



City of Norman



INFORMATIONAL MEETING *about*

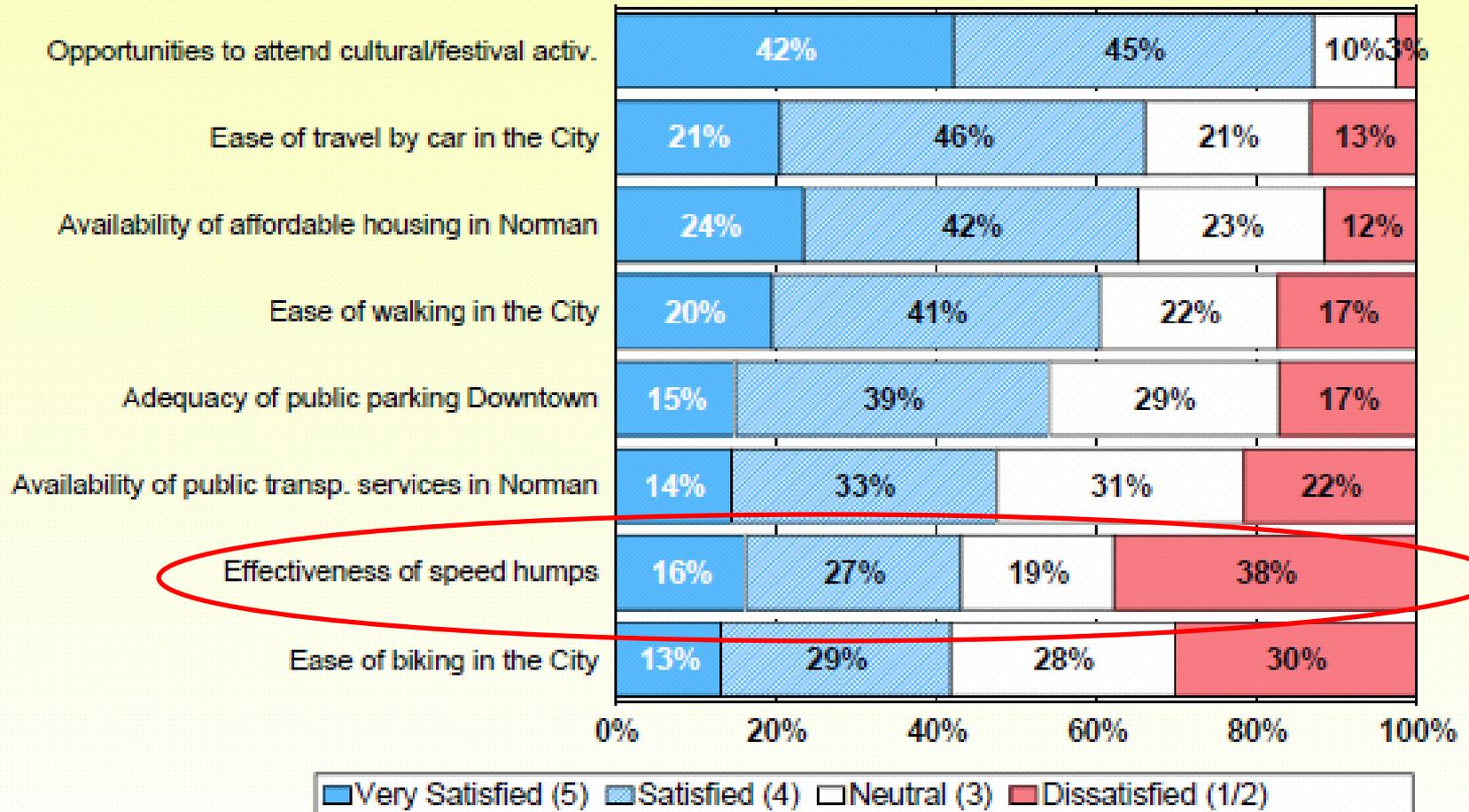
WALNUT ROAD Traffic Calming Project

Presentation to **Sherwood Forest** Residents

July 8, 2010

Q24. Satisfaction With Various Aspects of Transportation and Other Issues

by percentage of respondents who rated the item as a 1 to 5 on a 5-point scale (excluding don't knows)



Purpose of Meeting

- To go through a chronology of events leading to the current status of Walnut Road calming project**
- To allow residents opportunity to ask questions about the project and why it looks like it does**
- To give residents an opportunity to add or withdraw their names from the previously submitted petition.**
- To move the project forward**

TRAFFIC CALMING PROJECT DEVELOPMENT PROCESS

1. Citizen (or group of citizens) contacts Traffic Division about problem and requests traffic study.
2. 1st Traffic Study (Traffic Division collects and analyzes traffic data)
3. Speed Feedback Trailer deployed.
4. 2nd Traffic Study (Traffic Division collects and analyzes traffic data)
5. Neighborhood meeting held to develop traffic calming plan.
6. City prepares a support petition for affected residents to sign.
7. Neighborhood collects signatures and returns petition to Traffic Division.
8. Traffic Division verifies signatures and, if there's > 60% support, project will be READY.
9. Traffic Division finalizes plan details and selects contractor.
10. READY projects can be built when funds are available.

[Note: If more projects are READY than funds available, projects will be prioritized.]

Sherwood Forest Neighborhood Association

Formal written request asking
City to evaluate eligibility of
Walnut Road for a possible
traffic calming project

This petition is to authorize the City of Norman Traffic Control Division to take steps to begin a traffic study for our neighborhood. These signatures simply are a first step to looking into making our neighborhood a safer place. This will not authorize any work being done to our neighborhood at this time. A meeting will be set-up to discuss the findings of the study that will be done.

March 1, 2006

1. Randy & Heather Wade 1183 ROBINHOOD LN.
2. Ann and Noel Doff 1024 Robinhood Dr.
3. Beryl & Jan Hunt 1158 Robinhood Ln.
4. Diana & Tim Hartley 3208 Walnut Rd.
5. Mike & Mary Beth Schaff 3102 Walnut Rd.
6. Ed & Jan Carpenter 1025 Robinhood
7. Tom & Angela Thompson 1135 Robinhood Lane
8. Don & Lucy Nickolen 3127 Walnut
9. Jubree & Benton Ladd 3122 Walnut
10. Sam & Saradee Griffin 1179 Robinhood Ln.

To Qualify for Traffic Calming Program:

- **85th Percentile Speed > 8 mph over posted speed limit**
- **Average Daily Traffic (ADT) > 600 veh./day (vpd)**

If no. of reported speed-related accidents on road in 3-year period > 5 accidents, this can be used as a substitute criterion in lieu of either the speed or volume requirement.

**1st Meeting with Walnut
Road Residents (at
McKinley School)**

March 29, 2007

**Flyer announcing
McKinley School
meeting on 3/29/07**

**(approx. 70-75 flyers
distributed to residences
along Walnut Road
corridor)**



Tired of Speeders Tormenting Your Neighborhood on
Walnut Road?

The CITY OF NORMAN TRAFFIC DIVISION has a plan
for physically slowing down these annoying drivers.

It's called ***TRAFFIC CALMING.***

But it requires neighborhood help and support from the
residents along Walnut Road.

We urge you to attend a presentation of "Traffic Calming
on Walnut Road" by the City's Public Works Dept.-Traffic
Control Division.

Time: 6:00 p.m. on Thursday Mar. 29, 2007

Place: McKinley School Gymnasium
(728 S. Flood Ave.)

Questions: Call Heather Wade, 701-0497

Neighborhood Meeting



Generic presentation of traffic calming

Specific recommendations for the neighborhood

Why Not Stop Signs?

