

CITY COUNCIL ACTION REPORT

December 5, 2008

TO: Phillip L. Nelson, City Manager

FROM: Brian P. Murphy, Asst. City Manager/Economic Development Services
 Steven J. Vandette, City Engineer *SV*
 William J. Huotari, Deputy City Engineer *WJH*

SUBJECT: Traffic Committee Recommendations
 November 19, 2008

Background:

The Traffic Committee considered these items at the November 19, 2008 meeting and made the following recommendations (minutes attached):

- Recommend no changes at Torpey Drive and Rochester Road (Item 7).
- Recommend rescinding Traffic Control Order 08-07-MR (Item 4).
- Recommend that the YIELD signs on Ellenboro at Trombley be replaced by STOP signs (Item 5).
- Recommend that the YIELD sign on Enterprise at Robinwood be replaced with a STOP sign (Item 6).
- Recommend establishing fire lanes/tow away zones at 2477 West Maple, as recommended by the Fire Department.

Financial Considerations:

- Signs cost approximately \$115.

Policy Considerations:

- Troy has enhanced the health and safety of the community.

Options:

- Council can approve or deny the recommendations.

A regular meeting of the Troy Traffic Committee was held Wednesday, November 19, 2008 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: Sara Binkowski
Ted Halsey
Jan Hubbell
Gordon Schepke
Pete Ziegenfelder
Sam Jiang
- ABSENT: John Diefenbaker
Richard Kilmer

Also present: Bill Huotari, Deputy City Engineer
Lt. David Livingston, Troy Police Dept.
Lt. Eric Caloia, Troy Fire Dept.
Judy Cholette, 1115 Torpey
Andrea Cholette, 1110 Torpey
Dale Zygnowicz, 6370 Elmoor
Joyce Mann, 1206 Torpey
William Cinader, 1096 Torpey
Brenda Krcek, 3330 Rochester
Burt Kassab, 31000 Northwestern, Farm. Hills
Denny Torpey, 12830 Rattalee, Davisburg
Peter Glasier, 3334 Rochester
Kathleen Novetsky, 3289 Mirage
Gary Abitheira, 3201 Mirage
Mike & Kari Messina, 3302 Mirage
Erin Maten, 1975 Enterprise
Stuart Glasier, 3334 Rochester
Bassem Basha, 767 Coachman

RESOLUTION #2008-11-35

Moved by Halsey
Seconded by Hubbell

To excuse Mr. Diefenbaker and Mr. Kilmer.

YES: All-5
NO: None
ABSENT: 2 (Diefenbaker and Kilmer)
MOTION CARRIED

2. Minutes – August 20, 2008

RESOLUTION #2008-11-36

Moved by Hubbell

Seconded by Binkowski

To approve the August 20, 2008 minutes.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

PUBLIC HEARING

3. Request for Sidewalk Waiver at 3331-3339 Rochester Road

Burt Kassab, on behalf of Troy-Rochester Properties, LLC, requests a waiver for the sidewalk at 3331-3339 Rochester Road, on the Vanderpool side. The Sidewalks and Driveway Approaches (Chapter 34) ordinance requires that sidewalk be installed as part of the development of this parcel. The Public Works Department recommends denial of this waiver request. Petitioner has signed an "Agreement for Irrevocable Petition for Sidewalks."

Petitioner states that the neighborhood is already developed with no sidewalks existing, and a sidewalk would lead nowhere and connect to nothing. There are utility poles and a ditch which would make sidewalk installation difficult (photos attached). He mentioned that there is a perforated storm drain pipe alongside Vanderpool, and the Planning Department was in favor of the waiver.

Residents within 300 feet of the Rochester/Vanderpool intersection have been notified of the Public Hearing. One letter of objection (attached) to the waiver was received from Kraft Chiropractic Clinic, 3283 Rochester Road, which has since been rescinded. The writer was against a waiver on Rochester Road.

RESOLUTION #2008-11-37

Moved by Binkowski

Seconded by Hubbell

WHEREAS, City of Troy Ordinances, Chapter 34, Section 34.07.01 (D) allows the Traffic Committee to grant waivers of the City of Troy Design Standards for Sidewalks upon a demonstration of necessity; and

WHEREAS, Burt Kassab has requested a waiver of the requirement to construct sidewalk on the property because there are no other sidewalks in the area and there are physical conditions hindering sidewalk installation; and

WHEREAS, the Traffic Committee has determined the following:

- a. A variance 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 the property at 3331-3339 Rochester Road, on the Vanderpool side of the property, which is owned by Troy-Rochester Properties, LLC, until such time as physical conditions change.

YES: All-5
 NO: None
 ABSENT: Diefenbaker and Kilmer
 MOTION CARRIED

REGULAR BUSINESS

RESOLUTION #2008-11-08-38

Moved by Binkowski
 Seconded by Schepke

To consider Item 7 first.

YES: All-5
 NO: None
 ABSENT: Diefenbaker and Kilmer
 MOTION CARRIED

7. Install a NO LEFT TURN sign on Torpey Drive at Rochester Road

The Troy Police Department requests a NO LEFT TURN sign at this intersection to alleviate significant backups due to vehicles trying to turn left from Torpey to Rochester (see Mr. Huotari's report attached).

Lt. Livingston has observed the traffic and has seen backups, worse at the afternoon school dismissal times. The situation will be worse in the future when the new academy adds more grades. Currently it only has ninth graders.

Judy Cholette, 1115 Torpey, is very much against the left turn prohibition, as is Joyce Mann, of 1206 Torpey. She says it is often easier to turn left, as northbound traffic will stop and let drivers through to the center lane.

Property and business owners at that corner, Denny Torpey, Brenda Krcek, and Peter Glasier, believe they will all lose business if left turns are prohibited. It would be so inconvenient for their customers that they would shop elsewhere. Denny Torpey observed traffic last Friday and Monday, and said there was only about seven minutes of moderate inconvenience for motorists exiting Torpey onto Rochester.

All the residents who spoke said going north to go south is inconvenient and dangerous. There is no way to head south except by turning around in a side street or parking lot.

Mr. Huotari said Rochester Road reconstruction utility work will start in February of 2009, and actual construction early in 2010. The Rochester Road boulevard will be extended to Barclay, and the traffic signal currently at Charrington will be moved to the Torpey intersection.

Mr. Halsey thinks the schools could recommend that parents use an alternate route, such as Boyd Street, to access Rochester Road.

RESOLUTION #2008-11-08-39

Moved by Binkowski

Seconded by Schepke

Recommend no changes at Torpey Drive and Rochester Road.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

4. Rescind Traffic Control Order 08-07-MR

At the August Traffic Committee meeting, Res. 2008-08-33 recommended installation of a DO NOT BLOCK DRIVEWAY sign on Maple Road, with yellow lights (if possible) blinking from 6:00 a.m. to 9:00 a.m., Monday-Friday, on the east side of the west driveway of Fire Station #4 (with the approval of the Road Commission for Oakland County).

RCOC will not permit the proposed yellow blinking lights on the DO NOT BLOCK DRIVEWAY sign, as it is not a typical installation as shown in the Michigan Manual of Uniform Traffic Control Devices. Therefore, TCO #08-07-MR should be rescinded.

RCOC will relocate the DO NOT BLOCK DRIVEWAY sign because installation information has to be recorded their inventory. (RCOC does not like to install these DO NOT BLOCK DRIVEWAY" signs because they are not enforceable. There is nothing in the Michigan Vehicle Code (MVC) that allows for a Traffic Control Order to be written in reference to them.) They prefer to install the Stop Bar so it is done in accordance with their material specifications. After the initial installation (\$500) is paid for by the city, RCOC will maintain it in the future at no cost to the City.

RESOLUTION #2008-11-40

Moved by Hubbell

Seconded by Halsey

Recommend that Traffic Control Order #08-07-MR be rescinded.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

5. Install Stop Signs on Ellenboro at Trombley

Kari Messina, 3302 Mirage, has requested that the YIELD signs on Ellenboro at Trombley be replaced by STOP signs. She and her neighbors are concerned for the safety of students walking to Wattles Elementary School, and also for the middle-schoolers who wait for the school bus at that corner. There are no sidewalks in the area, and the residents feel that making traffic come to a complete stop at the corner would improve safety. Our consultants recommend no changes at the intersection (see attached report).

Gary Abithiera, 3201 Mirage, is concerned about safety because in winter it's dark and often icy when the children are walking to school and to the bus stop.

