.
- 2. Goal: To work closely with residents of the neighborhood to properly identify the concerns, conduct appropriate studies to quantify any problems and develop solutions that will reduce, traffic speeds and collisions or the severity of collisions should they occur. In turn, improving pedestrian safety and creating more pleasant neighborhoods for the citizens of Columbia.
- 3. **Purpose:** Although neighborhood traffic concerns generally relate to excessive speed, pedestrian and bicycle safety, cut-through traffic, accidents and general quality of life issues, this program recognizes the uniqueness of neighborhoods and that the critical issues and concerns vary from case to case. Based on this diversity, this program considers a wide range of potential solutions to address specific concerns of a neighborhood. The recommended solutions resulting from this program should fall into one of the following broad categories:
  - a. Increase Safety
  - **b.** Speed
  - c. Volume

The recommended solution should be based on the existing and intended traffic volumes, speeds, and geometrics for the roadway. The Neighborhood Traffic Management Program strives to utilize all type of traffic calming devices to address neighborhood concerns. The City of Columbia recognizes that a "one-device fits all" approach is not desirable and the program specifically encourages each neighborhood to develop a traffic calming solution that addresses their specific needs.

- 4. **Traffic Calming Measures**: The City's traffic management program involves three levels of traffic management and traffic calming measures. The measures are described briefly below. Detailed information is provided in the Traffic Calming Guidebook.
  - **a.** Level 1 Elements (Increase Safety): Basic traffic calming elements are those traffic control devices and programs implemented on a day-to-day basis to regulate, warn, guide, inform, enforce, and educate motorists, bicyclists, and pedestrians. They include standard striping and signing elements, minor roadway design elements to improve visibility and safety, enforcement by police, and safety education programs.

Basic elements are used primarily in those areas where traffic impacts have been found not be excessive or serious, but where traffic control and/or education has been determined to be appropriate. Some common basic elements include:

Basic Traffic (	Calming Devices
Warning Signs	Traffic Signal Timing
High Visibility Signs	Striping Changes
Radar Trailer/ Radar Signs	Curb Markings
Police Enforcement	Truck Restrictions
Lighting Improvements	Sign Turn Restrictions
	Neighborhood Speed Monitoring

**b.** Level 2 Elements (Speed): Level 2 Elements are traffic control devices and roadway design features primarily designed to slow traffic within residential areas. They are employed when either the use of Level 1 elements cannot effectively address speeding issues, or it has been found that the 85<sup>th</sup> percentile speed is greater than 8 mph over the posted speed limits and the ADT is over 400. Some common elements include:

Level II Traffic	Calming Devices
Traffic Circles	Road Humps
Medians	Chokers
Chicanes	Raised Crosswalks
Minor Bulbouts	Major Bulbouts

c. Level 3 Elements (Volume Controls): Level 3 Elements are traffic control devices and roadway design features primarily designed to discourage cut-through traffic from using residential streets. They are used when it has been found that traffic volumes are significantly higher in the studied area than found on similar streets in other areas. Level 3 devices can be used by themselves or in conjunction with Level 1 (Basic) and Level 2 Elements. Some common elements include:

Level III Traffic	Calming Devices
Full Street Closure	Partial Street Closure
Diverters	Extended Medians

5. **Procedure:** The traffic calming decision-making process, highlighting the roles played by residents and Public Works Traffic Engineering Division is shown in the schematic on Traffic Calming Decision Making Process. The Traffic Calming Decision Making Process represents Level I traffic calming. The Level I procedure should be completed prior to beginning the Level II or III procedure.

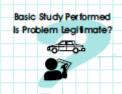
#### a. Level I Procedure

#### Neighborhood



To begin the traffic calming process please contact Public Works at 874-7250, or collect 10 signatures on the Neighborhood Request for Level 1 Traffic Calming and send to Public Works Traffic Engineering Division.

#### City



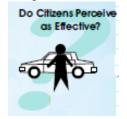
The Traffic Engineering Division will perform the appropriate study to address the requester's particular concern and situation.

#### City



The application of some Level 1 (Basic) devices is subject to independent policies and guidelines, such as those for crosswalks, stop signs, traffic signals, and bike lanes.