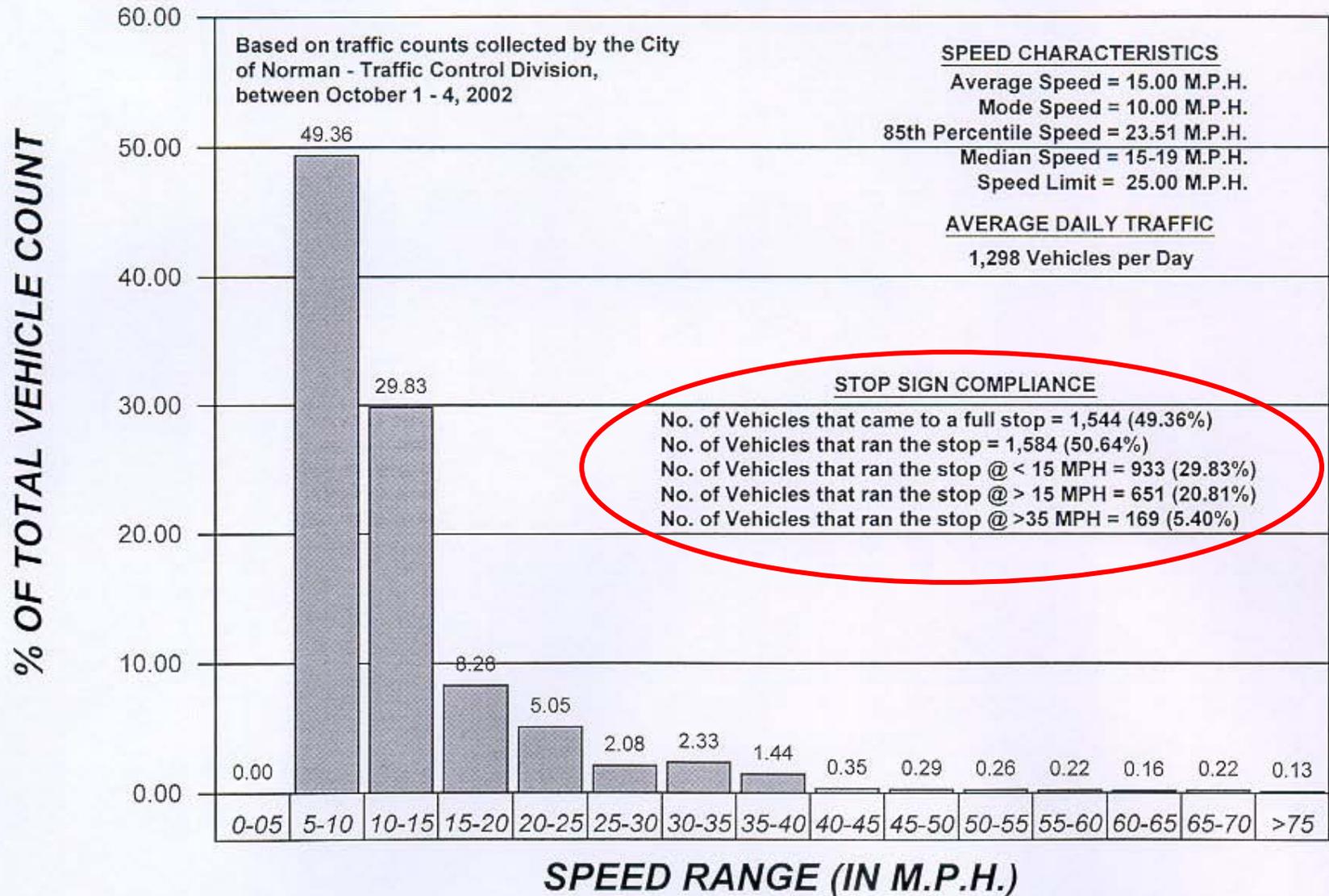
- Low compliance
- May increase speeds
- Better results with
Physical Traffic Calming Devices
- Encourages drivers to
disregard traffic signs



Manual on Uniform Traffic Control Devices (MUTCD) Sec. 2B.05:

“STOP signs should not be used for speed control”

DISTRIBUTION OF OPERATING SPEEDS EASTBOUND ON QUAIL DRIVE AT RED OAKS DRIVE



Physical Controls

Pluses

Enforce compliance by physical presence

May cause volume reduction

Speed reduction when properly placed

Positive effect on vehicular & pedestrian safety

Minuses

Substantial cost of construction & maintenance

Affects emergency response

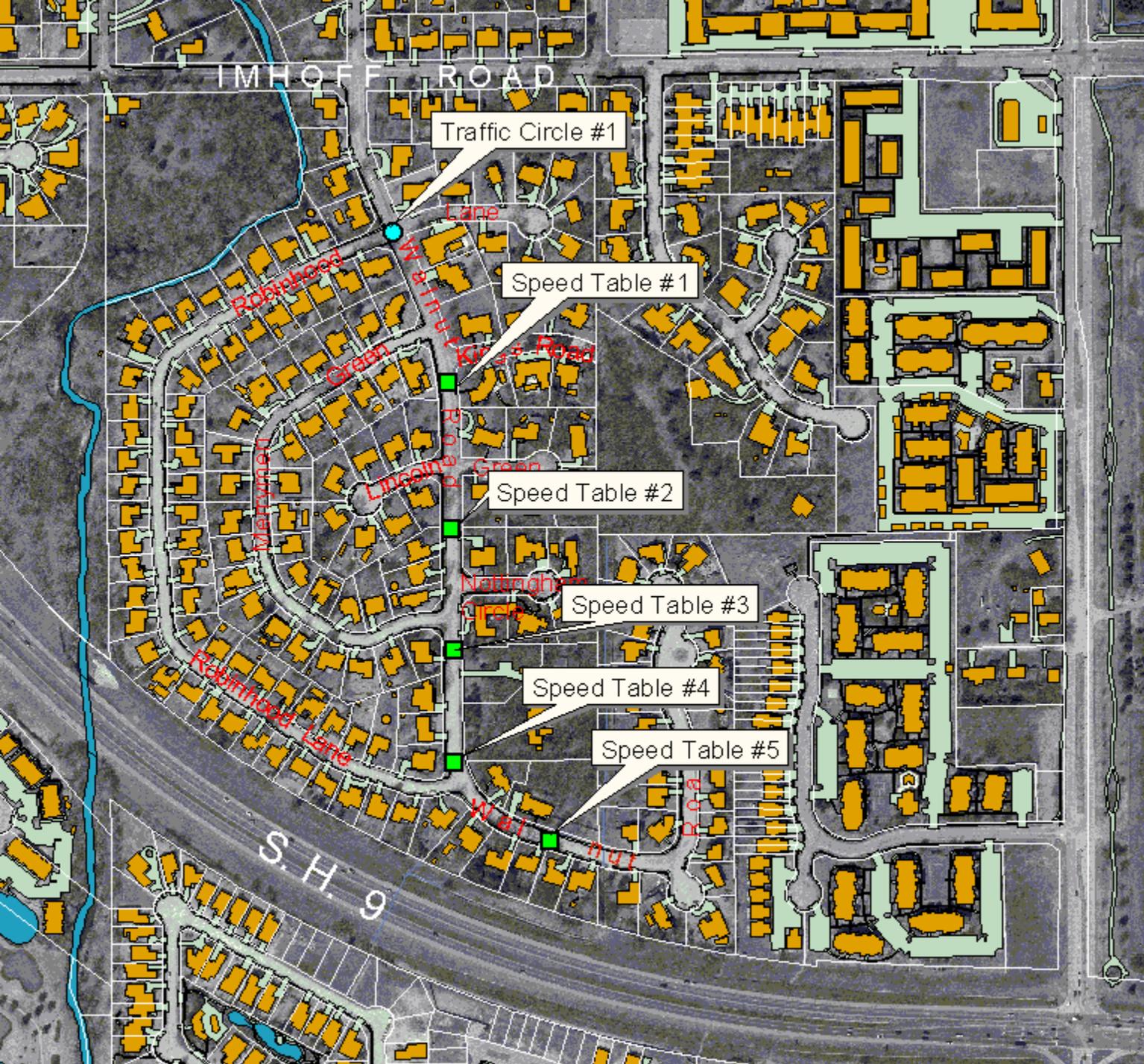
May negatively affect bicyclists & motorcyclists

Could hinder snow plowing operations

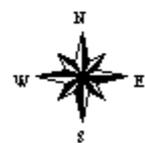
2006

Sherwood Forest Addition

Proposed Traffic Calming Locations



- Parcel
- Pavement
- Structures
- Street Names
- Water Features
- Narrow Streams



1 Inch = 400 Feet
March 06, 2006

Map produced by the City of Norman
Geographic Information System
(405) 344-5434

The City of Norman assumes no
responsibility for errors or omissions
in the information presented.

