

III. C.



DATE: April 5, 2013

TO: Michael G. Herring, ICMA-CM
City Administrator

FROM: James A. Eckrich, P.E.
Public Works Director / City Engineer

RE: Intersection of Penshurst Place and West Manor Drive

Earlier this year the City of Chesterfield received a request from a resident for stop signs at both intersections of West Manor Drive and Penshurst Place (see the attached map). In response, Public Services staff analyzed both intersections, including performing traffic counts and a sight distance analysis. As described in the attached reports, neither intersection meets the technical merits for a stop control. However, after driving the neighborhood and speaking to the resident, it is apparent that many residents are utilizing Penshurst Place as the through (primary) street, when the subdivision layout intended for West Manor Drive to be the through (primary) street. This is corroborated by the traffic counts.

Due to the ambiguity of the primary street, and the geometry of the intersection, the City's engineering staff believes it would be appropriate to install a yield sign at the western intersection of Penshurst Place and West Manor Drive. The sign would be installed at the northeast corner of said intersection and would require westbound traffic on Penshurst Place to yield prior to entering West Manor Drive. I have spoken to the resident and she agrees that this would be an appropriate course of action and would address her concerns. City Staff believes the proposed yield sign would properly address the traffic concern without the installation of an unwarranted stop control.

City Staff feels that yield control at the eastern intersection of Penshurst Place and West Manor Drive is not necessary. At the eastern intersection, Penshurst Place enters West Manor Drive much closer to a conventional "T" intersection, whereas at the western intersection the configuration is closer to a more unconventional "Y" intersection.

Action Recommended

This matter should be forwarded to the Planning and Public Works Committee for its consideration of approval of the attached ordinance approving the installation of a yield sign at the western intersection of Penshurst Place and West Manor Drive.

*oh:d
JAE
4/9/13*

BILL NO. _____

ORDINANCE NO. _____

AN ORDINANCE AMENDING ORDINANCE NUMBER 35, SCHEDULE VII OF THE ORDINANCES OF THE CITY OF CHESTERFIELD BY ADDING YIELD CONTROL FOR THE WESTERN INTERSECTION OF WEST MANOR DRIVE AND PENSURST PLACE

WHEREAS, it is desirable to maintain safe and appropriate traffic control on all roadways in a manner consistent with recognized traffic engineering standards; and

WHEREAS, a traffic engineering analysis indicates that yield control is needed to maintain traffic safety at the western intersection of West Manor Drive and Penshurst Place;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CHESTERFIELD, ST. LOUIS COUNTY, MISSOURI, AS FOLLOWS:

Section 1. Ordinance Number 35, Section 3, Schedule VII, Yield Intersections is hereby amended by adding the following provision thereto:

<u>Intersection</u>	<u>Traffic on Highway, Road, Street or Alley Listed Below Shall Yield</u>
Western Intersection of West Manor Drive and Penshurst Place	Penshurst Place (westbound)

Section 2. In all other respects, Ordinance Number 35 is in full force and effect.

Section 3. This ordinance shall be in full force and effect from and after its passage and approval.

