

# **NORTHFIELD TOWNSHIP BOARD AGENDA**

## *NOTICE OF SPECIAL MEETING*

**September 23, 2014 - - 6:15 PM**  
**8350 Main Street, 2<sup>nd</sup> Floor**

CALL TO ORDER  
PLEDGE/INVOCATION  
ROLL CALL  
ADOPT BALANCE OF AGENDA  
CALL TO THE PUBLIC

### AGENDA ITEMS

1. Approval of Conditional use for Nowatzke's

2<sup>nd</sup> CALL TO THE PUBLIC  
BOARD MEMBER COMMENTS  
ADJOURNMENT

Workshop Begins at 7:00 pm

\* Denotes previous backup; + denotes no backup in package

This notice is posted in compliance with PA 267 of 1976 as amended (Open Meetings Act) MCLA 41.72A (2) (3) and the Americans with Disabilities Act. (ADA) individuals with disabilities requiring auxiliary aids or services should contact the Northfield Township Office, (734-449-2880) seven days in advance.



# PREMIER CIVIL ENGINEERING



June 25, 2014

Pam Boegler  
Northfield Township Building and Zoning  
8350 Main St., Ste. A  
Whitmore Lake, Michigan 48189

**RE: Expansion of Conditional Use  
Nowatzke Truck & Trailer, Inc.  
6900 Whitmore Lake Rd., Whitmore Lake, MI**

Dear Ms. Boegler:

We are in receipt of the Plan Review comments from OHM dated June 16, 2014 and from Carlisle Wortman Associates dated June 3, 2014. Below you will find our response to each concern (in blue.)

## OHM

**Items to be Addressed:** The Washtenaw County Health Department will ultimately approve and permit the proposed relocation of the private well.

**Response:** The existing well is not proposed to be relocated.

**Items to be Addressed:** The applicant is proposing to remove and construct a new drive just south of the existing drive.

**Response:** The existing drive is not proposed to be relocated.

**Items to be Addressed:** A traffic study will be required during site plan review.

**Response:** Traffic study will be provided during site plan review.

**Items to be Addressed:** A pond exists in the northeast corner of the site which is not depicted in the site plan. No storm water management facilities appear on the site plan but will need to be included. A 20 foot wide drainage easement exists around this pond and should be shown on the plans.

All existing easements shall be shown on the site plan.

**Response:** The detention pond, water management facility and easements will be shown on the plan during site plan review.

**Items to be Addressed:** Copies of all permits and/or letters of waiver, obtained to date, shall be forwarded to the OHM office. The current status of all necessary permits should be included on the cover sheet. We note that this project will require the following permits:

- WCRC for soil erosion and sedimentation control
- WCRC for commercial drive construction
- WCHD for well
- Northfield Township Building Department

**Response:** The current status of all permits will be included on the cover sheet. There is no commercial drive being proposed, so we do not anticipate needing a permit from WCRC. There is no well relocation, or installation work proposed, so we do not anticipate needing a permit from WCHD.



## Carlisle Wortman

**Items to be Addressed:** *Verify whether truck/trailer business will continue at current operations or at a reduced scale.*

**Response:** *The business will continue at current operations*

**Items to be Addressed:** *1) Provide convenience store building area. 2) Provide appropriate easement agreements for the use of Tractor Supply property for site access. 3) Provide a traffic study at site plan review. 4) Washtenaw County Road Commission evaluation of potential impacts on the Whitmore Lake/North Territorial intersection.*

**Response:** The convenience store area is 2,285 s.f.  
Easement agreements will be provided  
Traffic study will be provided during site plan review.  
Washtenaw County Road Commission evaluation will be attained.

**Items to be Addressed:** *Review of all essential services and facilities will be undertaken during site plan review.*

**Response:** Noted

**Items to be addressed:** *Provide parcel dimensions.*

**Response:** The parcel dimensions have been added to the plan.

**Items to be Addressed:** *1) Provide proposed hours of operation, whether liquor will be sold on site, and whether trucks will be parked overnight. 2) Provide information related to the types of materials to be stored on-site. 3) Provide detail of underground storage tanks and proof of all applicable State of Michigan licenses at site plan review.*

**Response:** The hours of operation are proposed to be 24.  
Liquor will not be sold on site.  
Detail of underground storage tanks and proof of all applicable State of Michigan licenses shall be provided at site plan review.

## Conditional Use:

1. Verify whether truck/trailer business will continue at current operations or at a reduced scale.

**Response:** Truck/trailer business will continue at current operations.

2. Provide proposed hours of operation, whether liquor will be sold on the site, and whether trucks will be parked overnight.

**Response:** The owner proposed 24 hour operation.

No liquor to be sold at the site

Trucks will not be parked overnight.



# PREMIER CIVIL ENGINEERING



3. Provide information related to the types of materials to be stored on-site.

Materials stored on site include automotive (truck) parts, gasoline and diesel fuel, motor oils, transmission and brake fluids and other products associated with a truck repair facility. The C-store will have a limited amount of storage of food and beverages.

4. Apply for full site plan review.

The owner will be applying for site plan approval if conditional use approval is attained.

We are looking forward to the upcoming meeting. Feel free to contact me with any questions, or if you need any additional information.

Best Regards,

  
John Damrath  
Regional Manager

cc: Tom Nowatzke, NTT, 6900 Whitmore Lake Road, Whitmore Lake, MI 48189  
Doug Lewan, Carlisle Wortman Associates, Inc. (via e-mail)  
Jacob Rushlow, PE, OHM Advisors (via e-mail)

Encl. Plan Review comments from OHM Advisors dated June 16, 2014  
Plan Review comments from Carlisle Wortman Associates dated June 3, 2014

ARCHITECTS. ENGINEERS. PLANNERS.



June 16, 2014

Northfield Township  
Building & Zoning Department  
8350 Main Street, Suite A  
Whitmore Lake, Michigan 48189

Regarding: Nowatzke Fuel Station  
Conditional Use Review #1  
OHM Job Number: 0151-14-1027

We have reviewed the material, received by this office on May 21, 2014, for the above-referenced project based upon Township guidelines and engineering standards. A general summary of the site, followed by our review comments and recommendations, are noted below.

#### GENERAL

The applicant is proposing to establish a convenience store and fuelling offering. These uses previously appeared on the property and were removed at some point in time. A 43' x 92' canopy over 6 gasoline dispensers and a 24' x 60' canopy over 3 diesel dispensers are proposed. The proposed site also includes parking.

#### UTILITIES

The site is currently served by municipal sanitary and a private water supply well, which is proposed to be relocated. No new sanitary connections appear to be proposed at this time. The Washtenaw County Health Department will ultimately approve and permit the proposed relocation of the private well.

#### PAVING/ACCESS/TRAFFIC

Access to the site will remain along Whitmore Lake Road. Currently, there is one commercial drive approach, which the applicant is proposing to remove and construct a new drive just south of the existing drive. A secondary access to Whitmore Lake Road utilizing a shared driveway with the adjacent Tractor Supply Company also exists. We note an agreement was created and recorded with the previous Tractor Supply project and appears acceptable for this project.

The applicant proposes 24 new parking stalls located north and west of the existing building and north of the 43' x 92' canopy. Access to the convenience store must meet all applicable ADA requirements regarding van accessible parking spaces and dedicated access ways into the building.

It should be noted that a traffic impact study will be required during site plan review.

#### DRAINAGE/GRADING

A pond exists in the northeast corner of the site which is not depicted in the site plan. No storm water management facilities appear on the site plan but will need to be included. A 20 foot wide drainage easement exists around this pond and should be shown on the plans. All existing easements shall be shown on the site plan.

OHM Advisors  
34000 PLYMOUTH ROAD  
LIVONIA, MICHIGAN 48150

T 734.522.6711  
F 734.522.6427

OHM-Advisors.com



### PERMITS

Copies of all permits and/or letters of waiver, obtained to date, shall be forwarded to this office. The current status of all necessary permits should be included on the cover sheet. We note that this project will require the following permits:

- WCRC for soil erosion and sedimentation control
- WCRC for commercial drive construction
- WCHD for well
- Northfield Township Building Department

### RECOMMENDATIONS

As submitted, the conditional use application appears to be in substantial compliance with the Township requirements and we recommend the Planning Commission consider approval of the conditional use plan.

In an effort to assist the applicant through the site plan approval process, we recommend the following comments be addressed prior to submitting plans for site plan review.

1. The site plan received is not adequate size for review, as such; the scale depicted is not accurate. Site plan drawings shall be 24" x 36".
2. Legal description of the property shall be included on the site plan.
3. A vicinity map shall be included on the site plan.
4. Adjacent zoning shall be shown on the site plan.
5. General topography and soil information shall be included. All existing features shall be shown.
6. Distance between the proposed structures and existing building shall be shown.
7. Lot coverage (percent) and floor area ratio shall be noted on the site plan.
8. Location, size and type of trees and bushes shall be shown on the site plan.
9. Any pavement improvements and type of material shall be noted on the site plan.
10. General description and layout of storm water management system shall be included.
11. A traffic impact study will be required for review.

If you have any questions regarding this review or any of the comments presented, feel free to contact us at (734) 522-6711.

Sincerely,

**OHM ADVISORS**

Jacob Rushlow, P.E.

Client Representative

cc: Howard Fink, Township Manager (via e-mail)  
William Wagner, Public Safety Director (via e-mail)  
Marlene Chockley, Planning Commission Chair (via e-mail)  
John Damrath, Premier Civil Engineering, 308 TCW Ct, Lake St. Louis, MO 63367  
Tom Nowatzke, Nowatzke Truck and Trailer, Inc., 6900 Whitmore Lake Rd, Whitmore Lake, MI 48189  
File



CARLISLE

WORTMAN

associates, inc.

605 S. Main Street, Ste. 1  
Ann Arbor, MI 48104

(734) 662-2200  
(734) 662-1935 Fax

Date: June 4, 2014

## Conditional Land Use For Northfield Township, Michigan

### GENERAL INFORMATION

**Applicant:** Tom Nowatzke  
6900 Whitmore Lake Road  
Whitmore Lake, MI 48189

**Project Name:** Nowatzke Truck + Trailer Addition

**Plan Date:** May 5, 2014

**Location:** 6900 Whitmore Lake Road (B-02-20-300-036)

**Zoning:** GC, General Commercial

**Action Requested:** Conditional Use Review

**Required Information:** As presented herein.

### PROJECT AND SITE DESCRIPTION

The applicant is proposing to construct a new convenience store (as an addition to the existing building), six (6) gasoline dispensers with canopy and three (3) diesel fuel dispensers with canopy (based on our review of the May 9, 2014 plan provided with Conditional Use application).

The applicant provides documentation indicating permission for the sale of diesel fuel on the site on October 5, 1977, and a change in conditional use allowing the sale of gasoline on January 12, 1982. Additionally, information has been provided demonstrating on April 20, 1994

a convenience store and diesel fuel uses were approved on this site. However, Section 3.15 states the expansion of an existing conditional use requires a new conditional use approval.

These site improvements will be reviewed comprehensively during site plan review. However, the applicant should verify whether the truck/trailer business will continue at this location or if the uses in this proposal will reduce the current business' operations. We question the area(s) depicted as "trailer storage", and whether this is for the current business or for semi-truck parking as part of the proposed uses. A truck terminal is not listed as a permitted or conditional use in the GC zoning district, and would not be allowed in this location.

Automotive service station, including minor repair services is listed as a conditional use in the GC, General Commercial District.

***Items to be Addressed:*** Verify whether truck/trailer business will continue at current operations or at a reduced scale.

**Figure 1. – Aerial Photograph**





## CONDITIONAL USE CONSIDERATIONS

### NEIGHBORING ZONING AND LAND USE

Land uses adjacent to the existing truck and trailer facility commercial uses to the north; Tractor Supply and various industrial uses to the south; US-23 to the east; and agricultural/residential properties are found east of the site.

The zoning of the subject site and the area to the north (and south encompassing Tractor Supply) is GC, General Commercial; the areas to the west are zoned AR, Agriculture and LI, Limited Industrial; the areas to the south are zoned LI, Limited Industrial; and US 23 borders the property to the east.

*Items to be Addressed: None.*

### MASTER PLAN

The subject parcel and adjacent properties to the north, east and west are designated MU, Mixed Use. Properties to the south are depicted as Industrial on the Future Land Use Map.

The intent of the MU future land use category is: *to provide areas where local commercial, service, office and residential activities can all take place and allows a flexible approach to development at specific nodes along the US-23 corridor.* The MU future land use category coincides with the GC, General Commercial zoning district, which lists automotive service stations as a conditional use.

The proposed service station and convenience store expansion is compatible with the Township Master Plan.

(This property is within the MU-South area designation that is currently be reviewed by the Planning Commission and Township Board.)

*Items to be Addressed: None.*

### NATURAL RESOURCES

The proposed site is currently built and contains what appears to be a paved surface in the location where the proposed convenience store and gasoline/diesel pumps and canopies will be constructed. No natural resources will be compromised in the construction of the proposed uses.

*Items to be Addressed: None.*

## TRAFFIC IMPACT

The proposed square footage of the convenience store has not been provided (nor have drawings been provided at a scale where dimensions can be measured). Therefore, we are unable to estimate the number of vehicle trips the convenience store use will generate. The Institute of Transportation Engineers, *Transportation and Land Development*, provides a mean of 756.44 vehicle trips will occur per every 1,000 square feet of convenience store building area.

In addition, the gas station component will generate approximately 17.24 total (peak hour) trips per pump totally 310.32 vehicle trips per day (based upon 18 pumps – 12 gasoline + 6 diesel). The area of the proposed convenience store will need to be provided in order to provide a more accurate traffic impact assessment.

An adequate traffic study will be required to be submitted at site plan review. In addition, the applicant demonstrates truck traffic will utilize a portion of the Tractor Supply property for access to and from the site. Easement agreements demonstrating permission to access the Tractor Supply property will also be required for site plan review.

Further, the County Road Commission should review the potential impacts of the proposed uses on the intersection of North Territorial and Whitmore Lake Roads.

**Items to be Addressed:** 1) Provide convenience store building area. 2) Provide appropriate easement agreements for the use of Tractor Supply property for site access. 3) Provide a traffic study at site plan review. 4) Washtenaw County Road Commission evaluation of potential impacts on the Whitmore Lake/North Territorial intersection.

## ESSENTIAL FACILITIES AND SERVICES

The proposed use is located in the Township's Sewer Service Area. The plans provided do not depict existing utilities.

**Items to be Addressed:** Review of all essential services and facilities will be undertaken during site plan review.

## AUTOMOTIVE SERVICE STATION DEVELOPMENT REQUIREMENTS

Section 32.03 F. notes that automotive service stations, including minor repair services, are allowed as a conditional use in the GC zoning district, *when provided on a lot with a minimum frontage on any street of 150 feet and when no more than two (2) such stations exist at an intersection.*

An existing gas station is located along North Territorial west of the U.S. 23 interchange and east of Whitmore Lake Road. The proposed gas station will result at a second gas station at the

intersection of North Territorial and Whitmore Lake Roads. Parcel dimensions have not been provided; however, it appears that the proposed service station/convenience store use meets the specific use standards set forth in Section 32.03 F.

***Items to be addressed: Provide parcel dimensions.***

## **CONDITIONAL USE STANDARDS**

Article 63 outlines the procedures and requirements for the review of conditional use applications. Specifically, the Planning Commission *shall review the particular circumstances and facts of each proposed use in terms of the following standards and required findings, and with respect to any additional standards set forth in Article 60 and shall find and record adequate data, information and evidence showing that such a use on the proposed site, lot or parcel:*

1. *Will be harmonious with and in accordance with the general objectives, intent and purposes of this Ordinance.*

The proposed gas station with convenience store will be added to the existing truck and trailer facility use that is currently maintained on the subject property. As noted above, the proposed use is in compliance with the Northfield Township Master Plan, and is complimentary to the existing trucking use on the property. The subject property and the surrounding area are zoned for commercial and industrial development (excepting the western properties currently used/zoned for agricultural use. The proposed gas station/convenience store use will continue to be harmonious with and in accordance with the general objectives, intent and purposes of the Ordinance as presented herein.

We note however, the applicant has not provided information related to the proposed hours of operation, whether liquor will be sold on site, and whether trucks will be parked overnight.

2. *Will be designed, constructed, operated, maintained and managed so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity.*

The proposed building addition (convenience store) and gas pumps/canopy are proposed in the front (west) portion of the built site. Site layout appears adequate from the information provided; however, detailed site plans will be required to further determine whether the site will be "designed and constructed" in a manner appropriate and harmonious with the intended character of the area.