#### Neighborhood



Approximately 6 months after installation a short survey will be sent to the residents that signed the petition. The survey will include 3 questions.

- 1) Are you satisfied with the results of the Traffic Calming Project?
- Satisfied
- Unsatisfied
- Neither

2) Did the Traffic Calming Project fix the problem at hand? Score from 1 to 5.

Problem 1	Not Fixed	Problem Son	newhat Fixed	Problem Fixed
1	2	3	4	5
О	O	O	O	О

3) Describe any problems seen since the installation of the Traffic Calming Project.

#### Neighborhood



With a 50% or greater negative response the project can be evaluated to see if it qualifies for Level II or III traffic calming.

#### City



If a Level 1 device is inadequate as shown by the Citizen Survey, the Traffic Engineering Division will conduct a study for comprehensive traffic calming (Level 2 or 3). The Department of Public Works Traffic Engineering Division will place plate counters at the area in question to receive two key pieces of data. The Average Daily Traffic (ADT) which provides the amount of vehicles driving on the road per

day. The other key piece of data is the 85<sup>th</sup> percentile speed which is traditionally used to help set speed limits. It tends to be the speed that most people feel comfortable driving. To qualify for Level II or III traffic calming the area in question must be a paved residential street in the City Limits and meet 1 set of the criteria below:

Minimum ADT	Minimum 85 <sup>th</sup> percentile speed (mph)
400	33
250	38

#### Neighborhood



Level 1 Traffic Calming has been installed, received over a 50% negative response, and the area in question does not meet the minimum qualifications. The survey found in the Appendix will be filled out and used as a petition for Level 2 or 3 traffic calming. Since the area does not meet minimum qualifications overwhelming neighborhood backing

needs to be required in the form of 65% positive survey response.

**b.** Level 2 or 3 Procedure: To initiate the procedure, a neighborhood group must first have implemented and Level 1. At that time, the Traffic Engineering staff will provide a petition/survey to be filled out by the neighborhood group. The neighborhood may be determined by the following methods:

#### Neighborhood



Level I options have been implemented and have been found to be inadequate.

#### City



There are four ways to define the project area:

- 1) All residents along the street in question
- 2) All residents in the homeowners association
- 3) Per plat(s) or legal description(s)
- 4) Area defined by City Engineer

#### Neighborhood/City



The neighborhood meetings will work laterally with the plan being developed. The Public Works Traffic Engineering Division will work closely with the neighborhood to develop a plan for traffic calming. A public meeting will be held in the community to discuss the problems and

potential solutions. At a minimum, representatives of the Traffic Engineering Division will attend these meetings and, where necessary, representatives of the Police and Fire Department will attend to discuss enforcement and emergency services.

#### City



Based on the comments received at the public meeting, the neighborhood and Traffic Engineering staff will proceed with developing a recommended solution.

#### Neighborhood/City



The neighborhood should be in agreement on the Traffic Calming device that will be implemented and its location. The plan will have to be approved by the neighborhood with a 65% majority via community meeting, survey, or petition.

#### Neighborhood/City



Once the plan is agreed upon it will placed on the list for traffic calming devices requested and put in the yearly report to City Council. As with most decisions involving public infrastructure improvements, the final approval of any traffic calming project will lie with City Council. Some devices (Level 3) require City Council approval, extending the time period before installation.

6. **Project Prioritization:** Due to the participation in the Neighborhood Traffic Management Program the City of Columbia finds it important to prioritize the projects. The City uses a prioritization system to ensure that projects are scored in fact and not opinion. The prioritization system compares one project to another ensuring an even playing field and providing transparency to the process.

The following information is used to develop a numerical score each candidate street being considered for traffic calming measures; traffic volume, traffic speed, proximity to pedestrian generators, proximity to schools, and designation as a current or future bicycle route.

**Traffic Volume** (20 points maximum): points are based on the average daily traffic volume divided by 120.

**Speed** (45 points maximum): points are based on the 85<sup>th</sup> percentile speed minus the posted limit (psl) multiplied by 3

**Schools** (10 points maximum): 5 points are given for schools within ½ mile radius of the subject street; 10 points are given for schools within ¼ mile radius of the subject street.

