

AGENDA

Traffic Committee Meeting

November 16, 2016 – 7:30 P.M.

Lower Level Conference Room – Troy City Hall, 500 West Big Beaver Road

1. Roll Call
2. Minutes – October 19, 2016

PUBLIC HEARINGS

3. Request for Sidewalk Waiver – 5920 N. Adams Road – Sidwell #88-20-07-101-002

REGULAR BUSINESS

4. Request for “DO NOT BLOCK INTERSECTION” sign – Rochester Road at Player Drive
5. Request for Traffic Control – Prestwick Drive at Wentworth Drive
6. Request for “DO NOT BLOCK INTERSECTION” sign – I75 at Rochester Road
7. Public Comment
8. Other Business
9. Adjourn

cc:

Item 3: Keith Nelson, 1998 Cole St., Birmingham, MI 48009
Properties within 300'

Item 4: Mike O'Hare, 1172 Beattie Drive
Properties within 300'

Item 5: Properties within 300'

Traffic Committee Members
Captain Robert Redmond & Sgt. Mike Szuminski, Police Department
Lt. Eric Caloia, Fire Department
William J. Huotari, Deputy City Engineer/Traffic Engineer

TRAFFIC COMMITTEE

MESSAGE TO VISITORS, DELEGATIONS AND CITIZENS

The Traffic Committee is composed of seven Troy citizens who have volunteered their time to the City to be involved in traffic and safety concerns. The stated role of this Committee is:

- a. To give first hearing to citizens' requests and obtain their input.
- b. To make recommendations to the City Council based on technical considerations, traffic surveys, established standards, and evaluation of citizen input.
- c. To identify hazardous locations and recommend improvements to reduce the potential for traffic crashes.

Final decisions on sidewalk waivers will be made by the Committee at this meeting.

The recommendations and conclusions arrived at on regular items this evening will be forwarded to the City Council for their final action. Any citizen can discuss these recommendations before City Council. The items discussed at the Traffic Committee meeting will be placed on the City Council Agenda by the City Manager. The earliest date these items might be considered by City Council would normally be 10 days to 2 weeks from the Traffic Committee meeting. If you are interested, you may wish to contact the City Manager's Office in order to determine when a particular item is on the Agenda.

Persons wishing to speak before this Committee should attempt to hold their remarks to no more than 5 minutes. Please try to keep your remarks relevant to the subject at hand. Please speak only when recognized by the Chair. These comments are made to keep this meeting moving along. Anyone wishing to be heard will be heard; we are here to listen and help in solving or resolving your particular concerns.

PUBLIC HEARINGS

3. Request for Sidewalk Waiver - 5920 N. Adams Road – Sidwell #88-20-07-101-002

Keith Nelson requests a sidewalk waiver for the sidewalk at 5920 N. Adams Road (Sidwell #88-20-07-101-002). Mr. Nelson states “*there is no sidewalk to connect to on the south for roughly ½ mile*”.

There is however sidewalk to the north, directly adjacent to the subject parcel, which connects to the intersection of Adams Road and Square Lake Road.

The Department of Public Works (DPW) recommends denying this waiver request per the attached memo and requiring the installation of sidewalk on Adams Road.

SUGGESTED RESOLUTIONS:

1. WHEREAS, City of Troy Ordinances, Chapter 34, allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Keith Nelson has requested a waiver of the requirement to construct sidewalk based on no sidewalk to connect to on the south for roughly ½ mile; and

WHEREAS, the Traffic Committee has determined the following:

- a. A waiver will not impair the public health, safety or general welfare of the inhabitants of the City and will not unreasonably diminish or impair established property values within the surrounding area, and
- b. A strict application of the requirements to construct a sidewalk would result in practical difficulties to, or undue hardship upon, the owners, and
- c. The construction of a new sidewalk would lead nowhere and connect to no other walk, and thus will not serve the purpose of a pedestrian travel-way.

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **GRANTS** a waiver of the sidewalk requirement for 5920 N. Adams Road (Sidwell #88-20-07-101-002).

2. WHEREAS, the Traffic Committee has determined, after a public hearing, that Petitioner failed to establish the standards justifying the granting of a waiver,

NOW THEREFORE, BE IT RESOLVED, that the Traffic Committee **DENIES** a waiver of the sidewalk requirement for 5920 N. Adams Road (Sidwell #88-20-07-101-002).

REGULAR BUSINESS**4. Request for “DO NOT BLOCK INTERSECTION” sign – Rochester at Player Drive**

Mike O’Hare of 1172 Beattie Drive requests a “DO NOT BLOCK INTERSECTION” sign at the intersection of Player Drive and Rochester Road.

Northbound traffic backs up on Rochester Road at Square Lake through the Player Drive intersection making ingress/egress difficult from the homes east of Rochester Road. There is an existing traffic signal at this location, but traffic backs up through the intersection making turns difficult even on a green light for Player Drive. Drivers seeking an alternate north/south route to avoid the I75 construction has increased the number of times the intersection is blocked during the PM peak hour.

SUGGESTED RESOLUTION:

- a. RESOLVED, that a DO NOT BLOCK INTERSECTION sign be **APPROVED** for installation on northbound Rochester Road at Player Drive.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Rochester Road and Player Drive.

5. Request for Traffic Control – Prestwick Drive at Wentworth Drive

A resident along Prestwick stopped the City’s Sign Crew stating that “*there used to be a Stop sign on Prestwick at Wentworth*”. The resident further added that traffic does not yield the right-of-way and creates a hazardous condition at the intersection. A request to review the intersection was forwarded to the Traffic Engineer.

SUGGESTED RESOLUTION:

- a. RESOLVED, that the intersection of Prestwick at Wentworth be **MODIFIED** from no traffic control to a STOP sign on the Prestwick Drive westbound approach to Wentworth.
- b. RESOLVED, that **NO CHANGE** be made at the intersection of Prestwick and Wentworth.

6. Request for “DO NOT BLOCK INTERSECTION” sign – I-75 at Rochester Road

Troy Police received a concern about traffic from northbound I-75 blocking the intersection with Rochester Road.

Troy Police reviewed the concern and the following summarizes what the officer reported:

“There is grid-lock occurring through most traffic cycles during the PM rush at Rochester and I-75. The problem is caused by a significant increase in traffic exiting NB I-75 to NB Rochester trying to avoid road construction farther north on the

freeway. Although the exit to NB Rochester has many lanes, it cannot handle the massive increase in traffic seen now during the PM rush. Traffic exiting the freeway backs-up and clogs the intersection, then when the signal changes to green for NB Rochester, there is nowhere for the traffic already in the intersection (backed up from Big Beaver) to go. He and I discussed re-timing the signals, but the signals in that area are already timed to allow for maximum traffic flow. If we increased the green for Rochester, we'd cause significant problems for Big Beaver. There are no adjustments that can be made to further increase traffic flow".

SUGGESTED RESOLUTION:

- a. RESOLVED, that DO NOT BLOCK INTERSECTION signs be **APPROVED** for installation at the I-75 northbound ramp to Rochester Road.
- b. RESOLVED, that **NO CHANGE** be made at the I-75 northbound ramp to Rochester Road.

7. Public Comment

8. Other Business

9. Adjourn

A regular meeting of the Troy Traffic Committee was held Wednesday, October 19, 2016 in the Lower Level Conference Room at Troy City Hall. Pete Ziegenfelder called the meeting to order at 7:30 p.m.