3. *Will be compatible with the natural environment and existing and future land uses in the vicinity.*

No natural features will be impacted by the proposed uses. Further, the gas station/convenience store use is compatible with the current and future land uses in the general vicinity.

4. *Will be compatible with the Northfield Township Land Use Development Plan.*

As noted previously, the proposed gas station/convenience store use is compatible with the adopted Northfield Township Master Plan.

5. *Will be served adequately by essential public facilities and services, such as highways, streets, police, and fire protection, drainage structures, refuse disposal or that the persons or agencies responsible for the establishment of the proposed use shall be able to provide adequately any such service.*

Review of all essential services and facilities will be undertaken during site plan review.

6. *Will not be hazardous or disturbing to existing or future neighboring uses; and*

The applicant will need to describe the types of materials that are to be stored on the premises, including to and in in addition to gasoline and diesel fuel. Detail of underground storage tanks and proof of all applicable State of Michigan licenses will be required at site plan review.

7. *Will not create excessive additional requirements at public cost for public facilities and services.*

The subject site is located within the Township's Sewer Service Area. The expense of any facility expansion / use of public facilities will be borne by the developer.

***Items to be Addressed:*** 1) *Provide proposed hours of operation, whether liquor will be sold on site, and whether trucks will be parked overnight.* 2) *Provide information related to the types of materials to be stored on-site.* 3) *Provide detail of underground storage tanks and proof of all applicable State of Michigan licenses at site plan review.*

## **RECOMMENDATIONS**

Based upon the information provided, we find that the proposed gas station / convenience store use meets the conditional use requirements of the Northfield Charter Township Zoning Ordinance, and recommend Planning Commission approval. Our recommendation is conditioned on the following:

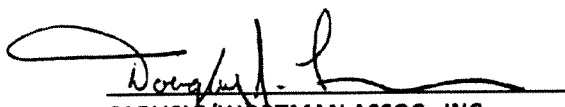
### Conditional Use:

1. Verify whether truck/trailer business will continue at current operations or at a reduced scale.
2. Provide proposed hours of operation, whether liquor will be sold on the site, and whether trucks will be parked overnight.
3. Provide information related to the types of materials to be stored on-site.
4. Apply for full site plan review.

Site Plan Review:


1. Provide convenience store building area.
2. Provide appropriate easement agreements for the use of Tractor Supply property for site access.
3. Provide a traffic study at site plan review.
4. Washtenaw County Road Commission evaluation of potential impacts on the Whitmore Lake/North Territorial intersection.
5. Review of all essential services and facilities will be undertaken during site plan review.
6. Provide parcel dimensions.
7. Provide detail of underground storage tanks and proof of all applicable State of Michigan licenses at site plan review.

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CARLISLE/WORTMAN ASSOC., INC.  
Douglas J. Lewan, PCP, AICP  
Principal

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CARLISLE/WORTMAN ASSOC., INC.  
Laura K. Kreps, AICP

#271-02-1305

Cc: Tom Nowatzke, 6900 Whitmore Lake Road, Whitmore Lake, MI 48189  
John Damrath via [jdamrath@pcestd.com](mailto:jdamrath@pcestd.com)

# Colts V, LLC.

6900 Whitmore Lake Road  
Whitmore Lake, Michigan 48189  
734-995-9600

July 31, 2014

Whom it May Concern,  
This letter is to affirm that Colts V, LLC. has given permission to Nowatzke Truck & Trailer to peruse conditional extension of the existing conditional use permits that are located at 6900 Whitmore Lake Road. The cost of the extension will be the sole responsibility of Nowatzke Truck & Trailer. Any questions don't hesitate to call.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Nowatzke", written in a cursive style.

Tom Nowatzke  
Colts V, LLC.  
6900 Whitmore Lake Road  
Whitmore Lake, Michigan 48189

# NORTHFIELD TOWNSHIP PLANNING COMMISSION

## Minutes of Regular Meeting July 2, 2014

### 1. CALL TO ORDER

The meeting was called to order by Chair Marlene Chockley at 7:00 P.M. at 8350 Main Street.

### 2. PLEDGE OF ALLEGIANCE

### 3. ROLL CALL AND DETERMINATION OF QUORUM

Roll call:	
Janet Chick	Absent with notice
Marlene Chockley	Present
Brad Cousino	Present
Andrea Darden	Present
Kenneth Dignan	Absent with notice
Sam Iaquinto	Present
Larry Roman	Absent with notice

Also present:  
Planning Consultant Douglas Lewan,  
Carlisle/Wortman Associates  
Township Manager Howard Fink  
Members of the Community

### 4. APPROVAL OF AGENDA

Chockley removed discussion of the Mixed Use South District from the agenda due to three Commissioners being absent.

- **Motion:** Iaquinto moved, Darden supported, that the agenda be adopted as amended.  
**Motion carried 4—0 on a voice vote.**

### 5. FIRST CALL TO THE PUBLIC

**Sunoco Station; Six Mile Road.** Tim Seville, 7705 Whitmore Lake Road, said two signs had been placed on this property indicating a request for the property would be on this agenda, but the signs have now been removed. Lewan and Chockley said they were not aware of any proposal for that property. Seville said the gas tanks are now exposed because the caps have been removed from the concrete slabs. He said the property is not being taken care of and he hopes that is taken into consideration if a request comes before the Commission.

Iaquinto said this sounds like a safety hazard. Seville said the tanks have probably been damaged due to water getting into the tank cavities and going through the freeze/thaw process. Fink said he will look into this.

### 6. CORRESPONDENCE

Chockley reported that only correspondence related to the Nowatzke application had been received.

### 7. REPORTS

#### 7A. Board of Trustees

No report.

#### 7B. ZBA

No meeting has been held since the last Planning Commission meeting.

#### 7C. Staff Report

Nothing to report.

#### 7D. Planning Consultant

Lewan said a joint meeting of the Planning Commission with the Township Board is proposed for July 16<sup>th</sup>, with the topic of discussion being the proposed change to the master plan requested by Biltmore Development.

### 8. PUBLIC HEARINGS

- 8A. Case #JPC140003; Nowatzke Truck & Trailer; Location: 6900 Whitmore Lake Road; Request for Conditional Use Permit for a convenience store and gasoline/diesel fueling station. Parcel 02-20-300-036; zoned GC.**

- **Motion:** Iaquinto moved, Darden supported, that the public hearing be opened.  
**Motion carried 4—0 on a voice vote.**

Dale Brewer, 11548 East Shore Drive, noted he had provided information to the Commission, including photos, and added:

- he believes the following are missing from this application:
  - Section 63.04H requires a written letter of zoning conformity from the Zoning Administrator
  - 63.05B requires that a sign giving notice of this request be posted on the property,
  - 63.07B states that the business sign needs to be maintained and be in harmony with adjoining properties, and the sign here looks worse than others nearby,
  - Under 63.07E a traffic study should be required prior to consideration of the CUP, rather than during site plan approval as recommended in the planner's report.
- The site consists of five separate buildings totaling more than 24,000 sq. ft.
- Sales on the site of "Bad Boy Buggies" is not consistent with the primary use of truck and trailer sales and service.

- There are 4-5 signs already on this 7.28 acre property, including 1 on the Tractor Supply site.
- There are several trucks or trailers in the greenbelt area which are larger than medium duty trucks, which was the limit in his previously-approved CUP.
- There are at least 25 trailers on the site, and probably more like 45.
- Debris is carelessly stored around the perimeter of the property, including old gasoline tanks.
- There is a large 2,000 gallon above-ground storage tank with a new pump on it containing an unknown substance and there is no containment for it which is in violation of state and federal laws.
- Trailers are wrapped in display signage for a variety of products, and one of them has a Maine license plate so is not paying Michigan taxes.
- Four conditional uses are being requested—diesel pumps, gas pumps, convenience store, and light auto repair—for this property which already has at least three uses on it.
- Prior CUPs were granted in 1977, 1982, and 1994, and since then at least two fuel stations have been constructed in this immediate area which sell both gas and diesel, and there are several other stations in the area selling both gas and diesel.

Craig Warburton said he has lived at 450 W. Joy Road for 23 years. He said this proposal is in compliance with what the applicant has done for years, and it fits with other things that have been approved for the area.

John Healey, TPW Whitmore Lake LLC, 10100 Waterville Street, Whitehouse, Ohio, said TPW is the developer and owner of the Tractor Supply store next to the subject site. He said they purchased their property from this applicant, and it appears that this application follows the same development proposal and traffic patterns outlined in their application seven years ago. He urged the Commission to approve this request.

Dale Brewer added:

- This will be a 1-1.5 million project, which will require a lot of traffic to pay for the investment.
- There are significant road and bridge problems, and problems with turning ratios, including one turn from the highway in excess of 135 degrees.
- There is no indication that the owner of the subject site, Colt V LLC, has given permission for this proposal.
- The Commission should delay action on this application until all of the required information is supplied or until 2016 when the US-23 interchanges are redone.

He objected to the time for public comments being limited.

## 9. OLD BUSINESS

### 9A. Mixed Use South District; Discussion of Uses.

Removed from the agenda.

## 10. NEW BUSINESS

### 10A. Case #JPC140003; Nowatzke Truck & Trailer; Location: 6900 Whitmore Lake Road; Request for Conditional Use Permit for a convenience store and gasoline/diesel fueling station. Parcel 02-20-300-036; zoned GC.

Lewan explained that the applicant is asking for permission to construct a new convenience store building with six gasoline and six diesel pumps and canopies. He noted that the Planning Commission only makes recommendations on Conditional Use Permits (CUPs); the final approval or denial is made by the Township Board.

He said the applicant has provided information that:

- in 1997 they started selling diesel fuel,
- a 1982 CUP granted permission for gasoline sales, although much lower amounts than is now being requested,
- in 1994 a convenience store and sale of diesel fuel were approved for the site, but the store was not built.

He explained the primary purpose of this hearing is to determine if the proposed uses are appropriate, and if that is agreed to, site plan review will consider the details. He said the site currently consists of truck and trailer repair and storage, and he asked if any of that business will be cut back. He noted overnight truck and trailer parking are not allowed on this site, so the only vehicles which may be on-site overnight are those that are for sale.

Regarding compatibility with neighboring uses, Lewan said there is a wide variety of commercial and industrial uses including retail, farm market, and industrial. He said the master plan calls for an MU-Mixed Use designation for this site and properties to the south. He read the description of the MU district and said automotive services are a conditional use, so the proposal is compatible with the master plan.

Lewan said traffic impact—which the Washtenaw County Road Commission (WCRC) will comment on that in the future—is the most serious issue, and his report recommends submittal of a traffic study at the site plan review state, but he agrees with Brewer that it may be more appropriate to require that now. He added that information about the size of the proposed building was not clear, site circulation needs to be clarified, and information about utility services needs to be provided.

Lewan referred to the seven standards listed in Article 63 and said the applicant must provide information about:

- Hours of operation of the convenience store and gas station.
- Whether liquor will be sold on site.
- Whether trucks are to be stored on site.



**Northfield Township Planning Commission  
Minutes of Regular Meeting  
Public Safety Building; 8350 Main Street  
July 2, 2014**

- Types of materials to be stored on site for the service station.
- Underground storage tank specifications.

He added that action on this application may be postponed by the Commission to allow additional information to be submitted. He also said he had assumed a letter of conformance from the Zoning Administrator had been submitted and that could be a condition of approval, but the requirement for posting of a sign is an ordinance requirement, so approval cannot be granted without that.

Iaquinto questioned whether the applicant was aware of the sign requirement and questioned whether the Township should have informed them. Lewan said it is a clearly stated requirement in the zoning ordinance.

John Damrath, project engineer, and Tom Nowatzke appeared. Nowatzke said:

- When he moved into the property in 1995 all of the current signs were there.
- He has one building.
- The convenience store will go inside the existing building. It will be 2200 sq. ft.
- A letter was submitted stating no alcohol would be sold.
- He will be discontinuing sales of Bad Boy Buggies after the current ones are sold.
- Material from his former operation in Detroit was moved to this site and will be removed within 90 days.
- They are asking for continuation of previously approved CUPs on the site and the addition of diesel fuel pumps.
- He eliminated the three diesel fuel tanks and four underground storage tanks and got certification that it was done properly.

Damrath said he does not see any obstacles in the staff recommendation that cannot be overcome. He said they will be installing a 25,000 gallon tank for gasoline and a 30,000 gallon tank for diesel. He said it is important for Nowatzke to have a decision or consensus on this now so his plans can move forward. Regarding the well on the site, he said it is 300 feet from the proposed fuel tanks, so it will not need to be relocated. He added that the drive shown on the plan was installed last year with approval from the WCRC Commission and the dashed lines on the plan show the previous location.

Nowatzke said 9-10 letters in support of this proposal have been submitted from businesses in this area.

Chockley said her biggest concern is traffic, and she questioned how many trucks per day would be going in and out of the site. Darden noted that Whitmore Lake Road gets a lot more traffic when US-23 backs up, and she asked if the applicant had considered how that would affect the site. Damrath said that is something the traffic study will address, but it is the uses that are under consideration right now. He noted there are already CUPs in existence for this site. Iaquinto said the

applicant is asking for an expansion of the existing uses, which is why this application is necessary.

Chockley noted the Commission cannot approve this request now because the property was not properly posted with a sign as required by the ordinance. Nowatzke said no one told him that was necessary and his original hearing date was postponed from June 18<sup>th</sup> due to a lack of quorum. Fink confirmed the signage is a zoning ordinance requirement, so the property must be posted, the application fee paid again, and another public hearing held.

Iaquinto said he is in favor of a traffic study being submitted with the CUP, and if that is the consensus of the Commission the applicant should be told now so he can be prepared before the public hearing in August. Chockley noted that the letters of support do not have to be resubmitted.

Nowatzke said it is not written anywhere that he has to read the zoning ordinance and no one told him the requirements in it for a sign, so he should not have to pay the application fee again. Fink said the Township Board is the only entity that can waive fees.

Chockley said the site looks more like a junkyard than a service station with all of the trucks scattered around the site, and the ordinance now requires screening from US-23. Nowatzke said the business next store has piles of mulch visible from US-23, so he questioned why the Commission should be concerned about the appearance of his site, but added it will be cleaned up.

In answer to a question, Lewan said if a CUP is granted but never acted upon that approval expires. Nowatzke asked if he can restore the diesel pumps to this site that were previously approved and installed, but then later removed. Lewan said that might be allowed.

Cousino said the plan submitted is not clear. Nowatzke answered his questions, including stating that the building size will not change.

It was noted that the applicant paid the \$100 bond that would be returned when the required signs notifying the public of this application were removed, so that would seem to indicate he knew of this requirement. Nowatzke said he was not aware of the details of the fees he was paying.

► **Motion:** Chockley moved, Iaquinto supported, that based upon the information received from the applicant, Nowatzke Truck & Trailer, Inc., 6900 Whitmore Lake Road, Whitmore Lake, MI 48189 concerning Parcel Number B-02-20-300-036, and reflected in the minutes of this meeting, the Planning Commission postpones the Conditional Use request to allow the applicant to respond to the comments discussed tonight by the Planning Commission, including the following:

1. To post a sign in accordance with the zoning ordinance.

2. To obtain a traffic study.
3. To provide a letter of authorization for Mr. Nowatzke to represent Colt V LLC, the owner of the subject property.
4. To address the items enumerated in the planning consultant's report dated May 5, 2014.
5. To address the items enumerated in the township engineer's report dated June 16, 2014.

Iaquinto said it is the applicant's responsibility to know the ordinance requirements, but said for the benefit of the Commission a system should be implemented to insure that legal requirements have been met prior to hearings. Fink directed Nowatzke to Township staff who can give him the pertinent information about the sign requirements.

Mr. Healey with Tractor Supply again said he may be able to attend the August meeting and speak in support of Mr. Nowatzke's application, so he confirmed that at the time of the approval of Tractor Supply's site plan easements for cross traffic between the two sites were arranged and agreed upon and Nowatzke has documentation for that.

**Motion carried 4—0 on a roll call vote.**

#### 11. MINUTES

**June 4, 2014, Regular Meeting**

Chockley made four minor corrections.

- **Motion:** Darden moved, Iaquinto supported, that the minutes of the June 4, 2014, regular meeting be approved as corrected, and to dispense with the reading. **Motion carried 4—0 on a voice vote.**

#### 12. POLICY REVIEW & DISCUSSION

None.