**Proximity to Pedestrian Generators** (5 points for each generator, 10 points maximum): Points are given to parks, trails, hospitals, colleges, transit routes/ bus stops, or C-2 zoning districts that are within 1/8 mile radius of the subject street

Collisions (10 points maximum) 2 points are given to each accident on average per year

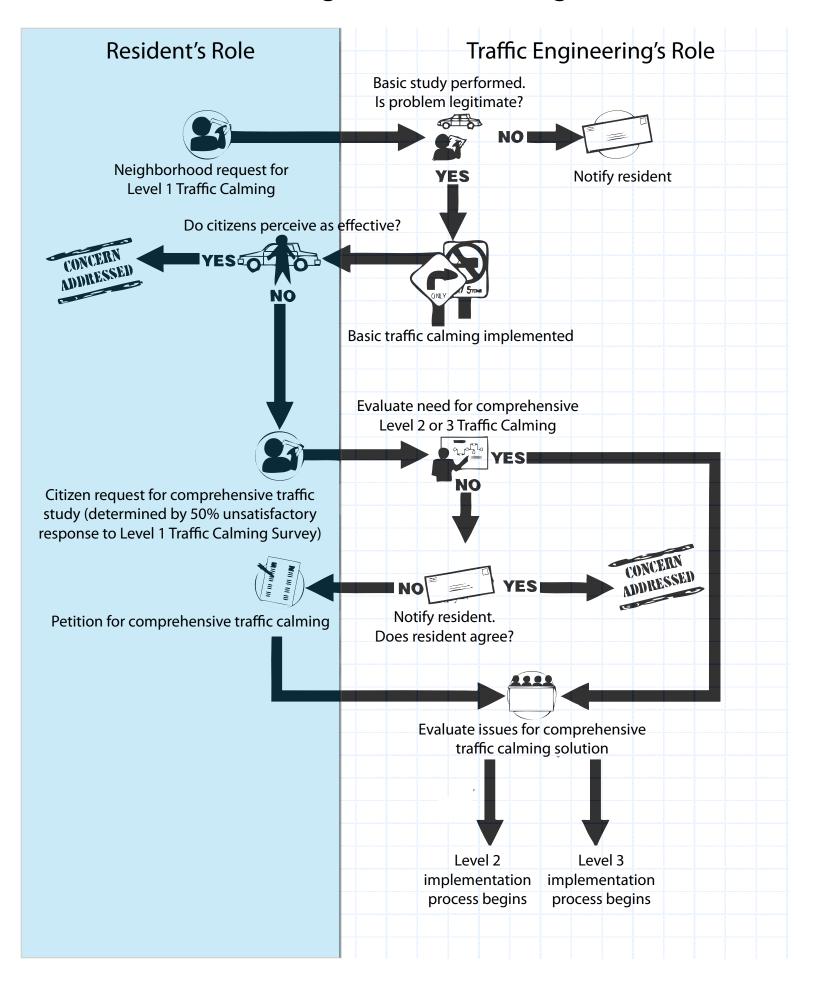
**Bicycle Routes** (5 points): Streets designated as a current of future bike route or have bike lanes are given 5 points.

7. **Finalize Neighborhood Funding Partnership:** Traffic Engineering staff will determine the engineers estimate for total construction and maintenance costs for the project. The neighborhood may choose to contribute funds towards the project. The projects will be presented to City Council on annual basis. In the presentation to City Council the amount contributed by the neighborhood will be clearly shown in association with the project. The contributions from the neighborhood will not move the project higher or lower on the priority