1. Roll Call

Present: Tim Brandstetter
Mitch Huber
Al Petrusis
Cynthia Wilsher
Pete Ziegenfelder

Absent: Richard Kilmer

Also present: Terry Stuart, 6303 Tutbury
Justin Brox, 5844 Niles
Gordon Armstrong, 95 W. Square Lake
Lt. Eric Caloia, Fire Department
Sgt. Mike Szuminski, Police Department
Bill Huotari, Deputy City Engineer/Traffic Engineer

2. Minutes – October 19, 2016

Resolution # 2016-10-31
Moved by Petrusis
Seconded by Wilsher

To approve the September 21, 2016 minutes as printed.

Yes: Brandstetter, Huber, Petrusis, Wilsher, Ziegenfelder
No: None
Absent: Kilmer

MOTION CARRIED

REGULAR BUSINESS

3. Request for Traffic Control – Welling at Calvert

At the September 21, 2016 Traffic Committee meeting, Mr. Bob Brokenshire of 1596 Welling requested that the intersection of Welling at Calvert be reviewed. There are existing Yield signs on the Welling Drive approaches to Calvert. He felt that the existing Yield signs did not provide the proper traffic control at the intersection. Mr. Brokenshire stated that traffic does not yield the right-of-way, travels through the intersection at a high rate of speed, is unsafe for drivers and pedestrians and creates a hazardous condition.

No residents were in attendance at the meeting to discuss the request.

Traffic Engineering did receive one (1) phone call in opposition to any changes at the intersection.

Mr. Brandstetter discussed the need for any changes at the intersection. The Yield signs appear to be appropriate for the intersection based on the study by OHM.

Mr. Petrusis discussed the only resident input received was in opposition to the request.

Resolution # 2016-10-32
Moved by Brandstetter
Seconded by Petrusis

RESOLVED, that NO CHANGE be made at the intersection of Welling at Calvert.

Yes: Brandstetter, Huber, Petrusis, Wilsher, Ziegenfelder
No: None
Absent: Kilmer

MOTION CARRIED

4. Request for Traffic Control – Tutbury at Bretby

Mr. Terry Stuart of 6303 Tutbury states that the lack of existing traffic control at the intersection of Tutbury at Bretby creates a hazardous condition. Traffic does not yield the right-of-way and travels through the intersection at a high rate of speed and is unsafe for drivers and pedestrians. Increased traffic due to the I-75 construction has further exacerbated the issue with higher volumes of traffic during the peak hours

Terry Stuart of 6303 Tutubury was in attendance at the meeting to support the request for traffic control at the intersection. Mr. Stuart discussed that the intersection is just east of Adams and driver confusion when they get to the intersection. Trees at the intersection obstruct a driver’s view and lead to situations where drivers may not be able to see oncoming traffic. The I75 construction has led to an increase in traffic and frustration by drivers. Mr. Stuart supports Yield signs at the intersection.

Mr. Petrusis stated that this is an odd intersection when you approach it and believes it requires some type of traffic control. A Yield sign may be sufficient.

Ms. Wilsher would rather see a Stop sign. When you can’t see traffic at an intersection you should approach the intersection with caution.

Mr. Brandstetter asked the residents if Tutbury was the appropriate street for Yield signs [they responded in the affirmative].

Mr. Petrusis recommended that the trees in the right-of-way be trimmed.

Mr. Brandstetter added that even if the trees were trimmed there would still be the need for Yield signs at the intersection.

Resolution # 2016-10-33
Moved by Petrusis
Seconded by Huber

RESOLVED, that the intersection of Tutbury at Bretby be **MODIFIED** from no traffic control to YIELD control on the Tutbury Lane approaches to the intersection.

Yes: Brandstetter, Huber, Petrusis, Wilsher, Ziegenfelder
No: None
Absent: Kilmer

MOTION CARRIED

5. Request for Traffic Control – Haldane at Niles

Mr. Gordon Armstrong of 95 W. Square Lake Road contacted the City’s Building Official regarding the lack of traffic control signs at the intersection of Haldane and Niles. The resident stated that traffic does not yield the right-of-way and creates a hazardous condition at the intersection.

Mr. Armstrong was in attendance at the meeting to discuss this request. He reports that there are 16 buildings on Niles and 30 houses, with 54 vehicles that he counted. He has never seen a problem with residents on Niles or Haldane, but attributes the issue to cut through traffic from Livernois to Square Lake or vice versa. Drivers take the intersection at high rates of speed and create an unsafe situation as they travel into the opposing lane of traffic during their turn. Mr. Armstrong reports that there are many children in this area and in the interest of safety he believes Stop signs are appropriate at the intersection.

Mr. Justin Brox of 5844 Niles was in attendance and supported what Mr. Armstrong stated. Mr. Brox added that Livernois at Square Lake gets very congested and drivers cut through on Haldane and Niles to avoid the backup at the traffic signal. He stated that this will always be a “high child neighborhood” due to the school near Niles and Square Lake.

Ms. Wilsher added that there is a lot of vegetation at the intersection that obstructs a driver’s vision. She added that you must stop before proceeding.

Mr. Petrulis discussed that the primary cut through was from northbound Livernois to westbound Square Lake to avoid the left turn backup at the Square Lake and Livernois intersection.

Resolution # 2016-10-34
Moved by Huber
Seconded by Wilsher

RESOLVED, that the intersection of Haldane at Niles be **MODIFIED** from no traffic control to STOP control on the Haldane Drive approaches to the intersection.

This motion was amended by Mr. Huber and supported by Mr. Petrulis.

Resolution # 2016-10-35
Moved by Huber
Seconded by Petrulis

RESOLVED, that the motion be **AMENDED** from STOP control on Haldane Drive approaches to the intersection to ALL-WAY STOP control at the intersection of Haldane and Niles.

Yes: Huber, Petrulis, Wilsher, Ziegenfelder
No: Brandstetter
Absent: Kilmer

MOTION CARRIED

Mr. Brandstetter explained his no vote was based on unwarranted Stop signs at an intersection creating confusion for a driver than may not feel they need to stop. This may create a false sense of security for drivers or pedestrians when they expect a driver to stop. He also discussed that Stop signs may not eliminate cut through traffic.

There was general discussion of cut through traffic as well as options other than signage that might be

appropriate.

Resolution # 2016-10-36
Moved by Huber
Seconded by Petrulis

RESOLVED, that the intersection of Haldane at Niles be **MODIFIED** from no traffic control to ALL-WAY STOP control at the intersection of Haldane and Niles.

Yes: Huber, Wilsher, Ziegenfelder
No: Brandstetter, Petrulis
Absent: Kilmer

MOTION CARRIED

6. Public Comment

There was no additional public comment made.

7. Other Business

There was no other business to address.

8. Adjourn

The meeting adjourned at 8:23 p.m.

Pete Ziegenfelder, Chairperson

Bill Huotari, Deputy City Engineer/Traffic Engineer



10-19-2016

TO: The City of Troy Traffic Committee

FROM: Kurt Bovensiepe, Public Works Director *KB*
Mike Pihaylic, Streets and Drains Operations Manager *MP*
Ashely Levin, Project Manager *AL*

SUBJECT: Request for Waiver of Sidewalk Requirement
Sidwell Number 88-20-07-101-002

Per the attached waiver form, Keith Nelson, is requesting a waiver for the sidewalk on the property located at 5920 N. Adams, 88-20-07-101-002.