#### 13. COMMENTS FROM THE COMMISSIONERS

Iaquinto, Darden, and Chockley wished everyone a safe and joyous Fourth of July weekend.

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Prepared by Lisa Lemble.

Corrections to the originally issued minutes are indicated as follows:

Wording removed is ~~stricken through~~;

Wording added is underlined.

Adopted on August 6, 2014.

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Marlene Chockley, Chair

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Kenneth Dignan, Secretary

Official minutes of all meetings are available on the Township's website at  
<http://www.twp-northfield.org/government/>

#### 14. SECOND CALL TO THE PUBLIC

**Nowatzke CUP Application.** Dale Brewer said the Department of Environmental Quality or the Environmental Protection Agency should be notified to inspect the above-ground storage tank on the Nowatzke site because there is no containment. He also said in addition to the Washtenaw County Road Commission the Michigan Department of Transportation should be notified to comment on traffic.

**Biltmore Proposal.** Craig Warburton said a letter from Kyle Warburton about the Biltmore project was in the packet for the canceled June 18<sup>th</sup> meeting, but it was not included in this packet. Chockley said she does have his letter and would like to talk to him about that after the meeting.

Warburton said he is profoundly behind the master plan as written, and said the use of sewers should be discouraged in areas not currently served.

**Sound System.** Warburton said added that the sound system in the meeting room is terrible, Commissioners mumble, and it is difficult to distinguish between what is commentary and what is germane to the matter at hand.

#### 15. ANNOUNCEMENT OF NEXT MEETING

**July 16, 2014,** at 7:00 P.M. at the Public Safety Building was announced as the next regular Commission meeting time and location.

#### 16. ADJOURNMENT

- **Motion:** Iaquinto moved, Darden supported, that the meeting be adjourned.  
**Motion carried 4—0 on a voice vote.**

The meeting was adjourned at 8:25 P.M.

# NORTHFIELD TOWNSHIP PLANNING COMMISSION Minutes of Regular Meeting August 20, 2014

## 1. CALL TO ORDER

The meeting was called to order by Chair Marlene Chockley at 7:20 P.M. at 8350 Main Street.

## 2. PLEDGE OF ALLEGIANCE

## 3. ROLL CALL AND DETERMINATION OF QUORUM

Roll call:

Janet Chick	Present
Marlene Chockley	Present
Brad Cousino	Present
Kenneth Dignan	Present (arrived at 7:15 P.M.)
Sam Iaquinto	Present
Larry Roman	Present

Also present:

Planning Consultant Douglas Lewan,  
Carlisle/Wortman Associates  
Recording Secretary Lisa Lemble  
Members of the Community

## 4. APPROVAL OF AGENDA

Chockley switched the order of the Second Call to the Public with Comments from Commissioners.

- **Motion:** Iaquinto moved, Roman supported, that the agenda be adopted as amended.  
**Motion carried 5—0 on a voice vote.**

## 5. FIRST CALL TO THE PUBLIC

**Zoning Ordinance Updates.** Dale Brewer, 11548 East Shore Drive, asked that recently approved revisions to the zoning ordinance be made available to the public.

**Biltmore Development Request for Master Plan Amendment.** Ed Wojtys, 6235 Hellner Road, said members of the public who spoke at the last meeting were overwhelmingly opposed to the Master Plan change and said if the Commission feels differently he would like to know why. He said this is a similar situation to the Grand Sakwa proposal and said he would not like the Township to go through that experience again. He said there is no reason to change the Master Plan.

Joanne Martilla Pearson, 5756 Earhart Road, said five acre residential zone is the best tool for preserving the Township's rural character. She said this has created small farms and residences where at least half of the land is preserved in open space. She said 28 of the 30 people who spoke at the last meeting were opposed to changing the Master Plan and multiple public planning sessions are needed to review this idea. She said the narrative should be "Protect Our Master Plan."

Renee Mulcrone, 366 Glenmor, said everyone wants growth in the Township and wants the Township to thrive. She said the business district has an ideal location, but problems—mainly lack of parking—have hindered its development, but there is now a bike path going through town and a Downtown Development Authority working to improve it. She asked that the Township not act on the Biltmore request until the school district annexation is decided, and cautioned that changing the Master Plan based on the Biltmore request will mean the Plan will not be defensible when other developers ask for changes.

[Dignan arrived at this point].

Craig Warburton, 450 W. Joy Road, read from Township documents a couple of years ago stating that the Master Plan—a guide for future development—had recently been adopted after public input and would help prevent urban sprawl and leapfrog development and support small farms. He said the results of community input cannot be amended by amending the Master Plan and this is really a rezoning request.

Cecilia Infante, 1035 E. Five Mile Road, said she supports development and Township growth, but the Township would not benefit from this if the school district is not annexed by Ann Arbor. She said the people in the proposed homes will not shop in Whitmore Lake, and she estimated an additional 9,000 daily car trips on the two major roads in the area.

Jeff Hayner, 187 Pontiac Trail, Ann Arbor, said once agricultural land is gone, it's gone, and it needs to be preserved. He said it is much less expensive for governments to serve agricultural land with public services than residential, and the land south of the Biltmore site is designated for agricultural use. He said New Urbanism would be supported by developing land closer to the downtown.

## 6. CORRESPONDENCE

Lewan reported that registration for the October 8-10 Michigan Association of Planners (MAP) conference is will be closing soon.

## 7. REPORTS

### 7A. Board of Trustees

Chick reported that last week the Board:

- Voted that the Board will be the entity making the appointment of a Township representative to Huron River Watershed Council.
- Approved a dog leash and barking ordinance.

### 7B. ZBA

Dignan reported that on August 18<sup>th</sup> variances to allow a garage to be rebuilt at Beech and Lakeshore Drive were approved.

### 7C. Staff Report

Nothing to report.

### 7D. Planning Consultant

Nothing to report.

## 8. PUBLIC HEARINGS

- 8A. Case #JPC140003; Nowatzke Truck & Trailer; Location: 6900 Whitmore Lake Road; Request for Conditional Use Permit for a convenience store and gasoline/diesel fueling station. Parcel 02-20-300-036; zoned GC.

- **Motion:** Iaquinto moved, Roman supported, that the public hearing be opened.  
**Motion carried 6—0 on a voice vote.**

Tom Nowatzke referred to letters of support he had submitted to the Commission and noted that the Township engineer and planner submitted positive reports about the project.

Doug Lewan, Planning Consultant, noted that the Commission has discretion in attaching conditions to a Conditional Use Permit (CUP), the Township Board makes the final disposition on CUPs, and if the CUP is approved a complete site plan will have to be approved by the Commission.

Regarding this proposal he said:

- This is a request for creation of a 285 sq. ft. convenience store within the existing building, six gasoline pumps, three diesel pumps, and a canopy over the pumps. He suggested including a condition to make it clear that truck stops are not allowed in this district, so semis cannot be parked here overnight.

- The proposed use is compatible with the surrounding uses and fits in with the "service" and "commercial" uses in the new Master Plan area known as Mixed Use South.

- The applicant submitted a traffic impact study which indicates passable, but undesirable, E and F ratings at peak hours in this area, but that this operation will not have a significant effect on those ratings. He added that the Township Engineer has indicated he will provide a full review of this study at the time of site plan review, and said if the Commission is concerned about traffic related to this request the Commission can delay action until the engineer's report is received, or a satisfactory review can be made a condition of approval.

- Tractor Supply has indicated they will provide easements for traffic related to this site, and details can be worked out at site plan review.
- His report includes a list of items to be addressed at the site plan review stage.
- Kurt Weiland, Zoning Administrator, inspected the site and found that:

- Signage for the CUP request was properly posted on the site.
- Vehicles for sale are in the required setback.
- Materials stored outside need to be stored inside.
- Non-roadworthy trailers appear to have been stored on the site for some time. He recommended a limit of 30 days for these.

Dale Brewer referred to the list of objections he had provided to Commissioners, and said, signs, banners, and stored salvage materials are in violation of ordinances, there is improper and dangerous propane storage on the site, there are traffic concerns, US-23 ramps are failing and the North Territorial bridge has weight limits on it with no plans for improvements until 2017, payment of personal property taxes are or have been delinquent for this site, a past fuel discharge has not been cleaned up, the property is not a good reflection on the neighboring businesses, and the owner of the property is not a good steward of the property for the Township.

Craig Warburton, 450 W. Joy Road, said this operation is not incompatible with the commercial and industrial uses surrounding it.

A representative for Mr. Nowatzke noted that a recommendation in the traffic study—a left turn lane into the site—has been added to their site plan. Nowatzke said this will be a good-looking facility, no new signs will be added, and it will be a first class operation the Township will be proud of. He said he

**Northfield Township Planning Commission  
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August 20, 2014**

takes materials from his site to the junkyard once a month.

- **Motion:** Dignan moved, chick supported, that the public hearing be closed.  
**Motion carried 6—0 on a voice vote.**

**9. OLD BUSINESS**

**9A. Case #JPC140003; Nowatzke Truck & Trailer;  
Location: 6900 Whitmore Lake Road; Request  
for Conditional Use Permit for a convenience  
store and gasoline/diesel fueling station.  
Parcel 02-20-300-036; zoned GC.**

In answer to a question from Iaquinto, Lewan said he researched state law about the issue of Conditional Use Permits (CUPs) and found nothing to indicate there is a time limit on CUPs granted. He said the statement by Mr. Brewer during the public hearing involved recitation of case law and he cannot comment on that, but everything he found indicates that CUPs run with the property, even with change of ownership. He said the one exception might be if the zoning of the property was changed to a designation that does not allow the approved use. He said he teaches a zoning class and has never found any information to the contrary. In answer to a question from Chick, Lewan said if a CUP is granted but not implemented the approval would lapse at some point.

Dignan asked whether the CUP previously approved for this site has been reviewed and whether any conditions of that CUP would apply in light of this application. Lewan said when Nowatzke originally approached the Township about this expansion he brought the minutes of the meeting when the existing CUP was approved, but that approval was for a very limited sale of fuel and this is clearly an expansion of that. In answer to a question from Iaquinto, Lewan said that original CUP was put into use and Nowatzke has been selling fuel.

Roman said some of the signage on the site still needs to be looked at. He also asked if the existing LP tank was covered by the original CUP and whether continued sale of LP is indicated on the new plans. Regarding traffic, Roman said he attended the recent MDOT meeting about the US-23 project and the MDOT planner he spoke to said the intersection of North Territorial and Whitmore Lake Road is not addressed in their plan. He noted that despite recent upgrades to that intersection there are no right turn lanes and said the County should look at that situation again. He said he does not think Nowatzke's proposal will contribute much to the problems there, but this would be the right time for the County to look at this intersection again.

Dignan agreed with Roman, and he said he takes Nowatzke at his word that he intends to improve the site, but he would like to see some steps toward that taken now as a good will gesture. He asked Lewan how much the clean-up of that site plays in the approval of this request. Lewan said it would be a perfectly acceptable condition for the applicant to address the citations listed by the zoning administrator.

Chick agreed that there should be a limit on how long trailers are stored on this site. Nowatzke said he buys and sells used trailers, but does not generally fix them up. He said he might be able to live with a 90 day limit on trailer storage. Dignan asked Lewan if unlicensed trailers can be stored on the site legally. He said he understands that a used vehicle can remain on a lot for a very long time, and it seems to him that a limit on the storage time might not be reasonable. Nowatzke said he scraps trailers that are not sold after a certain period of time.

Iaquinto said the Township has not aggressively enforced zoning violations for many years, but that is changing, especially when a property owner seeks additional approvals for use of the site.

In answer to a question from Cousino, Nowatzke said the above ground tank contains material used in asphalt paving, belongs to someone renting space from him, and will be moved within the month. In answer to another question from Cousino, Nowatzke said the site just went through a Phase I environmental assessment and it was found to be clean.

In answer to a question from Roman, Nowatzke said he sells LP gas, and the existing tank is shown on the plan as being moved to a new location. Chick said there are delinquent sewer charges for this site. Nowatzke said he was made aware of this 60 days ago and he has not received a bill. In answer to a question from Dignan, Nowatzke said the personal property taxes that were discharged were related to a past marriage. Iaquinto asked whether current personal property taxes have been paid. Nowatzke said they have been paid as far as he knows. In answer to a question from Chick, Lewan said payment of taxes would not be an appropriate condition of CUP approval.

In answer to a question from Iaquinto, Lewan said a CUP approval would not expire unless the applicant had not implemented the approved plan within one year of the subsequent site plan approval. He added that if an applicant is making steps toward concluding their project the Township will make allowances for that. Dignan asked how far the Commission and Township Board can go in attaching conditions to a CUP request. Lewan said conditions can be anything related to the Standards for approval recited in the zoning ordinance.

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Chockley said sale of used vehicles is listed as a conditional use in the GC district, and she asked whether a CUP for that use exists. Nowatzke said there is not a CUP for that use, but trailers have been sold on the site since before 1978. Cousino noted Nowatzke sells new trailers, and sale of used trailers are allowed with that permitted use.

In answer to a question from Cousino, Nowatzke said there are no public showers or restaurant on the site as would be found with a typical truck stop. Dignan said he has no reservations about this request, but it is important that review of the traffic study be a condition of approval.

The Commission discussed appropriate conditions for approval of the request CUP. Iaquinto said he is always in favor of business development, but he would like to see the property cleaned up. He said there are many attractive businesses surrounding this site, and request for approval of additional uses opens the door to enforcement of ordinances.

► **Motion:** Chockley moved, Roman supported, that Based upon the information received from the applicant, Nowatzke Truck & Trailer, Inc., 6900 Whitmore Lake Road, Whitmore Lake, MI 48189 concerning Parcel Number B-02-20-300-036, and reflected in the minutes of this meeting, the Planning Commission finds the preliminary site plan and related information received by the Township on August 20, 2014, meets the required standards and findings for Conditional Uses and recommends approval with conditions. Specifically, it is found that the following required standards and findings found in Section 63.07 of the Zoning Ordinance have been demonstrated by the applicant:

- A. Will be harmonious with and in accordance with the general objectives, intent, and purposes of this Ordinance;
- B. Will be designed, constructed, operated, maintained and managed so as to be harmonious and appropriate in appearance with the existing or intended character of the general vicinity;
- C. Will be compatible with the natural environment and existing and future land uses in the vicinity;
- D. Will be compatible with the Northfield Township Land Use Development Plan;
- E. Will be served adequately by essential public facilities and services, such as highways, streets, police, and fire protection, drainage structures, refuse disposal or that the persons or agencies

responsible for the establishment of the proposed use shall be able to provide adequately any such service;

- F. Will not be hazardous or disturbing to existing or future neighboring uses; and
- G. Will not create excessive additional requirements at public cost for public facilities and services.

Further, the Planning Commission recommends the following conditions be placed on the subject Conditional Land Use:

- 1. that the traffic impacts be satisfactory to and/or remediated to the satisfaction of the Washtenaw County Road Commission
- 2. that the concerns enumerated in the township planner's memo of August 7, 2014 be addressed
- 3. that the concerns enumerated in the township engineer's letter of August 13, 2014 be addressed
- 4. and that any non-conformities on the existing site be remediated according to the zoning ordinance

**Motion carried 6—0 on a roll call vote.**

**8B. Whitmore Lake North Territorial (aka Mixed Use South) Overlay District.**

Lewan said this is a more fleshed-out ordinance for the area at North Territorial and US-23 per the discussion at the last meeting. He made comments, including:

- Key design standards including having shared driveways, bringing buildings closer to roads, limiting parking in front of buildings, and allowing parking in front yard setbacks if certain design features are provided (e.g. screening kneewalls, fencing).
- Community Design features would be required along frontage roads.
- Standards intended to prevent large, unbroken facades are included, although exemptions from some regulations are provided for "Big Box" retailers.
- Permitted and conditional uses are intended to expand the uses allowed in any single zoning district currently covered by the overlay district.

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August 20, 2014**

Lewan said this is a very important document and there is no rush to get it to the public hearing stage. In answer to a question from Cousino, Lewan confirmed that none of these regulations or standards can be implemented unless the property owner asks for approval from the Township of new development plans. He elaborated that governments can use these mechanisms to get the public improvements it would like, such as sidewalk, bike paths, and benches; or governments can install them with public funds, but most do not have those resources so they rely on ordinances of this type to get them piecemeal as they can.

Iaquinto asked if sales of RVs and trailers would be allowed. Dignan said he does not see those as being compatible in this district.

