

# South Linden Area Traffic Calming Recommendations

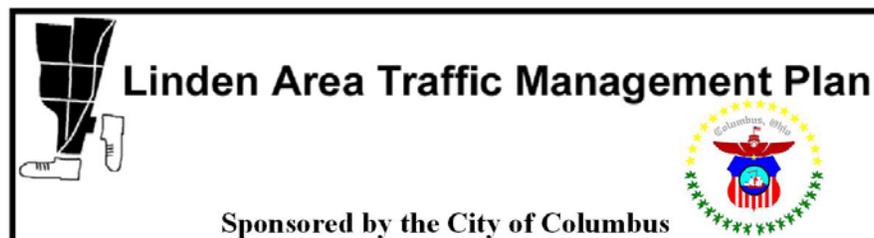
A Companion Report to *Comprehensive Strategies for Traffic Management*



**April 2005**

Prepared by:

**Dan Burden, *Walkable Communities, Inc.***  
**Michael Wallwork, P. E., *Alternate Street Designs, P.A.***  
**Mid-Ohio Regional Planning Commission**



## Introduction

This report contains recommendations for implementing traffic calming treatments in the south area of Linden. These recommendations are made in conjunction with area-wide traffic management recommendations in the *Comprehensive Strategies for Traffic Management* report. Taken together, these sets of recommendations lay out a program for improving neighborhood livability by better controlling vehicular speeds, improving walking facilities, and involving the community in every step of the process.

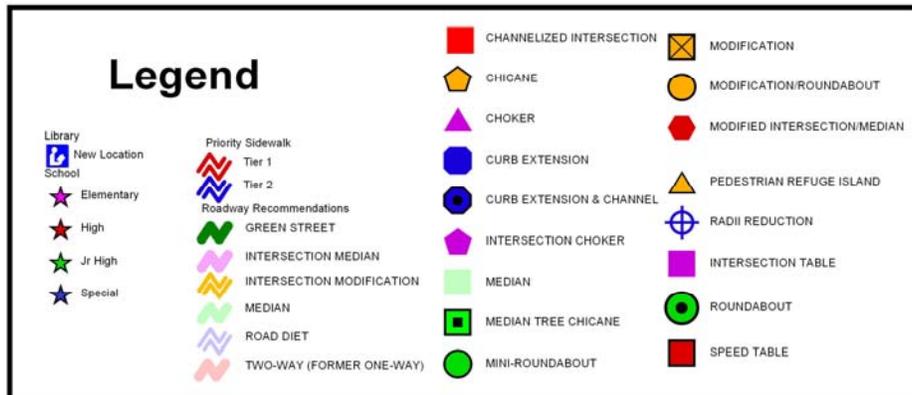
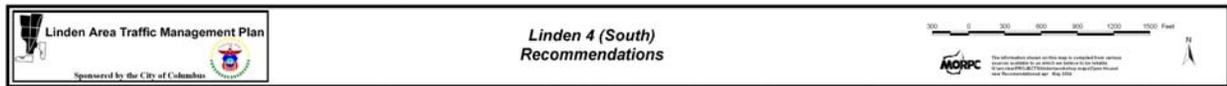
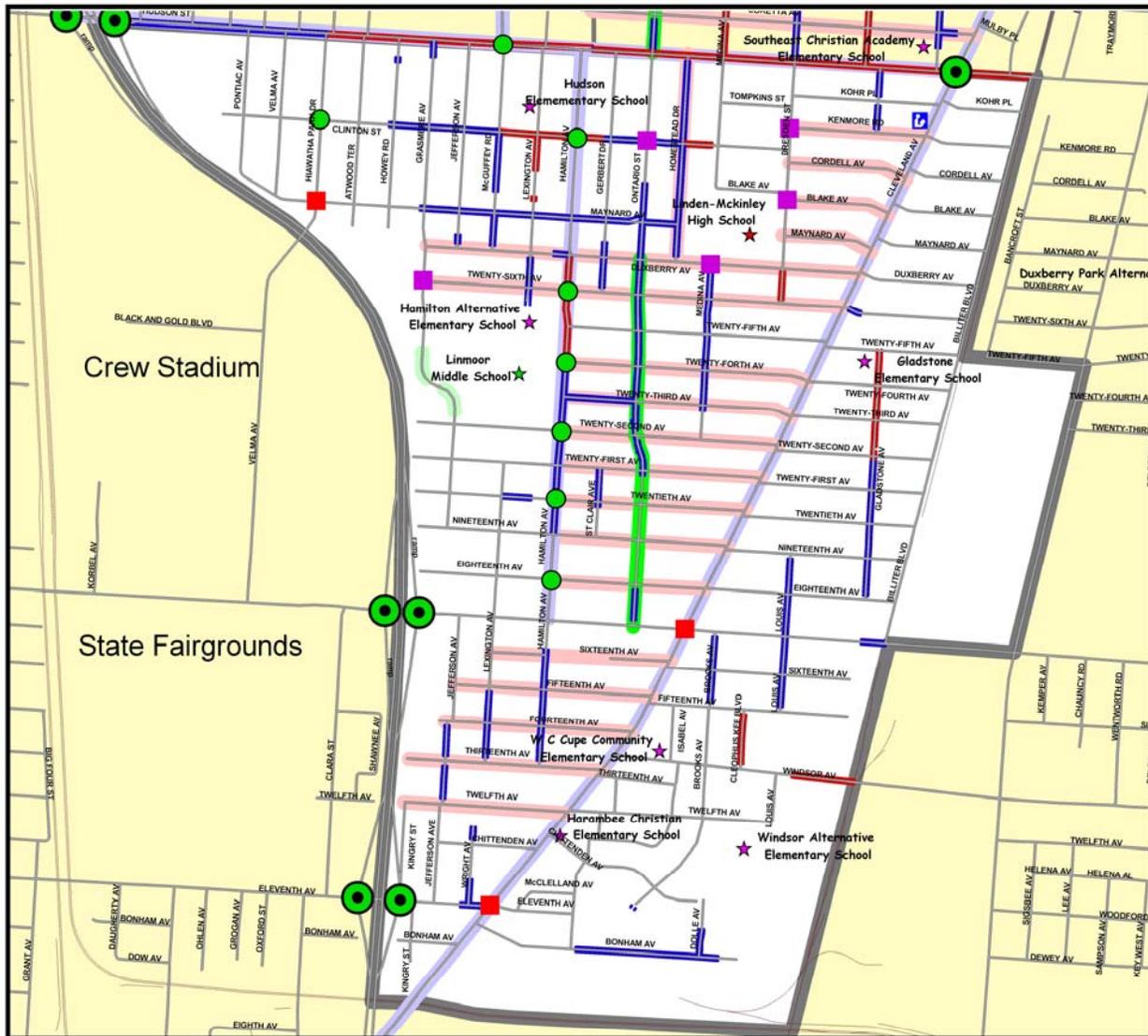