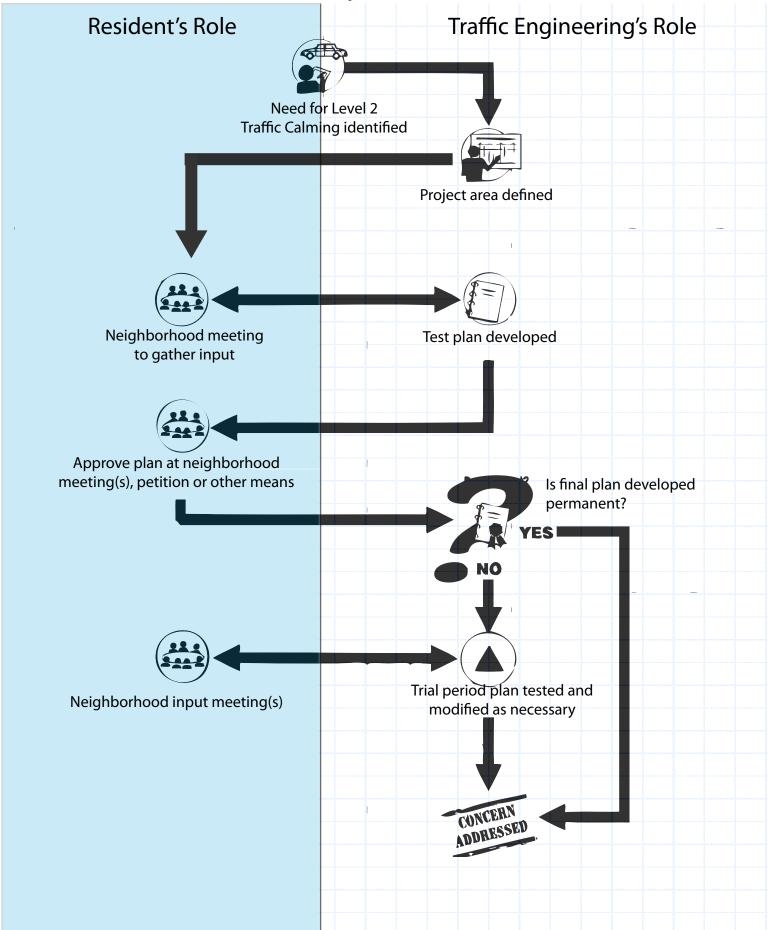
list, but it will lower the "Cost to the City", which is presented next to the Prioritization Score. A sample "Annual Neighborhood Traffic Management Program Report" may be found in the appendix. Payment from the neighborhood (if chosen to do so) will either be through a one-time cash payment or tax bill.

- **a. Project Implementation:** After the City Council's approval for the implementation of the year's Traffic Calming projects, the construction of the recommended approved projects will be scheduled as soon as practical.
- **b. Evaluation Phase:** A citizen survey will be sent to the neighborhood six (6) months after implementation of a Level 1 Traffic Calming Device. Traffic Engineering staff will perform a follow-up study six (6) months after implementation of a Level 2 or 3 Traffic Calming Device. The survey will be the same survey as the post implemented Level 1 traffic calming survey.

### **Traffic Calming Decision-Making Process**



## Level 2 and 3 Implementation Process



### **Petition for Comprehensive Traffic Calming**

This form is designed to help you evaluate your street, and to indicate if you support the City investigating potential traffic calming devices on your street. The information you supply is also crucial for helping the City understand and define specific problems. Please answer the question below and mail this postage paid sheet by following the instructions on the back. Your survey winot be counted if you do not return this form indicating your decision.  * Required
Name of Obvserver *
one form per household please
Are you in favor of the City investigating potential comprehensive (Level 2 or 3) traffic calming devices? *
Yes
O No
Address *
A via
Age age in years
↑ 18-40
© 65+
Division No. 1971
Phone Number
E-mail Address
Are you a
Check all that apply
pedestrian

bicyclist motorist

	1 Not a Problem	2	3	4	5 Serious Problem
Motorist courtesy toward pedestrians	0	0		0	0
Crossing the street as a pedestrian					0
Backing out of driveways (difficult due to speeding cars)	0	0		0	
Speeding Cars					
Motorist behavior at intersections (turning fast, disobeying signs)	0	0	0	0	0
					10
Where are important ped	estrian crossing	s?			