Cousino questioned whether it is necessary to restrict non-single-family dwellings to second floors of buildings. In answer to a question from Chick, Lewan said he listed schools as conditional uses, but medical facilities as permitted uses, because schools could have more traffic impacts. Chockley questioned the purpose of including golf courses in the list of uses; Lewan said that can be removed.

Chockley noted that open air displays (e.g. woodchip sales) are allowed in some of the underlying zoning districts, but are excluded from the overlay. Lewan said the intent is for any of those existing uses to become legal, non-conformities. He said Commissioners can decide otherwise, but the question is what the Township wants the area to look like. Dignan said that means an existing landscape supply business in this area could not expand without Zoning Board of Appeals approval, so that could be an encouragement for them to leave the Township because there are no other areas with the proper zoning and easy access to the Township. He said he has a problem with that. Iaquinto agreed. Dignan suggested making this a conditional use.

Roman said any large institutional uses, boat sales, and car sales should be conditional due to their size and potential impacts.

In answer to questions from Cousino about open air sales, Lewan said if a landscape supply business went out of business and restarted a year later, or if it were sold to another owner, it would be allowed to continue operating; however, if the site were taken over by another type of open air sales (e.g. brickyard), the zoning administrator would have to make a determination as to whether the intensity of the use had increased.

Dignan said this is creating a situation in which an existing business decades from now would not be able to expand. Lewan said even now any business of that

type would at a minimum be required to get site plan approval to expand.

**10A. Article 34.0 Residential Office; Review of ordinance language.**

**10B. Article 40.0 Limited Industrial; Review of ordinance language.**

**10C. Article 41.0 General Industrial; Review of ordinance language.**

**10D. Article 42.0 Enterprise Services; Review of ordinance language.**

Lewan explained that some extraneous language in these sections was removed, such as references to conditional use permits, signs, and height regulations that are now included in other parts of the ordinance. He said at a future meeting he would like to bring a map showing where these zoning districts exist in the Township.

**11. MINUTES**

**August 6, 2014, Regular Meeting**  
Chockley made three minor changes.

- **Motion:** Dignan moved, Iaquinto supported, that the minutes of the August 16, 2014, regular meeting be approved as corrected, and to dispense with the reading.  
**Motion carried 5—0 on a voice vote.**

**12. POLICY REVIEW & DISCUSSION**

None.

**13. SECOND CALL TO THE PUBLIC**

**Whitmore Lake North Territorial Overlay District.** Dale Brewer said the landscaping businesses developed in this area because that was the only non-agricultural use allowed in AR zoning, so this will need to be addressed. He said Regal Recycling is in this district and nothing in the overlay language addresses this use or most of the uses on the Nowatzke property.

**Nowatzke Application for CUP.** Dale Brewer asked the Commission to reconsider its motion regarding this because it does not ask the Washtenaw County Road Commission to review the traffic study and determine whether it adequately addresses the proposal.

Chockley read the motion's statement about the traffic study. Lewan said while it perhaps could have been worded better, it will be sufficient for the Road Commission to do what they need to do.

#### 14. COMMENTS FROM THE COMMISSIONERS

**Biltmore Development Request for Master Plan Amendment.** Cousino asked what the status of this request is. Lewan said the Commission chose the smaller of the two proposed study areas as the subject of the review, and it also listed studies to be done at the developer's expense to allow further consideration by the Commission. Lewan reported that consulting firms are being chosen to prepare those studies.

**North Territorial/Whitmore Lake Road Intersection.** Dignan said from his discussion with a Michigan Department of Transportation (MDOT) representative at their presentation on proposed US-23 changes MDOT will not consider changes to the North Territorial and Whitmore Lake intersection until some development comes in that a traffic study indicates puts it past its current capacity.

**Updated Zoning Ordinance Copies.** Dignan asked when these can be provided to Zoning Board of Appeals members. Lewan said many updated sections were awaiting approval by the Township Board and he will provide these as soon as possible.

**Conditional Use Permit Approval Authority.** Iaquinto reported that Township Board Trustee Dockett asked at the Board's last meeting that the responsibility for approving Conditional Use Permits be returned to the Planning Commission. Chick said she will bring that up with the Township Board.

#### 15. ANNOUNCEMENT OF NEXT MEETING

**September 3, 2014**, at 7:00 P.M. at the Public Safety Building was announced as the next regular Commission meeting time and location.

Chockley and Iaquinto said they will be out of town on September 17<sup>th</sup>, and Dignan said he may also be gone. Chockley said she may cancel that meeting.

#### 16. ADJOURNMENT

- **Motion:** Dignan moved, Iaquinto supported, that the meeting be adjourned.  
**Motion carried 5—0 on a voice vote.**

The meeting was adjourned at 9:55 P.M.

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Prepared by Lisa Lemble.

Corrections to the originally issued minutes are indicated as follows:

Wording removed is ~~stricken through~~;

Wording added is underlined.

Adopted on September 3, 2014.

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Marlene Chockley, Chair

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Kenneth Dignan, Secretary

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<http://www.twp-northfield.org/government/>



**RECEIVED**

AUG 06 2014

**NORTHFIELD TOWNSHIP**



**FLEIS & VANDENBRINK**

**MEMO**

**VIA EMAIL**

**To:** Mr. John Damrath, Principal  
Damrath Group

---

**From:** Michael J. Labadie, PE  
Steven J. Russo, E.I.T.  
Fleis & VandenBrink

---

**CC:** Mr. Tom Nowatzke  
Nowatzke Truck & Trailer, Inc.

---

**Date:** August 5, 2014

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**Re:** Proposed Nowatzke Truck & Trailer Fuel Station  
Northfield Township, Michigan  
Traffic Impact Assessment

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### **Introduction**

This memorandum presents the results of a Traffic Impact Assessment (TIA) for the Nowatzke Truck & Trailer dealership in Northfield Township, Michigan. The project site is located on the east side of Whitmore Lake Road approximately 700 feet south of N. Territorial Road with site access provided via one driveway directly to Whitmore Lake Road and two connections with the Tractor Supply driveway which also connects to Whitmore Lake Road. The proposed development plans include a new fuel station to include 12 gasoline pumps, 4 diesel pumps, and a 2,285 square feet (SF) convenience store. No modifications to site access are proposed as part of the development.

The purpose of this study is to evaluate traffic operations with the proposed project. This TIA has been completed to identify the impacts (if any) of this project on the US-23 & N. Territorial Road interchange, intersection of N. Territorial Road & Whitmore Lake Road, and the site access points. Additionally, vehicle queue lengths from the N. Territorial Road & Whitmore Lake Road intersection were evaluated with respect to the site access points.

The scope of the study was developed based on Fleis & VandenBrink (F&V) knowledge of the study area, understanding of the development program, accepted traffic engineering practice, and methodologies published by the Institute of Transportation Engineers (ITE). The study analyses were completed using Synchro and SimTraffic, Version 8 traffic analysis software.

### **Data Collection**

Existing weekday traffic volume data were collected by F&V between July 16<sup>th</sup> and 17<sup>th</sup>, 2014. Vehicular turning movement counts were collected during the AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak periods at all study intersections. The count data at the intersection of N. Territorial Road & Whitmore Lake Road was compared to recent 24-hour count information collected between June 5<sup>th</sup> and 6<sup>th</sup>, 2014 obtained from the Southeast Michigan Council of Governments (SEMCOG) website. The results of this comparison indicate that during the AM peak hour traffic volumes on the southbound approach were

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# MEMO

significantly higher in June than July. This can most likely be attributed to school traffic from Whitmore Lake High School located approximately one mile north of the intersection. In order to account for this, traffic volumes on the southbound approach were adjusted upward and distributed through the intersection and study network based on existing traffic patterns.

These data were used as a baseline to establish existing traffic conditions without the proposed redevelopment. F&V also collected an inventory of existing lane use and traffic controls and obtained existing traffic signal timing information from the Washtenaw County Road Commission (WCRC) and Michigan Department of Transportation (MDOT).

## Existing Conditions

The existing AM and PM peak hour traffic volumes were identified based on the data collected. Peak hour volumes for each intersection were used and through volumes were balanced upward through the study intersections. Existing peak hour vehicle delays and Levels of Service (LOS) were calculated based on the existing lane use and traffic control, the existing peak hour traffic volumes, and the methodologies presented in the *Highway Capacity Manual, 2000* (HCM). Typically, LOS D is considered acceptable, with LOS A representing minimal delay, and LOS F indicating failing conditions. Additionally, SimTraffic network simulations were reviewed to evaluate network operations and vehicle queues. The results of the existing conditions analysis are attached and summarized in Table 1.

These results indicate acceptable vehicle delay and LOS at the Nowatzke and Tractor Supply driveways during both peak hours. At the intersection of N. Territorial Road & Whitmore Lake Road, the intersection operates at an overall LOS E during both peak hours with several approaches and movements operating at a LOS E or F. At the N. Territorial Road & US-23 interchange, the eastbound approach at the northbound entrance / exit ramps operates at a LOS F during the PM peak hour.

Review of network simulations indicates that the eastbound approach at the intersection of N. Territorial Road & Whitmore Lake Road currently experiences a long vehicle queue throughout the duration of the AM peak hour. During the PM peak hour, long vehicle queues are observed for eastbound N. Territorial Road from the US-23 interchange that periodically extend back to Whitmore Lake Road. Further, long vehicle queues are observed for the northbound and westbound approaches at the intersection of N. Territorial Road & Whitmore Lake Road.

As this development is proposed within the next year, and based on stagnant traffic growth patterns in southeast Michigan, future background conditions (without the proposed development) are assumed equal to existing conditions.

## Existing Improvements

In order to mitigate current traffic operations at the intersection of N. Territorial Road & Whitmore Lake Road, signal cycle length and timing changes were evaluated; however, the signal at this intersection is fully actuated and responds to allocate green time according to vehicle demands. Therefore, cycle length and signal timing changes would not sufficiently reduce vehicle delays. Subsequently, geometric improvements were evaluated. The results of this analysis indicate that right turn lanes should be constructed on all approaches at the intersection.

With the right turn lanes, intersection operations would be improved to a LOS D during both peak hours and vehicle delay would be reduced on all approaches as shown in Table 2. Several left turn movements would

# MEMO

continue to operate at a LOS E or F; however, review of network simulations indicates acceptable traffic operations and significant vehicle queues are not observed for these movements.

At the N. Territorial Road & US-23 interchange, exclusive left turn lanes are not provided at the entrance ramps to US-23 due to the physical constraints of the bridge, which causes the poor operations of the eastbound approach at the northbound ramps during the PM peak hour. MDOT is currently investigating improvements at the interchange which would include replacement of the bridge and roundabouts at the ramp terminals. Based on the low number of site-generated traffic from the proposed fuel station that would travel through the US-23 & N. Territorial Road interchange and the MDOT plan to improve the interchange, it is determined that improvements required to mitigate existing operations are considered to be regional and beyond the scope of this study.

**Table 1**  
**Existing Intersection Operations**

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. N. Territorial Road & Whitmore Lake Road	Signalized	EB	84.9	<u>F</u>	35.8	D
		WB	33.2	C	64.2	E
		NB	45.5	D	70.1	E
		SB	<u>60.8</u>	<u>E</u>	<u>41.8</u>	<u>D</u>
		<b>Overall</b>	<b>66.1</b>	<b>E</b>	<b>59.2</b>	<b>E</b>
2. N. Territorial Road & US-23 SB Ramps	Signalized	EB	10.8	B	5.5	A
		WB	7.3	A	6.1	A
		SB	<u>28.4</u>	<u>C</u>	<u>27.8</u>	<u>C</u>
		<b>Overall</b>	<b>15.0</b>	<b>B</b>	<b>9.9</b>	<b>A</b>
3. N. Territorial Road & US-23 NB Ramps	Signalized	EB	8.8	A	96.6	F
		WB	4.3	A	14.1	B
		NB	26.6	C	26.8	C
		SB	<u>24.2</u>	<u>C</u>	<u>21.9</u>	<u>C</u>
		<b>Overall</b>	<b>10.9</b>	<b>B</b>	<b>37.7</b>	<b>D</b>
4. Whitmore Lake Road & Nowatzke Drive	STOP (Minor)	WB	20.2	C	14.0	B
		NB	Free		Free	
		SB	0.2	A	0.3	A
5. Whitmore Lake Road & Tractor Supply Drive	STOP (Minor)	WB	9.2	A	14.1	B
		NB	Free		Free	
		SB LT	7.4	A	9.3	A

# MEMO

**Table 2**  
**Existing Intersection Operations With Improvements**

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. N. Territorial Road & Whitmore Lake Road	Signalized	EB	37.4	D	33.1	C
		WB	31.7	C	42.5	D
		NB	44.9	D	37.3	D
		SB	<u>54.4</u>	<u>D</u>	<u>42.7</u>	<u>D</u>
		<b>Overall</b>	<b>42.2</b>	<b>D</b>	<b>38.6</b>	<b>D</b>

## Site Trip Generation and Assignment

The number of AM and PM peak hour vehicle trips that would be generated by the proposed fuel station was forecast based on data published by the Institute of Transportation Engineers (ITE) in *Trip Generation, 9<sup>th</sup> Edition* and the *Trip Generation Handbook, 2<sup>nd</sup> Edition*.

As is typical of fuel stations, a portion of the site-generated trips are already present on the adjacent road network and are interrupted to visit the site. These trips are known as "pass-by" trips and account for a percentage of the total site-generated traffic. Pass-by trips result in turning movements at the site driveways, but do not increase traffic volumes on the adjacent road network. The site trip generation forecast is shown in Table 3.

**Table 3**  
**Site Trip Generation**

Land Use	ITE Code	Amount	Units	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Gas Station W / Convenience Market	945	16	Pumps	2,604	82	81	163	108	108	216
<i>Pass-By</i>		<i>AM: 62% PM: 56%</i>			<u>51</u>	<u>50</u>	<u>101</u>	<u>60</u>	<u>61</u>	<u>121</u>
<b>New Trips</b>					<b>31</b>	<b>31</b>	<b>62</b>	<b>48</b>	<b>47</b>	<b>95</b>

The vehicle trips that would be generated by the proposed redevelopment were assigned to the study road network based on existing peak hour traffic patterns, the proposed site access plan, and the methodologies published by ITE. This methodology indicates that pass-by trips enter and exit the development in their original direction of travel, while new trips will return to their direction of origin. The assumed distribution of new site traffic is summarized in Table 4. Pass-by trips were distributed based on existing traffic patterns along Whitmore Lake Road. These patterns indicate that 85% and 15% of pass-by trips would enter the site from the north / south and exit to the south / north during the AM peak hour, respectively, with the opposite distribution during the PM peak hour.

# MEMO

**Table 4  
New Site Trip Distribution**

To / From	via	AM	PM
North	Whitmore Lake Road	31%	5%
South	Whitmore Lake Road	5%	40%
East	N. Territorial Road	14%	34%
West	N. Territorial Road	<u>50%</u>	<u>21%</u>
		100%	100%

## Future Conditions

Future peak hour vehicle delays and LOS were calculated at the study intersections based on the future traffic volumes with the proposed fuel station and convenience market. The results of this analysis indicate that the proposed project would not have a significant impact on the intersection of N. Territorial Road & Whitmore Lake Road, as shown in Table 5. With the construction of right turn lanes on all approaches, intersection approaches would continue to operate at a LOS D or better during the AM and PM peak hours, except the southbound approach which would operate at a LOS E during the AM peak hour. However, this approach is three seconds away from being a LOS D and the traffic volumes on this approach used in the analysis were calculated based on 24-hour count information and not actual observed volumes in order to account for school traffic. Therefore, this approach may operate at a LOS D under future conditions based on actual vehicle demands for the southbound approach.

At the site driveways to Whitmore Lake Road, all approaches and movements would operate acceptably at a LOS C or better during both peak hours. Review of the network simulations indicates acceptable traffic operations during the AM peak hour. During the PM peak hour, a long vehicle queue is still observed for the eastbound approach at the N. Territorial Road & US-23 northbound ramps which periodically extends back to Whitmore Lake Road. Further, long vehicle queues are observed for the northbound approach at the intersection of N. Territorial Road & Whitmore Lake Road which periodically blocks the north site driveway. However, these queues dissipate and are not present throughout the duration of the peak hour.

## Driveway Turn Lane Warrants

According to WCRC Driveway Standards Section 3.14.1, MDOT Traffic & Safety Notes 603A, 604A, and 605A shall be utilized in order to determine where turn lanes or passing flares shall be required. These standards were utilized to determine the future access configuration at the Nowatzke Driveway to Whitmore Lake Road. The results of this analysis indicate that a left turn lane should be provided at the north Nowatzke Driveway for traffic entering the site off of Whitmore Lake Road.