Chapter 34 City of Troy Sidewalks and Driveway Approaches Ordinance # 34-07 requires, all owners of lots and premises abutting dedicated streets open to the public shall be required to construct sidewalks and driveway approaches at the time of construction of any new buildings or structures, or additions to buildings or structures, or at the time a nonconforming use changes to a permitted use in the Zoning District. No occupancy permit shall be issued until such time as the owners of said property have complied with the requirements of this provision provided only that the Director of Building and Zoning may extend the time for completion of the required sidewalks and driveway approaches in accordance with established procedure.

City of Troy Sidewalks and Driveway Approaches Ordinance # 34.07.01 also requires that a sidewalk be installed in conjunction with the development of this parcel because of a recent lot split, combined and re-platted

Please be advised that there is no sidewalk installed to the south of this property (for approximately a quarter of a mile) but sidewalk was recently installed at the property just north of 5920 Adams, at the corner of Adams and Square Lake.

We recommend that the sidewalk be installed at 5920 Adams as per ordinance #34.07. Although the parcels to the south do not currently have sidewalks, installing sidewalk at 5920 Adams would provide pedestrian connection from the north as well as provide future pedestrian connections on Adams. If the sidewalk requirements were to be waived, we recommend the approval be subject to the execution and recording of an "Agreement for Irrevocable Petition for Sidewalk", or the submission of a cash deposit for future construction to assure consent and participation if there is future sidewalk installation.

LOT 1
20-07-101-001

LEGEND

- EXISTING GRADE
- EXISTING CONTOUR
- PROPOSED GRADE
- PROPOSED DRAINAGE FLOW
- PROPOSED CONTOUR
- SEDIMENT CONTROL FENCE
- EXISTING TREE
- REMOVE TREE
- SAVE TREE

TREE LISTING

Tag	Size (C")	Spec.	Crown Radius	Tag	Size (C")	Spec.	Crown Radius
09	12	PINE	10 R (R)	101	18	MAPLE	25 R
70	12	MULBERRY	18 R	102	TR 16	CEDAR	10 R (R)
71	24	MAPLE	20 R	103	TW 12	CEDAR	15 R (R)
72	20	MAPLE	22 R	104	14	CEDAR	15 R (R)
73	18	MAPLE	20 R	105	12	MULBERRY	25 R
74	12	OAK	18 R	106	TW 16	MAPLE	20 R
75	18	MAPLE	15 R	107	18	MAPLE	25 R
76	24	MAPLE	20 R	108	14	MAPLE	18 R
77	15	MAPLE	20 R	109	10	PINE	10 R
78	15	SPRUCE	10 R	110	16	PINE	10 R
79	18	TREE OF HEAVEN	15 R	111	14	PINE	10 R
80	16	TREE OF HEAVEN	20 R	112	12	MAPLE	15 R
81	18	MAPLE	25 R	113	14	PINE	12 R
82	14	MAPLE	20 R	114	TW 8	MAPLE	15 R (R)
83	12	MAPLE	20 R	115	16	PINE	20 R
84	16	MAPLE	20 R	116	26	MAPLE	25 R (R)
85	20	MAPLE	25 R	117	8	CHERRY	10 R (R)
86	TR 8-24	MAPLE	25 R	118	14	HONEY LOCUST	20 R
87	18	MAPLE	25 R	119	10	MAPLE	20 R
88	16	MAPLE	20 R (R)	120	TW 8	MAPLE	20 R
89	16	MAPLE	20 R (R)	121	12	MAPLE	20 R
90	14	CHERRY	16 R (R)	122	14	PINE	10 R (R)
91	16	MAPLE	20 R (R)	123	18	MAPLE	18 R
92	16	MAPLE	20 R (R)	124	14	MAPLE	15 R
93	12	WALNUT	18 R (R)				
94	12	ELM	18 R				
95	26	WALNUT	30 R				
96	26	MAPLE	32 R (R)				
97	18	MAPLE	18 R				
98	16	MAPLE	16 R				
99	20	MAPLE	20 R				
100	26	MAPLE	25 R				

"STORM DRAINAGE CALCULATIONS"

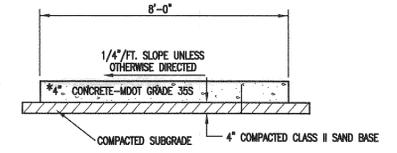
"C" CALCULATION
 ROOF/PAVEMENT AREA = 10,700 SF = 0.25 ACRES @ C = 0.90
 GREEN BELT AREA = 1.20 ACRES @ C = 0.20
 TOTAL AREA = 1.45 ACRES
 $C = \frac{(0.25 \text{ AC} \times 0.90) + (1.20 \text{ AC} \times 0.20)}{1.45 \text{ AC}} = 0.32$

THEORETICAL 10 YEAR FLOW
 Q 10 YEAR = ACI; A = 1.45 ACRES, C = 0.32
 $I = \frac{175}{1+25} = 20+25 = 3.89$
 T = 20 MINUTES
 Q 10 YEAR = (1.45)(0.32)(3.89) = 1.81 CFS

10 YEAR DETENTION BASIN CALCULATIONS (I.e. WITH OUTLET)
 ONSITE CONTRIBUTING AREA = 1.45 ACRES
 OFFSITE CONTRIBUTING AREA = 0
 TOTAL CONTRIBUTING AREA = 1.45 ACRES
 RUNOFF COEFFICIENT (C) = 0.32
 $Q_A = (0.20)(1.45 \text{ ACRES}) = 0.29 \text{ C.F.S.}$
 $Q_0 = \frac{Q_A}{(A)(C)} = \frac{0.29}{(1.45)(0.32)} = 0.625$
 $T = -25 + \sqrt{\frac{6,562.50}{Q_0}} = 77.47 \text{ MINUTES}$
 $V_S = \frac{10,500 T}{T + 25} = 6,002 \text{ C.F./ACRE}$
 $V_T \text{ REQ'D} = V_S (C)(A) = (6,002)(0.32)(1.45) = 2,785 \text{ C.F. REQ'D.}$

VOLUME PROVIDED:
 888.0: 1,900 SF
 889.2: 3,400 SF
 $> 2,650 \text{ SF}_{AV} \times 1.2' = 3,180 \text{ CF PROVIDED, OK}$

DETENTION BASIN
 EXISTING GROUND WATER ELEVATION = NONE
 DESIGN TEMPORARY HIGH WATER ELEVATION = 889.20
 1' FREEBOARD ELEVATION = 890.20
 STORAGE REQUIRED = 2,785 C.F.
 STORAGE PROVIDED = 3,180 C.F.



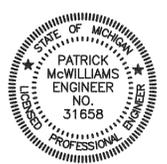
8' wd, 6" Thick Concrete Sidewalk
NOT TO SCALE

Parcel is Zoned R-1A
 SINGLE FAMILY RESIDENTIAL
 SETBACKS: W/SEWER
 FRONT - 50 FEET
 SIDES - 15 FEET, LEAST TWO - 30 FEET
 REAR - 45 FEET

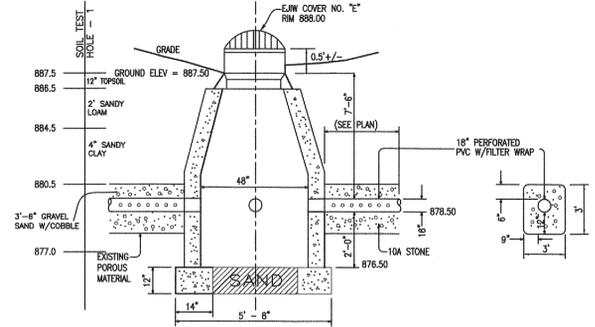
BENCHMARK:
 ARROW ON HYDRANT LOCATED 20 FEET
 NORTH OF EXISTING PRIVATE DRIVE
 ELEVATION - 903.21 NAVD '88

NOTE:
 SANITARY GRAVITY SERVICE CAN ONLY
 BE PROVIDED FOR FIRST FLOOR LEVEL.
 THE BASEMENT WOULD REQUIRE A PUMP.