Signature *			
Submit  Never submit passwords thr	ough Google Forms		
Powered by Google Docs			
Report Abuse - Terms of Service	- Additional Terms		

									Ped Genera	ators				Schoo	ols			
Neighborhood	Score	Volume	Volume Score	85th Speed	Speed Score	Parks	Bus Stop	C2	Hospital	College	Trail	Total Ped	1/4 Mile	1/2 Mile	Total School	Bike Route	Ward	Request Year
Derby Ridge-																		
Riva	80	2,470	20	40	45	0	0	0	0	0	0	0	5	5	10	5	2	2008
College Park	80	1,244	10	40	45	5	0	0	0	0	5	10	5	5	10	5	4	2006
Sexton	74	2,239	19	35	30	5	5	0	0	0	0	10	5	5	10	5	1	2012
Hanover- N																		
Chrleston	73	2,106	18	40	45	0	5	0	0	0	0	5	0	0	0	5	3	2008
Rice- Mckee	73	1,509	13	40	45	5	5	0	0	0	0	10	0	0	0	5	3	2006
Derby Ridge-																		
Bold Ruler	67	1,616	13	38	39	0	0	0	0	0	0	0	5	5	10	5	2	2008
Derby Ridge-																		
Seattle	66	1,134	9	39	42	0	0	0	0	0	0	0	5	5	10	5	2	2008
Rice - Twin Oak	65	1,835	15	40	45	0	0	0	0	0	0	0	0	0	0	5	3	2006
Parkside	61	660	6	40	45	5	0	0	0	0	0	5	0	0	0	5	2	2007
Rice- Laclede	61	777	6	40	45	5	0	0	0	0	0	5	0	0	0	5	3	2006
Derby Ridge-																		
Omaha	59	905	8	37	36	0	0	0	0	0	0	0	5	5	10	5	2	2008
Kelsey-5602	54	539	4	40	45	0	0	0	0	0	0	0	0	0	0	5	3	2007
Kelsey- 5502	53	497	4	38	39	5	0	0	0	0	0	5	0	0	0	5	3	2007
Upland Creek	48	301	3	40	45	0	0	0	0	0	0	0	0	0	0	0	3	
Crabapple 3500	47	1,013	8	38	39	0	0	0	0	0	0	0	0	0	0	0	5	2013
Bourn (N of																		
Rollins)-204	47	290	2	40	45	0	0	0	0	0	0	0	0	0	0	0	4	2010
Rainforest																		
Parkway	47	589	5	39	42	0	0	0	0	0	0	0	0	0	0	0	2	2006
4th Avenue	46	528	4	34	27	5	0	0	0	0	0	5	5	5	10	0	1	2006
Muirfield	45	513	4	37	36	0	0	0	0	0	0	0	0	0	0	5	5	2008
Crabapple 3302	44	558	5	38	39	0	0	0	0	0	0	0	0	0	0	0	5	2013

<sup>\*</sup>Collision data not scored \*\*Not fully scored. No speed or volume data available yet

							8		Ped Genera	ators				Schoo	ls			
			Volume	85th	Speed		Bus					Total	1/4	1/2	Total	Bike		Request
Neighborhood	Score	Volume	Score	Speed	Score	Parks	Stop	<b>C2</b>	Hospital	College	Trail	Ped	Mile	Mile	School	Route	Ward	Year
Kennesaw Ridge	43	386	3	35	30	0	0	0	0	0	0	0	5	5	10	0	2	2007
Saddlebrook	43	386	3	35	30	0	0	0	0	0	0	0	5	5	10	0	2	2009
Highridge-																		
Ridgemont	43	939	8	35	30	0	0	0	0	0	5	5	0	0	0	0	4	2006
Grand	42	1,586	13	28	9	5	5	0	0	0	0	10	5	5	10	0	1	2006
Kelsey-5804	40	644	5	35	30	0	0	0	0	0	0	0	0	0	0	5	3	2007
Limerick '05	37	351	3	33	24	5	0	0	0	0	0	5	0	0	0	5	4	
Bourn (N of																		
Rollins)-412	35	393	3	34	27	0	0	0	0	0	0	0	0	5	5	0	4	2010
War Adminral	35	498	4	32	21	0	0	0	0	0	0	0	5	5	10	0	2	2007
Brookefield	34	561	5	33	24	0	0	0	0	0		0	0	0	0	5	5	2008
Highridge-																		
Marylee	34	858	7	34	27	0	0	0	0	0	0	0	0	0	0	0	4	2006
Prestwick Dr.	34	544	5	33	24	0	0	0	0	0	0	0	0	0	0	5	5	2008
Barksdale Mill 3508	33	388	3	35	30	0	0	0	0	0	0	0	0	0	0	0	5	2013
Hubbell	21	70	1	25	0	0	5	5	0	0	0	10	0	10	10	0	1	2012
Park Avenue**	20		0		0	0	5	5	0	0	5	10	0	10	10	0	1	2007
Saint James**	20		0		0	0	5	5	0	0	5	10	0	10	10	0	1	2012
Saint Joseph**	20		0		0	0	5	5	0	0	5	10	0	10	10	0	1	2012
Audubon**	20					5	0	0	0	0	0	5	5	5	10	5	6	2013
Limireck '06	19	72	1	26	3	5	0	0	0	0	5	10	0	0	0	5	4	
Limerck '04	14	480	4	25	0	5	0	0	0	0	0	5	0	0	0	5	4	
Alexander	13	370	3	25	0	5	5	0	0	0	0	10	0	0	0	0	1	
Martinshire**	10		0		0	5					5	10		0	0		4	2007