# MEMO

- improvements required to mitigate existing operations are considered to be regional and beyond the scope of this study.
4. At the intersection of N. Territorial Road & Whitmore Lake Road, right turn lanes should be constructed on all approaches to improve existing traffic operations to a LOS D or better for all approaches during both peak hours.
  5. The proposed development **would not have a significant impact on the study road network.**
  6. The site driveways with Whitmore Lake Road will operate acceptably and an ingress left turn lane should be constructed at the north Nowatzke Driveway.

Any questions related to this memorandum, study, analyses, and results should be addressed to Fleis & VandenBrink.

**Attached:** Traffic Volume Data  
SEMCOG Data  
Synchro / SimTraffic Results  
Driveway Warrants

SJR:mjl

# MEMO

**Table 5**  
**Future Intersection Operations**

Intersection	Control	Approach	AM Peak		PM Peak	
			Delay (s/veh)	LOS	Delay (s/veh)	LOS
1. N. Territorial Road & Whitmore Lake Road	Signalized	EB	42.1	D	35.1	D
		WB	34.7	C	41.5	D
		NB	46.2	D	37.7	D
		SB	<u>57.7</u>	<u>E</u>	<u>43.1</u>	<u>D</u>
		<b>Overall</b>	<b>45.9</b>	<b>D</b>	<b>38.8</b>	<b>D</b>
2. N. Territorial Road & US-23 SB Ramps	Signalized	EB	10.8	B	5.7	A
		WB	7.4	A	6.7	A
		SB	<u>28.4</u>	<u>C</u>	<u>27.9</u>	<u>C</u>
		<b>Overall</b>	<b>15.0</b>	<b>B</b>	<b>10.2</b>	<b>B</b>
3. N. Territorial Road & US-23 NB Ramps	Signalized	EB	8.9	A	135.2	F
		WB	4.3	A	14.6	B
		NB	26.6	C	26.9	C
		SB	<u>24.2</u>	<u>C</u>	<u>21.9</u>	<u>C</u>
		<b>Overall</b>	<b>10.9</b>	<b>B</b>	<b>48.4</b>	<b>D</b>
4. Whitmore Lake Road & Nowatzke Drive	STOP (Minor)	WB	11.6	B	16.0	C
		NB	Free		Free	
		SB LT	1.3	A	9.5	A
5. Whitmore Lake Road & Tractor Supply Drive	STOP (Minor)	WB	9.9	A	14.7	B
		NB	Free		Free	
		SB LT	7.4	A	9.4	A

## Conclusions

The conclusions of this Traffic Impact Assessment are as follows:

1. Currently, the intersection of N. Territorial Road & Whitmore Lake Road operates at an overall LOS E during both peak hours with several approaches and movements operating at a LOS E or F.
2. Currently, the eastbound approach at the US-23 northbound ramps & N. Territorial Road operates at a LOS F during the PM peak hour.
3. Based on the low number of site-generated traffic from the proposed fuel station that would travel through the US-23 & N. Territorial Road interchange and MDOT's plan to improve the interchange,

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27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

Project: Nowatzke Truck & Trailer  
Weather: Sunny, 70's  
Location: Whitmore Lake & Tractor Supply

File Name : WHITMO~2  
Site Code : 00000000  
Start Date : 7/17/2014  
Page No : 1

Groups Printed- Group 1

	WHITMORE LAKE Southbound			TRACTOR SUPPLY DRIVE Westbound			WHITMORE LAKE Northbound			TRACTOR SUPPLY DRIVE Eastbound			Int. Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	75	1	0	0	0	0	11	0	0	0	0	87
07:15 AM	0	80	1	0	0	0	0	10	0	0	0	0	91
07:30 AM	0	89	1	2	0	0	0	10	0	0	0	0	102
07:45 AM	0	83	3	0	0	1	1	16	0	0	0	0	104
Total	0	327	6	2	0	1	1	47	0	0	0	0	384
08:00 AM	0	75	1	5	0	0	1	15	0	0	0	0	97
08:15 AM	0	76	4	3	0	1	1	15	0	0	0	0	100
08:30 AM	0	83	2	0	0	0	0	18	0	0	0	0	103
08:45 AM	0	72	3	3	0	1	2	20	0	0	0	0	101
Total	0	306	10	11	0	2	4	68	0	0	0	0	401
*** BREAK ***													
04:00 PM	0	38	4	7	0	0	2	118	0	0	0	0	169
04:15 PM	0	37	5	6	0	1	3	139	0	0	0	0	191
04:30 PM	0	28	7	7	0	2	2	161	0	0	0	0	207
04:45 PM	0	24	5	7	0	0	2	182	0	0	0	0	220
Total	0	127	21	27	0	3	9	600	0	0	0	0	787
05:00 PM	0	27	5	5	0	1	4	157	0	0	0	0	199
05:15 PM	0	16	3	7	0	1	1	154	0	0	0	0	182
05:30 PM	0	14	6	8	0	0	1	161	0	0	0	0	190
05:45 PM	0	21	4	7	0	0	0	152	0	0	0	0	184
Total	0	78	18	27	0	2	6	624	0	0	0	0	755
Grand Total	0	838	55	67	0	8	20	1339	0	0	0	0	2327
Apprch %	0.0	93.8	6.2	89.3	0.0	10.7	1.5	98.5	0.0	0.0	0.0	0.0	
Total %	0.0	36.0	2.4	2.9	0.0	0.3	0.9	57.5	0.0	0.0	0.0	0.0	



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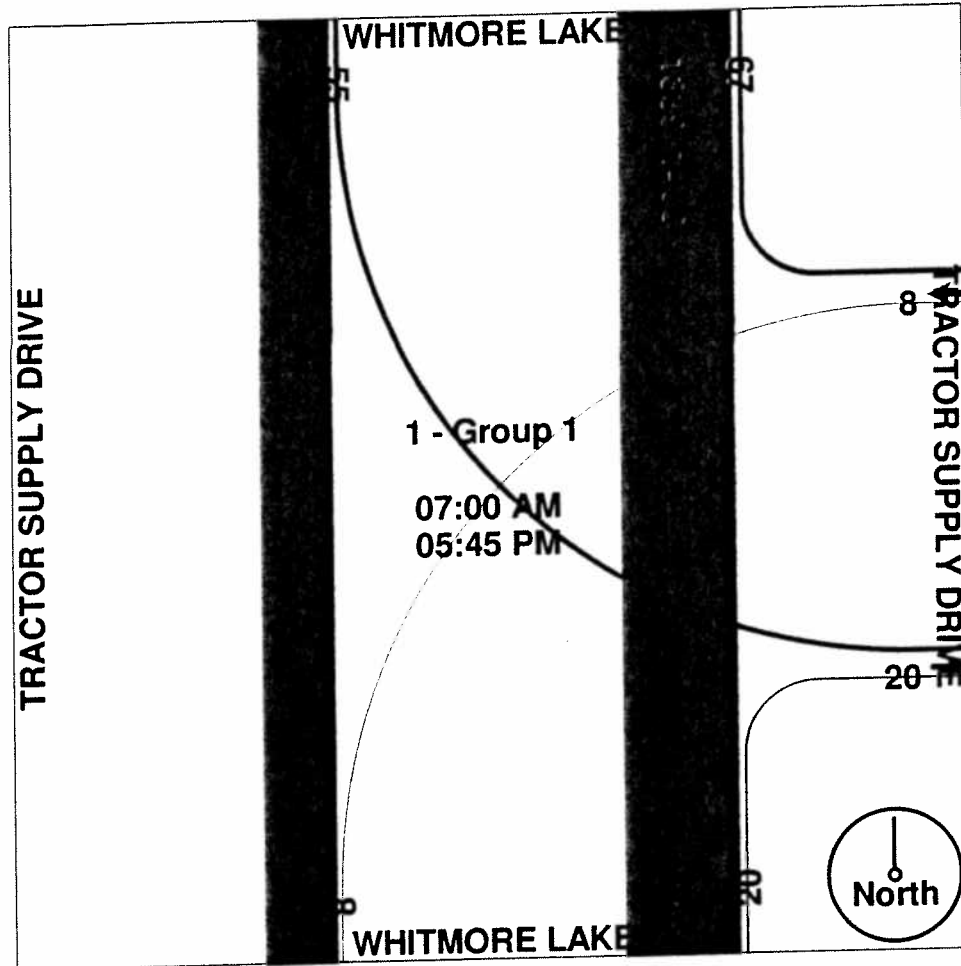
27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : WHITMO~2

Site Code : 00000000

Start Date : 7/17/2014

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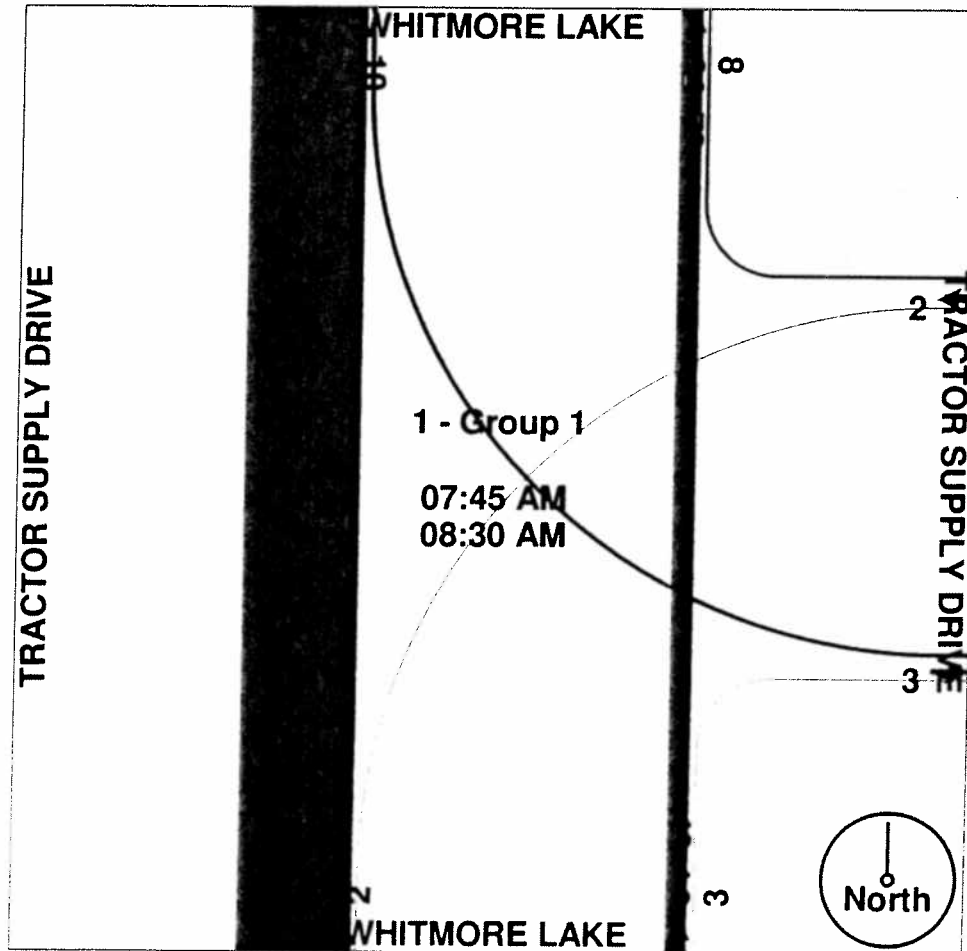


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File Name : WHITMO~2  
Site Code : 00000000  
Start Date : 7/17/2014  
Page No : 3

WHITMORE LAKE Southbound					TRACTOR SUPPLY DRIVE Westbound				WHITMORE LAKE Northbound				TRACTOR SUPPLY DRIVE Eastbound				Int. Total	
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																		
Intersection	07:45 AM																	
Volume	0	317	10	327	8	0	2	10	3	64	0	67	0	0	0	0	404	
Percent	0.0	96.9	3.1		80.0	0.0	20.0		4.5	95.5	0.0		0.0	0.0	0.0			
07:45 Volume	0	83	3	86	0	0	1	1	1	16	0	17	0	0	0	0	104	
Peak Factor																		0.971
High Int.	07:45 AM				08:00 AM				08:30 AM				6:45:00 AM					
Volume	0	83	3	86	5	0	0	5	0	18	0	18						
Peak Factor	0.951				0.500				0.931									



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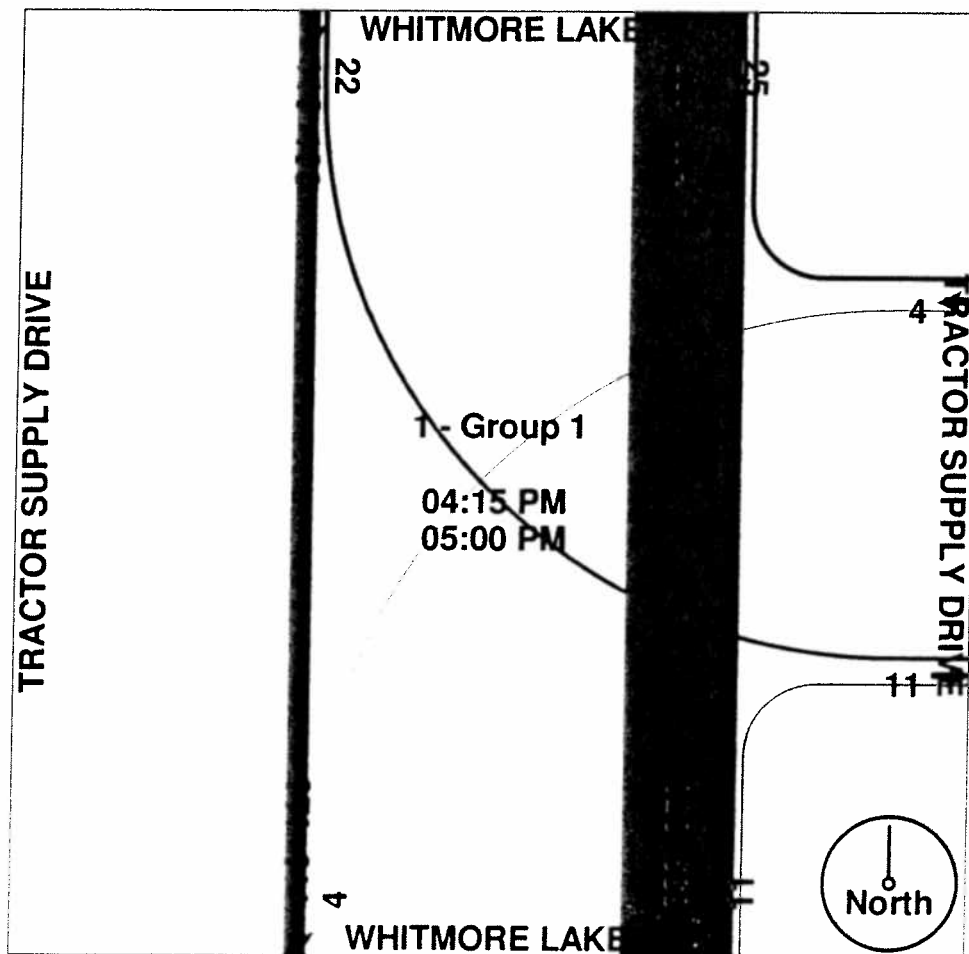
File Name : WHITMO~2

Site Code : 00000000

Start Date : 7/17/2014

Page No : 4

Start Time	WHITMORE LAKE Southbound				TRACTOR SUPPLY DRIVE Westbound				WHITMORE LAKE Northbound				TRACTOR SUPPLY DRIVE Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection 04:15 PM																	
Volume	0	116	22	138	25	0	4	29	11	639	0	650	0	0	0	0	817
Percent	0.0	84.1	15.9		86.2	0.0	13.8		1.7	98.3	0.0		0.0	0.0	0.0		
04:45																	
Volume	0	24	5	29	7	0	0	7	2	182	0	184	0	0	0	0	220
Peak Factor																	0.928
High Int. 04:15 PM					04:30 PM				04:45 PM								
Volume	0	37	5	42	7	0	2	9	2	182	0	184					
Peak Factor				0.821				0.806				0.883					



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27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : WHITMO~1