APPROVED
 AS NOTED:
 CITY OF TROY
 LAND SURVEYOR
 10-18-2016

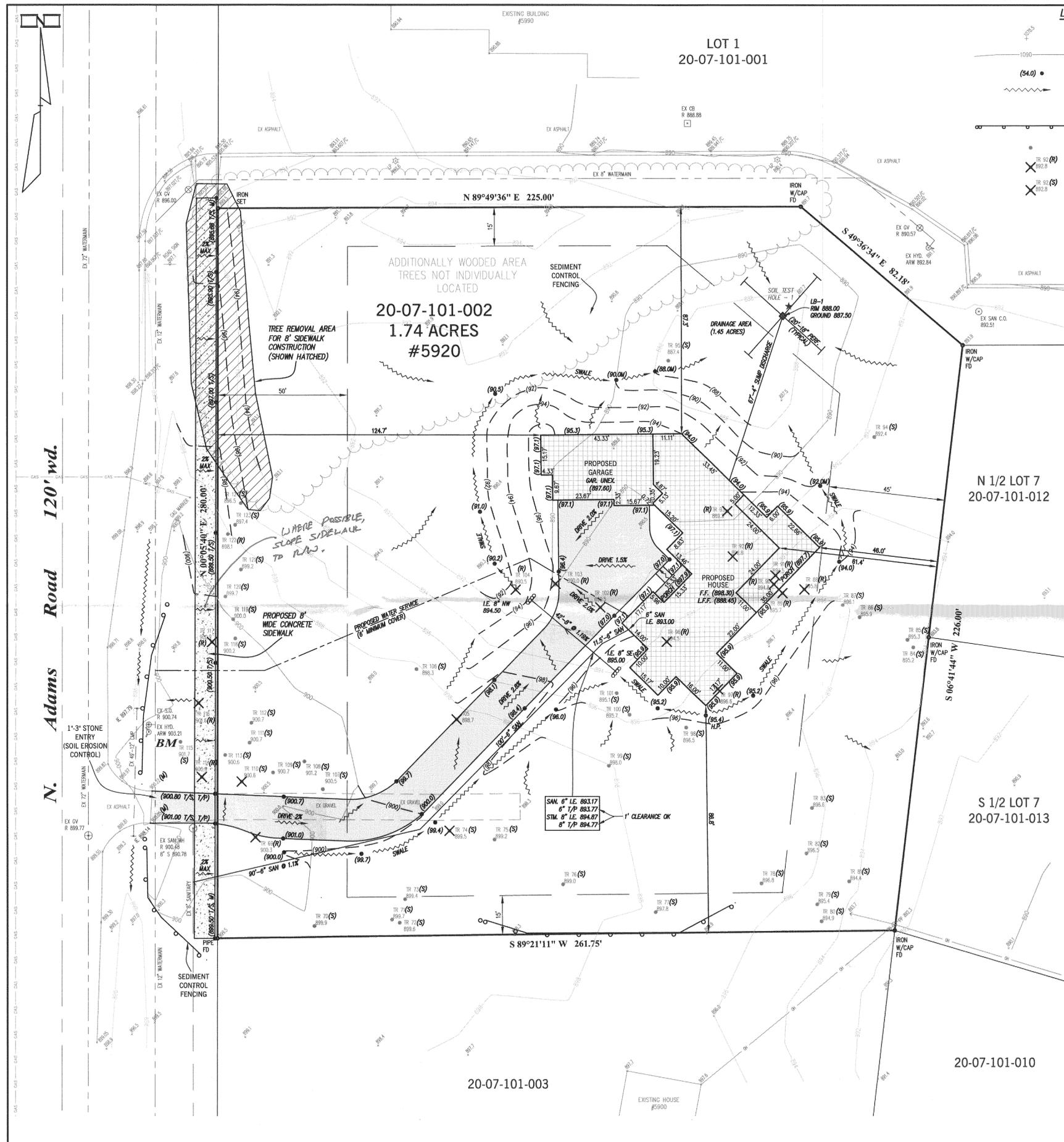


LEACHING BASIN #1 DETAIL & 18" PIPE DETAIL



"PERCOLATION CALCULATION"
 ASSUMED PERCOLATION RATE = 6"/HR = 1"/10 MIN IN SAND & GRAVEL
 ABSORPTION = (17'12" x 1' x 1' = 0.08333 CF)/60 SEC = 0.001388 CFS/SF
 AVAILABLE SF: USE 3' WIDE TRENCH WITH 1' OF GRAVEL
 UNDER 18" PERFORATED PVC PIPE BOTTOM YIELDING 4.75 SF/LF
 [(BOTTOM 3 SF/LF) + (SIDES 1.75 SF/LF x 2 x 50% = 1.75 SF/LF)] = 4.75 SF/LF
 TRENCH LF = 80 LF
 ∴ 80 LF x 4.75 SF/LF = 380 SF
 ∴ THIS PERCOLATION = 0.001388 CFS/SF x 380 SF = 0.0527 CFS = 0.05 CFS PROVIDED
 10 YEAR STORM VOLUME REQUIRED = 2,785 CF
 TIME TO PERCOLATE INTO GROUND = 2,785 CF / 0.05 CFS = 55,700 SECONDS
 55,700 SEC / 3,600 SEC/HR. = 15 HOURS +/-