Results of McKinley School Meeting

- **Opposition to proposed traffic circle at Walnut/Robinhood intersection. “Too hard to negotiate in slick weather.”**
- **Staff suggested replacing circle with another speed table.**
- **Concern about negatively impacting a regular wheelchair user of Walnut Road if speed tables used.**
- **By show of hands, majority of people preferred the “all speed tables” option - but certainly not a consensus.**
- **City agreed to re-look at options before sending out a prepared petition to circulate.**

**2nd Meeting with
Walnut Road Residents
(at City of Norman)**

April 10, 2007

Meeting at City of Norman

- **On 4/10/07, a group of residents from the McKinley meeting, and interested in getting a calming project, met with staff in City of Norman Building A.**
- **Idea introduced of using an entry median again (used to have one there).**
- **Staff agreed to look at options to cut down number of speed tables by using other types of devices, such as “curb chokers” or center medians, where there weren’t driveway conflicts. Drainage would have to be looked at for these options.**

Walnut Road calming project put on “back burner” while survey data was gathered (to evaluate drainage).

Oversight Committee

In late 2008, Oversight Committee of the City Council did a lengthy evaluation of the Traffic Calming Program. These changes resulted:

- Qualifying 85th Percentile Speed changed from 32 to **33 mph****
- Qualifying Traffic Volume changed from 500 to **600 vehicles per day****
- Eligible petitioners expanded from those just along calmed corridor to **residents that are forced to go over or around a calming device****

**3rd Meeting with Walnut Road
Residents (at St. Michael's
Episcopal Church)**

March 11, 2010

Due to changes to Traffic Calming Program and the time that had elapsed, staff ordered another traffic study to re-evaluate the numbers.

- ✓ **Significant traffic changes had occurred.**
- ✓ **Southern portion of Walnut Road no longer qualified for project.**
- ✓ **Decision made by staff to propose “softer” calming devices, e.g. center medians, and 1 speed table in new proposed calming scheme.**
- ✓ **Another neighborhood meeting needed, using Council directive to invite all residents who must go over the speed table to go in and out of neighborhood.**

**a Speed Feedback
Trailer was deployed
for about a week**

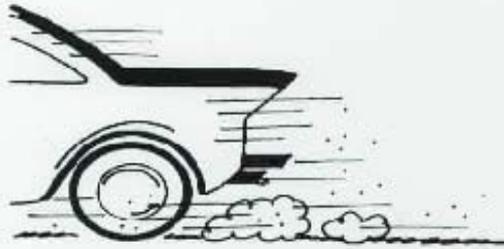
**In between the 2006 and
2009 traffic studies....**

April 2009

November 2009



Flyer announcing 3/11/2010 meeting



Are Speeders still tormenting you on **Walnut Road**?

We discussed Traffic Calming 2 or 3 years ago, but it never reached the petition stage.

The City's **TRAFFIC CALMING PROGRAM** has made some recent changes in its eligibility criteria.

A more concise calming plan on Walnut Road has been developed.

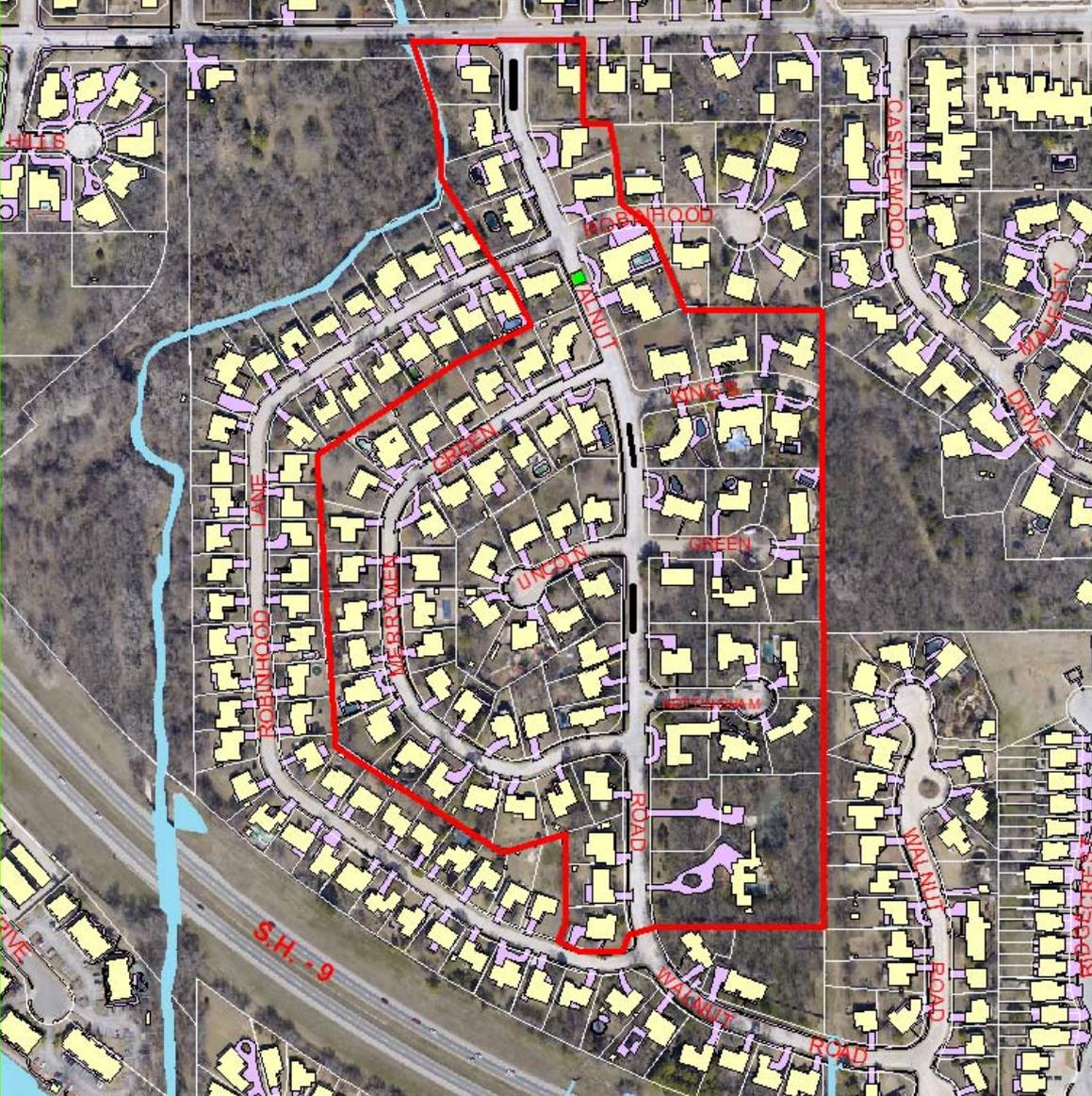
The City of Norman Traffic Division invites you to attend a meeting to again discuss ***TRAFFIC CALMING on WALNUT ROAD.***

Time: 6:00 p.m. on Thursday Mar. 11, 2010

Place: **St. Michael's Episcopal Church**
(1601 W. Imhoff Rd.)

Questions: Call Michael Rayburn, 217-7713

Flyers were put on doors of residences in outlined area of this map



  **Eligible Petition Area**

WALNUT ROAD

 **1" equals 300'**
Jan. 10, 2010

Traffic Studies SUMMARY

- March '06 study
- April '09 (from Speed Feedback Trailer)
- November '09 study



● **Traffic Data Location**



Walnut Road

1" equals 300'