Site Code : 00000000

Start Date : 7/17/2014

Page No : 1

Project: Nowatzke Truck & Trailer

Weather: Sunny, 70's

Location: Whitmore Lake & Nowatzke Drive

Groups Printed- Group 1

	WHITMORE LAKE Southbound			NOWATZKE DRIVE Westbound			WHITMORE LAKE Northbound			Eastbound			Int. Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	74	0	0	0	0	0	12	0	0	0	0	86
07:15 AM	0	82	0	0	0	0	0	10	0	0	0	0	92
07:30 AM	0	91	1	1	0	0	0	9	0	0	0	0	102
07:45 AM	0	82	5	0	0	0	0	16	0	0	0	0	103
Total	0	329	6	1	0	0	0	47	0	0	0	0	383
08:00 AM	0	74	1	2	0	0	0	14	0	0	0	0	91
08:15 AM	0	76	2	1	0	0	0	15	0	0	0	0	94
08:30 AM	0	81	1	1	0	0	0	17	0	0	0	0	100
08:45 AM	0	71	1	2	0	0	0	21	0	0	0	0	95
Total	0	302	5	6	0	0	0	67	0	0	0	0	380
*** BREAK ***													
04:00 PM	0	40	0	1	0	0	0	115	0	0	0	0	156
04:15 PM	0	41	2	3	0	0	0	141	0	0	0	0	187
04:30 PM	0	29	1	6	0	3	0	158	0	0	0	0	197
04:45 PM	0	25	0	1	0	1	0	184	0	0	0	0	211
Total	0	135	3	11	0	4	0	598	0	0	0	0	751
05:00 PM	0	31	1	0	0	0	0	159	0	0	0	0	191
05:15 PM	0	18	1	0	0	0	0	154	0	0	0	0	173
05:30 PM	0	19	2	1	0	1	0	162	0	0	0	0	185
05:45 PM	0	22	0	0	0	0	1	151	0	0	0	0	174
Total	0	90	4	1	0	1	1	626	0	0	0	0	723
Grand Total	0	856	18	19	0	5	1	1338	0	0	0	0	2237
Apprch %	0.0	97.9	2.1	79.2	0.0	20.8	0.1	99.9	0.0	0.0	0.0	0.0	
Total %	0.0	38.3	0.8	0.8	0.0	0.2	0.0	59.8	0.0	0.0	0.0	0.0	

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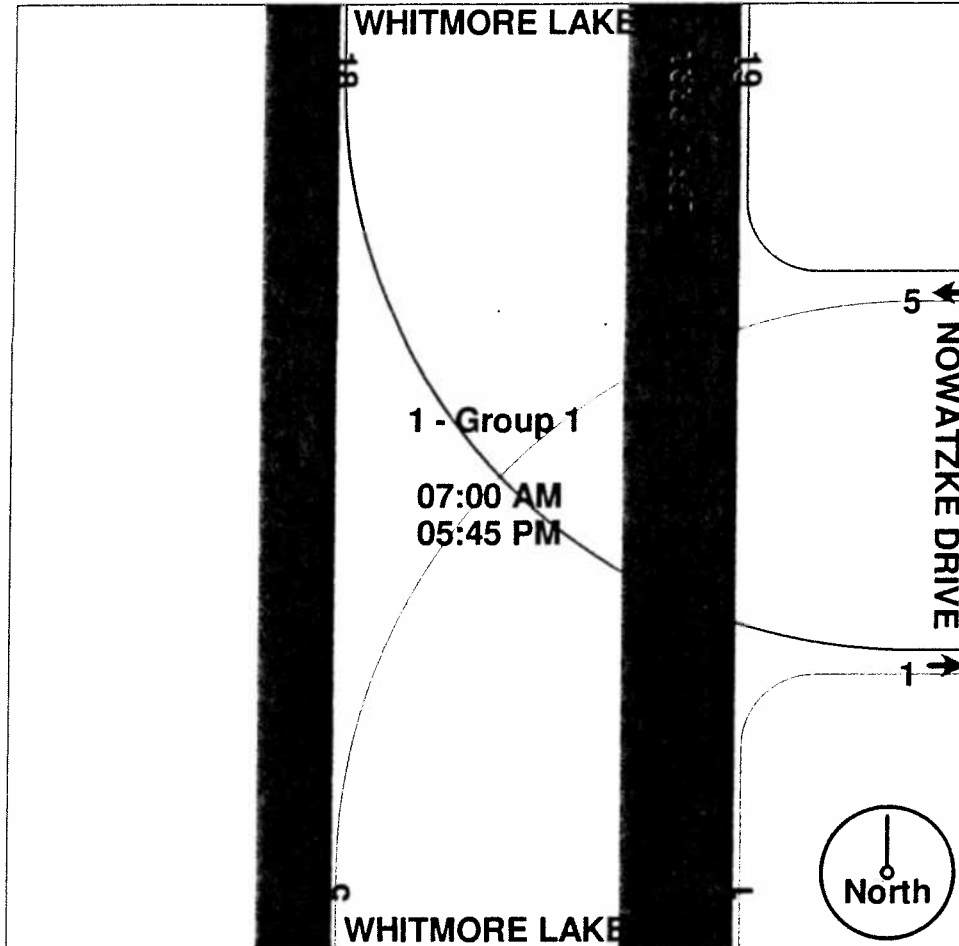
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Farmington Hills, MI 48334

File Name : WHITMO~1

Site Code : 00000000

Start Date : 7/17/2014

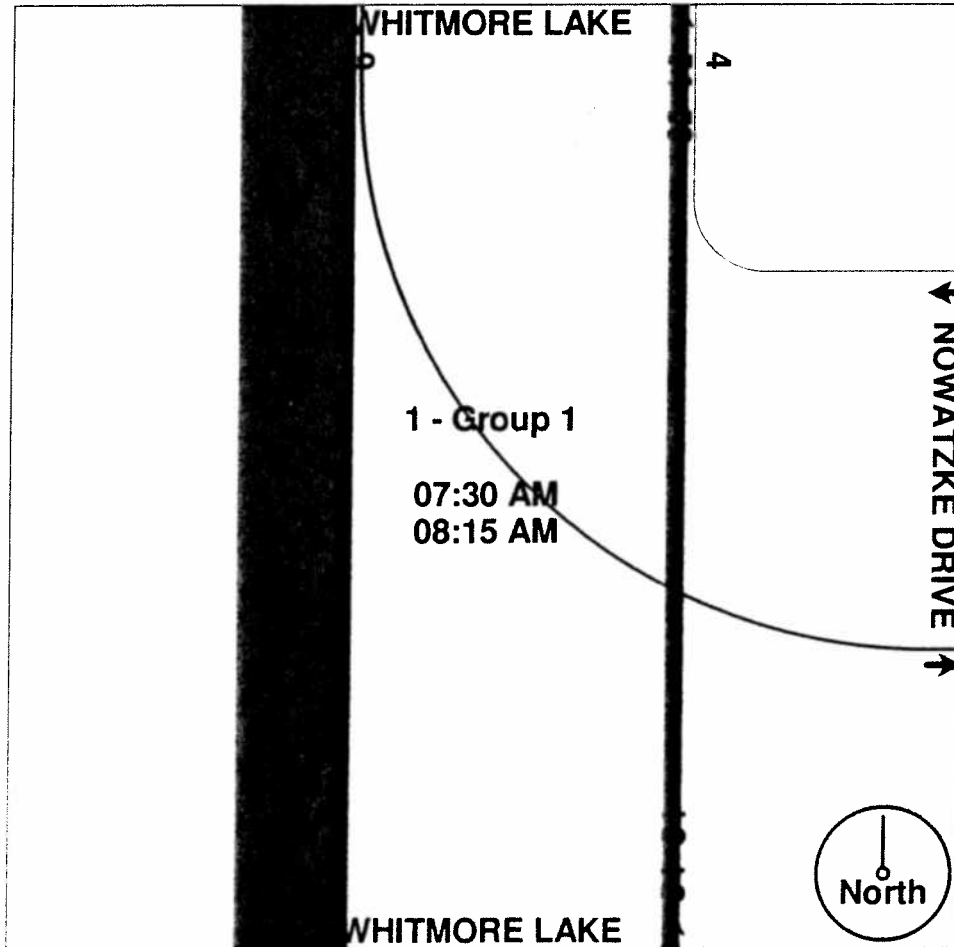
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File Name : WHITMO~1  
 Site Code : 00000000  
 Start Date : 7/17/2014  
 Page No : 3

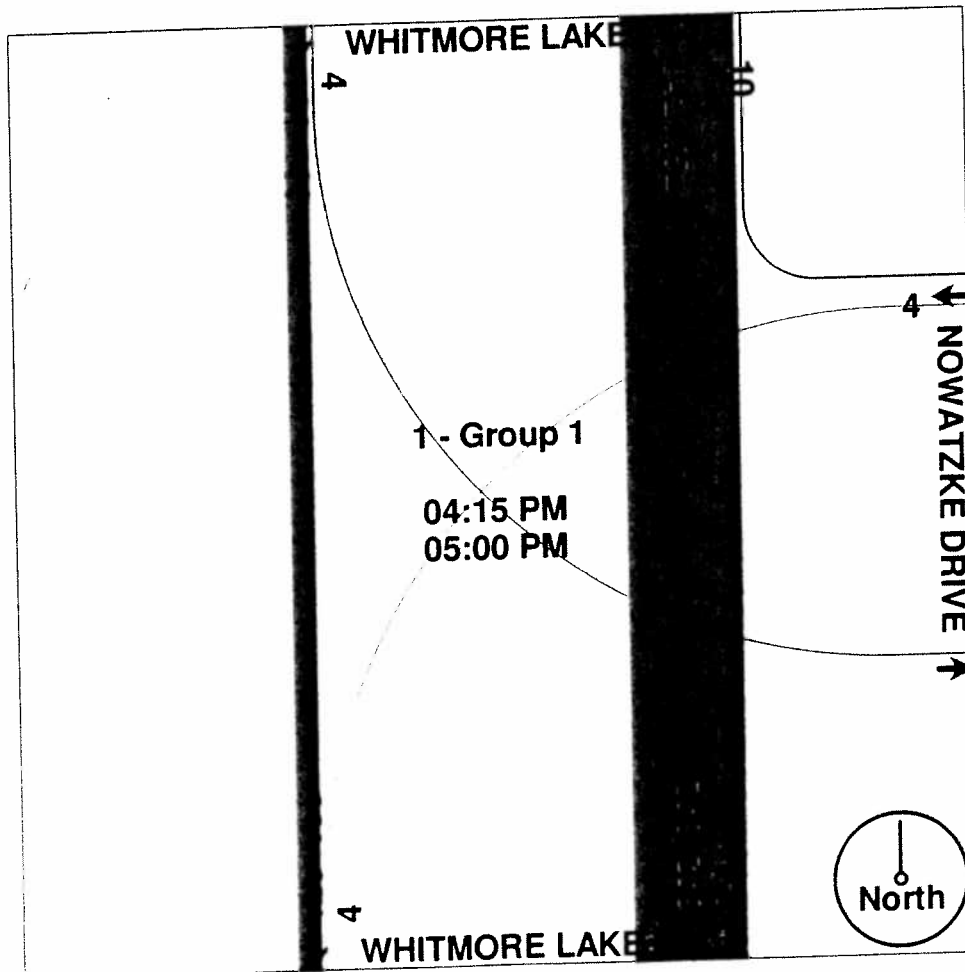
	WHITMORE LAKE Southbound				NOWATZKE DRIVE Westbound				WHITMORE LAKE Northbound				Eastbound					
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total	
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																		
Intersection	07:30 AM																	
Volume	0	323	9	332	4	0	0	4	0	54	0	54	0	0	0	0	390	
Percent	0.0	97.3	2.7		100.	0.0	0.0		0.0	100.	0.0		0.0	0.0	0.0			
					0					0								
07:45	0	82	5	87	0	0	0	0	0	16	0	16	0	0	0	0	103	
Volume																		
Peak Factor																	0.947	
High Int.	07:30 AM				08:00 AM				07:45 AM				6:45:00 AM					
Volume	0	91	1	92	2	0	0	2	0	16	0	16						
Peak Factor				0.902				0.500				0.844						



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File Name : WHITMO~1  
 Site Code : 00000000  
 Start Date : 7/17/2014  
 Page No : 4

	WHITMORE LAKE Southbound				NOWATZKE DRIVE Westbound				WHITMORE LAKE Northbound				Eastbound				App. Total	Int. Total
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left			
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																		
Intersection	04:15 PM																0	786
Volume	0	126	4	130	10	0	4	14	0	642	0	642	0	0	0			
Percent	0.0	96.9	3.1		71.4	0.0	28.6		0.0	100.0	0.0		0.0	0.0	0.0			
04:45																	0	211
Volume	0	25	0	25	1	0	1	2	0	184	0	184	0	0	0			0.931
Peak Factor																		
High Int.	04:15 PM				04:30 PM				04:45 PM									
Volume	0	41	2	43	6	0	3	9	0	184	0	184						
Peak Factor	0.756								0.389				0.872					



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27725 Stansbury Boulevard, Suite 150

Farmington Hills, MI 48334

File Name : N. Territorial & Whitmore Lake

Site Code : 00000000

Start Date : 7/16/2014

Page No : 1

Project: Nowatzke Truck & Trailer

Weather: Sunny, 70's

Location: N. Territorial & Whitmore Lake

Groups Printed- Unshifted

	WHITMORE LAKE Southbound			N. TERRITORIAL Westbound			WHITMORE LAKE Northbound			N. TERRITORIAL Eastbound			Int. Total
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	4	27	9	1	22	12	4	2	3	37	147	3	271
07:15 AM	5	44	4	2	37	14	4	2	2	29	147	2	292
07:30 AM	5	38	12	1	25	14	7	1	3	33	142	1	282
07:45 AM	5	32	11	0	15	19	9	5	7	28	144	3	278
Total	19	141	36	4	99	59	24	10	15	127	580	9	1123
08:00 AM	4	27	11	1	36	23	7	3	1	32	113	0	258
08:15 AM	3	30	9	3	36	16	12	2	2	27	83	2	225
08:30 AM	2	31	3	1	36	16	11	5	2	29	107	0	243
08:45 AM	6	20	8	5	38	23	17	1	1	24	98	2	243
Total	15	108	31	10	146	78	47	11	6	112	401	4	969
*** BREAK ***													
04:00 PM	3	12	3	12	90	19	36	41	32	11	52	8	319
04:15 PM	5	11	5	4	87	25	37	76	37	7	50	11	355
04:30 PM	9	4	3	10	94	20	43	88	38	4	57	11	381
04:45 PM	7	5	2	11	99	17	42	111	39	2	63	16	414
Total	24	32	13	37	370	81	158	316	146	24	222	46	1469
05:00 PM	13	6	2	25	122	20	19	107	37	3	48	9	411
05:15 PM	7	1	1	11	106	12	19	94	33	4	62	21	371
05:30 PM	8	6	8	7	104	11	28	91	43	3	42	12	363
05:45 PM	8	5	4	16	110	9	32	88	38	7	39	17	373
Total	36	18	15	59	442	52	98	380	151	17	191	59	1518
Grand Total	94	299	95	110	1057	270	327	717	318	280	1394	118	5079
Apprch %	19.3	61.3	19.5	7.7	73.6	18.8	24.0	52.6	23.3	15.6	77.8	6.6	
Total %	1.9	5.9	1.9	2.2	20.8	5.3	6.4	14.1	6.3	5.5	27.4	2.3	