<sup>\*</sup>Collision data not scored \*\*Not fully scored. No speed or volume data available yet

									Ped Genera					Schoo				
Neighborhood	Score	Volume	Volume Score	85th Speed	Speed Score	Parks	Bus Stop	C2	Hospital	College	Trail	Total Ped	1/4 Mile	1/2 Mile	Total School	Bike Route	Ward	Request Year
South																		
Brookline**	10		0		0		5				0	5	0	5	5		5	2013
3rd Avenue**	5		0		0	5					0	5		0	0		1	2006
Cook**	5		0		0	5					0	5		0	0		1	2012
Hirth**	5		0		0	5					0	5		0	0		1	2008
Longview**	5		0		0	5					0	5		0	0		4	2007
Ridgefield**	5		0		0						5	5		0	0		4	2006
Ridgemont**	5		0		0						5	5		0	0		4	2006
Ridgeway**	5		0		0	5					0	5		0	0		1	2008
Sanford**	5		0		0	5					0	5		0	0		1	2008
Falmouth**	5		0		0						0	0	0	5	5		5	2013
Aldeah**	0		0		0							0			0		1	2008
Anderson**	0		0		0							0			0		1	2008
Blue Ridge**	0		0		0							0			0		2	2012
Bourn (S of																		
Rollins)**	0		0		0							0			0		4	2012
Braemore**	0		0		0							0			0		4	2009
Brookline**	0		0		0							0			0		5	2006
Fall River																		
Drive**	0		0		0							0			0		5	2009
Godfrey**	0		0		0							0			0		5	2006
Hardin**	0		0		0							0			0		1	2008
Heriford**	0		0		0							0			0		2	2012
Hillside Dr. **	0		0		0							0			0		4	2006
McBaine**	0		0		0							0			0		1	2008
Middlebush**	0		0		0							0			0		4	2006
N. Glenwood**	0		0		0							0			0		1	2008

									Ped Genera	ators				Schoo	ls			
			Volume	85th	Speed		Bus					Total	1/4	1/2	Total	Bike		Request
Neighborhood	Score	Volume	Score	Speed	Score	Parks	Stop	<b>C2</b>	Hospital	College	Trail	Ped	Mile	Mile	School	Route	Ward	Year
N. Greenwood**	0		0		0							0			0		1	2008
Northampton**	0		0		0							0			0		5	2008
Parkade**	0		0		0							0			0		2	2012
Royal Heritage**	0		0		0							0			0		5	2008
Sunset**	0		0		0							0			0		4	2006
Westwood**	0		0		0							0			0		4	2007
Eastham**	0		0		0							0			0		5	2013
North																		
Brookline**	0		0		0							0			0		5	2013
Rollins Road**	0		0		0							0			0		4	2013
William St.South																		
of Ann**	0		0		0							0			0		6	2013
Aztec**	0		0		0							0			0		3	2013

<sup>\*</sup>Collision data not scored \*\*Not fully scored. No speed or volume data available yet