Jan. 10, 2010

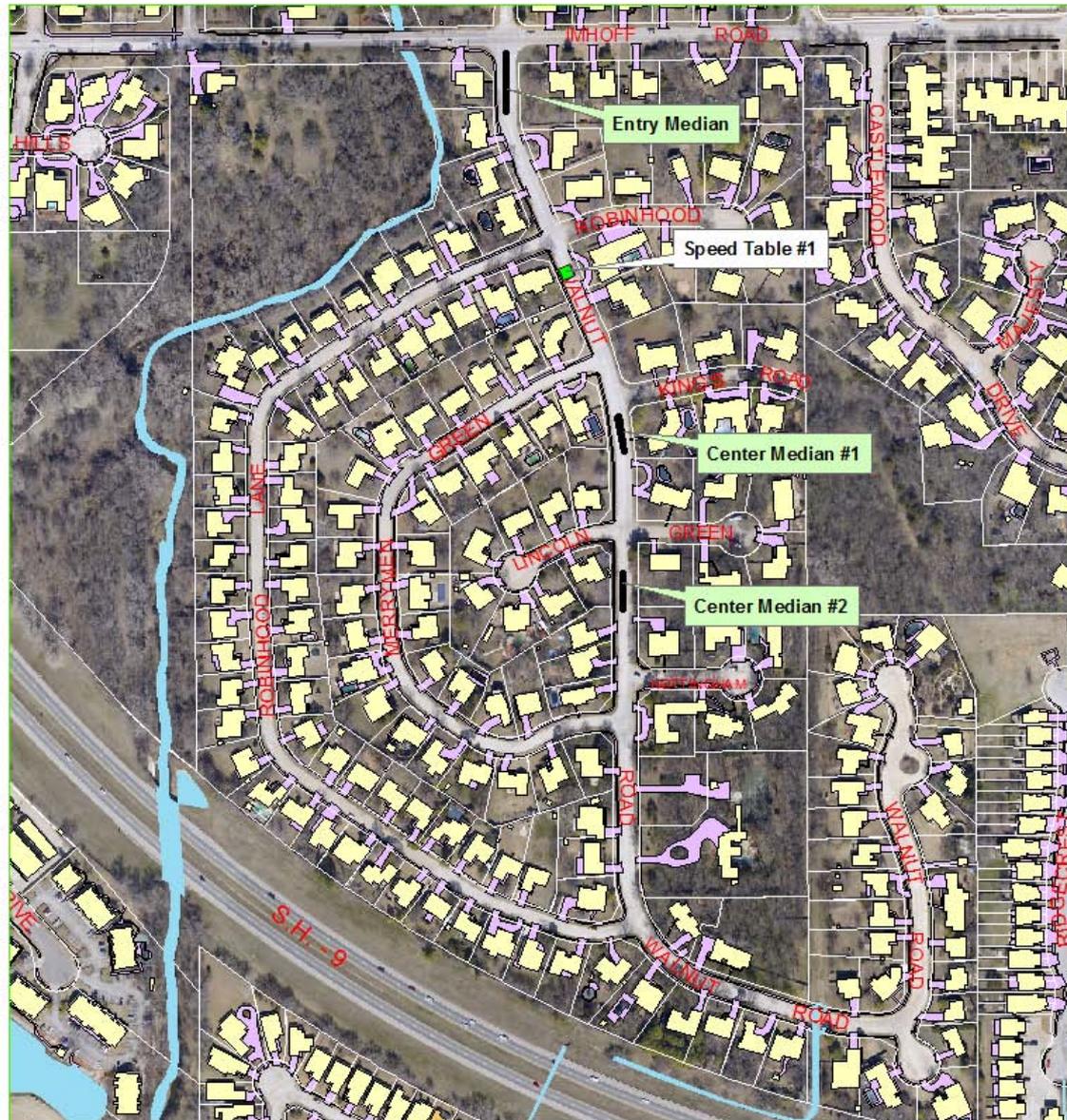
SUMMARY of Traffic Studies - Walnut Road (2006 vs. 2009)

COMPARISON OF TRAFFIC DATA

Site A 2006 (betw Robinhood & King's Rd.)		Site A 2009 (betw. Robinhood & King's Road)
3,075 vehicles	<i>Total No. of Vehicles</i>	2,691 vehicles
1,026 vehicles	<i>Avg. Daily Traffic</i>	897 vehicles
34.2 mph	<i>85th Percentile Speed</i>	38.2 mph
1,963 vehicles (63.8%)	<i>No. of Speeders > 25 mph</i>	1,947 vehicles (72.4%)
363 vehicles (11.8%)	<i>No. of Speeders > 35 mph</i>	699 vehicles (26.0%)
70 vehicles (2.3%)	<i>No. of Speeders > 45 mph</i>	147 vehicles (5.5%)
Site B 2006 (betw Nottingham & Robinhood)		Site B 2009 (betw. Nottingham & Robinhood)
1,551 vehicles	<i>Total No. of Vehicles</i>	1,125 vehicles
518 vehicles	<i>Avg. Daily Traffic</i>	375 vehicles
33.5 mph	<i>85th Percentile Speed</i>	31.5 mph
1,108 vehicles (71.4%)	<i>No. of Speeders > 25 mph</i>	531 vehicles (47.2%)
127 vehicles (8.2%)	<i>No. of Speeders > 35 mph</i>	70 vehicles (6.2%)
18 vehicles (1.2%)	<i>No. of Speeders > 45 mph</i>	25 vehicles (2.2%)

2009

Proposed
Traffic
Calming
Locations



 **Location of Calming Device**

 **1" equals 300'**
Jan. 10, 2010

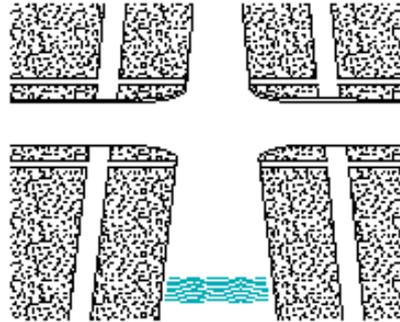
Walnut Road

SPACING

of Traffic

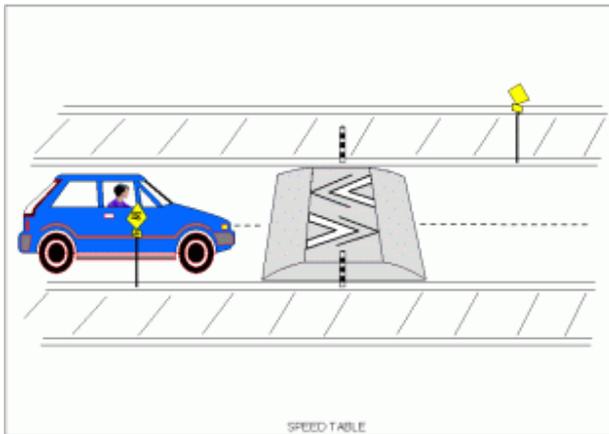
Calming Devices

Research data indicate that speeds increase approximately 1 mph for every 100' of separation of calming devices. 300'- 400' spacing seems to be an optimal spacing for calming a corridor.



Speed Humps

14' long



Speed Tables

22' long

Advantages

- Effective speed reduction
- Can shift cut-through traffic elsewhere

Disadvantages

- Jars vehicles
- Affects emergency vehicle response time
- May be increased noise