## Summary of Concerns

Residents are concerned with (1) Speed and lack of pedestrian support on Cleveland Avenue, (2) Speed on Hamilton, Clinton, Dresden, Maynard, Hiawatha and Grasmere, (3) Speed on local one-way streets, (4) Safety near Hamilton School, Linden McKinley High School and other schools, (5) Missing sidewalks, (6) Event parking, oversized vehicle parking and expired ADA parking, (7) Speed on Ontario, (8) Pedestrian safety at Four Corners, 17th & Kohr, (9) Lane switching on Cleveland, (10) Improved school crossings on 11th, 13th, 23rd, 24th, 25th and at Hudson, (11) Reduced speeds and improvements on Hamilton.

## MAP OF SOUTH LINDEN RECOMMENDATIONS

NOTE: This map shows a complete build-out of all phases of the recommendations. Some treatments may not be necessary if early phases are effective.



## South Linden Recommendations

### SIDEWALKS

About a quarter of the streets in this area are without sidewalks; a lower proportion than the rest of the Linden area. Missing sidewalks tend to be concentrated along the longer streets, especially the north-south streets. Tier 1 priority sidewalks are needed around schools. Tier 2 priority sidewalks are concentrated primarily along the major neighborhood through streets and to fill in gaps in the existing sidewalk network.

### STREET TREATMENTS: MAJOR ROADS

#### **Cleveland Avenue**

Cleveland Avenue is the primary north-south arterial in the study area running from downtown Columbus to Westerville. Traffic volumes vary from lows of 11,000 in southern Linden to highs of 30,000 vehicles per day in the northeast Linden area. The crash record is typical of a four lane undivided road with an outdated signal system and improper alignments resulting in crash-prone intersections.

South of Hudson Street, Cleveland Avenue is designated as State Route 3, varies in width from 40 to 42 feet, has on-street parking with peak hour parking restrictions and carries 11,000 to 18,000 vehicles per day. Distances between signalized intersections are quite long and pedestrian crossings are limited in number and poorly designed. As a result, many people cross Cleveland randomly.