### **Annual Neighborhood Traffic Management Program Report**

Neighborhood	Score	Cost to City	Proposed Solution	% Support	Estimated Cost	Neighborhood Contribution	% Contributed	Meets Level 2 or 3 Requirements	Ward	Request Year
Derby Ridge	80	\$8,000	Median	75	\$14,000	\$6,000	43%	Yes	2	2008
College Park	80	\$0	Speed Humps	82	\$6,000	\$6,000	100%	No	4	2006
Sexton	74	\$7,000	Median	67	\$14,000	\$7,000	50%	Yes	1	2012
Hanover	73	\$17,000	Diagonal Diverter	87	\$19,000	\$2,000	11%	Yes	3	2008
Parkside	61	\$10,000	Median	72	\$13,000	\$3,000	23%	Yes	2	2007
Rice	61	\$16,000	Corner Bulbout	86	\$22,000	\$6,000	27%	Yes	3	2006
Kelsey	54	\$6,000	Chicane	95	\$30,000	\$24,000	80%	Yes	3	2007
4th Avenue	46	\$2,000	Speed Humps	95	\$2,000	\$0	0%	Yes	1	2006
Muirfield	45	\$0	Speed Humps	90	\$0	(\$0)	0%	No	5	2008
Kennesaw Ridge	43	\$0	Corner Bulbout	63	\$22,000	\$22,000	100%	No	2	2007
Saddlebrook	43	\$0	Speed Humps	55	\$1,000/	\$1,000	100%	No	2	2009
Highridge	43	\$10,000	Median	97	\$15,000	\$5,000	33%	Yes	4	2006
Ridgemont	43	\$12,000	Chicane	83	\$28,000	\$16,000	57%	Yes	4	2006
Grand	42	\$15,000	Chicane	86	\$27,000	\$12,000	44%	Yes	1	2006
War Adminral	35	\$6,000	Speed Humps	66	\$7,000	\$1,000	14%	Yes	2	2007
Bourn (N of Rollins)	35	\$23,000	Choker	73	\$24,000	\$1,000	4%	Yes	4	2010
Prestwick Dr.	34	\$7,000	Choker	88	\$25,000	\$18,000	72%	Yes	5	2008
Hubbell	21	\$2,000	Speed Humps (	81	\$7,000	\$5,000	71%	Yes	1	2012
Saint Joseph	20	\$0	Speed Humps	60	\$2,000	\$2,000	100%	No	1	2012
Saint James	20	\$8,000	Median	56	\$13,000	\$5,000	38%	Yes	1	2012
Park Avenue	20	\$2,000	Speed Humps	59	\$5,000	\$3,000	60%	Yes	1	2007
Martinshire	10	\$7,000	Speed Humps	65	\$9,000	\$2,000	22%	Yes	4	2007
Sanford	5	\$12,000	Median	90	\$14,000	\$2,000	14%	Yes	1	2008
Hirth	5	\$1,000	Raised Crosswalk	94	\$10,000	\$9,000	90%	Yes	1	2008
Cook	5	\$0 0	Speed Humps	53	\$0	\$0	0%	No	1	2012
Ridgefield	5	\$13,000	Choker	63	\$23,000	\$10,000	43%	Yes	4	2006
McBaine	0	\$1,000	Speed Humps	73	\$1,000	\$0	0%	Yes	1	2008
Ridgeway	0	\$14,000	Chicane	78	\$30,000	\$16,000	53%	Yes	1	2008
N. Greenwood	0	\$1,000	Speed Humps	60	\$5,000	\$4,000	80%	Yes	1	2008

		Cost to
Neighborhood	Score	City
Derby Ridge	80	\$1,000
College Park	80	\$15,000
Sexton	74	\$0
Hanover	73	\$2,000
Parkside	61	\$2,000
Rice	61	\$0
Kelsey	54	\$13,000
4th Avenue	46	\$2,000
Muirfield	45	\$3,000
Kennesaw Ridge	43	\$1,000
Saddlebrook	43	\$2,000
Highridge	43	\$0
Ridgemont	43	\$7,000
Grand	42	\$3,000
War Adminral	35	\$1,000
Bourn (N of Rollins)	35	\$2,000
Prestwick Dr.	34	\$1,000
Hubbell	21	\$18,000
Saint Joseph	20	\$17,000
Saint James	20	\$14,000
Park Avenue	20	\$0
Martinshire	10	\$15,000
Sanford	5	\$6,000
Hirth	5	\$6,000
Cook	5	\$10,000
Ridgefield	5	\$3,000
McBaine	0	\$7,000
Ridgeway	0	\$1,000
N. Greenwood	0	\$7,000