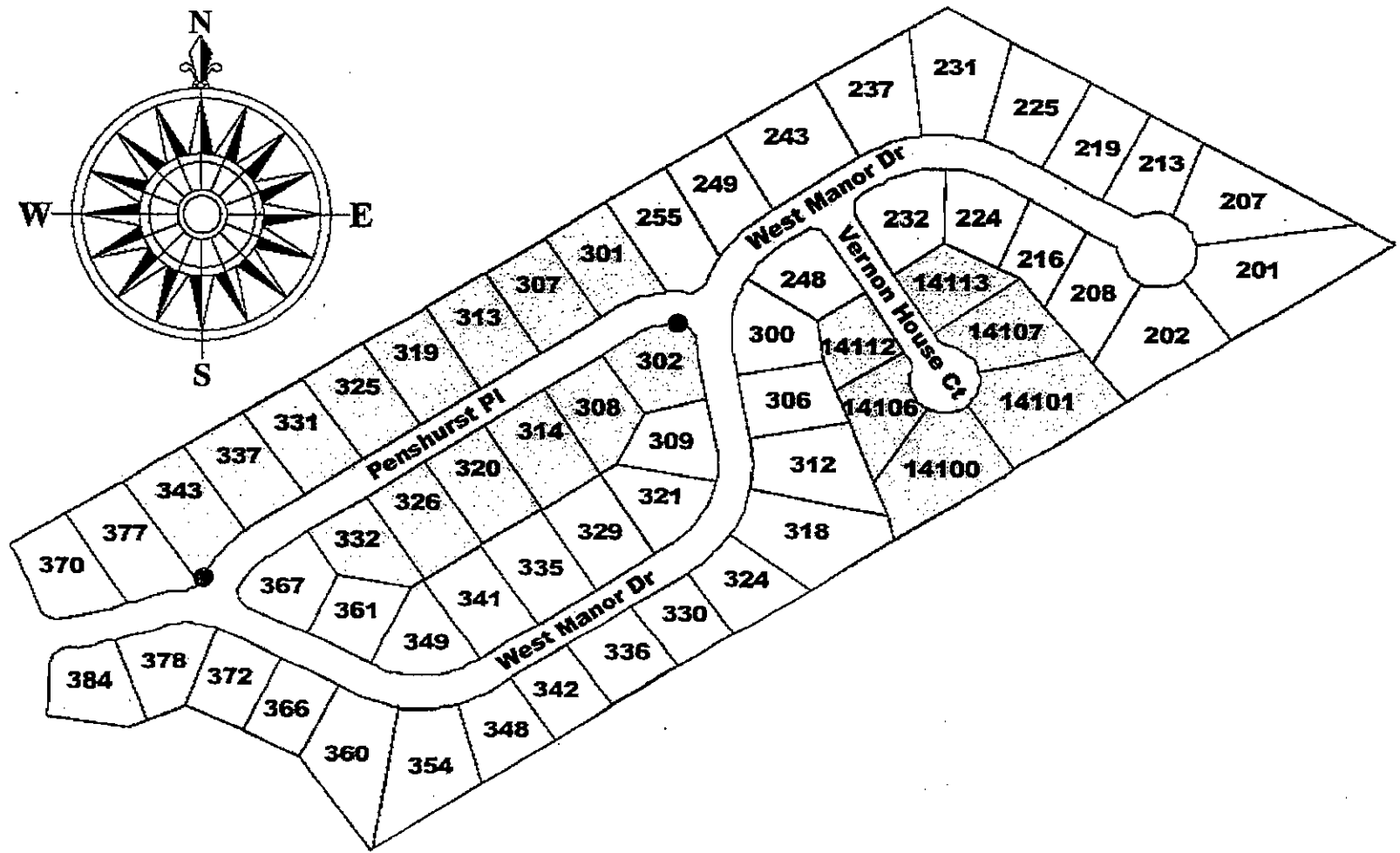
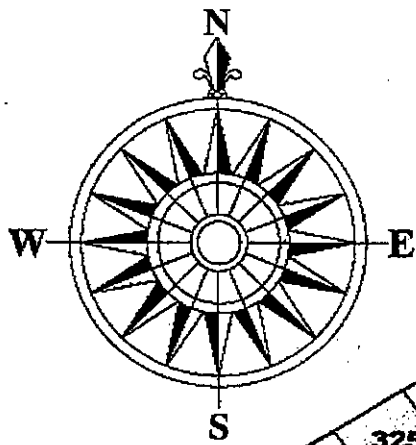
Passed and approved this _____ day of _____, 2013.

MAYOR

ATTEST:

CITY CLERK

[FIRST READING HELD: _____]



*Jim: please handle
mjs
1/28/2013*

367 West Manor Drive
Chesterfield, MO 63017
January 24, 2013

Mr. Michael Herring, City Administrator
Chesterfield City Hall
690 Chesterfield Parkway West
Chesterfield, MO 63017

Dear Mr. Herring:

My husband and I have lived in Chesterfield for the past 5-1/2 years. We resided on acreage in western Wildwood for 20 years, prior to our move to the Green Trails West subdivision in the summer of 2007. We love our neighborhood and "subdivision life" very much. Our home sits at the crossroads of West Manor and Peshurst Drives. As noted on the attached map, Peshurst is a shorter street, beginning and ending at West Manor. As one must turn off of West Manor to access Peshurst, it seems appropriate that traffic travelling along Peshurst, at each end, should stop as the traffic on West Manor would then have the right-of-way. Presently, no stop sign exists on either end of Peshurst. We have witnessed many cars travelling on Peshurst "merge" directly onto West Manor without looking or stopping to yield to traffic. West Manor Drive is the primary roadway, extending to the back end of the cul-du-sac.

We live at 367 West Manor (see attached map) and have witnessed many "close calls", as drivers invariably shoot out of Peshurst at 35-40 mph and in front of moving traffic on West Manor. Our driveway is on the West Manor side and we have had to regularly stop our car to avoid many drivers who apparently believe that they have the right-of-way. This is certainly a safety concern and I feel that there should be a stop sign at both ends of Peshurst Drive where I have placed a red dot.

Thank you for your consideration in this matter and for helping our beautiful City of Chesterfield be safer!

Sincerely,

Patti Siefert

Patti Siefert
314.378.0432

JMS

1/25/13

*cc: → Mike Beessel ✓
Rory Johnson*

*Called Patti
02/06/13 - gave
update - B. Mueller*

MEMORANDUM

DATE: April 1, 2013
TO: Jim Eckrich, Public Works Director
FROM: Susan Mueller, Principal Engineer *sm*
RE: Sight Distance – Penshurst Place and West Manor Drive
(West Intersection)



Introduction

We have completed a review of the intersection of Penshurst Place with West Manor Drive. As depicted in the aerial below, Penshurst Place intersects with West Manor Drive with no stop or yield controls. Both are residential low volume streets with unposted speed limits of 25 mph.



Photo 1: Aerial Photo of intersection

Recommendation

Based on field observations and analysis of the study intersection, the following recommendations are offered:

1. Install a Yield sign for westbound traffic on Penshurst Place at West Manor Drive.
2. Request periodic police enforcement of the 25 mph speed limit near the intersection.