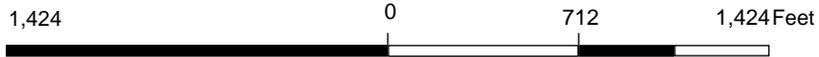
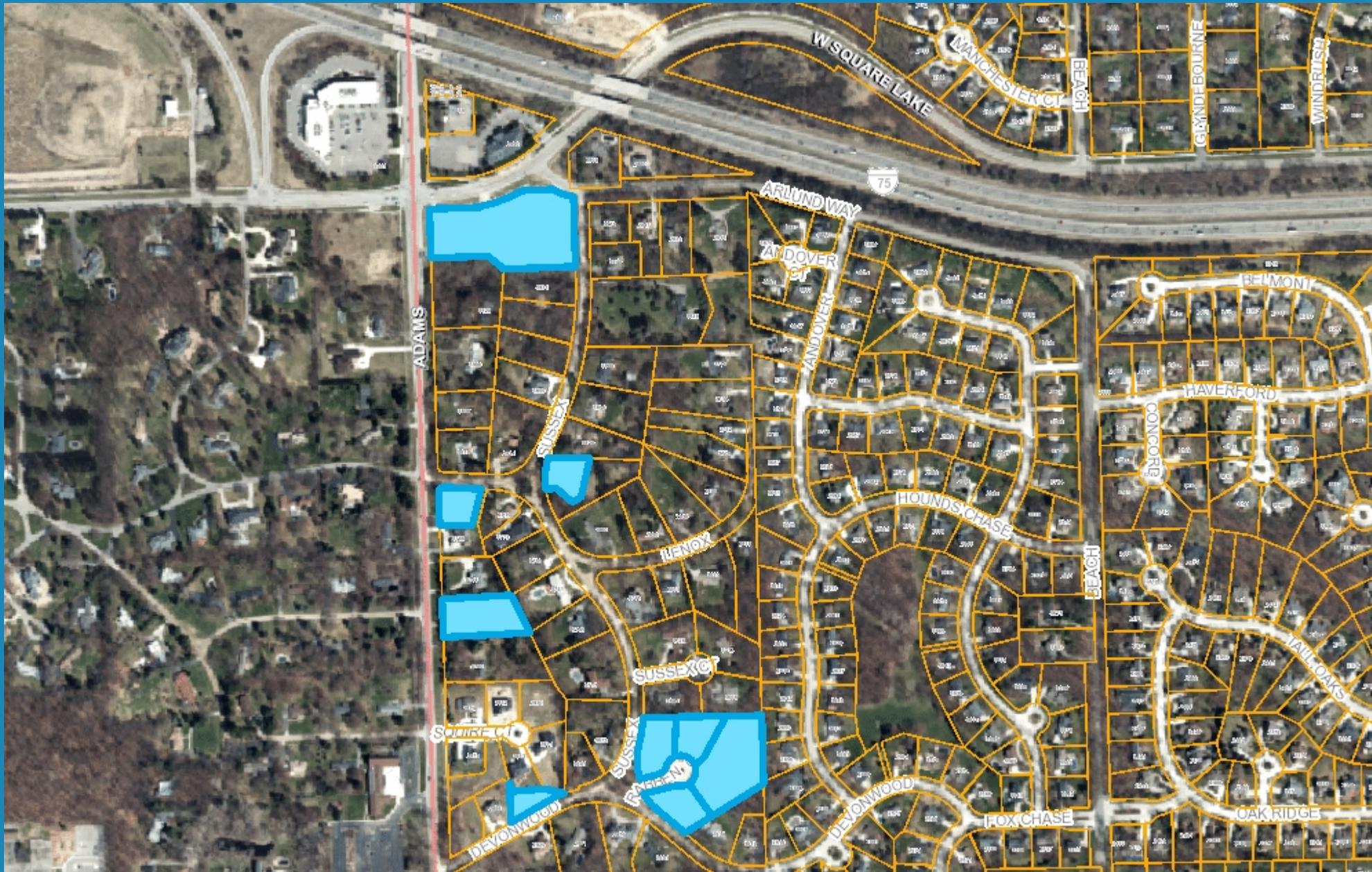
This is to certify that I, *Timothy J. Hart*, a Professional Land Surveyor, have this date made a survey of a parcel of land described as follows:
 LOT 2, "MIDDLESEX COUNTRY HOME SITES" A SUBDIVISION OF THE W 1/2 OF THE NW 1/4 OF SECTION 7, T2N, 11E, TROY TOWNSHIP (NOW CITY OF TROY), OAKLAND COUNTY, MICHIGAN AS RECORDED IN LIBER 44 OF PLATS, PAGE 12, OAKLAND COUNTY RECORDS.



DATE 10-18-16	ISSUE ADDED 8' WIDE SIDEWALK PER CITY (10-17-16)	PROPRIETOR: D R NELSON & ASSOCIATES 220 ENGLEWOOD STREET A LAKE ORION, MICHIGAN 48359 (248) 838-8770	THIS DRAWING IS THE PROPERTY OF KIEFT ENGINEERING, INC. AND MAY NOT BE USED, REPRODUCED OR PUBLISHED, IN PART OR IN WHOLE, WITHOUT EXPRESSED WRITTEN PERMISSION FROM KIEFT ENGINEERING, INC.	KIEFT ENGINEERING, INC. REG. PROF. ENGINEER AND REG. LAND SURVEYOR 5852 SOUTH MAIN STREET, STE #1, CLARKSTON, MICHIGAN 48346 PHONE (248) 625-5251 FAX (248) 625-7110	DATE 10-12-16	CKD. BY	DATE	72 HOURS (3 WORKING DAYS) BEFORE YOU DIG CALL MISS DIG 800-482-7171 (TOLL FREE)	SITE PLAN PARCEL NO. 20-07-101-002 CITY OF TROY, OAKLAND COUNTY, MICHIGAN	SCALE 1" = 20'	SHEET 2 OF 2	KE 2016.116
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Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.



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TRAFFIC COMMITTEE REPORT

October 31, 2016

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for DO NOT BLOCK INTERSECTION
Rochester Road at Player Drive

Background:

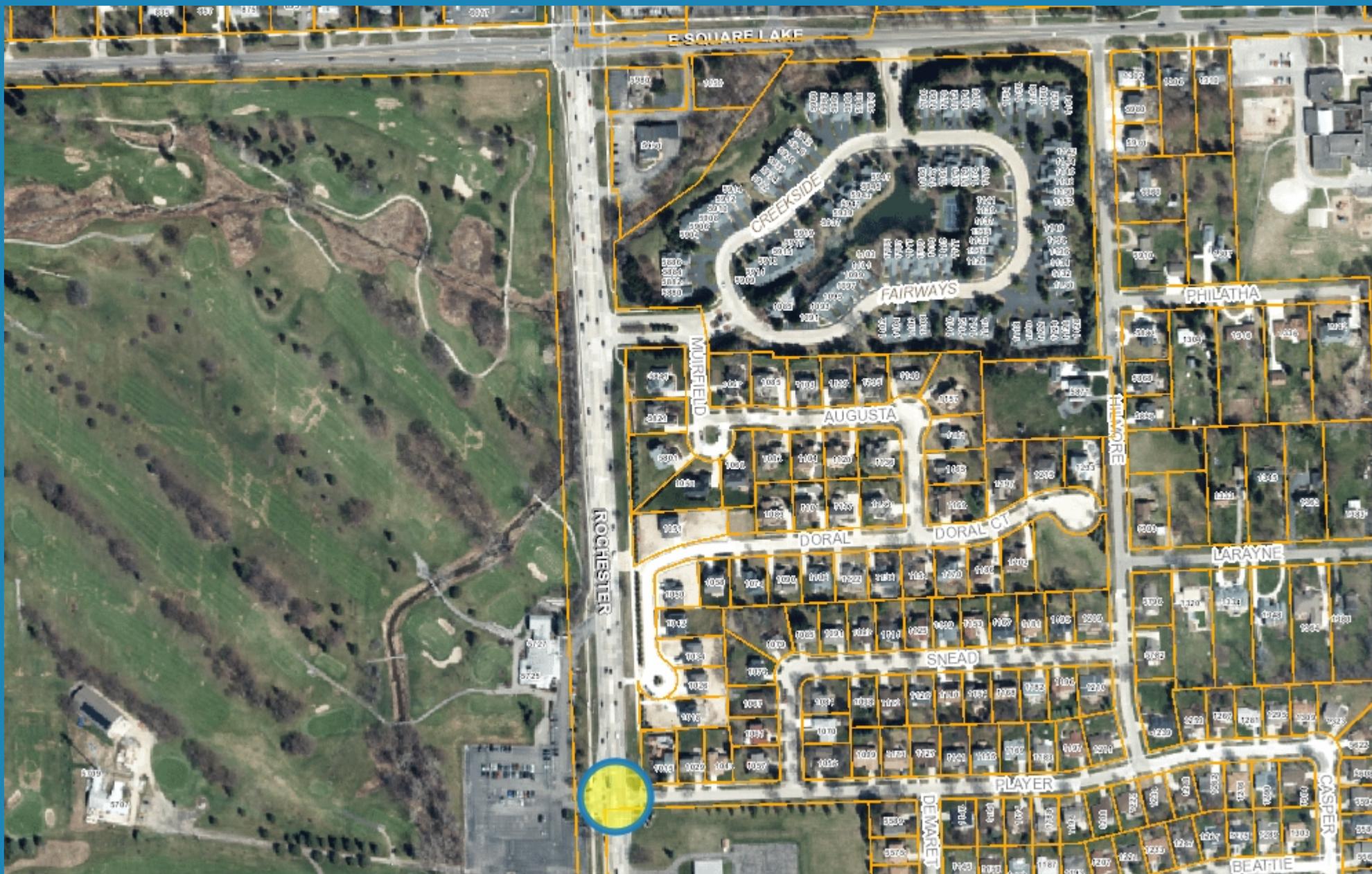
Mike O'Hare of 1172 Beattie Drive requests a "DO NOT BLOCK INTERSECTION" sign at the intersection of Player Drive and Rochester Road.