Kathleen Novetsky 3289 Mirage, said that Wattles Elementary School is the only one in Troy without a 4-way STOP near it. She mentioned that this Ellenboro/Trombley intersection is offset, not completely straight, which makes it trickier to maneuver. She also reports that motorists use Trombley as a cut-through between Rochester Road and Big Beaver.

Mike Messina, 3302 Mirage, would like all-way STOP signs at this intersection. He thinks there is too long a stretch of Trombley without any STOP signs to slow down traffic. MMUTCD does not recommend the use of STOP signs to slow traffic.

Mr. Schepke reported that two of his friends who live near the intersection support installation of STOP signs instead of the YIELD signs.

Mr. Halsey believes the schools need to educate the children about safety while walking to school. He has seen the kids walking on both sides and the middle of the street. Lt. Livingston will contact the school regarding a safety program for students who walk to school.

RESOLUTION #2008-11-41

Moved by Halsey

Seconded by Schepke

Recommend that the YIELD signs on Ellenboro at Trombley be replaced by STOP signs.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

6. Install STOP Signs on Robinwood at Enterprise

Erin Maten of 1975 Enterprise requested that STOP signs be placed on Robinwood at Enterprise to replace the existing YIELD sign on Enterprise to improve safety for school children crossing Robinwood. Our traffic engineering consultant reviewed the request and recommends that the existing YIELD sign on Enterprise be changed to a STOP sign (see attached report).

Ms. Maten said that there are around 40 homes on Enterprise where children live, most of them fourth graders or younger. Children are not bussed to school. There is no sidewalk on the south side of Robinwood, so kids must cross Robinwood to reach the sidewalk on the north side. Kids also have to use the same route to reach Robinwood Park. Ms. Maten would like to have sidewalks on the south side of Robinwood, or at least a crosswalk.

Lt. Livingston will contact Troy's elementary school principals to develop a plan to educate teachers and students about safety while walking to school.

RESOLUTION #2008-11-42

Moved by Halsey

Seconded by Hubbell

Recommend installation of a STOP sign instead of the YIELD sign on Enterprise at Robinwood.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

8. Establish Fire Lanes at 2477 West Maple Road

Section 8.28, Chapter 106, Troy City Code, provides for the establishment of fire lanes on private property. The Fire Department recommends that the fire lanes shown on the attached sketch be provided to allow proper deployment of and travel by emergency vehicles (fire, police, medical).

RESOLUTION #2008-11-43

Moved by Hubbell

Seconded by Halsey

Recommend establishing fire lanes/tow away zones at 2477 West Maple, as recommended by the Fire Department.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

9. Public Comment

Joyce Mann, 1206 Torpey, expressed gratitude for the additional speed limit signs and police patrols on Torpey. She believes they are helping to slow traffic.

10. Other Business

Mr. Huotari reported on Baker Middle School. The school has made significant changes to improve safety and traffic flow in their parking lot.

Joyce Mann expressed a wish for more lighting in the parking lot, as she has seen vehicles hit the divider. Mr. Huotari said that the school would be responsible for lighting.

RESOLUTION #2008-11-44

Moved by Binkowski

Seconded by Hubbell

To not meet in December.

YES: All-5

NO: None

ABSENT: Diefenbaker and Kilmer

MOTION CARRIED

11. Adjourn

The meeting adjourned at 8:48 p.m.

Pete Ziegenfelder, Chair

Laurel Nottage, Recording Secretary

Reasons for sidewalk variance for 3331-3339 Rochester Road:

The property is located on the SWC of Vanderpool and Rochester Roads. We are requesting a sidewalk waiver for the proposed sidewalk on Vanderpool. As the attached sketch shows, we are installing the sidewalk on Rochester Road and connecting it with a crosswalk in the parking lot. The proposed sidewalk on Vanderpool does not connect with any other sidewalk (and in fact sort of dead ends at the nwc of the property). I believe that immediately west of the property, there is a culvert in front of the homes. Moreover, there are several utility poles and storm drains in the area where the proposed sidewalk is to be located and it would not be safe nor practical to install the sidewalk on the Vanderpool side. Additionally, the Planning Commission, at the site plan hearing, strongly recommended to the City Planner that the sidewalk requirement be waived for the Vanderpool side. Thank you for your consideration.

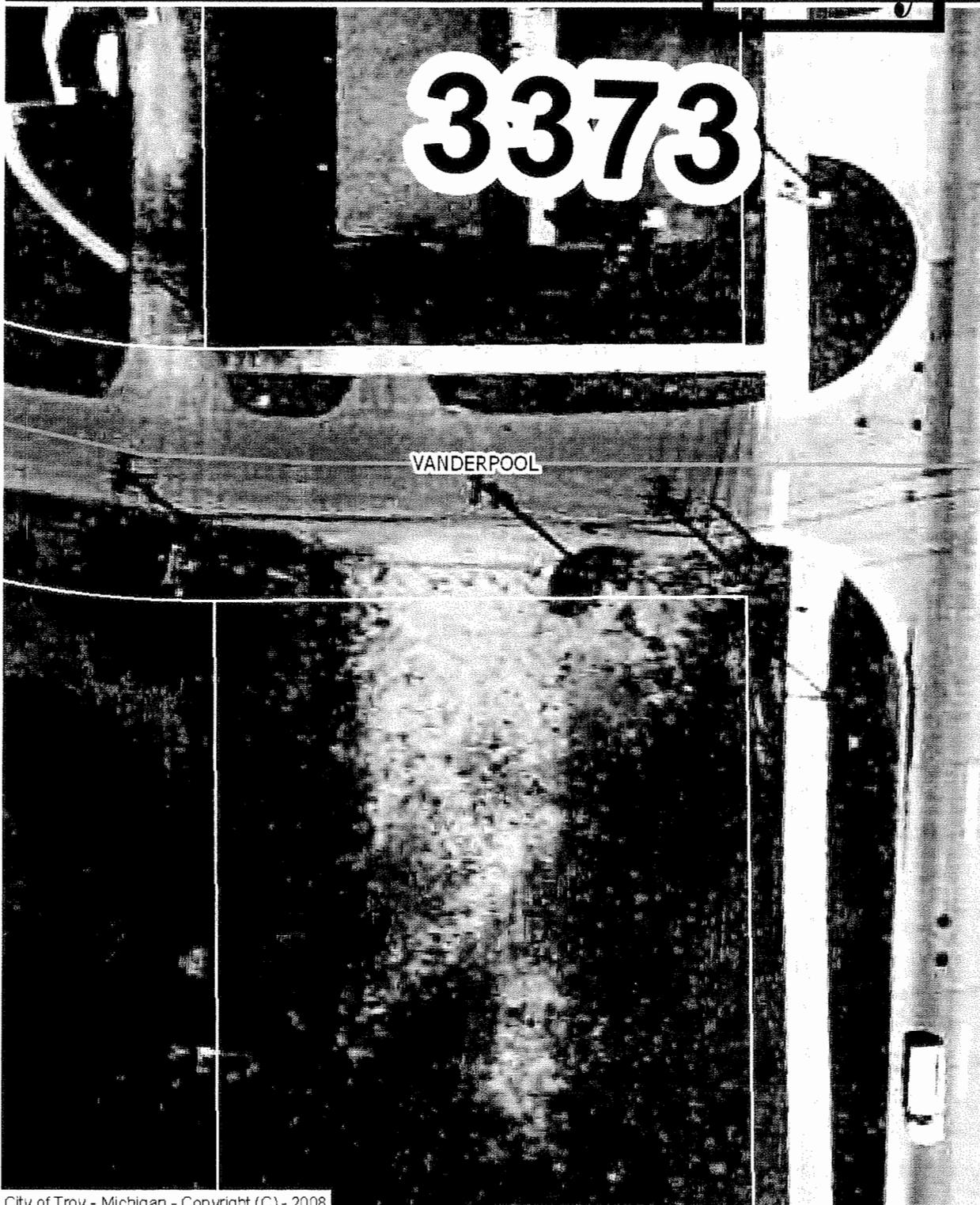
500 W. Big Beaver
Troy, MI 48064
(248) 552-1000

The City of Tomorrow...

ITEM 3



Geographical Information Systems Online



VANDERPOOL

City of Troy - Michigan - Copyright (C) - 2008

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.

ITEM 3





October 1, 2008

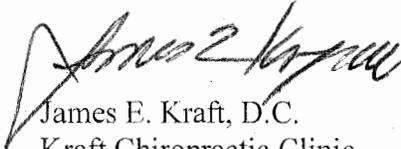
City of Troy
William J. Huotari
Deputy City Engineer

Re: Sidewalk Vanderpool, see attached

Mr. Huotari,

It is my opinion that a sidewalk should be required at the site listed on your notice. I see school children, bicycle riders, women with strollers, etc on a daily basis in that area. To approve the waiver would be a mistake and does not take into account the pedestrians.