*RECOMMENDATIONS: Improved Pedestrian Crossings, Road Diet (2 phases)*

*Phase One:* Add pedestrian crossings at intersections and other appropriate desire lines of foot travel. Install short medians as refuge islands at non-intersection locations. Improve the intersections at 11<sup>th</sup> and 17<sup>th</sup> avenues as described separately below and re-mark the pedestrian crossings at Hudson Street. Re-stripe Cleveland Avenue to have two 11-foot travel lanes with an 8-foot painted median and one parking lane on alternating sides of the street. Parking would be dropped to accommodate left turn lanes.

The road diet will result in parking being removed from one side of Cleveland Avenue. The loss of on-street parking on one side of the street in this largely residential area will likely have limited impact because on-street parking is lightly used and off-street parking is available for most properties. The parking lane should be provided at commercial centers and where parking needs are greatest. After designating the travel and parking lanes, the remaining roadway width can be added to the median.



Cleveland Avenue will be placed on a “road diet” leaving only two travel lanes in many areas. Pedestrian access will be greatly enhanced through the addition of crossing islands, typically spaced each 300-500 feet, at intersections and some added midblock locations.



Cleveland Avenue before and after road diet

After



Before

The effects of these changes should be evaluated to determine if phase two will be necessary.

Alternative road diet approaches would be 1) remove all on-street parking and add a bike lane on each side of the street; or 2) provide eight-foot parking lanes on both sides of the street, two 11-foot travel lanes and a narrow median.

*Phase Two:* Rebuild Cleveland Avenue to a single lane in each direction, with parking on both sides as suggested above. A parking lane is added compared to Phase One because using concrete rather than painted treatments keeps empty parking lanes from becoming travel lanes. Provide narrow planted medians with turning pockets where needed, indented on-street parking, planter strips with trees, many pedestrian crossings, roundabouts to replace signals where possible, improved sidewalks set back from the road. Because of the moderate traffic volumes, single lane roundabouts will operate at good levels-of-service. The median can be extended through some minor intersections, with neighborhood agreement, to allow better traffic flow and safer intersections; this would work best with roundabouts on Cleveland Avenue as they would permit residents to turn around and better access side streets.

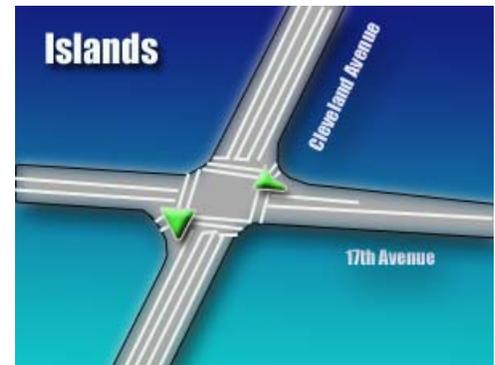
### 17th Avenue

Seventeenth Avenue from the interstate to Cleveland Avenue is carrying 8,000 to 13,000 vehicles per day. There is on-street parking in some areas, left turn lanes at some intersections and a curb-to-curb road width that varies from 30 to 35 feet.

**RECOMMENDATIONS:** *Channelized Intersection, Roundabouts (2 phases)*

**Phase One:** Channelize some of the intersection movements at Cleveland Avenue by adding “pork chop” islands in the northeast and southwest corners to shorten crosswalks and control turning speeds.

**Phase Two:** Install a set of roundabouts at the I-71 interchange ramps to assist traffic movement and create an attractive gateway.



### 11th Avenue

Eleventh Avenue from the interstate to Cleveland Avenue is carrying 8,000 to 10,000 vehicles per day in a 40-foot, curb-to-curb section, with on street parking in some areas and left turn lanes at some intersections.

**RECOMMENDATIONS:** *Channelized Intersection, Roundabouts (2 phases)*

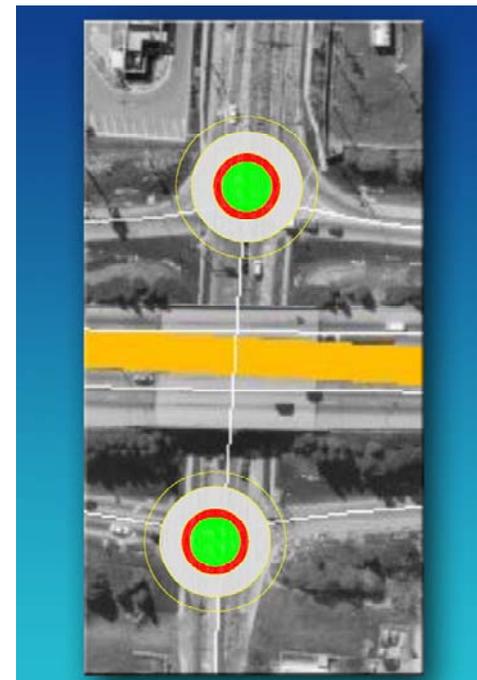
**Phase One:** Channelize some of the intersection movements at Cleveland Avenue by adding a “pork chop” island on the southwest corner and remarking crosswalks as shown below. These minor changes will improve pedestrian crossings and vehicle flow.