Northbound traffic backs up on Rochester Road at Square Lake through the Player Drive intersection making ingress/egress difficult from the homes east of Rochester Road. There is an existing traffic signal at this location, but traffic backs up through the intersection making turns difficult even on a green light for Player Drive. Drivers seeking an alternate north/south route to avoid the I75 construction has increased the number of times the intersection is blocked during the PM peak hour.

The Troy Police Department was consulted regarding this request and confirmed that this is a valid concern and would not object to posting a DO NOT BLOCK INTERSECTION sign at this location.

The Michigan Manual of Uniform Traffic Control Devices (MMUTCD) does not contain any warrants for the use of DO NOT BLOCK INTERSECTION signs and markings. Their use is considered a "may" condition, though you should not mark the pavement without also having a sign. The sign is required, pavement markings are optional.

There is a similar location at Rochester Road and Fairways Boulevard (south of Square Lake and just north of Player Drive) that is currently posted with a DO NOT BLOCK INTERSECTION sign.



912 0 456 912Feet



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.





TRAFFIC COMMITTEE REPORT

October 31, 2016

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for Traffic Control
Prestwick Drive at Wentworth Drive

Background:

A resident along Prestwick stopped the City's Sign Crew stating that "*there used to be a Stop sign on Prestwick at Wentworth*". The resident further added that traffic does not yield the right-of-way and creates a hazardous condition at the intersection. A request to review the intersection was forwarded to the Traffic Engineer.

No Traffic Control Order (TCO) was found on record for this location. DPW placed a temporary STOP sign at the intersection pending review by the Traffic Committee and City Council approval of the TCO.

There have been no crashes reported at this intersection in the past five (5) years.

The posted speed limit on both streets is 25 mph. Wentworth Drive could be considered the major road and Prestwick Drive the minor one because Wentworth Drive has access to Wattles Road to the south, whereas Prestwick Drive terminates at Wentworth Drive.

The major potential sight distance obstruction at the intersection are trees in the northeast quadrant of the intersection.

The safe approach speed was found to be 6.9 mph for westbound Prestwick Drive based on a vehicle traveling southbound on Wentworth Drive as a result of the sight obstruction from the trees on the right side of the approach to the intersection.

The city requested that OHM review the request and provide their findings and recommendations (copy attached).

October 10, 2016

Mr. William Huotari, PE
Deputy City Engineer
City of Troy
500 W. Big Beaver Rd
Troy, MI 48084

RE: Traffic Control Recommendation for Prestwick Drive at Wentworth Drive
OHM JN: 0128-16-0270

Dear Mr. Huotari:

As requested, we have reviewed the Prestwick Drive at Wentworth Drive intersection to determine the proper traffic control. The subject intersection is a 3-leg intersection located in the City of Troy approximately 1,600 feet north of W. Wattles Road and 2,000 feet west of Coolidge Highway. The speed limit on both streets is 25 mph. The intersection is presently uncontrolled, however a temporary STOP sign is installed on the Prestwick Drive approach. Reference the attachments for aerial and intersection photos.

Background on Traffic Control Determination

Based on the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) there are four conditions where **all-way** STOP signs may be warranted:

- A. *Where traffic control signals are justified, the multi-way stop is an interim measure that can be installed quickly to control traffic while arrangements are being made for the installation of the traffic control signal.*
- B. *Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.*
- C. *Minimum volumes:*
 1. *The vehicular volume entering the intersection from the major street approaches (total of both approaches) averages at least 300 vehicles per hour for any 8 hours of an average day; and*
 2. *The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour for the same 8 hours, with an average delay to minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but*
 3. *If the 85th-percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the values provided in Items 1 and 2.*
- D. *Where no single criterion is satisfied, but where Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values. Criterion C.3 is excluded from this condition.*

There is also an explicit restriction in the MMUTCD that STOP signs are not to be used for speed control, in Section 2B.04.



Based on the Michigan Manual of Uniform Traffic Control Devices (MMUTCD) there are four conditions where STOP signs may be warranted:

- At the intersection of a less important road with a main road where application of the normal right-of-way rule is unduly hazardous
- On a street entering a through highway or street.
- At an unsignalized intersection in a signalized area.
- At other intersections where a combination of high speed, restricted view, or crash records indicate a need for control by the STOP sign.

Many times STOP signs are installed where they may not be warranted. Traffic experts agree that unnecessary STOP signs:

- Cause accidents they are designed to prevent.
- Breed contempt for other necessary STOP signs.
- Waste millions of gallons of gasoline annually.
- Create added noise and air pollution.
- Increase, rather than decrease, speeds between intersections.

The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection.

The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

- Traffic Volumes: Normally, the heavier volume of traffic should be given the right-of-way.
- Approach Speeds: The higher speed traffic should normally be given the right-of-way.
- Types of Highways: When a minor highway intersects a major highway, it is usually desirable to control the minor highway.
- Sight Distance: Sight distance across the corners of the intersection is the most important factor and is critical in determining safe approach speeds.

Crash Analysis

Based on information obtained through the Traffic Improvement Association of Michigan, there were no crashes recorded in the past five (5) years at the intersection of Wentworth Drive and Prestwick Drive. The crash data does not constitute a compelling case for modifying the existing controls.

Types of Roadways & Minimum Volumes

Both Wentworth Drive and Prestwick Drive are considered local streets. On-street parking is not permitted on the east side of the road on Wentworth Drive nor on the north side of the road on Prestwick Drive in the vicinity of the intersection. Wentworth Drive could be considered the major road and Prestwick Drive the minor one because Wentworth Drive has access to W. Wattles Road to the



south, whereas Prestwick Drive terminates at Wentworth Drive. While traffic counts were not collected in the vicinity of the intersection, based on local knowledge of the area and the residential nature of the location, it is highly improbable that there are any daily hours in which Wentworth Drive meets the 300 vehicles per hour threshold for a minimum of 8 hours, therefore the minimum volume criteria for an all-way STOP has not been met.

Approach Speeds

The approach speed limit on both streets is 25 mph. Speed limits alone cannot be used in this case to determine which direction of traffic should be assigned the right-of-way.