Sincerely,



James E. Kraft, D.C.
Kraft Chiropractic Clinic
3283 Rochester Rd.
Troy, MI 48083
(248) 740-9100

RECEIVED

OCT 3 2008

ENGINEERING

TRAFFIC CONTROL ORDER #08-07-MR

LOCATION

Maple Road at Fire Station #4

REQUIREMENT OF ORDER

Resolved, that Traffic Control Order No. 08-07-MR is hereby approved for installation of "Do Not Block Driveway" sign on Maple Road, with yellow lights (if possible) blinking from 6:00 a.m. to 9:00 a.m., Monday-Friday on the east side of the west driveway of Fire Station #4 (with the approval of the Road Comm. for Oakland County)

DATE OF COUNCIL APPROVAL

9/8/08

Res. No. 2008-09-281-F-7b

William J. Huotari
Deputy City Engineer

Date

WORK ORDER SENT TO

DPW _____

By: _____

DATE INSTALLED

Authorized Signature

WHEN COMPLETED, PLEASE RETURN ORIGINAL TO TRAFFIC ENGINEERING

Traffic Engineering Dept. will distribute copies after installation to:

Date

Police Dept. _____

City Clerk _____

Fire Dept. _____



TRAFFIC COMMITTEE REPORT

October 30, 2008

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer

SUBJECT: Ellenboro at Trombley
Stop Sign Request

Background:

- Kari Messina of 3302 Mirage requested that STOP signs be placed on Ellenboro at Trombley.
- Ms. Messina stated that this intersection is used as a bus stop and also for children crossing Trombley to go to Wattles Elementary to the north.
- There are existing YIELD signs on Ellenboro at Trombley.
- This intersection was reviewed in May 2008 for the same request, but did not include a pedestrian count.
- A pedestrian count was performed on October 27 and October 28.
- The peak period for pedestrian traffic is between 2:15 and 4:15 in the afternoon. During this period there were a total of 42 north-south crossings made, 16 of these pedestrians were dropped off from the bus at 2:45 on the north east corner.
- A copy of the previous consultant report, traffic volume counts and new pedestrian counts are attached.
- The intersection did not meet warrants for a STOP sign on Ellenboro or Trombley with the previous request.
- The addition of the pedestrian count does not change the previous recommendation.

Recommendations:

- Staff recommends that no changes be made at the intersection and that the existing YIELD signs on Ellenboro at Trombley remain in place.

Suggested Resolutions:

- a. Recommend installation of STOP signs on Ellenboro at Trombley.
- b. Recommend no changes at the intersection of Ellenboro and Trombley.



HUBBELL, ROTH & CLARK, INC
Consulting Engineers

Principals
George E. Hubbell
Thomas E. Biehl
Walter H. Alix
Peter T. Roth
Michael D. Waring
Keith D. McCormack
Curt A. Christeson
Thomas M. Doran

Senior Ass **ITEM 5**
Frederick C. Navarre
Gary J. Tressel
Lawrence R. Ancypa
Kenneth A. Melchior
Dennis M. Monsere
Randal L. Ford
David P. Wilcox
Timothy H. Sullivan

Chief Financial Officer
J. Bruce McFarland

Associates
Thomas G. Maxwell
Nancy M.D. Faught
Jonathan E. Booth
Michael C. MacDonald
Marvin A. Olane
James C. Hanson
Richard F. Beaubien
William R. Davis
Daniel W. Mitchell
Jesse B. VanDeCreek
Robert F. DeFrain
Marshall J. Grazioli
Thomas D. LaCross

May 15, 2008

City of Troy
500 W. Big Beaver Road
Troy, Michigan 48084

Attn: Mr. William Huotari, P.E., Deputy City Engineer

Re: Intersection Traffic Controls for
Trombly/Ellenboro Intersection

HRC Job No. 20080338.02

Dear Mr. Huotari:

At your request, we have reviewed the intersection of Trombly and Ellenboro in the City of Troy. The intersection is located north of Big Beaver Road and west of Rochester Road in the center of section 22. The intersection review was completed to determine if traffic control devices are required to ensure safe and efficient travel based on the criteria prescribed in the Michigan Manual of Uniform Traffic Control Devices. Trombly is the more continuous collector road which at its east end connects to Rochester Road. Ellenboro is a lower volume local road which does not connect to either Big Beaver Road or Wattles Road. Ellenboro ends at Colebrook, one block from Trombly. Traffic volume data was collected at the intersection by the City. Twenty Four hour traffic on Trombly is 2,361 vehicles per day and 1,352 vehicles on Ellenboro. Because Trombly carries more traffic than Ellenboro, Ellenboro is considered the minor street at this intersection.

Traffic Crash Experience

Based on data from the City of Troy, four (4) traffic crashes were identified which have occurred at this intersection during the last three years. The most recent crash occurred in October 2007. Two of these crashes were right angle type crashes. The Traffic Improvement Association Traffic Crash Analysis Tool identified two additional crashes that occurred at the intersection between 2000 and 2005. Both of these were an angle type crash. The output of the Traffic Crash Analysis Tool is attached to provide additional details on the intersection crash history. The Michigan Manual on Uniform Traffic Control Devices indicates that multi-way stop control would be warranted at this intersection if we found five (5) angle type crashes in a one year period. Because there were only four angle crashes at this intersection over the more than seven year period (2000-2007), the traffic crash experience at this intersection does not meet the warrants for a multi-way stop.

Sight Distance

Our field review of this intersection showed houses on all four of the corners and a tree on the southeast corner (See Photo 1). These houses limit the visibility of motorists approaching the intersection on Ellenboro to see conflicting traffic on Trombley. The sight distance restriction suggests that two of the intersection approaches should be controlled. The appropriate form of intersection control can best be decided by determining the safe approach speed for vehicles approaching 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.



Photo 1 Northbound Ellenboro at Trombley

Two-way stop control is commonly used at the intersection of a minor road with a state highway or major arterial. Two-way stop control is also used where the application of the normal right-of-way rule is unduly hazardous such as in the case of restricted view (safe approach speed less than 10 mph). Because the safe approach speed is greater than 10 mph, two-way stop control would not be appropriate for this intersection.

The yield sign is used to protect traffic on one of two intersecting streets without requiring traffic on the other street to come to a complete stop. Instead, cross traffic is merely required to yield to any vehicle in the intersection or approaching so closely on the intersecting street as to constitute an immediate hazard. Since the safe approach speed for motorists approaching Trombley on Ellenboro is less than 25 mph, but greater than 10 mph, making yield signs on Ellenboro at Trombley the recommended signage. The yield signs should remain on the Ellenboro approaches to the intersection because Trombley carries the higher traffic volume.

Conclusions

Our review of the traffic crash experience indicates that the intersection does not meet the criteria for four-way stop control. However, sight distance restrictions indicate that some form of intersection control would be appropriate. Because the safe approach speed is less than 25 mph but greater than 10 mph, HRC recommends the yield signs on Ellenboro at Trombley remain in place.