**Pictures of
Speed Tables
in Norman**



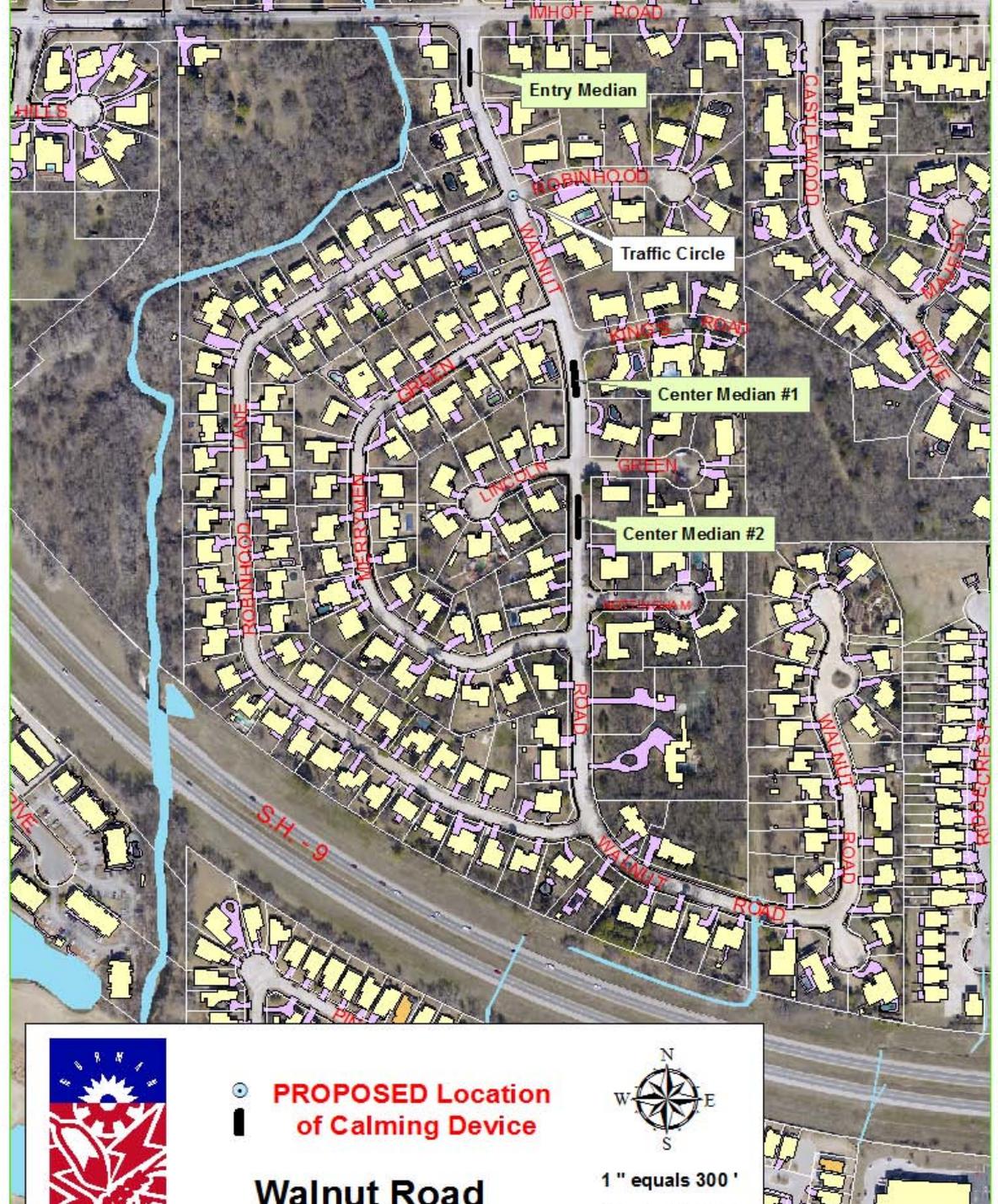
Westbrooke Terrace



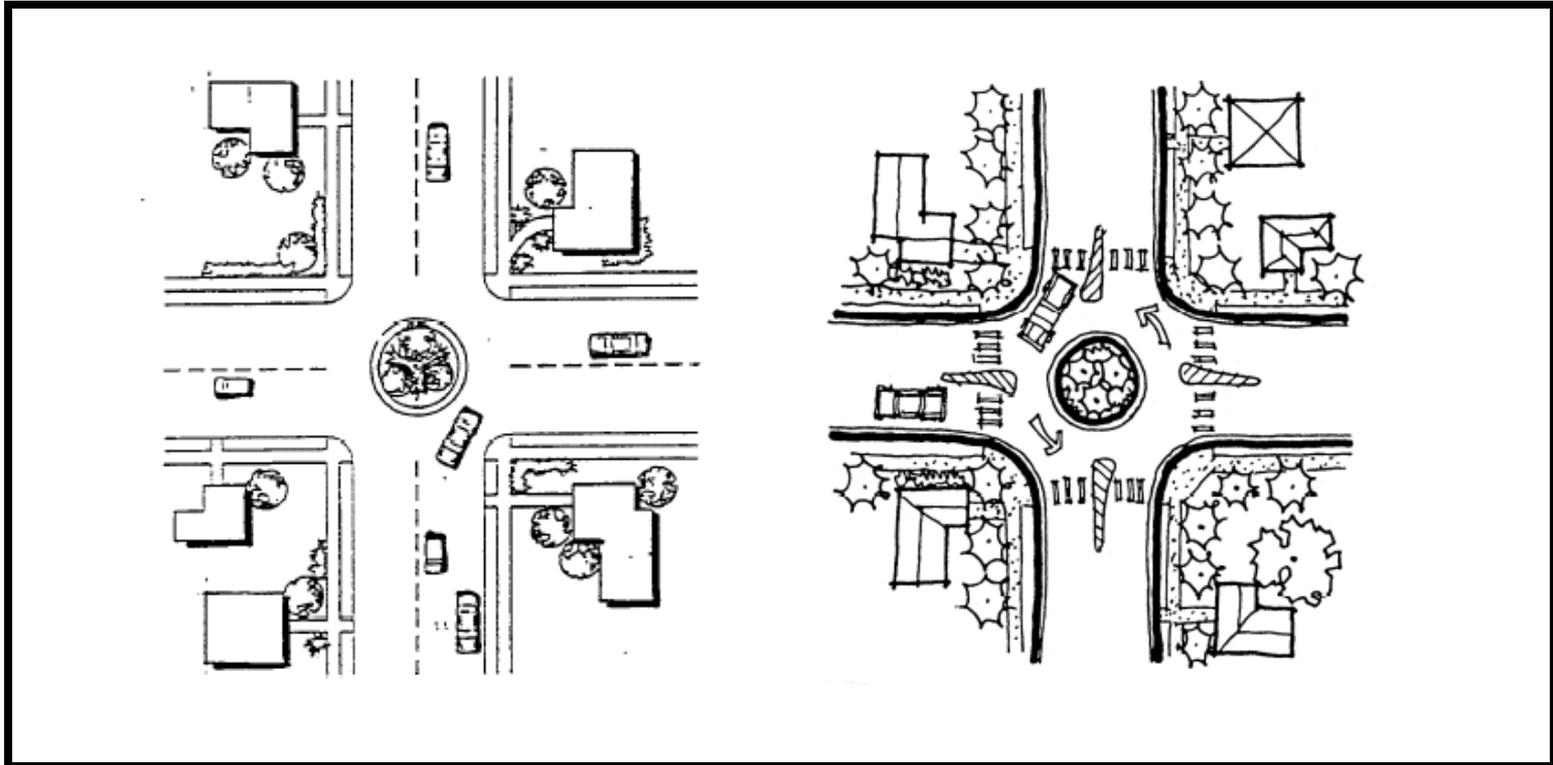
Sequoyah Trail – going Westbound
(just W of Woodbriar)

Meeting RESULTS

- Opposition to even a single speed table
- Residents wanted traffic circle instead
- Staff discussed circle pros & cons
- No one could avoid traffic circle, so petition area would expand to entire neighborhood



Traffic Circles



Advantages

Noticeable reduction of speeds
Aesthetically pleasing when landscaped

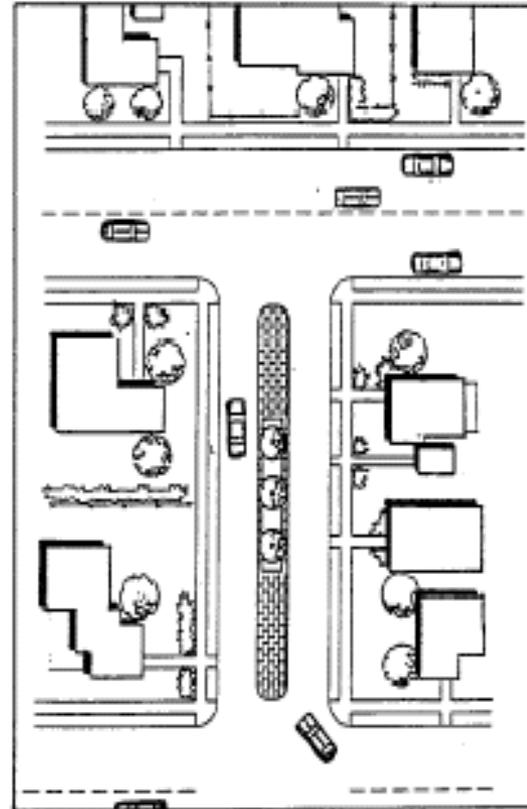
Disadvantages

May increase accidents until drivers used to it
Pedestrians/bicyclists must adjust change of crossing patterns

Medians

Center Island Median

Advantages	Disadvantages
Reduces opportunities for head-on accidents	Loss of on-street parking
May be aesthetically pleasing if landscaped	Can restrict certain convenient turns