**Phase Two:** Install a set of roundabouts at the I-71 interchange. A set of roundabouts located here will smooth the flow of traffic and act as a gateway into the neighborhood, while providing pedestrian-friendly crossings.



Proposed intersection improvement for 11<sup>th</sup> Avenue and Cleveland Avenue

### Interchange Roundabouts at 17<sup>th</sup> Avenue and I-71



## Hudson Street

Hudson Street is a wide two-lane roadway, 32 feet wide from curb-to-curb with narrow left turn lanes at many intersections. Traffic volumes vary from 22,000 near the freeway, dipping to 15,000 at McGuffey, and climbing again to 19,000 vehicles per day near Cleveland Avenue. Combined traffic volumes at McGuffey and Hudson are approximately 19,000 vehicles per day. Speeds are low during most of the day due to traffic saturation and because of the narrowness of some lanes and utility poles next to the street. This roadway becomes severely congested during many events at the Crew Stadium and state fairgrounds, especially near I-71.

Hudson Street forms the border between the North and South Linden neighborhoods. According to both neighborhood's plans, Hudson Street is proposed to be redefined as a parkway and gateway into North and South Linden. The "Linear Park Concept" would relocate commercial businesses from Hudson to Cleveland Avenue and create greenspace with pathways on both sides of the roadway providing recreational opportunities for both North and South Linden residents. The recommendation below can be used as a phase in implementing the neighborhood plans.

### *RECOMMENDATION: Road Diet and Mini-Roundabout (2 phases)*

**Phase One:** Redesign Hudson Street with two well-defined 12-foot travel lanes to allow easy truck access to Cleveland Avenue, eight-foot pedestrian refuge islands and medians where feasible between existing left turn lanes. The travel lanes can narrow to 11 feet at intersections to better accommodate the left turn lanes. This treatment will improve pedestrian crossings and allow some early placement of landscaping to begin greening the corridor. The road diet will not allow parking on Hudson Street. However, this will have no impact west of McGuffey because on-street parking is already prohibited. East of McGuffey, parking would be removed from the north side of the street.

**Phase Two:** Widen the sidewalk to 5 feet and the road by 4 feet to allow both travel lanes and the median/left turn lanes to be 12 feet wide. Place the utilities underground and retain the refuge islands from phase one. A mini-roundabout is recommended at McGuffey Road to calm traffic and help foster neighborhood redevelopment. Right-of-way may be required in some areas.



Hudson Street will be have added short islands in Phase One, and (below) a roundabout will be added at McGuffey Road during Phase Two.



## Hamilton Avenue

Hamilton Avenue is a wide, two-lane, 32-foot roadway. Speeds are high when the roadway is not congested. The road has different characteristics north and south of Duxberry.

*RECOMMENDATION: Road Diet and Mini-Roundabout (2 phases)*

*Phase One:* Between Duxberry and 17<sup>th</sup> Avenue, Hamilton Avenue would be remarked with two 10-foot wide travel lanes that alternate the single side on-street parking to alternate sides of the street. A continuous parking lane line will be added to define the parking areas. Use high emphasis markings for crosswalks at any designated school crossings.

The road diet will not reduce parking on Hamilton Avenue as on-street parking is currently limited to the east side south of Duxberry. After designating the travel and parking lanes, the remaining roadway width can be used as a median or a restricted shoulder on the side of the street opposite the parking. The effects of these changes should be evaluated to determine if phase two will be necessary.

*Phase Two:* If needed, Hamilton Avenue will have mini-roundabouts installed at Clinton Street, 26<sup>th</sup> Avenue, 24<sup>th</sup> Avenue, 22<sup>nd</sup> Avenue, 20<sup>th</sup> Avenue, and 18<sup>th</sup> Avenue.



Hamilton Avenue between 24th and 26th Avenues. Treatments include a new pickup and delivery system on school grounds, a pair of roundabouts, inset parking and other treatments to assist school drop-off, pick-up and to keep speeds at 15-25 mph in front of the school 24 hours a day.