***Fleis & VandenBrink Engineering, Inc.***

27725 Stansbury Boulevard, Suite 150

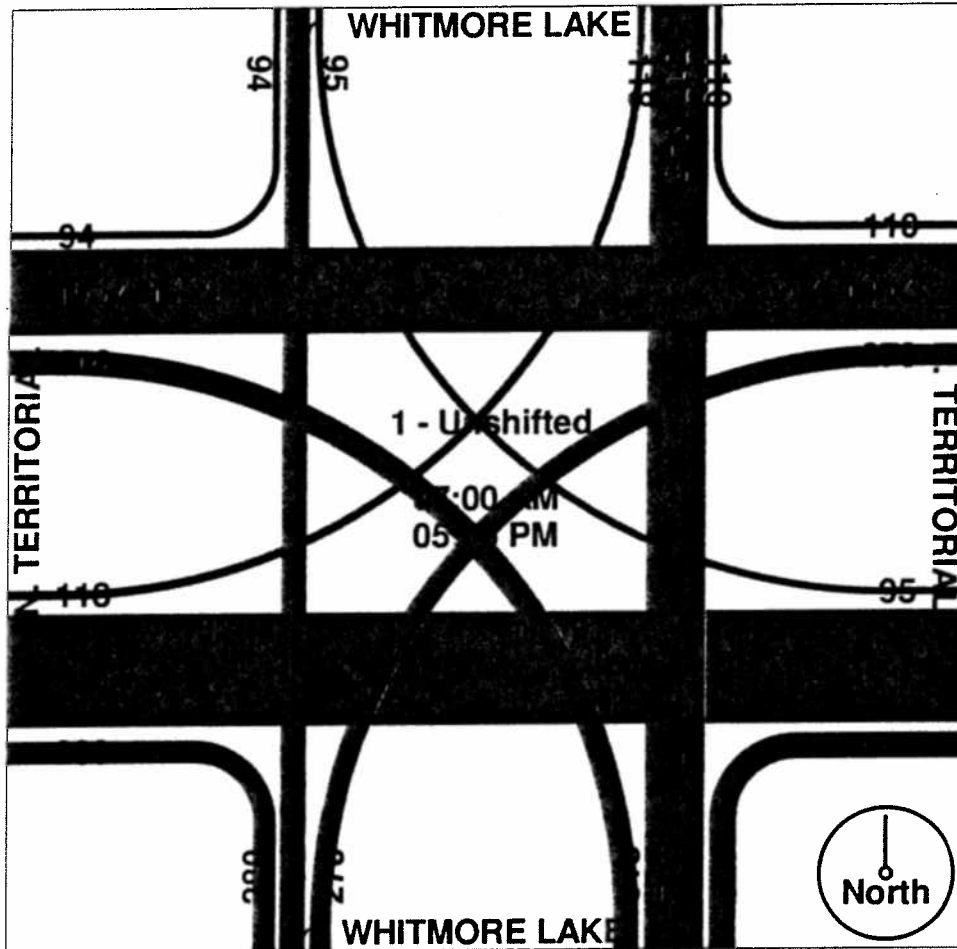
Farmington Hills, MI 48334

File Name : N. Territorial &amp; Whitmore Lake

Site Code : 00000000

Start Date : 7/16/2014

Page No : 2



# Fleis & VandenBrink Engineering, Inc.

27725 Stansbury Boulevard, Suite 150

Farmington Hills, MI 48334

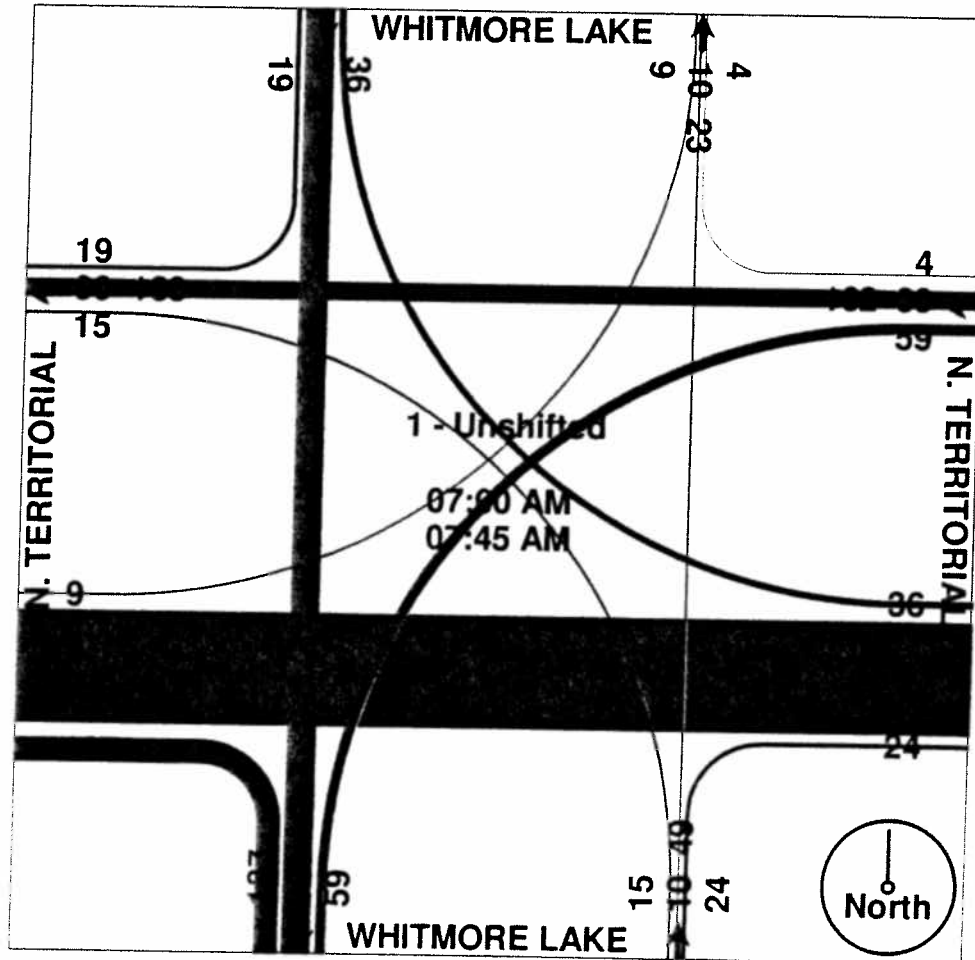
File Name : N. Territorial & Whitmore Lake

Site Code : 00000000

Start Date : 7/16/2014

Page No : 3

	WHITMORE LAKE Southbound				N. TERRITORIAL Westbound				WHITMORE LAKE Northbound				N. TERRITORIAL Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:00 AM																
Volume	19	141	36	196	4	99	59	162	24	10	15	49	127	580	9	716	1123
Percent	9.7	71.9	18.4		2.5	61.1	36.4		49.0	20.4	30.6		17.7	81.0	1.3		
07:15	5	44	4	53	2	37	14	53	4	2	2	8	29	147	2	178	292
Volume																	
Peak Factor																	0.961
High Int.	07:30 AM				07:15 AM				07:45 AM				07:00 AM				
Volume	5	38	12	55	2	37	14	53	9	5	7	21	37	147	3	187	
Peak Factor				0.891				0.764				0.583				0.957	

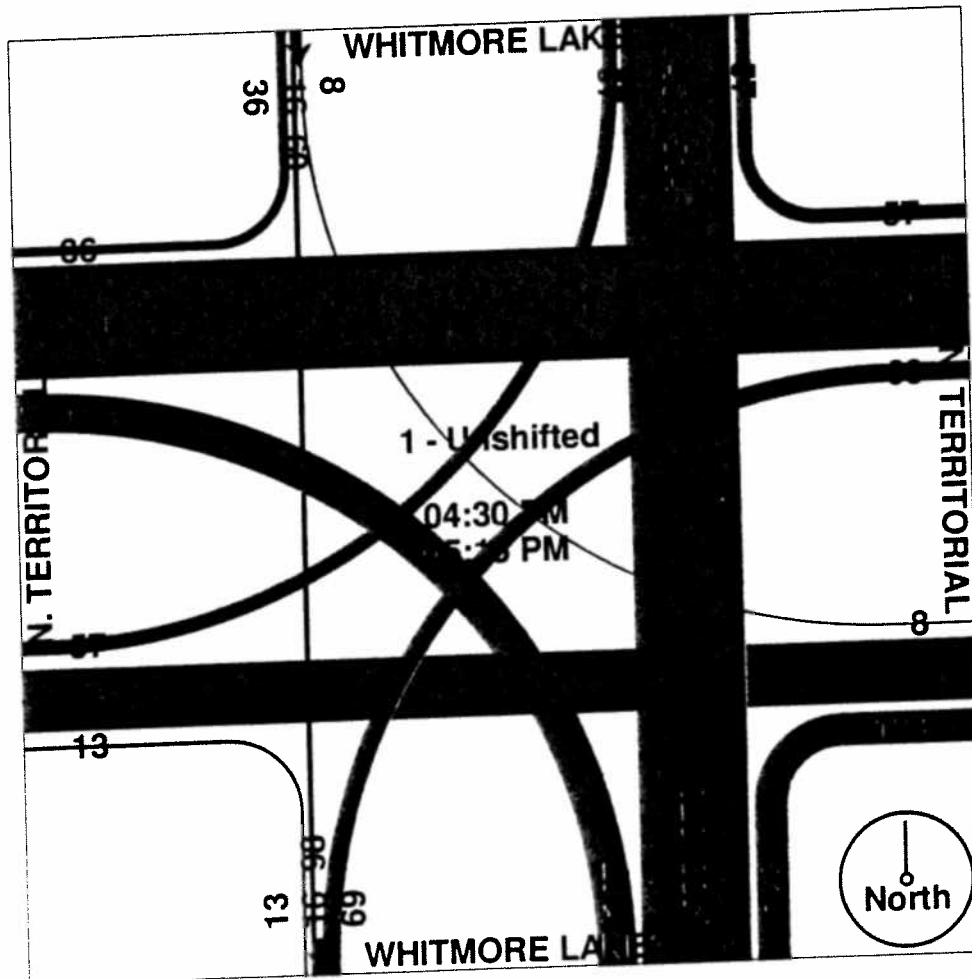


# Fleis & VandenBrink Engineering, Inc.

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : N. Territorial & Whitmore Lake  
Site Code : 00000000  
Start Date : 7/16/2014  
Page No : 4

	WHITMORE LAKE Southbound				N. TERRITORIAL Westbound				WHITMORE LAKE Northbound				N. TERRITORIAL Eastbound				App. Total	Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour From	12:00 PM to 05:45 PM - Peak 1 of 1																	
Intersection	04:30 PM																	
Volume	36	16	8	60	57	421	69	547	123	400	147	670	13	230	57	300	1577	
Percent	60.0	26.7	13.3		10.4	77.0	12.6		18.4	59.7	21.9		4.3	76.7	19.0			
04:45	7	5	2	14	11	99	17	127	42	111	39	192	2	63	16	81	414	
Volume																	0.952	
Peak Factor																		
High Int.	05:00 PM				05:00 PM				04:45 PM				05:15 PM					
Volume	13	6	2	21	25	122	20	167	42	111	39	192	4	62	21	87		
Peak Factor				0.714				0.819				0.872				0.862		



# Fleis & VandenBrink Engineering, Inc.

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

Project: Nowatzke Truck & Trailer  
Weather: Sunny, 70's  
Location: N. Territorial & SB US-23

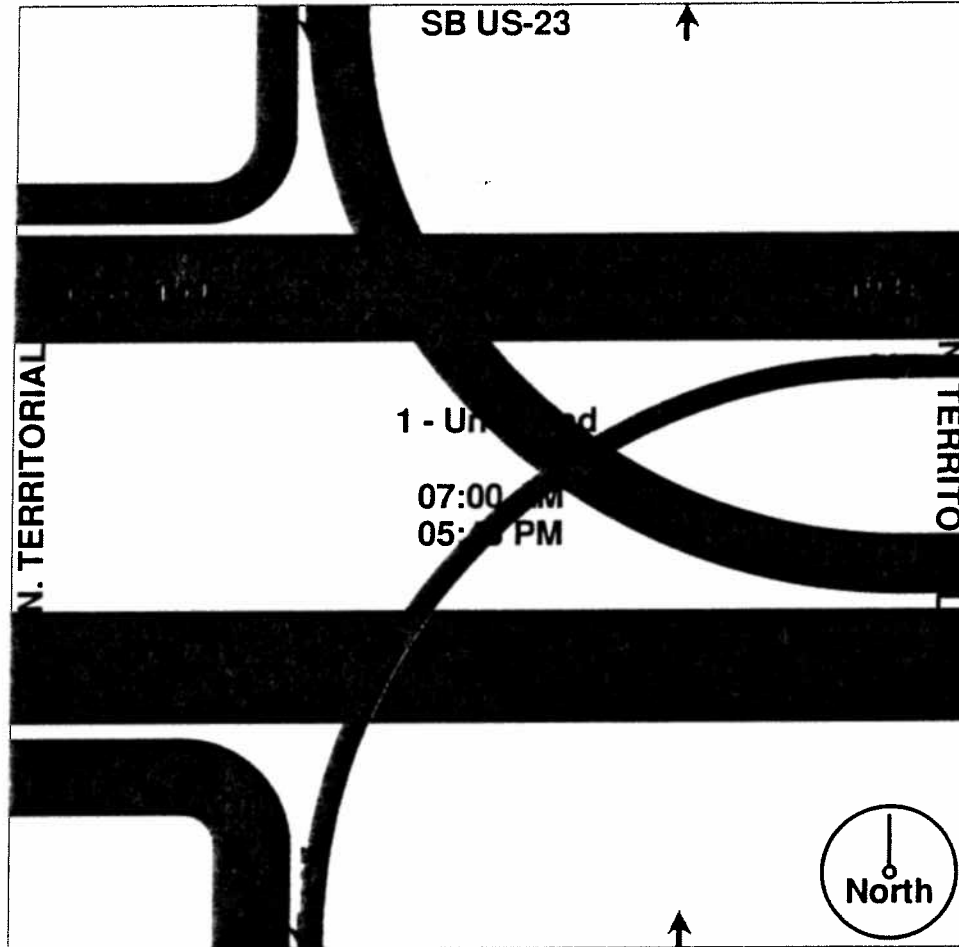
File Name : N. Territorial & SB US-23  
Site Code : 00000000  
Start Date : 7/16/2014  
Page No : 1

Groups Printed- Unshifted													
Start Time	SB US-23 Southbound			N. TERRITORIAL Westbound			Northbound			N. TERRITORIAL Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	19	0	60	0	18	12	0	0	0	66	68	0	243
07:15 AM	23	0	64	0	32	10	0	0	0	82	93	0	304
07:30 AM	19	0	57	0	22	7	0	0	0	78	86	0	269
07:45 AM	21	0	59	0	32	13	0	0	0	63	96	0	284
Total	82	0	240	0	104	42	0	0	0	289	343	0	1100
08:00 AM	24	0	55	0	33	13	0	0	0	64	83	0	272
08:15 AM	30	0	38	0	37	15	0	0	0	57	60	0	237
08:30 AM	29	0	25	0	23	15	0	0	0	71	56	0	219
08:45 AM	29	0	45	0	34	15	0	0	0	70	54	0	247
Total	112	0	163	0	127	58	0	0	0	262	253	0	975
*** BREAK ***													
04:00 PM	29	0	18	0	98	15	0	0	0	30	61	0	251
04:15 PM	37	0	20	0	87	6	0	0	0	25	60	0	235
04:30 PM	32	0	23	0	99	27	0	0	0	35	91	0	307
04:45 PM	29	0	32	0	112	20	0	0	0	30	81	0	304
Total	127	0	93	0	396	68	0	0	0	120	293	0	1097
05:00 PM	31	0	17	0	113	22	0	0	0	22	71	0	276
05:15 PM	22	0	33	0	126	15	0	0	0	30	55	0	281
05:30 PM	23	0	36	0	105	16	0	0	0	23	44	0	247
05:45 PM	20	0	22	0	120	16	0	0	0	29	77	0	284
Total	96	0	108	0	464	69	0	0	0	104	247	0	1088
Grand Total	417	0	604	0	1091	237	0	0	0	775	1136	0	4260
Apprch %	40.8	0.0	59.2	0.0	82.2	17.8	0.0	0.0	0.0	40.6	59.4	0.0	
Total %	9.8	0.0	14.2	0.0	25.6	5.6	0.0	0.0	0.0	18.2	26.7	0.0	

**Fleis & VandenBrink Engineering, Inc.**

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : N. Territorial & SB US-23  
Site Code : 00000000  
Start Date : 7/16/2014  
Page No : 2