Castlerock Addition

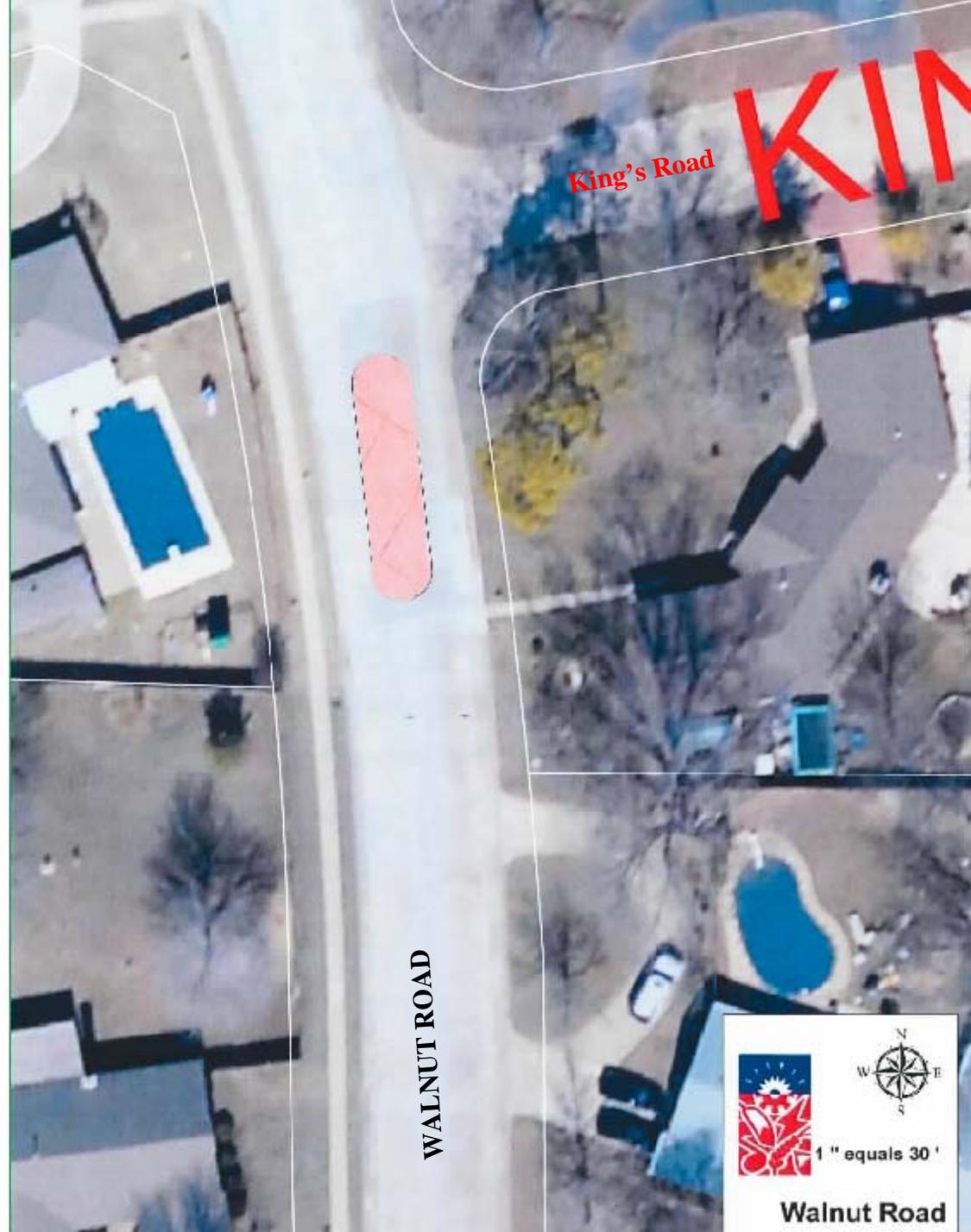
Brownwood Lane &
Buckingham Drive



**City designed Traffic Circle for
Robinhood / Walnut Intersection**

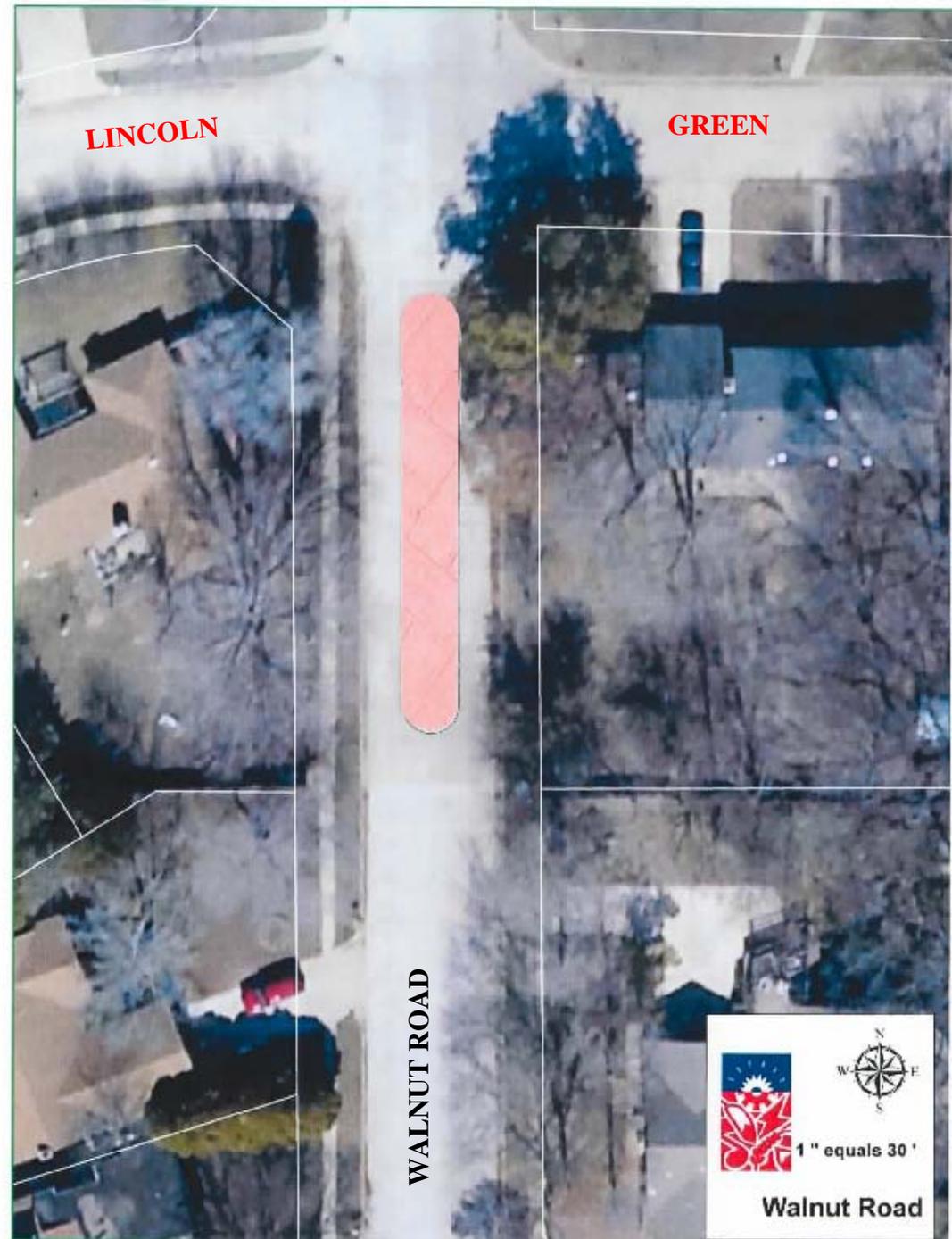
Center Median #1

- stamped, colored concrete



Center Median #2

- stamped, colored concrete



Mrs. Ann Goff
1024 Robinhood Lane
Norman, OK 73072

Mrs. Goff,

As follow-up to the Walnut Road Neighborhood Meeting to discuss traffic calming, I am enclosing here 4 copies of the petition that we've prepared to be circulated for the Walnut Road Traffic Calming project. You can collect signatures on one of the copies only, or use more than one to split up the work. Also enclosed is a copy of the sign-up sheet from the neighborhood meeting.

Petition Instructions from City staff

Due to the desires of those at that meeting, there are no speed tables in this revised calming plan. The one speed table proposed at that meeting has been replaced by a traffic circle. The new calming plan is attached to the petition, and every residence contacted should understand that they are supporting that plan by signing the petition.

We have listed the names of the owners of record of the eligible addresses to sign the petition. Only one signature will be counted for each address. Owner signatures are preferred, but tenant signatures are permitted; we ask that tenant signers identify themselves as such and write the owner's name and phone number in the COMMENTS column (to help in the verification process). It takes 60% of eligible petitioners to move the project forward, so it's a good idea to get more signatures than required in case some don't validate or get overturned.

If a listed name is incorrect, just mark through it and write in the name of the resident. If a residence is vacant, please note it on petition. To be considered for this funding cycle, the signed petition needs to be returned to the City by April 15, 2010.