Very truly yours,

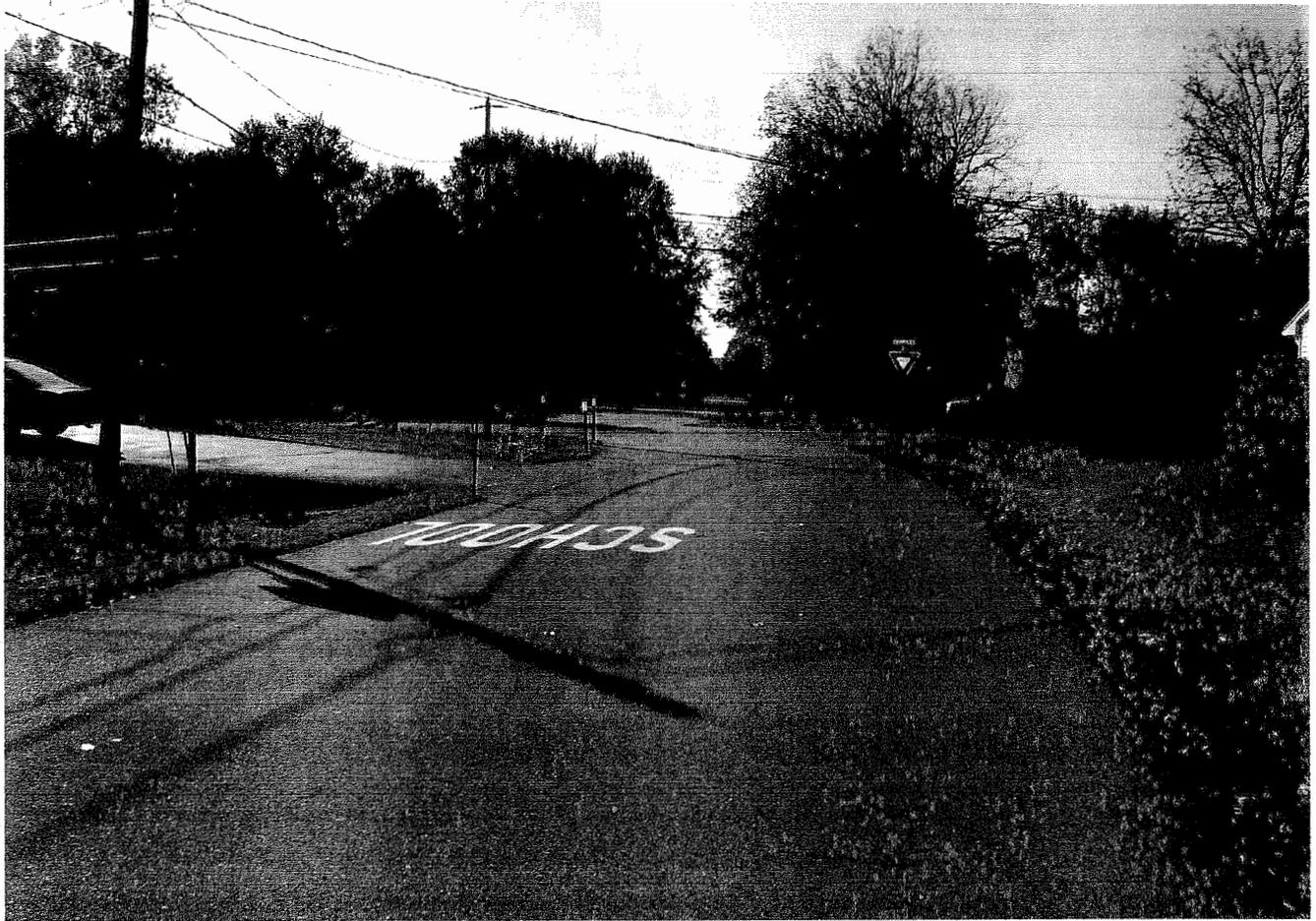
HUBBELL, ROTH & CLARK, INC.

A handwritten signature in black ink that reads 'Colleen L. Hill'.

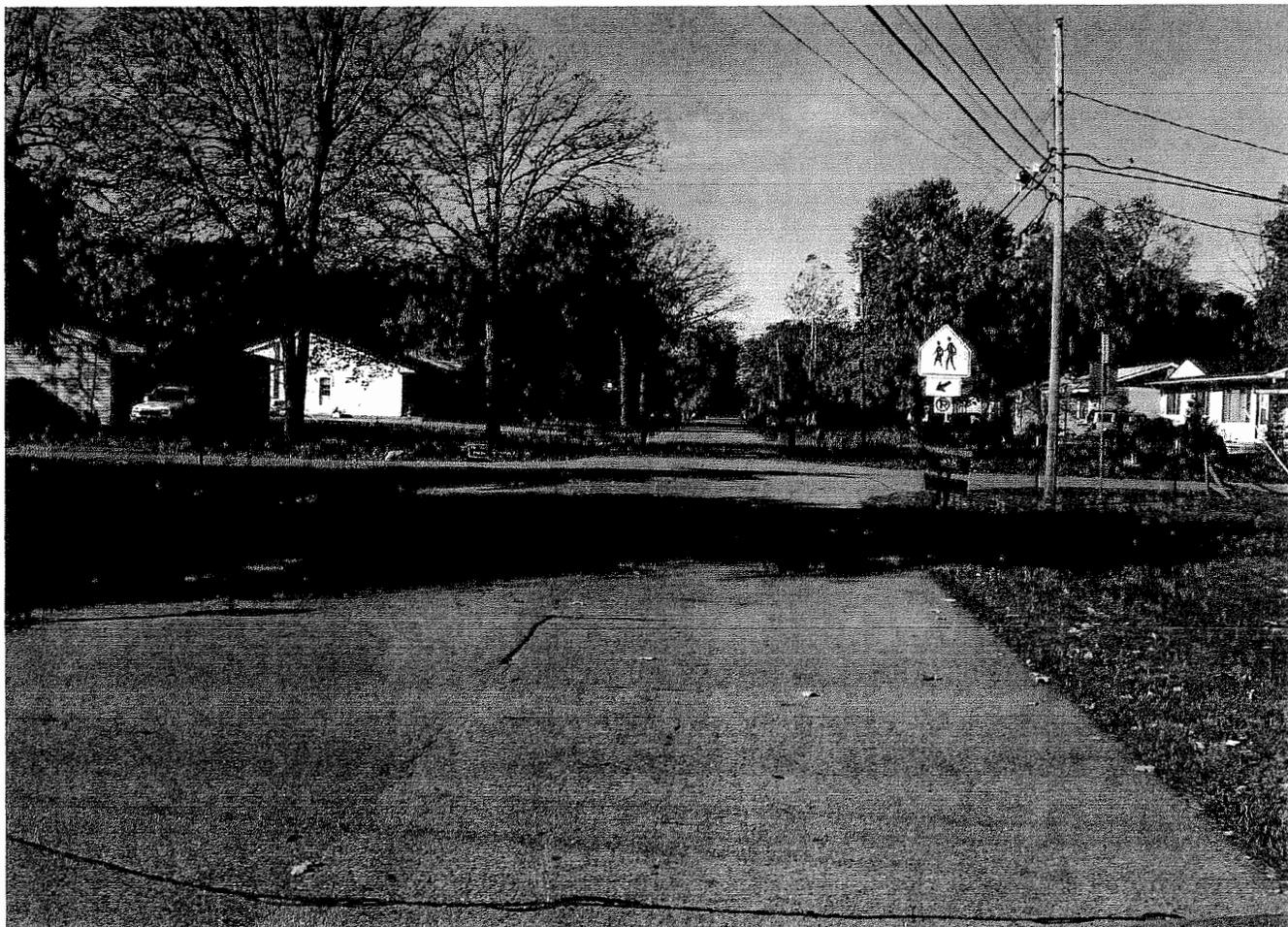
Colleen L. Hill, P.E., PTOE
Transportation Project Engineer

jmk
CLH/
pc:

HRC; W. Alix, File



ELLEN BORO



Trombley



Geographical Information Systems Online



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.

Ellenboro & Trombley Pedestrian Count

- 1 **SOURCE:** Citizen request thru Traffic Engineering
- 2 **OBSERVATIONS:** In the area of Ellenboro and Trombley no sidewalks exist. Also on
3 the Oct. 27th and the 28th it was noted that, on occasion, both parents and students walked
4 down the middle of the street going and returning from school. It was also observed that
5 Vehicle traffic occasionally ignored the yield and pedestrian crossing (yellow) signs.
- 6 **ACTION TAKEN:** A traffic engineering technician was placed at the corner of
7 Ellenboro and Trombley to observe the number of people crossing at the intersection.
8 During the morning of the 27th at 07:30 7 students boarded the school bus at the north
9 east corner. At 08:30 student and parents started to make there way to the elementary
10 school one block north. From 08:30 thru 09:15 a total of 11 students along with 7 parents
11 passed thru the intersection. During the morning of the 28th at 07:30 9 students boarded
12 the school bus. And from 08:15 thru 09:15 18 students along with 9 parents crossed thru
13 the intersection. During the afternoon of the 27th at 2:45 a school bus dropped off 16
14 students at the north east corner if the intersection. The remaining 26 pedestrian count
15 which includes 2 parents going to and coming from the elementary school crossed the
16 intersection at the times and direction indicated on the accompanying chart.
- 17 **STATUS:** Open



TRAFFIC COMMITTEE REPORT

October 31, 2008

TO: Traffic Committee
FROM: Bill Huotari, Deputy City Engineer
SUBJECT: Enterprise at Robinwood
Stop Sign Request

Background:

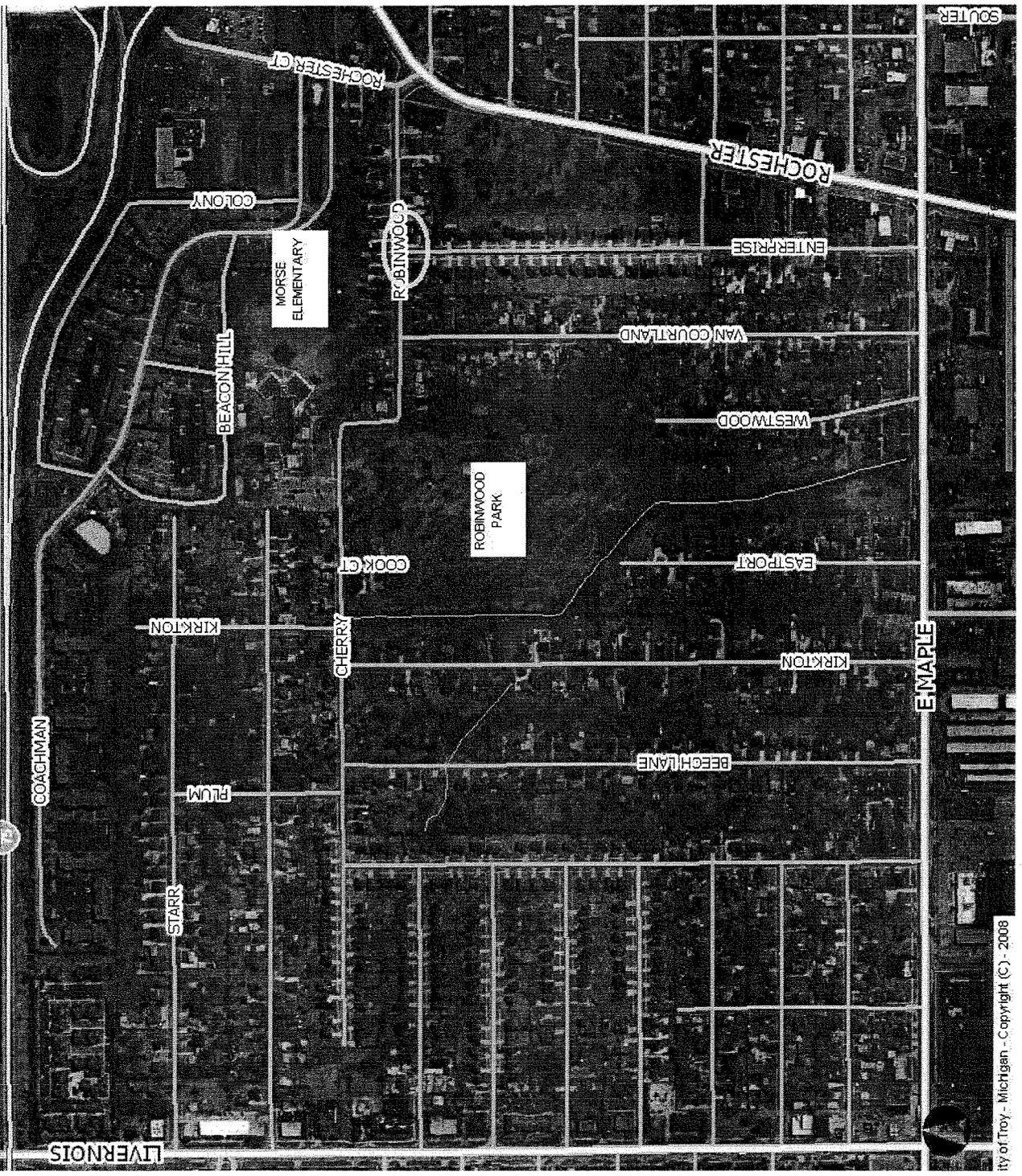
- Erin Maten of 1975 Enterprise requested that STOP signs be placed on Robinwood at Enterprise to replace the existing YIELD sign on Enterprise.
- Ms. Maten stated that this intersection is the primary route for children on Enterprise to cross Robinwood to go to Morse Elementary to the northwest.
- This intersection was previously considered by the Traffic Committee in January 2002. The installation of the current YIELD sign on Enterprise at Robinwood was approved by TCO #02-02-SS (Y). Minutes of the meeting are attached.
- The intersection was most recently reviewed in September 2008.
- Traffic volumes have increased slightly since 2002 and pedestrian counts were also performed with the most recent review of the intersection.
- The city requested that our traffic engineering consultant review the request and provide a report of their findings and recommendations.
- The report recommends that the existing YIELD sign be changed to a STOP sign based on findings that the safe approach speed on Enterprise is less than 10 mph.
- A copy of this report is attached along with supporting information.

Recommendations:

- Staff recommends that the existing YIELD sign on Enterprise at Robinwood be replaced with a STOP sign.

Suggested Resolutions:

- a. Recommend installation of a STOP sign on Enterprise at Robinwood.
- b. Recommend installation of STOP signs on Robinwood at Enterprise.
- c. Recommend no changes at the intersection of Enterprise at Robinwood.



8. **Install STOP Sign on Enterprise at Robinwood Street.**

Cindy Pennington, 1924 Westwood, requests a STOP sign on Enterprise at Robinwood. Ms. Pennington indicated that she sees confusion at the intersection as to who has the right of way at the intersection.

Enterprise used to be a stub street running north from Maple Road. A residential development at the end of Enterprise opened up the road to Robinwood; today the roadway runs from Maple to Robinwood. Robinwood serves as an access to the residential development in the area and to Morse Elementary School.

Recent traffic counts indicate that Enterprise carries around 280 vehicles in a day, and Robinwood carries around 2000 vehicles in a day. Average traffic volumes on Troy residential roadways range between 200 and 5000 vehicles per day.

Since this intersection has not been in existence for a long time, there haven't been significant crashes at the intersection that may have been prevented by a STOP sign.

A sight distance study showed no significant sight obstructions at the intersection. A fence and one shrub in the southeast corner may pose minor sight obstructions to a motorist.

Sgt. Redmond said that Enterprise is becoming a major cut-through street and traffic is increasing significantly. Robinwood and Enterprise also carry vehicles to and from Morse Elementary School.

Motion by Halsey
Supported by Kilmer

To recommend installation of a YIELD sign on Enterprise at Robinwood.

YEAS: 6

NAYS: 0

ABSENT: 1

October 10, 2008



Mr. William Huotari, P.E.
Deputy City Engineer
City of Troy
500 W. Big Beaver Road
Troy, MI 48084

Subject: Traffic Control Recommendation for the intersection of Robinwood Drive and Enterprise Drive
OHM JN: 0128-08-0050

Dear Mr. Huotari:

As requested, we have reviewed the Robinwood Drive/Enterprise Drive intersection to determine the proper traffic control. The subject intersection is a T-intersection located in the City of Troy, approximately 0.4 miles north of Maple Road and 650' west of Rochester Road. Enterprise Drive is a local street, which runs north-south forming T-intersections at both ends (with Maple Road to the south and Robinwood Drive to the north). Robinwood Drive is a local street running in the east-west direction. Morse Elementary School and Robinwood Park are located less than 1,000 feet west of the intersection along the north and south sides of Robinwood Drive respectively. The speed limit on both streets is 25 mph. There is currently a YIELD sign on Enterprise Drive, which is the northbound approach to the intersection. Reference the attachments for an aerial photograph and intersection photos.

Background on Traffic Control Determination

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 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 "multiway-STOP" or "all-way" STOP sign installation is discouraged. The multiway-STOP warrant requires the volumes of traffic per approach leg on intersecting roads to be approximately equal.

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.

Traffic Volumes

24-Hour traffic volumes were provided by the City of Troy. The counts indicate the average daily traffic (ADT) on Enterprise Drive to be 343 with Robinwood Drive at 2,170. The highest peak hour volumes along each road are 43 for Enterprise Drive and 280 on Robinwood Drive. The MMUTCD indicates that multi-way STOP control could be warranted if there were at least 300 vehicles per hour from the major street approaches and 200 units (vehicles, pedestrians and bicycles) per hour from the minor street approaches for the same eight hours on an average day. Based on the peak hour volumes alone, the option of multi-way STOP control does not meet warrants. In addition, the traffic volumes at the intersection are not directionally balanced, which is required for multi-way STOP control.

In addition to vehicular traffic, pedestrian traffic has also been counted at the intersection. The peak period for pedestrian traffic is between 2:15 and 3:30 in the afternoon. During this period there were a total of 43 north-south crossings made. With the pedestrian and vehicular traffic added together this location is still below warrant thresholds for multi-way STOP control. All vehicular and pedestrian traffic counts are provided as an attachment to this letter.

Crash Analysis

There have been no crashes recorded in the past four years at this intersection.

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.