Field Observations



Photo 2 – Penshurst Place southbound looking east on West Manor Drive

Photo 2 is taken from an intersection approach distance of 70 feet, heading south on Penshurst Place looking east on West Manor Drive.

The traffic cone is 60 feet from the intersection. This intersection sight distance meets 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 3 – Penshurst Place southbound looking west on West Manor Drive

Photo 3 is taken from an intersection approach distance of 60 feet, heading south on Penshurst Place looking west on West Manor Drive.

The traffic cone is 70 feet from the intersection. This intersection sight distance meets the 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 4 –West Manor Drive eastbound looking north on Penshurst Place

Photo 4 is taken from an intersection approach distance of 60 feet, heading east on West Manor Drive looking north on Penshurst Place.

The traffic cone is 70 feet from the intersection. This intersection sight distance meets 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 5 –West Manor Drive westbound looking north on Penshurst Place

Photo 5 is taken from an intersection approach distance of 70 feet, heading west on West Manor Drive looking north on Penshurst Place.

The traffic cone is 60 feet from the intersection. This intersection sight distance meets 10 mph criteria for acceptable uncontrolled intersection conditions.

Vehicle volumes entering the intersection are: Penshurst Place SB = 21 ADT
West Manor Drive WB = 69 ADT
West Manor Drive EB = 271 ADT

TOTAL entering volume = 361 ADT

85th Percentile Speeds entering the intersection: Penshurst Place SB = 24 mph
West Manor Drive WB = 27 mph
West Manor Drive SB = 25 mph

Total collisions in six years from 01/01/2007 to 03/27/2013 = 1
Intersection collisions in six years from 01/01/2007 to 03/27/2013 = 0

Findings

Sight distance at the intersection meets 10 mph approach speed criteria for an uncontrolled intersection on local low volume roads, however the “Y” geometry of the intersection is somewhat unconventional and a resident reports near miss collisions at this location. Traffic volumes entering the intersection are below 1000 vehicles per day and there have been no reported intersection related collisions for the past six (6) years. Traffic counters recorded vehicles traveling in excess of 40 mph. Results of the traffic count data and the LETS accident report are attached hereto.

cc: In House Traffic Studies

MEMORANDUM



DATE: April 1, 2013
TO: Jim Eckrich, Public Works Director
FROM: Susan Mueller, Principal Engineer *SM*
RE: Sight Distance – Penshurst Place and West Manor Drive
(East Intersection)

Introduction

We have completed a review of the intersection of Penshurst Place with West Manor Drive. As depicted in the aerial below, Penshurst Place intersects with West Manor Drive with no stop or yield controls. Both are residential low volume streets with unposted speed limits of 25 mph.



Photo 1: Aerial Photo of Intersection

Recommendation

Based on field observations and analysis of the study intersection, the following recommendations are offered:

1. Continue to operate the intersection as uncontrolled.
2. Request periodic police enforcement of the 25 mph speed limit near the intersection.

Field Observations



Photo 2 – Penshurst Place eastbound looking north on West Manor Drive

Photo 2 is taken from an intersection approach distance of 70 feet heading east on Penshurst Place looking north on West Manor Drive.

The traffic cone is 60 feet from the intersection. This intersection sight distance meets the 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 3 – Penshurst Place eastbound looking south on West Manor Drive

Photo 3 is taken from an intersection approach distance of 60 feet heading east on Penshurst Place looking south along West Manor Drive.

The traffic cone is 70 feet from the intersection. This sight distance exceeds the 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 4 – West Manor Drive southbound looking west on Penshurst Place

Photo 4 is taken from an intersection approach distance of 60 feet heading south on West Manor Drive looking west on Penshurst Place.

The traffic cone is 70 feet from the intersection. This sight distance meets the 10 mph criteria for acceptable uncontrolled intersection conditions.



Photo 5 – West Manor Drive northbound looking west on Penshurst Place

Photo 5 is taken from an intersection approach distance of 70 feet heading north on West Manor Drive looking west on Penshurst Place.

The traffic cone is 60 feet from the intersection. This sight distance meets the 10 mph criteria for acceptable uncontrolled intersection conditions.

Vehicle volumes entering the intersection are: Penshurst Place EB = 77 ADT
West Manor Drive NB = 25 ADT
West Manor Drive SB = 34 ADT

TOTAL = 136 ADT

85th Percentile Speeds entering the intersection: Penshurst Place EB = 26 mph
West Manor Drive NB = 25 mph
West Manor Drive SB = 25 mph

Total collisions in six years from 01/01/2007 to 03/27/2013 = 1
Intersection collisions in six years from 01/01/2007 to 03/27/2013 = 0

Findings

Sight distance at the intersection meets 10 mph approach speed criteria for an uncontrolled intersection on local low volume roads, and the geometry is a standard "T" intersection. Traffic volumes entering the intersection are below 1000 vehicles per day and there have been no intersection related collisions for the past six (6) years. Traffic counters recorded vehicles traveling in excess of 40 mph. Results of the traffic count data and the LETS accident report are attached hereto.

cc: In House Traffic Studies