Please send or bring the signed petition(s) to me at:

Michael Rayburn
City of Norman Traffic Division
201 West Gray, Bldg. A
Norman, OK 73069

If you have questions, please contact me at 217-7713 (e-mail address is mike.rayburn@normanok.gov), or Angelo Lombardo at 366-5327 (e-mail address is angelo.lombardo@normanok.gov).

Sincerely,

Michael Rayburn
Staff Engineer – Traffic Division

Enclosures

ISSUES Raised since Petition was submitted

Resident objected that the center median proposed next to his home would make it difficult to get his boat out of his driveway onto Walnut Road

Staff agreed to shorten median to give him more room to accommodate turning maneuver

Residents objected that they were purposely not invited to last meeting where they would have objected to traffic circle

Staff invited residents from a map (without regard as to who lived where) based on Council direction to include residents from side streets if they had no other access options except to go over a device. All residents not invited could have taken Robinhood Lane to avoid the proposed speed table.

Resident objected that the center median proposed next to his home would take some parking space from his home

Staff explained that a device was necessary at that location for spacing purposes, and that the median device was considered there only because there were no drives in that area onto Walnut. Parking was still available in front of his home on King's Road.

ISSUES Raised since Petition was submitted

(continued)

Opponents of project objected that this project was devised by a few and that opponents had no say in the process.

When the traffic circle was inserted into plan, all residents were then eligible petitioners. Circulators of petition then had to get support signatures from 60% of all neighborhood residences. Many residences on side streets, including Robinhood Lane and the outlying portions on Walnut Road, signed the support petition.

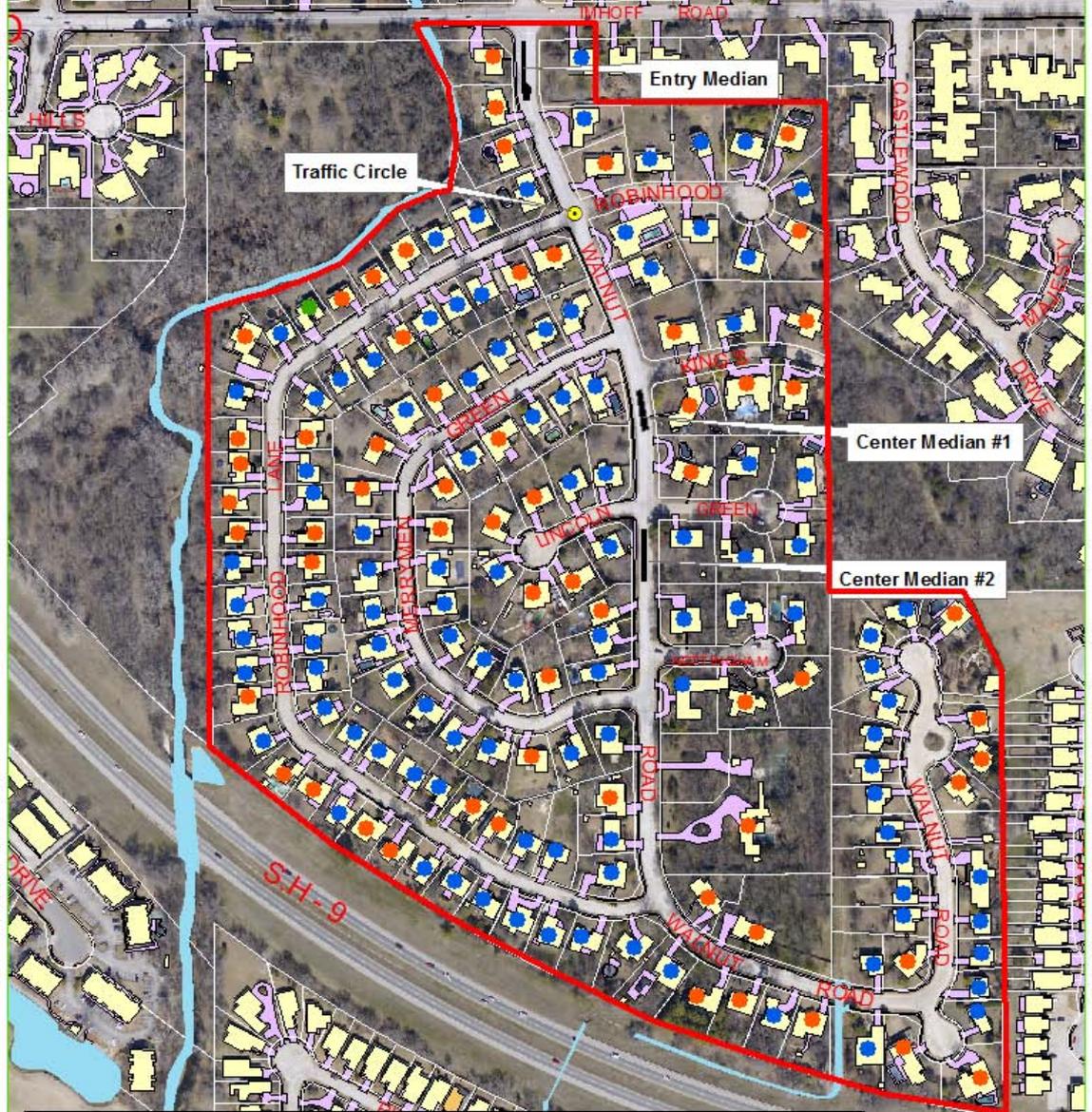
Circulators of support petition have successfully done the work required of them and feel that denial of this project at the end would be unfair to their efforts and would break the City's promises to them.

Staff has tried to administer the Traffic Calming Program as Council has directed. City Council always maintains the prerogative to approve or deny a neighborhood project. Otherwise, only a request by petition signers to remove their names could overturn this plan.

Circulators of support petition have expressed concern about having to go through the petition process again and further delay the project.

Staff understands the concern and hopes to find a compromise between the proponents and opponents.

Signed support petition was submitted to City on 4/15/2010



 63.2% SUPPORT (108 Yes of 171 Possible)

 Traffic Calming Device

 Eligible Petition Area

 1" equals 300'

April 16, 2010

Walnut Road

Project Cost:

1 entry median

2 center medians

1 traffic circle with water

\$ 53,000

Other options would have cost:

3 speed tables \$ 9,000

1 entry median

2 center medians

1 speed table

\$ 45,000

Delay for **EMERGENCY VEHICLES**

- Target response time for Fire Department is **5 minutes**
- Calculated response time (going 10 mph over speed limit) to farthest extent of **Walnut Road** from Fire Station #3 (at Monitor Ave./Constitution St.):

With no calming devices: 4.0 minutes

With proposed calming devices: 4.1 minutes

Police Enforcement

Advantages	Disadvantages
Visible enforcement reduces speeding	Benefits are usually short term
Driver awareness about speeding is increased	
Enforcement flexible - any time of day	
Effect can be quick	



Norman Police Department Efforts

From January 1, 2009 to Present

- 1 collision at Imhoff/Walnut (intersection)
- No citations
- 1 traffic stop within the neighborhood
- 5 traffic stops at Imhoff/Walnut (entrance into neighborhood)



Speed Feedback Signs

- City deploys 3 portable speed feedback trailers every week
- Units set out for 1 week per location and direction changed mid-week
- Data downloaded and sent monthly to Norman Police for their use in enforcement
- Permanent installations are possible using electrical or solar power sources
- Cost of a permanent installation is approx. \$7,500 (including estimated maintenance)
- Reports from Minneapolis and Bellevue (WA) indicate a min. 4% speed reduction still after 3 years



Speed Feedback Sign Study

Northcliff Avenue selected because:

- It was long and straight
- It had vacant area to place unit
- It was being considered for a calming project

Objectives

Determine the influence of Feedback Trailer in regard to:

- distance from trailer
- time of deployment

Determining effects of speeds downstream of trailer

Compare speeds at analyzer and trailer locations

To what speeds do drivers speed up at 400' and 800' distances from trailer?