## STREET TREATMENTS: MINOR ROADS

### **Hiawatha Park Drive**

*RECOMMENDATIONS: Channelized Intersection, Mini-Roundabout*

Add medians and narrow the south leg of the intersection as shown to slow vehicles, especially turning vehicles, and shorten pedestrian crossings. The intersection of Hiawatha Park Drive and Maynard Avenue is large and wide-open; several of the lanes are redundant. Reducing the paved area of the intersection will improve safety and have little or no impact on the capacity of the intersection.

The City recently installed speed humps north of Maynard. If the new speed humps do not produce satisfactory results, a mini-roundabout at Clinton Street should be considered as an alternative.



### **Dresden Street Duxberry Avenue**

*RECOMMENDATION: Intersection Tables*

Install tables in the Dresden intersections with Kenmore Road and Blake Avenue and the Duxberry and Medina Avenue intersection. Intersection tables control speed from all directions, limiting speed to about 15-20 mph.

### **Ontario Street**

*RECOMMENDATIONS: Green Street, Intersection Table*

Place a speed table in the intersection with Clinton Street. Designate Ontario as a “green street” from Duxberry south to 17<sup>th</sup> Avenue. A green street is a slow-speed roadway meant primarily for walking and bicycling. A “green street” in this location would serve as a north-south neighborhood connector for residents and school children. The road already favors this designation because it is relatively narrow with minimal traffic and no sidewalks. To complete the conversion to a “green street” additional trees should be added, traffic operations adjusted to favor through-movement of pedestrians and bicyclists on Ontario and intersection treatments considered such as mini-roundabouts. Suggested operational changes include designating Ontario as an alley to lower the speed limit to 15 mph.



Shown above, a “green street,” also referred to as a woonerf, serves as a very narrow, two-way street. The traveled portion of this roadway is 13 feet wide. Placement of parking, mailbox locations and other street details, including lighting, is determined with advice of residents who help design the street. “Green streets” add great value to neighborhoods, improving walking, association (human interaction), and low-speed travel.

### **Grasmere Avenue**

*RECOMMENDATION: Intersection Table, Medians*

Install a speed table in the intersection with 26<sup>th</sup> Avenue. Add medians to the two curves between 26<sup>th</sup> and 22<sup>nd</sup> avenues to help control speeds by preventing vehicles from crossing the center line.



## POLICY: CONVERT ONE-WAY STREETS TO TWO-WAY

Most east-west streets, such as Kenmore, Blake, Maynard and many numbered streets are 26 feet wide, curb-to-curb, with parking on both sides of the street. These streets were designed and built to operate as two-way streets but were converted to one-way streets nearly 30 years ago. Residents often ask to have two-way streets converted to one ways in order to eliminate the need to yield to other drivers. Many of them are satisfied with having to come in and exit a particular direction in trade for easier movement along their street.



Unfortunately, one-way streets tend to increase speeding, a problem identified on many streets. A number of motorists were tracked doing 30-40 mph during our field observations. Therefore, one-way streets are recommended to be converted to two-way operations. This includes **Kenmore, Cordell, Blake, Maynard, Homestead, Duxberry** and most of the **numbered avenues**. Kohr Place should remain one-way due to a COTA bus route operating on that street. One interesting observation is that many streets are one-way east of Hamilton Avenue and two-way west of Hamilton Avenue, a very unusual situation that indicates two-way operation should work well, with neighborhood approval.



Conversion should begin with the identification of one pair of one-way streets where residents are willing to pilot the effort. A neighborhood traffic team should work to obtain local awareness and support, collecting signatures on petitions from area residents. Speeds and other factors should be evaluated before and after the conversions. Once a conversion has been determined to be successful in reducing speeds, and the residents are satisfied with the results, an outreach effort should be developed with the community to determine the level of support for conversion of the remaining streets. A series of neighborhood work sessions can help the neighborhood through the process of testing, evaluating and determining the ways to proceed on other conversions.

## Summary

The primary objectives of the traffic calming and traffic management program are to: 1) identify issues and concerns, 2) determine workable solutions, and 3) most importantly, encourage residents and other stakeholders to develop a sense of ownership and commitment to solve problems that affect their quality of life. This program was and continues to be a citizens' hands-on project, working with staff from the City of Columbus. Citizen input remains essential to the success of the program.

At the final workshop the South Linden Area residents agreed on a prioritized list of the most important issues that they wanted to see addressed in their neighborhood. This list included speeding, lack of crosswalks and sidewalks, poorly-marked school zones, and problematic one-way streets. The roads and intersections below needed the most attention, and the conceptual designs are those the community showed most interest in implementing.

<p>PRIORITY ROADS: Hamilton Avenue, Cleveland Avenue and Cleveland Avenue intersections with Hudson, 24<sup>th</sup> and 17<sup>th</sup>.</p>
---