Types of Highways

Although both Enterprise Drive and Robinwood Drive are considered local streets, Robinwood Drive is considered the major road at this intersection based on the traffic volumes. The road with the heavier volume of traffic, Robinwood Drive, should be given the right-of-way.

Sight Distance

The only major sight distance obstructions at the intersection are the houses on the southeast and southwest quadrants. The houses and sight distance come 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.

Mr. William Huotari, P.E.

October 10, 2008

Page 3

When the safe approach speed is found to be greater than 10 mph for the minor road, a YIELD sign is commonly used. In this case, the safe approach speed on Enterprise Drive was found to be less than 10 mph; 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 control be modified from a YIELD sign to a STOP sign on the Enterprise Drive northbound approach to the intersection. We recommend against modifying the intersection to multi-way STOP control.

Sincerely,
Orchard Hiltz & McCliment, Inc.



Steven M. Loveland, PE, PTOE
Traffic Project Engineer

Attachments:

- Aerial and Intersection Photos
- Traffic and Pedestrian Counts
- Safe Approach Speed Calculation Spreadsheet



Geographical Information Systems Online

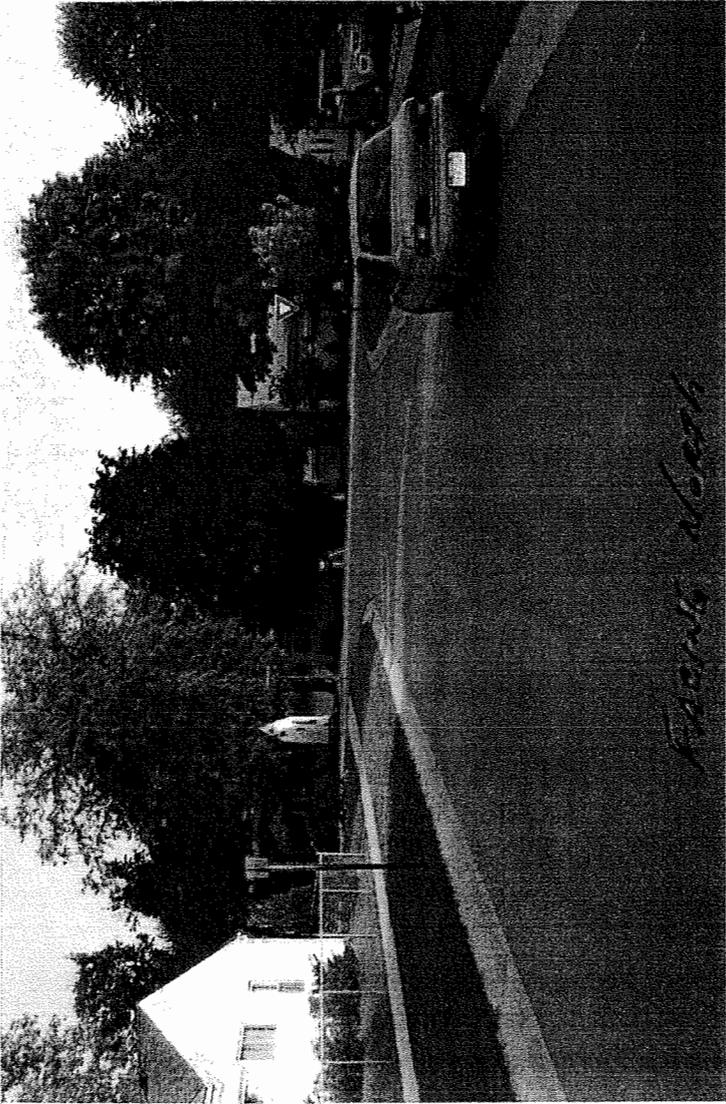


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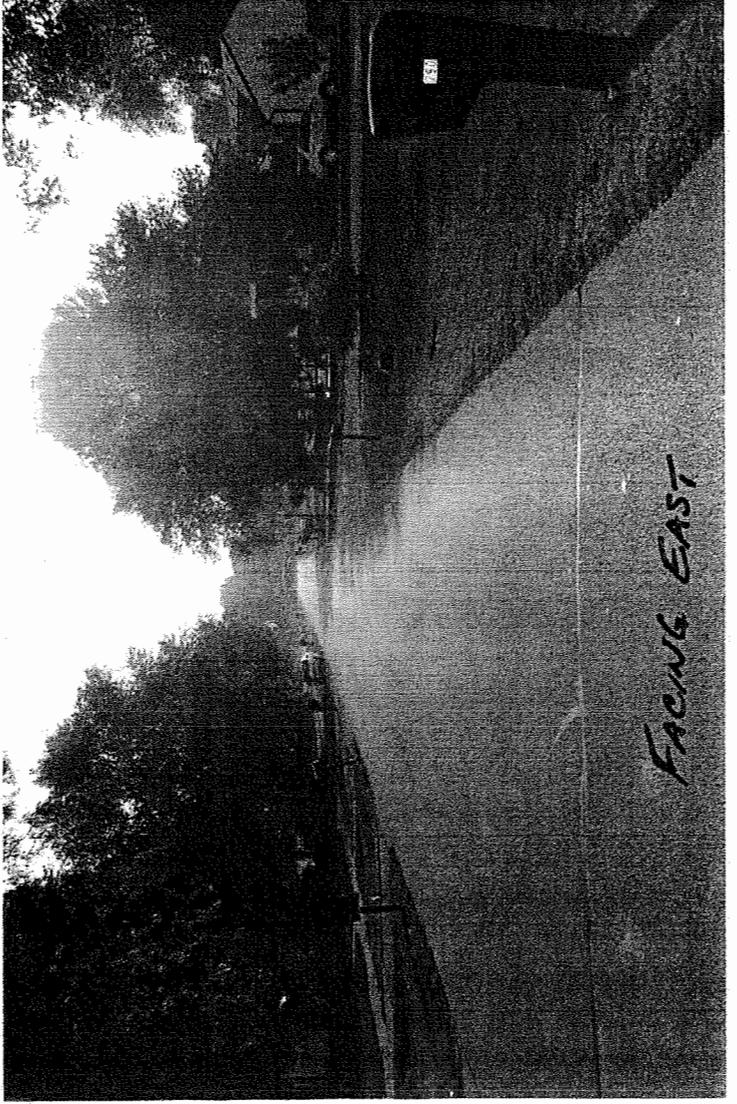


15510 - 15510

ROBWOOD / ENTERPRISE #1



FACING WEST



FACING EAST

Safe Approach Speed Calculation

Enterprise and Robinwood
City of Troy, MI

Major = Robinwood
Local = Enterprise

Date: 10/9/2008

Analyst: S. Loveland

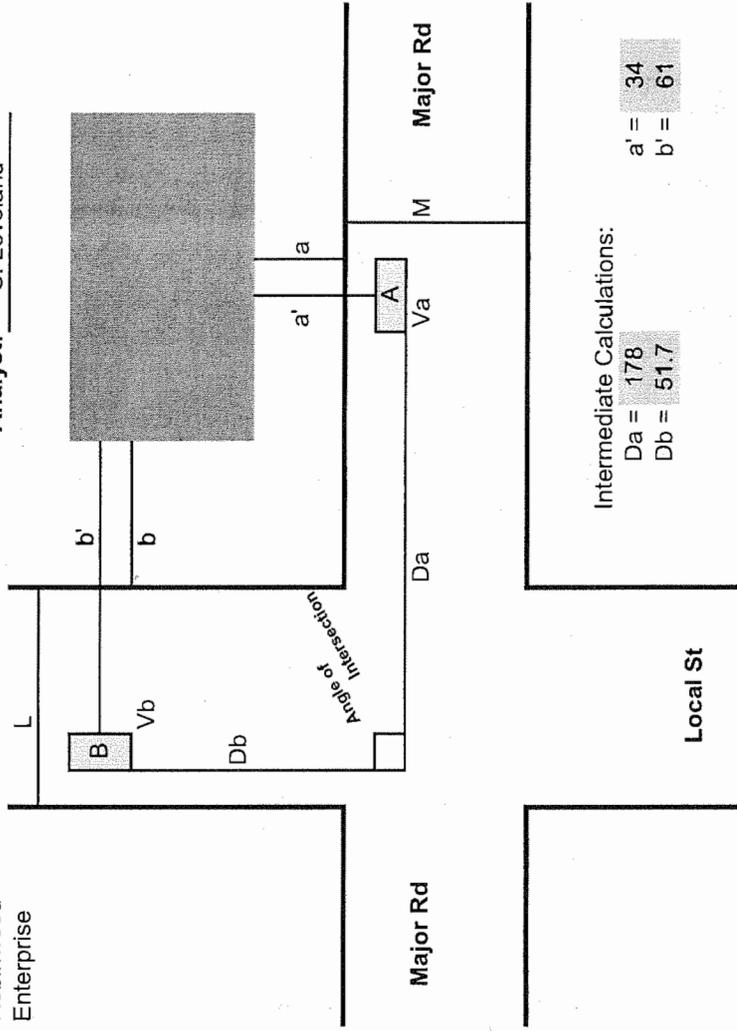
Measured:

Width of Roads
Major: M = 24 (ft)
Local: L = 24 (ft)

Distance to Obstruction
a = 25 (ft)
b = 46 (ft)

Angle of Intersection
Delta = 90 (degrees)

Major Rd Posted
Speed Limit = 25 (mph)



Assumed:

Speed of Vehicle A = Posted Speed Limit
on Major Road + 5 (mph)

Perception / Reaction Time (AASHTO)
Va = 30 (mph)

Coefficient of friction (AASHTO)
t = 2.0 (sec)
f = 0.40

Clearance distance in excess of safe stopping distance (AAA)
C = 15 (ft)

Intermediate Calculations:
Da = 178
Db = 51.7
a' = 34
b' = 61

Calculated Safe Approach Speed for Vehicle
Approaching on Local Rd
Vb = 9.8 (mph)

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

Recommended ROW control for local street
based on safe approach speed :

STOP Sign



TRAFFIC COMMITTEE REPORT

November 6, 2008

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer *WJH*

SUBJECT: Torpey Drive at Rochester
NO LEFT TURN Request

Background:

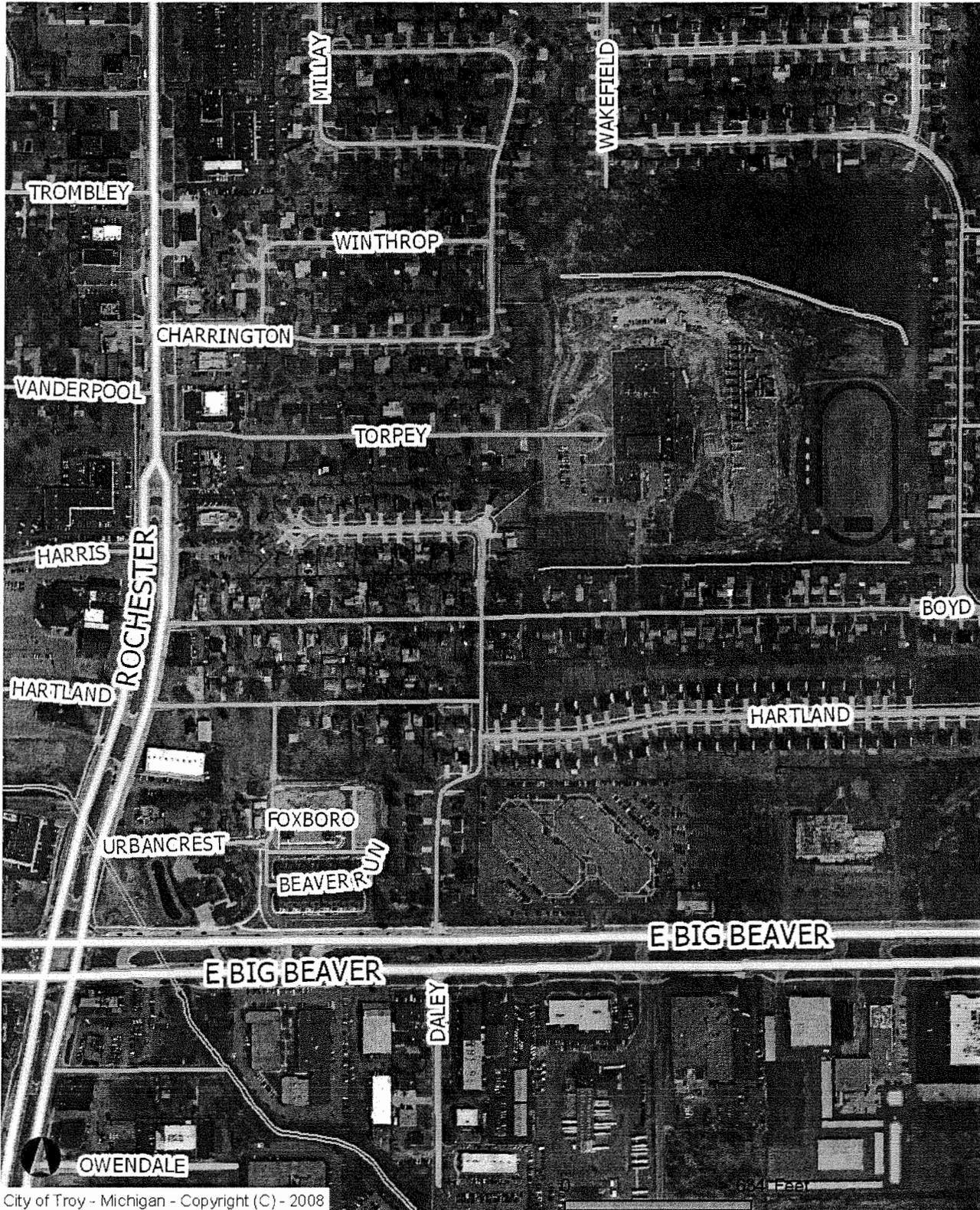
- The Troy Police Department requests that a "NO LEFT TURN" sign be placed at the intersection of Torpey Drive and Rochester Road.
- The sign would be limited to 7:00 a.m. to 9:00 a.m. and 2:00 p.m. to 4:00 p.m., Monday through Friday so that during off-school times residents would still be able to make turns when traffic allowed.
- The Troy Police Department has already requested that buses leaving the Baker Middle School site use Torpey and Boyd, which the Troy School District has complied with.
- Bus routes to the south are exiting the site and accessing Boyd so that they can make a right turn at Rochester, travel north to the cross over, make a Michigan left and continue south on their route.
- Bus routes to the north are still using Torpey as they can make a right turn at Rochester and continue to the north.
- Significant backups are still occurring in the afternoon due to vehicles attempting to make a left turn from Torpey to Rochester.
- Placement of the sign would require that all traffic on Torpey turn right on Rochester during the specified hours.
- It is likely that additional vehicles would use Boyd to travel south on Rochester Road.

Recommendations:

- Staff recommends that a "NO LEFT TURN" sign be placed at the intersection of Torpey Drive and Rochester Road.

Suggested Resolutions:

- a. Recommend installation of a "NO LEFT TURN" sign at Torpey Drive and Rochester Road be placed limiting left turns between the hours of 7-9 a.m. and 2-4 p.m., Monday through Friday.
- b. Recommend no changes at Torpey Drive and Rochester Road.



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Geographical Information Systems Online

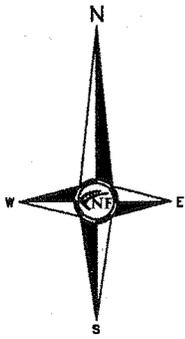


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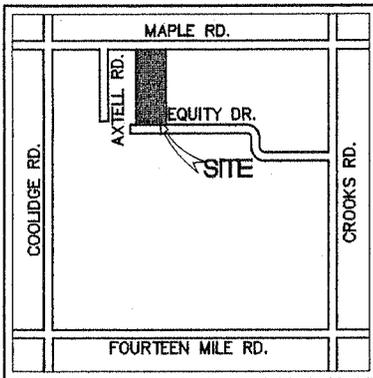
2477 W. Maple Road