Sight Distance

The major potential sight distance obstruction at the intersection are trees at the northeast quadrant of the intersection (see page 1 of the attached approach pictures). This obstruction comes into play when determining the safe approach speeds for the intersection. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

When the safe approach speed is found to be less than 10 mph, a STOP sign is recommended. In this case, the safe approach speed was found to be 6.9 mph for westbound Prestwick Drive based on a vehicle traveling southbound on Wentworth Drive as a result of the sight obstruction from the trees on the right side on approach to the intersection, therefore a STOP sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.



Recommendation

OHM recommends that the intersection be set under STOP control on the Prestwick Drive approach to the intersection. The major sight distance obstruction in this study were trees at the northeast quadrant of the intersection.

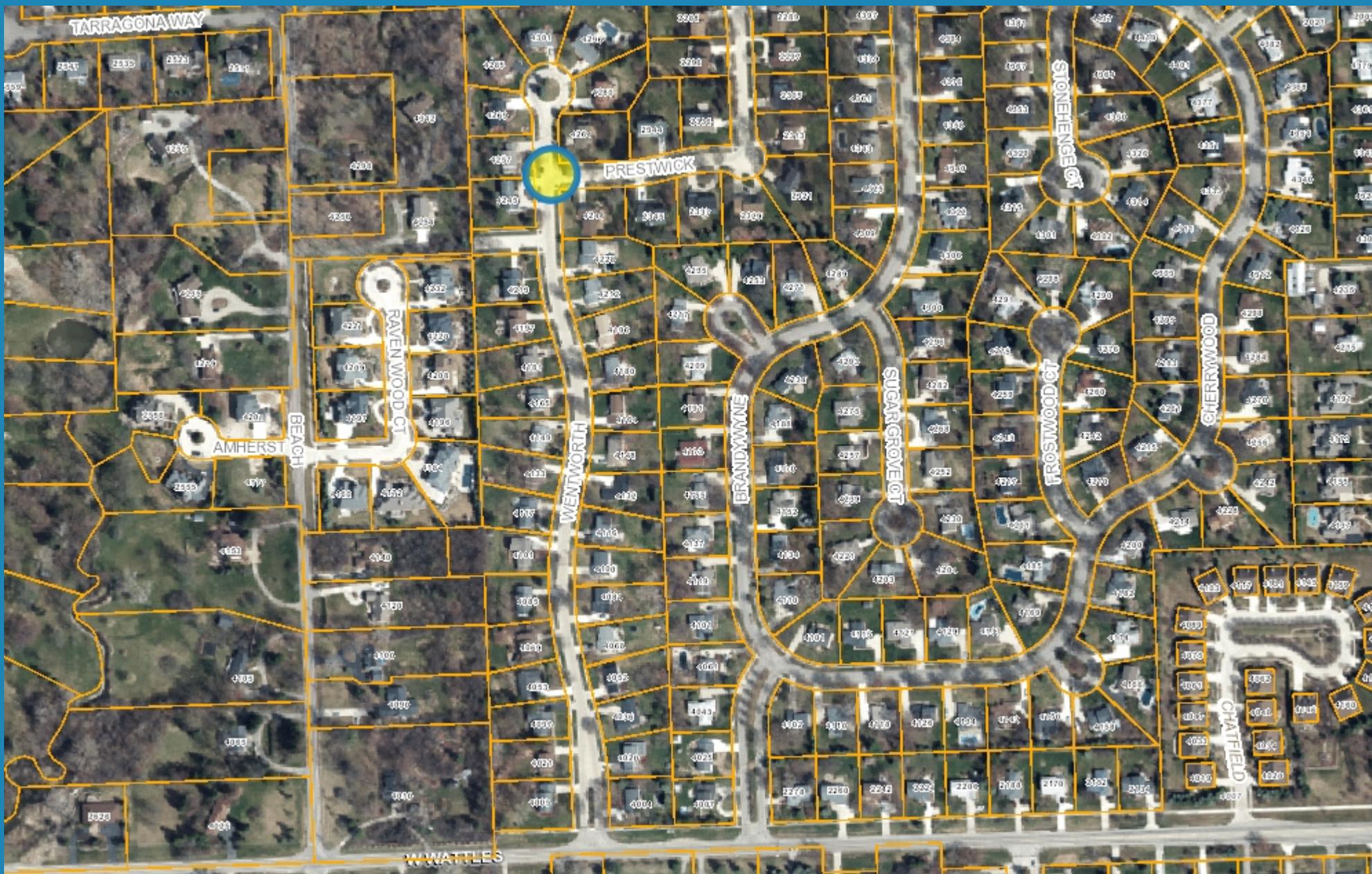
Sincerely,
Orchard, Hiltz & McCliment, Inc.

Steve M. Loveland, PE, PTOE
Traffic Project Manager

Matt L. Clark, EIT
Engineer

Attachments:

- Aerial and Intersection Photos
- Safe Approach Speed Calculation Spreadsheet



Note: The information provided by this application has been compiled from recorded deeds, plats, tax maps, surveys, and other public records and data. It is not a legally recorded map survey. Users of this data are hereby notified that the source information represented should be consulted for verification.

Safe Approach Speed Calculation

**Prestwick at Wentworth
City of Troy**

Road 1 = Wentworth
Road 2 = Prestwick

Date: 10/10/2016
Analyst: Matt Clark

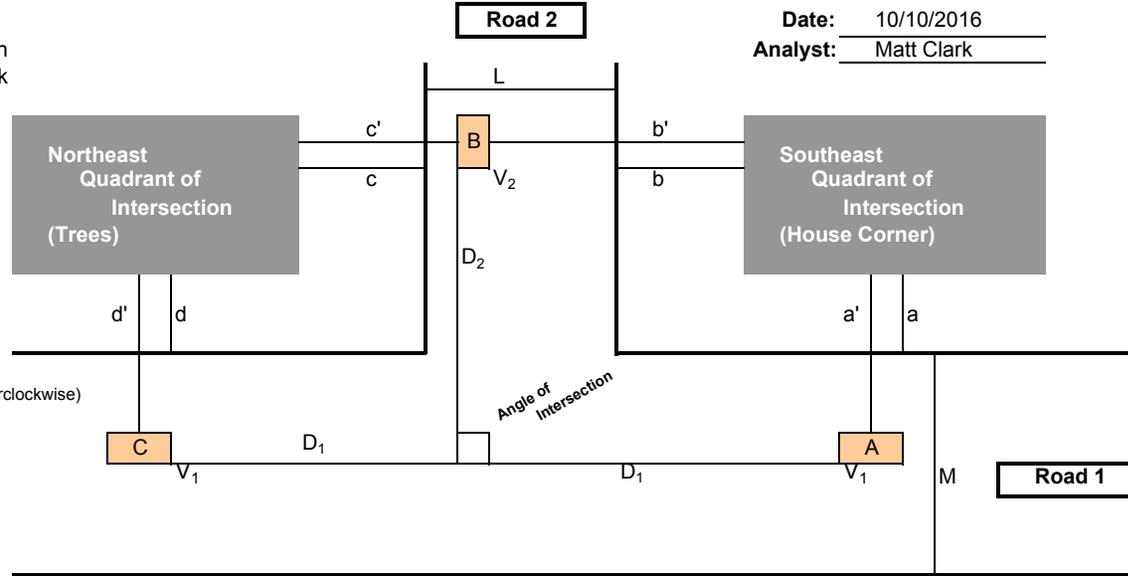
Measured:

Width of Roads
Road 1 = 26 (ft)
Road 2 = 26 (ft)