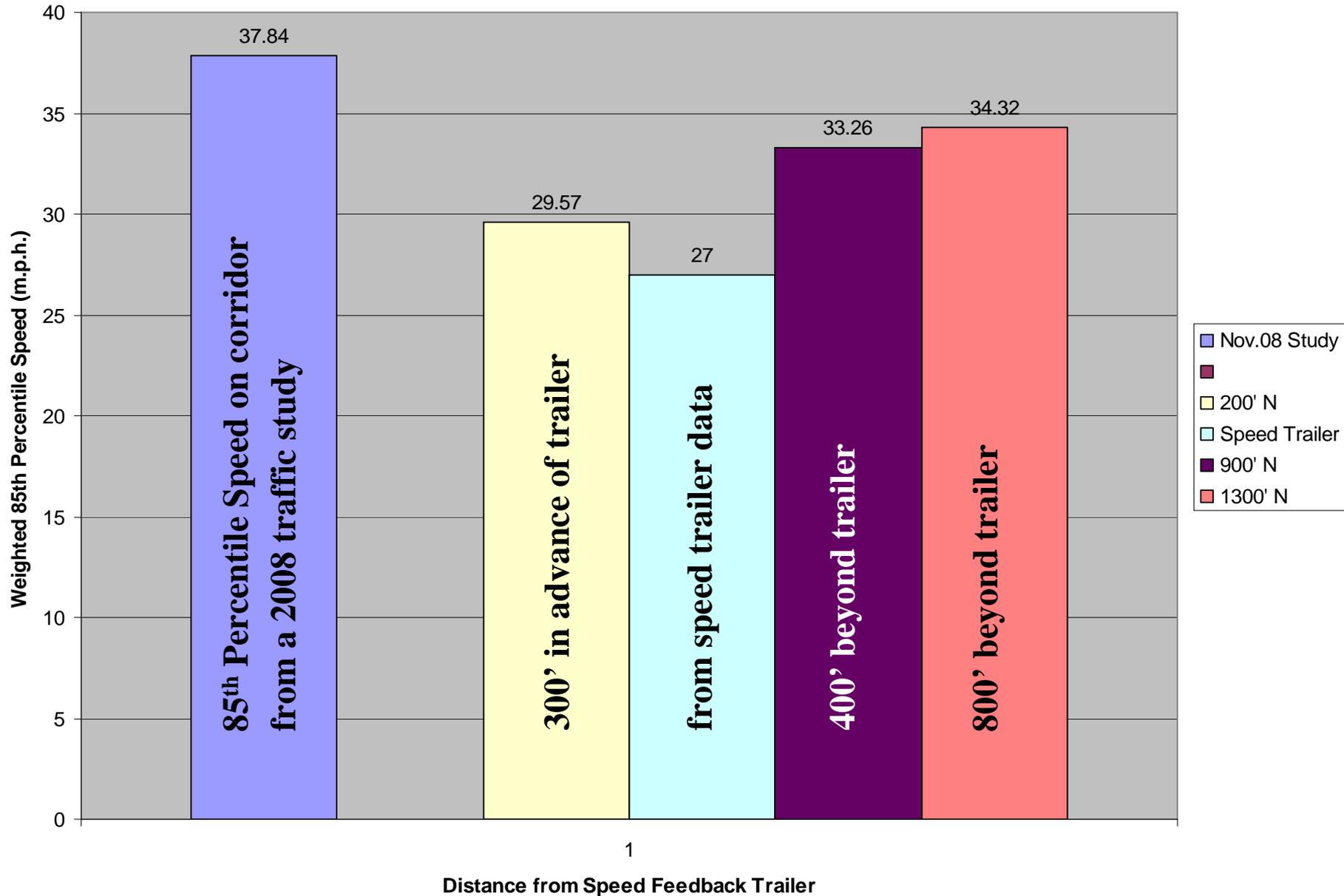
Download traffic & trailer data weekly

Do drivers speed up in a shorter distance from trailer over time?

Will long-term speed feedback installations continue to slow down drivers?



NORTHCLIFF AVENUE: Comparison of 85th Percentile Speeds at Varying Distances from Speed Feedback Trailer



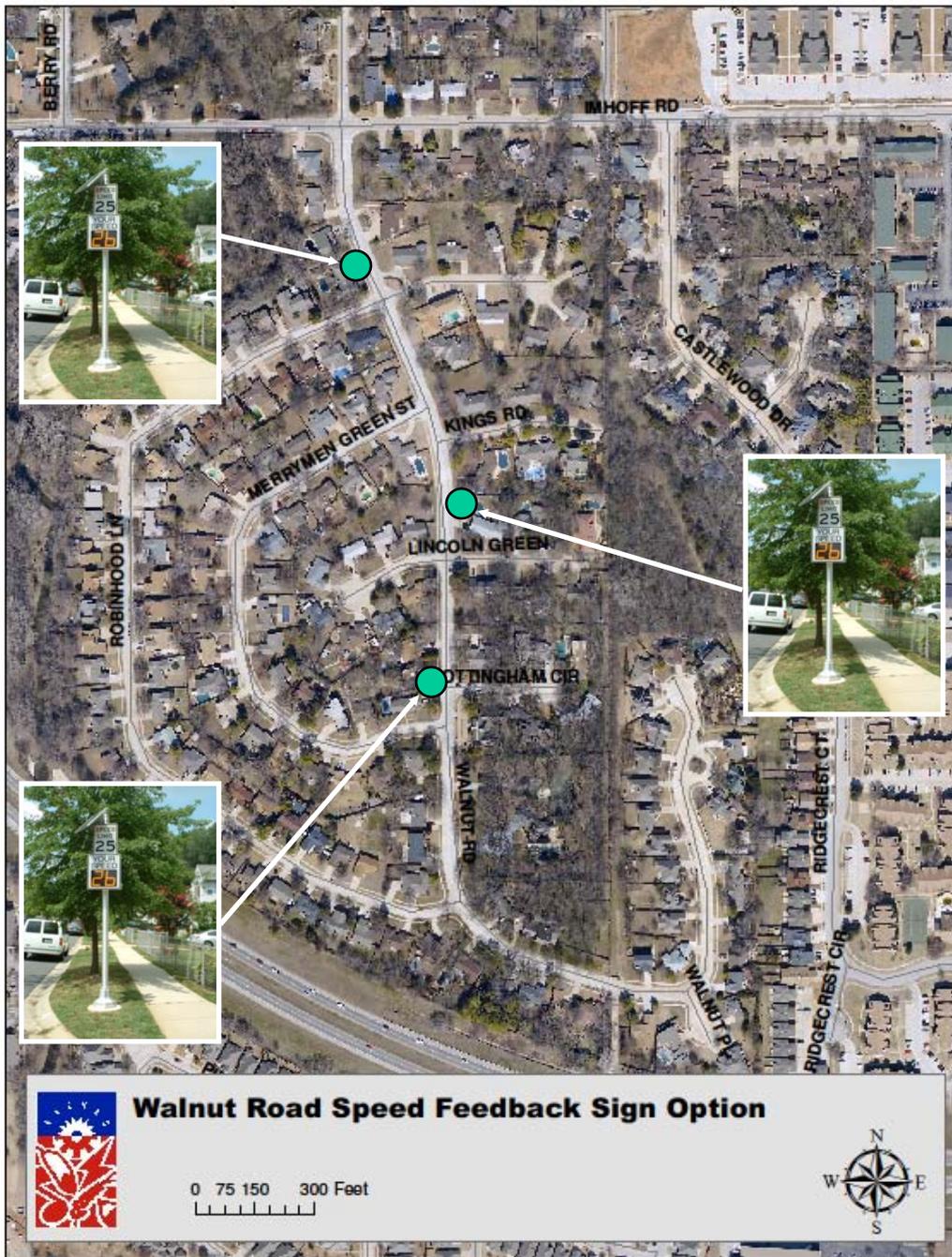
Permanently Installed Speed Feedback Sign Use

Conclusions

- Speed Feedback Signs are excellent in reducing speeds when initially deployed.
- Like other calming devices, drivers speed up after passing device.
- To calm a corridor, feedback trailers would need to be spaced 300' – 400' (same as other devices).
- Speed Feedback Trailers would need power source to keep them operating and effective – therefore more costly.
- Because of its non-physical traffic calming nature, the effectiveness as a speed reduction measure decreases over time.

Non-Physical Traffic Calming Option

- Pilot Project
- Use 3 speed feedback signs
- 2 for southbound traffic
- 1 for northbound traffic
- Estimated Cost of Speed Feedback Signs - \$22,500
- Entrance Median Cost - \$18,000
- Total Project Cost - \$40,500



Questions for Consideration

- If I signed the petition, do I still support the proposed project?
- Do I want to change my previous position?
 - Add my name to the petition
 - Remove my name from the petition
- If I signed the petition, could I support the non-physical traffic calming option?

Questions