FIRE LANES

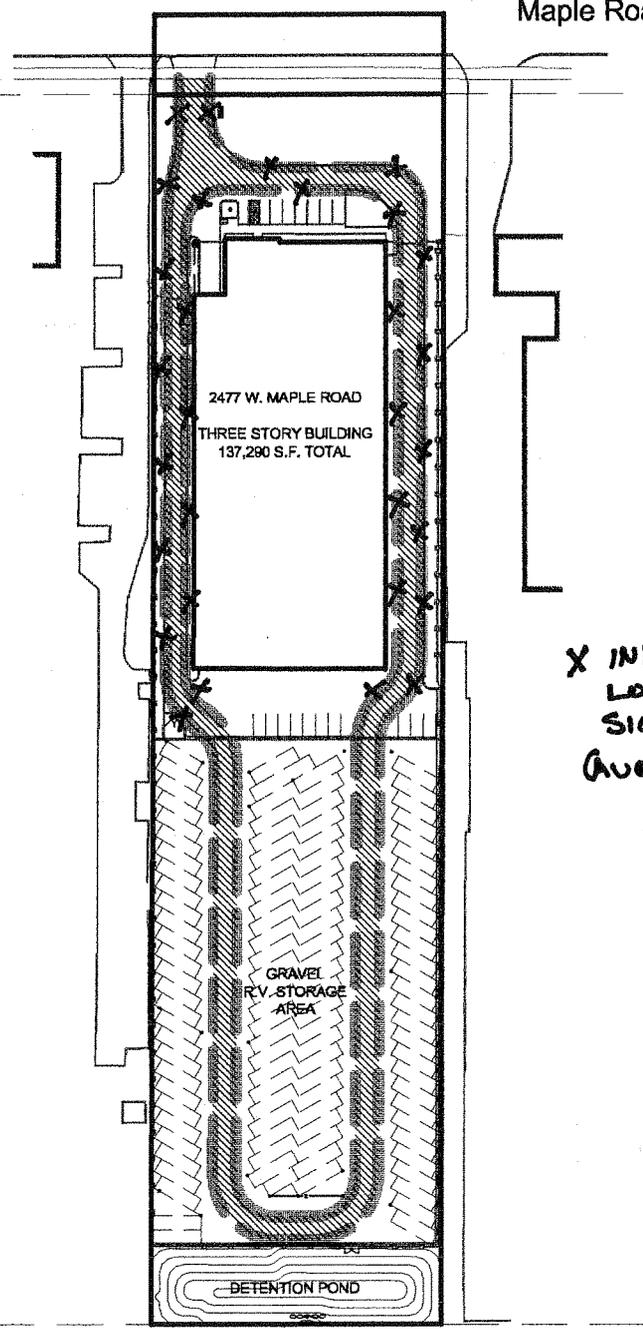


Maxwell Drive

Maple Road

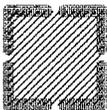


Location Map

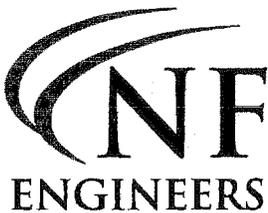


X INDICATES APPROXIMATE LOCATION OF FIRE LANE SIGNS (AUG 08)

LEGEND



DENOTES ON-SITE FIRE LANE



NOWAK & FRAUS ENGINEERS
 1310 N. STEPHENSON HWY.
 ROYAL OAK, MI 48067-1508
 TEL. (248) 399-0886
 FAX. (248) 399-0805

PREPARED FOR:

WEST MAPLE VENTURES LLC
 10651 NORTHEND
 FERNDALE, MI 48220

SCALE

N.T.S.

DATE

07-23-2008

DRAWN

S.R.M.

JOB NO.

8406-04

SHEET

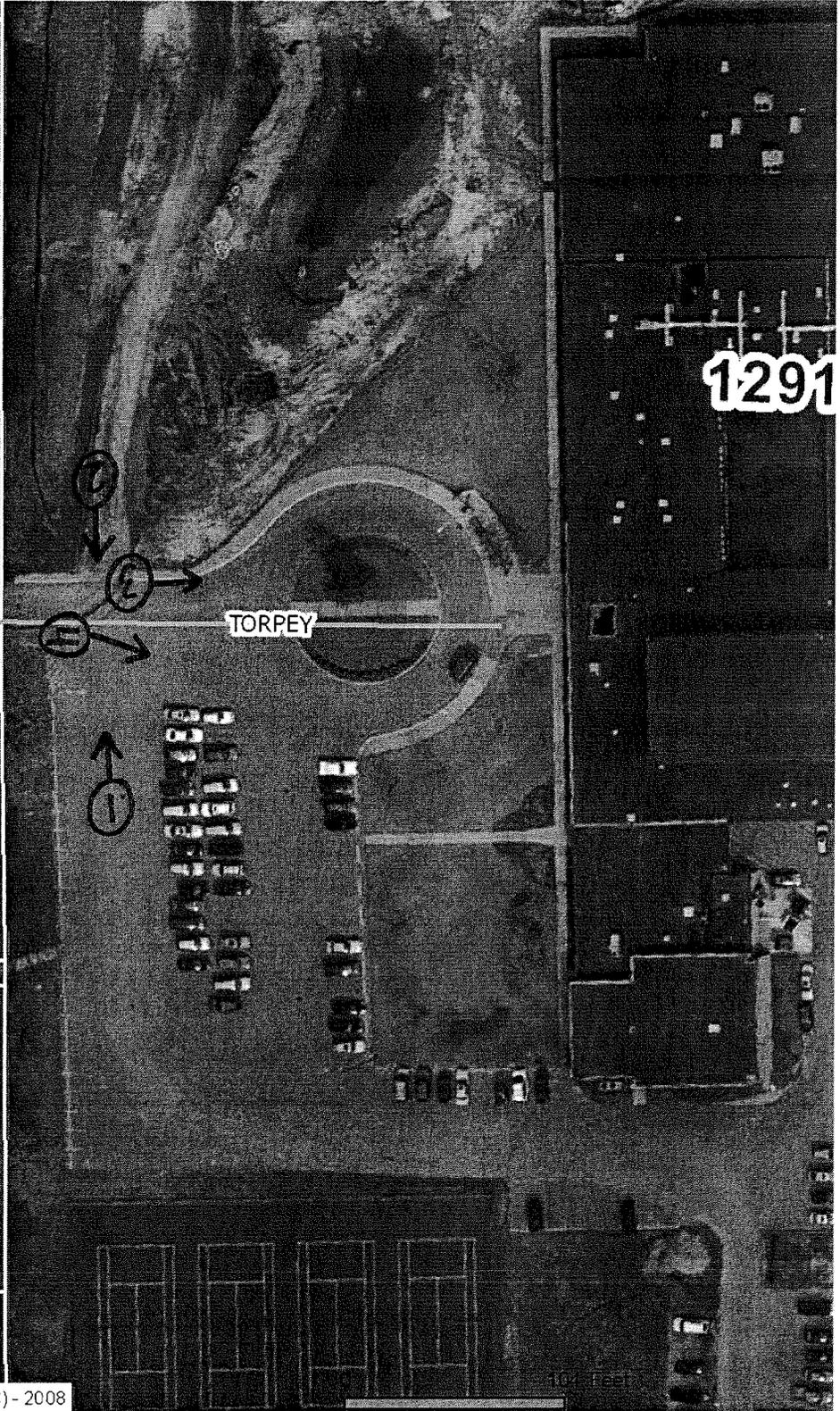
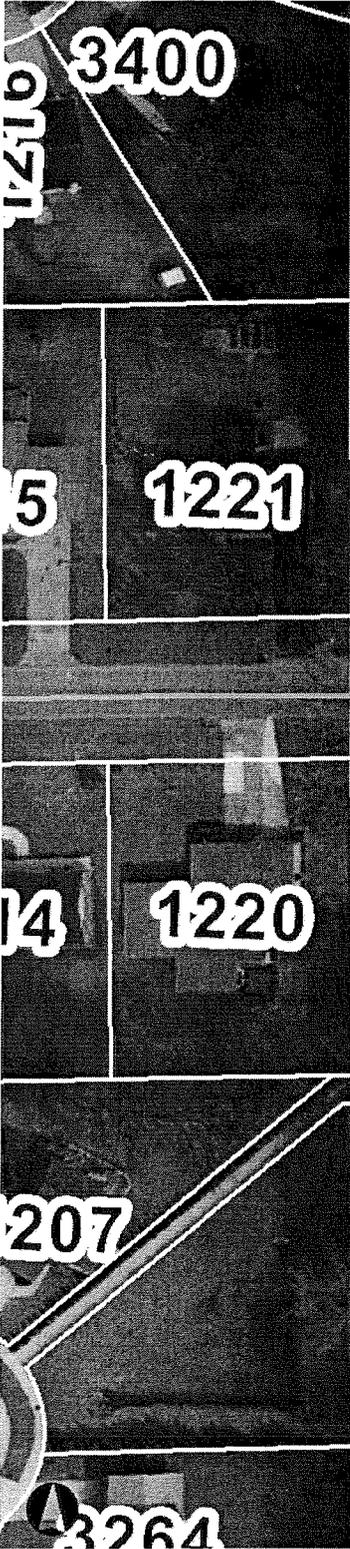
1 of 1

Equity Drive (private 60' wide)

11/17/08 (Rev. 1)



Geographical Information Systems Online



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