Distance to Obstruction
a = 52 (ft)
b = 56 (ft)
c = 15 (ft)
d = 15 (ft)

Angle of Intersection
Delta = 90 (degrees, measure counterclockwise)

Road 1 Posted
Speed Limit = 25 (mph)



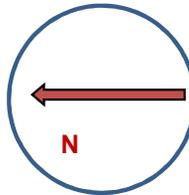
Assumed:

Speed of Vehicle A = Speed of Vehicle C
= Posted Speed Limit on Road 1
+ 5 (mph)
V₁ = 30 (mph)

Perception / Reaction Time (AASHTO)
t = 2.5 (sec)

Deceleration rate (AASHTO)
A = 11.20

Clearance distance in excess of safe stopping distance (AAA)
EC = 0 (ft)



Intermediate Calculations:
D₁ = 196
D_{2A} = 97.9
D_{2C} = 29.7
a' = 62
b' = 72
c' = 25
d' = 31

Based On $D_1 = (1.075 V_1^2 / A) + 1.4667 V_1 t + EC$
 $D_{2A} = \frac{a' * D_1}{(D_1 - b')}$ or $D_{2C} = \frac{c' * D_1}{(D_1 - d)}$

Calculated Safe Approach Speed for Vehicle B

Approaching on Road 2
V₂ = 18.1 (mph) [Based on Veh. A]
or V₂ = 6.9 (mph) [Based on Veh. C]

Notes: Enter field measurements in yellow highlighted area.
Blue fields are std. default values; change only for cause.
Calculated by spreadsheet

FALSE

Recommended ROW control for Road 2

based on safe approach speed : **STOP Sign**



Prestwick Drive heading west



Prestwick Drive heading west and looking right



Wentworth Drive heading south



Prestwick Drive looking east



Wentworth Drive heading north



TRAFFIC COMMITTEE REPORT

October 31, 2016

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/ Traffic Engineer

SUBJECT: Request for DO NOT BLOCK INTERSECTION
I-75 at Rochester Road

Background:

Troy Police received a concern about traffic from northbound I-75 blocking the intersection with Rochester Road.

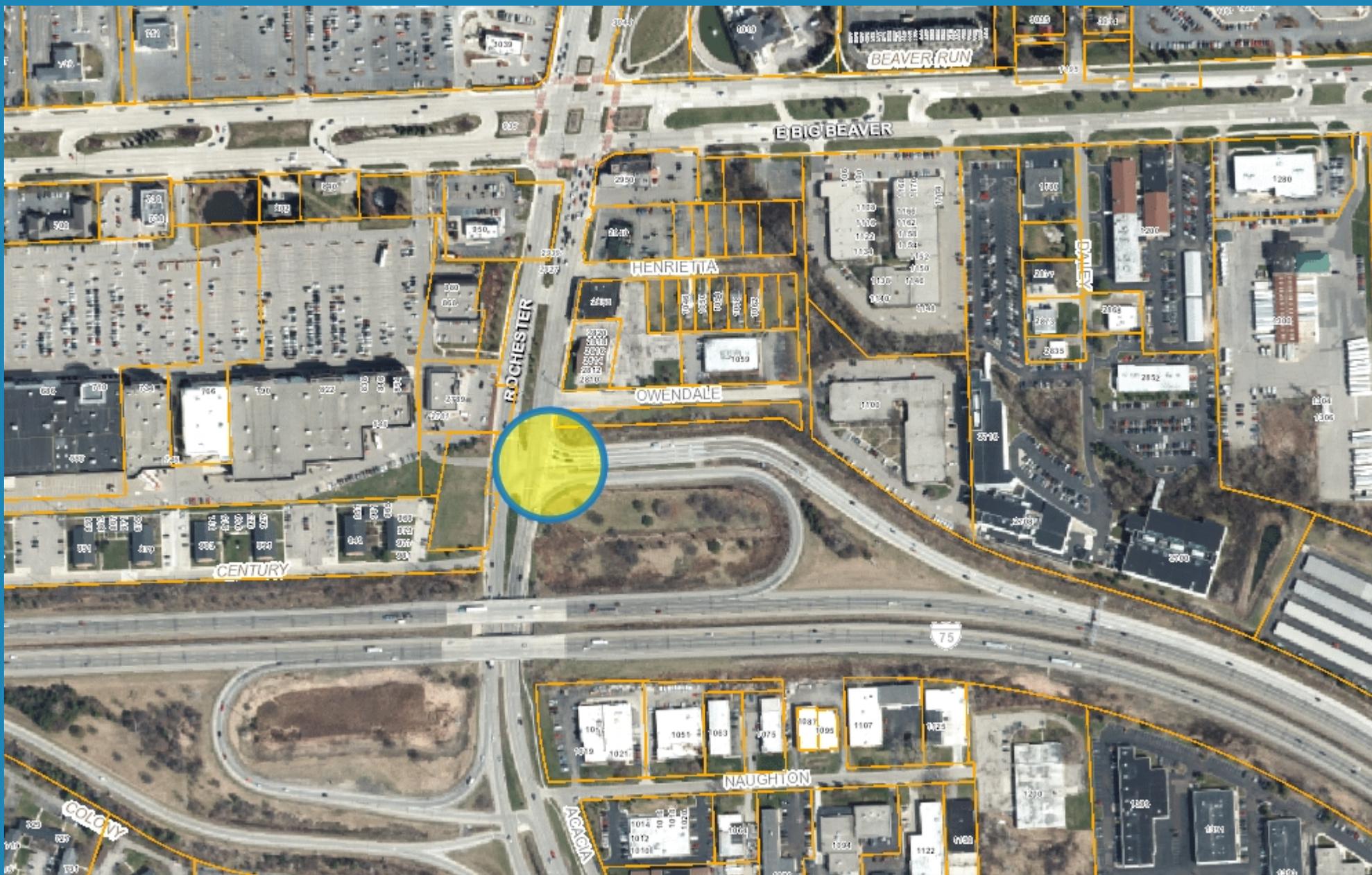
Troy Police reviewed the concern and the following summarizes what the officer reported:

"There is grid-lock occurring through most traffic cycles during the PM rush at Rochester and I-75. The problem is caused by a significant increase in traffic exiting NB I-75 to NB Rochester trying to avoid road construction farther north on the freeway. Although the exit to NB Rochester has many lanes, it cannot handle the massive increase in traffic seen now during the PM rush. Traffic exiting the freeway backs-up and clogs the intersection, then when the signal changes to green for NB Rochester, there is nowhere for the traffic already in the intersection (backed up from Big Beaver) to go. He and I discussed re-timing the signals, but the signals in that area are already timed to allow for maximum traffic flow. If we increased the green for Rochester, we'd cause significant problems for Big Beaver. There are no adjustments that can be made to further increase traffic flow".

Due to the severity of the issue and in concurrence with Troy Police, a temporary Traffic Control Order (TCO) was issued to place three (3) "DO NOT BLOCK INTERSECTION" signs at the intersection. One (1) sign was posted on each side of the I-75 ramp and one (1) sign was posted in the median directly across from the ramp.

This temporary TCO is valid for ninety (90) days or until replaced by a permanent TCO, whichever is sooner.

The Michigan Manual of Uniform Traffic Control Devices (MMUTCD) does not contain any warrants for the use of DO NOT BLOCK INTERSECTION signs and markings. Their use is considered a "may" condition, though you should not mark the pavement without also having a sign. The sign is required, pavement markings are optional.



912 0 456 912Feet



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