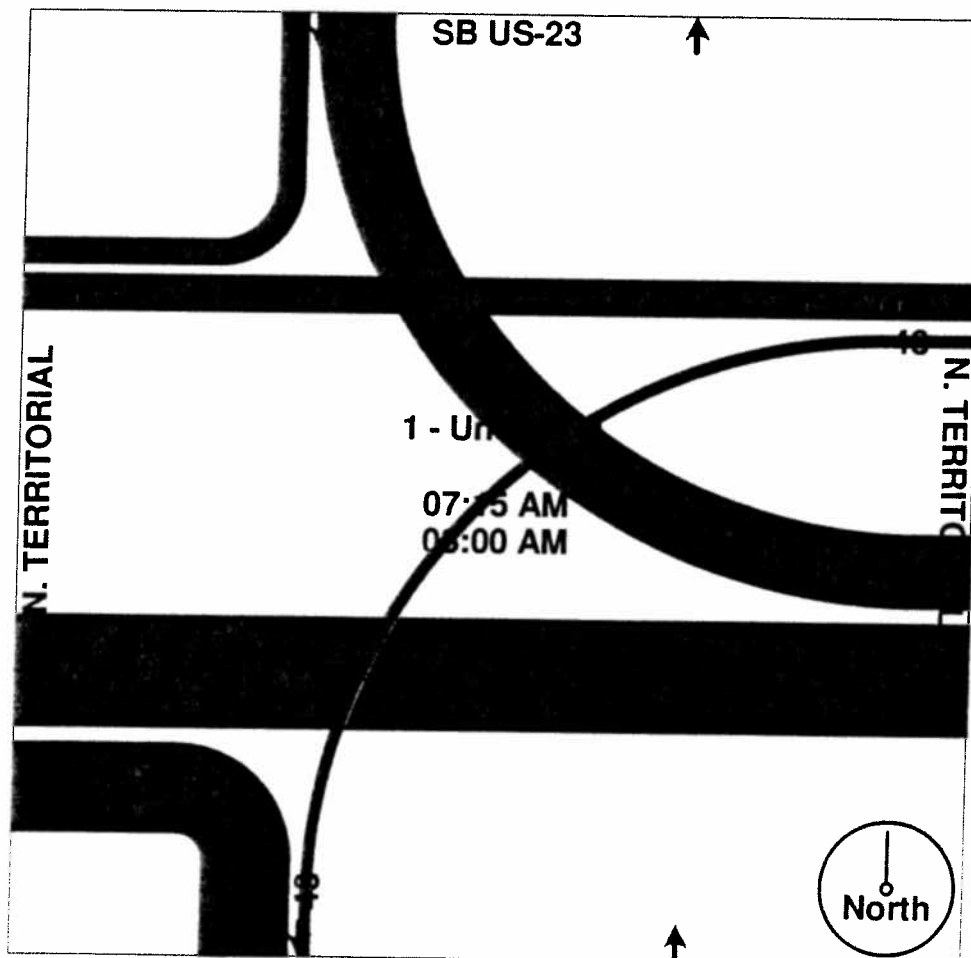


# **Fleis & VandenBrink Engineering, Inc.**

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : N. Territorial & SB US-23  
Site Code : 00000000  
Start Date : 7/16/2014  
Page No : 3

Start Time	SB US-23 Southbound				N. TERRITORIAL Westbound				Northbound				N. TERRITORIAL Eastbound					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																		
Intersection	07:15 AM																	
Volume	87	0	235	322	0	119	43	162	0	0	0	0	287	358	0	645	1129	
Percent	27.0	0.0	73.0		0.0	73.5	26.5		0.0	0.0	0.0		44.5	55.5	0.0			
07:15																		
Volume	23	0	64	87	0	32	10	42	0	0	0	0	82	93	0	175	304	
Peak Factor																	0.928	
High Int.	07:15 AM				08:00 AM				6:45:00 AM				07:15 AM					
Volume	23	0	64	87	0	33	13	46	0	0	0	0	82	93	0	175		
Peak Factor	0.925								0.880				0.921					

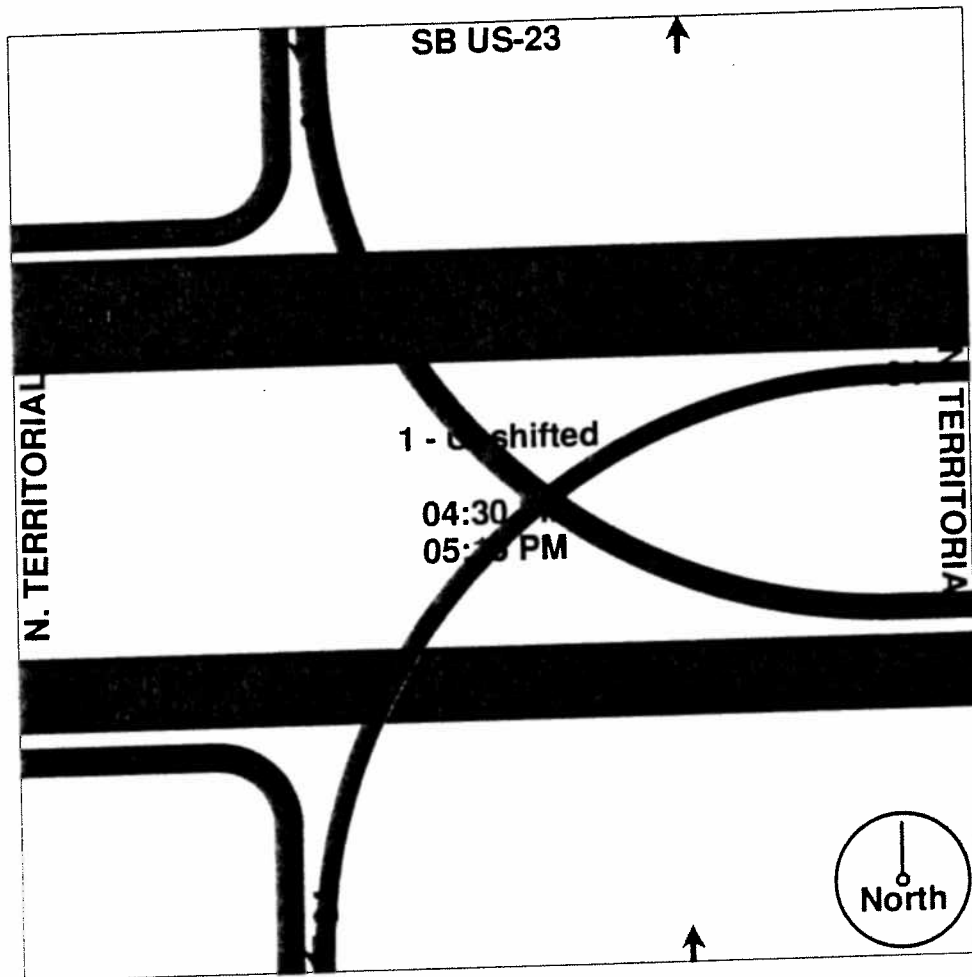


# Fleis & VandenBrink Engineering, Inc.

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : N. Territorial & SB US-23  
Site Code : 00000000  
Start Date : 7/16/2014  
Page No : 4

Start Time	SB US-23 Southbound				N. TERRITORIAL Westbound				Northbound				N. TERRITORIAL Eastbound				App. Total	Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left			
Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																		
Intersection	04:30 PM																	
Volume	114	0	105	219	0	450	84	534	0	0	0	0	117	298	0	415	1168	
Percent	52.1	0.0	47.9		0.0	84.3	15.7		0.0	0.0	0.0		28.2	71.8	0.0			
04:30	32	0	23	55	0	99	27	126	0	0	0	0	35	91	0	126	307	
Volume																	0.951	
Peak Factor																		
High Int.	04:45 PM					05:15 PM							04:30 PM					
Volume	29	0	32	61	0	126	15	141	0	0	0	0	35	91	0	126	0.823	
Peak Factor				0.898				0.947										



# Fleis & VandenBrink Engineering, Inc.

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : NTERRI~1  
Site Code : 00000000  
Start Date : 7/17/2014  
Page No : 1

Project: Nowatzke Truck & Trailer  
Weather: Sunny, 70's  
Location: N. Territorial & US-23 NB

Groups Printed- Unshifted

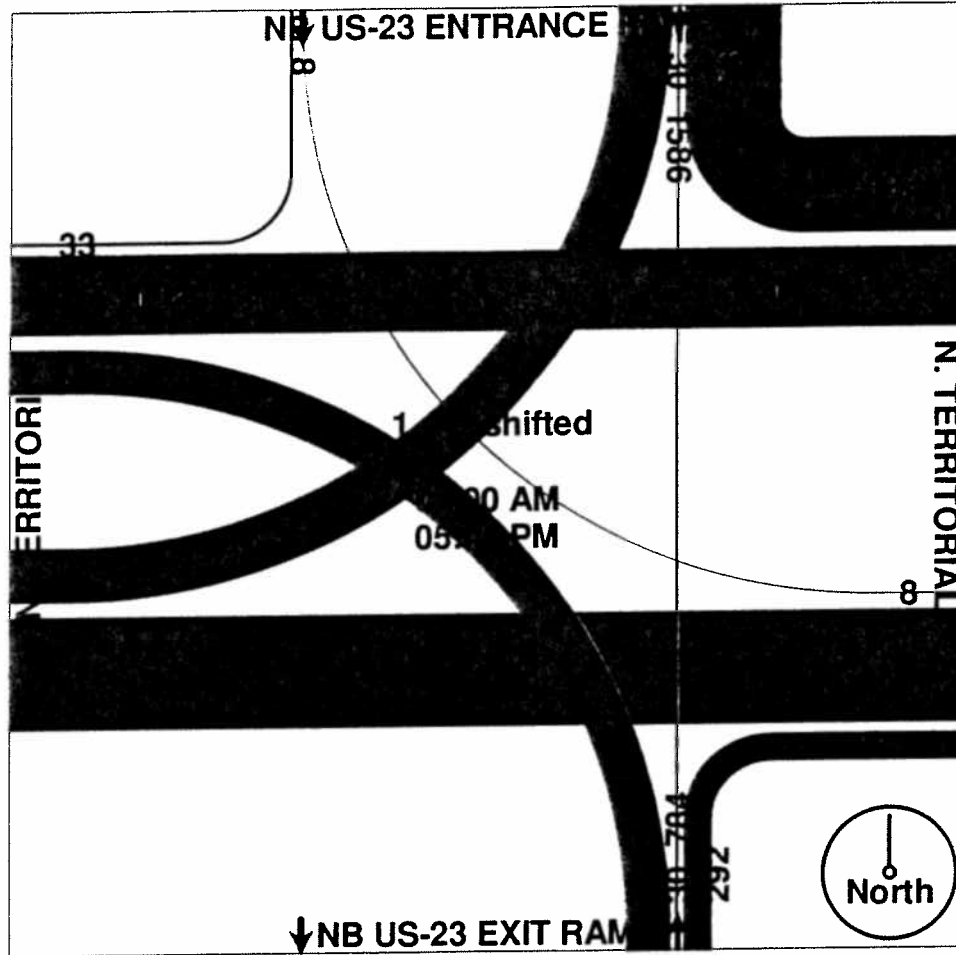
Start Time	NB US-23 ENTRANCE RAMP Southbound			N. TERRITORIAL Westbound			NB US-23 EXIT RAMP Northbound			N. TERRITORIAL Eastbound			Int. Total
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
07:00 AM	0	0	0	23	18	0	15	0	9	0	88	15	168
07:15 AM	0	0	0	21	17	0	18	1	15	0	97	36	205
07:30 AM	3	0	2	21	18	0	12	4	10	0	103	25	198
07:45 AM	1	0	0	25	24	0	23	1	20	0	124	27	245
Total	4	0	2	90	77	0	68	6	54	0	412	103	816
08:00 AM	2	0	0	25	32	0	21	5	14	0	99	28	226
08:15 AM	0	0	0	28	26	0	14	2	20	0	91	19	200
08:30 AM	0	0	0	22	24	0	17	2	21	0	81	25	192
08:45 AM	2	0	0	26	20	0	16	0	29	0	73	26	192
Total	4	0	0	101	102	0	68	9	84	0	344	98	810
*** BREAK ***													
04:00 PM	1	0	2	68	58	0	16	3	44	0	48	60	300
04:15 PM	3	0	0	82	74	0	12	2	47	0	54	53	327
04:30 PM	3	0	0	87	88	0	13	3	39	0	50	46	329
04:45 PM	5	0	0	96	62	0	23	3	37	0	44	59	329
Total	12	0	2	333	282	0	64	11	167	0	196	218	1285
05:00 PM	1	0	1	122	108	0	17	2	40	0	64	31	386
05:15 PM	5	0	0	124	76	0	26	1	41	0	47	48	368
05:30 PM	5	0	1	115	93	0	27	0	41	0	51	38	371
05:45 PM	2	0	2	102	95	0	22	1	35	0	63	33	355
Total	13	0	4	463	372	0	92	4	157	0	225	150	1480
Grand Total	33	0	8	987	833	0	292	30	462	0	1177	569	4391
Apprch %	80.5	0.0	19.5	54.2	45.8	0.0	37.2	3.8	58.9	0.0	67.4	32.6	
Total %	0.8	0.0	0.2	22.5	19.0	0.0	6.6	0.7	10.5	0.0	26.8	13.0	



**Fleis & VandenBrink Engineering, Inc.**

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : NTERRI~1  
Site Code : 00000000  
Start Date : 7/17/2014  
Page No : 2

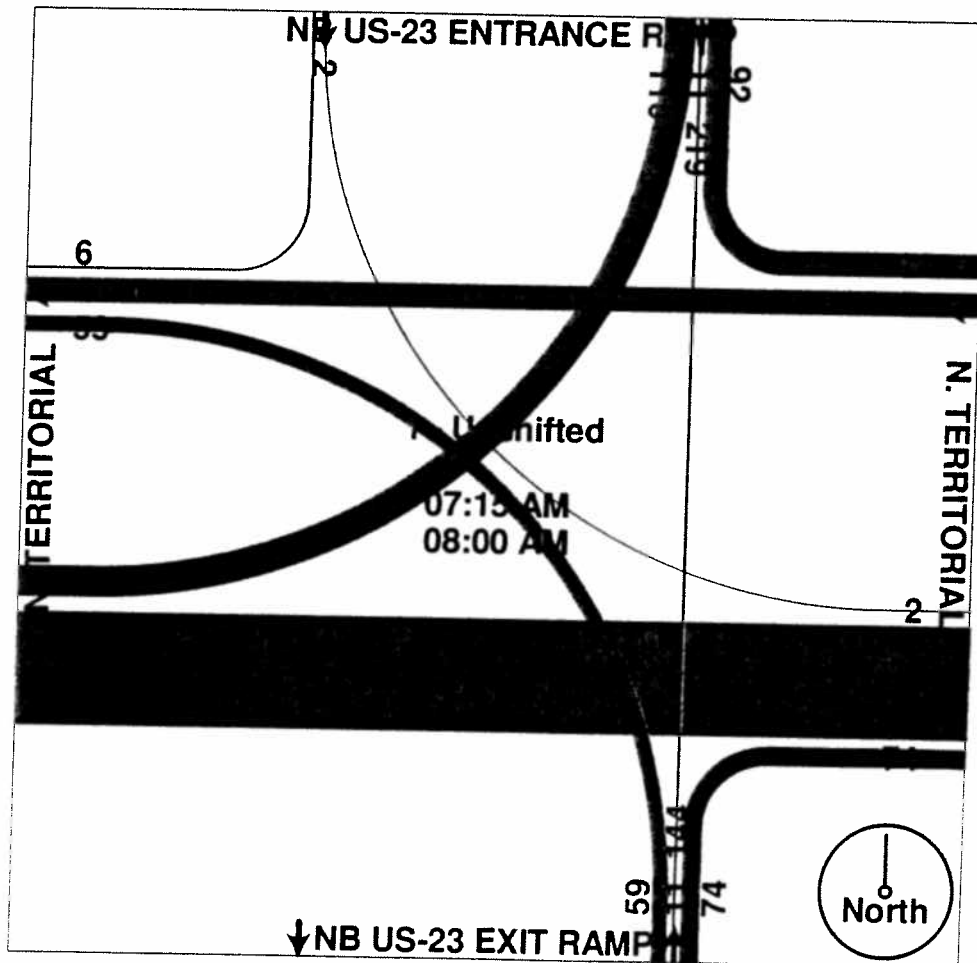


# **Fleis & VandenBrink Engineering, Inc.**

27725 Stansbury Boulevard, Suite 150  
Farmington Hills, MI 48334

File Name : NTERRI~1  
Site Code : 00000000  
Start Date : 7/17/2014  
Page No : 3

NB US-23 ENTRANCE RAMP Southbound					N. TERRITORIAL Westbound				NB US-23 EXIT RAMP Northbound				N. TERRITORIAL Eastbound				Int. Total
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	6	0	2	8	92	91	0	183	74	11	59	144	0	423	116	539	874
Percent	75.0	0.0	25.0		50.3	49.7	0.0		51.4	7.6	41.0		0.0	78.5	21.5		
07:45	1	0	0	1	25	24	0	49	23	1	20	44	0	124	27	151	245
Peak Factor																	
High Int.	07:30 AM				08:00 AM				07:45 AM				07:45 AM				0.892
Volume	3	0	2	5	25	32	0	57	23	1	20	44	0	124	27	151	
Peak Factor	0.400								0.803				0.818				0.892



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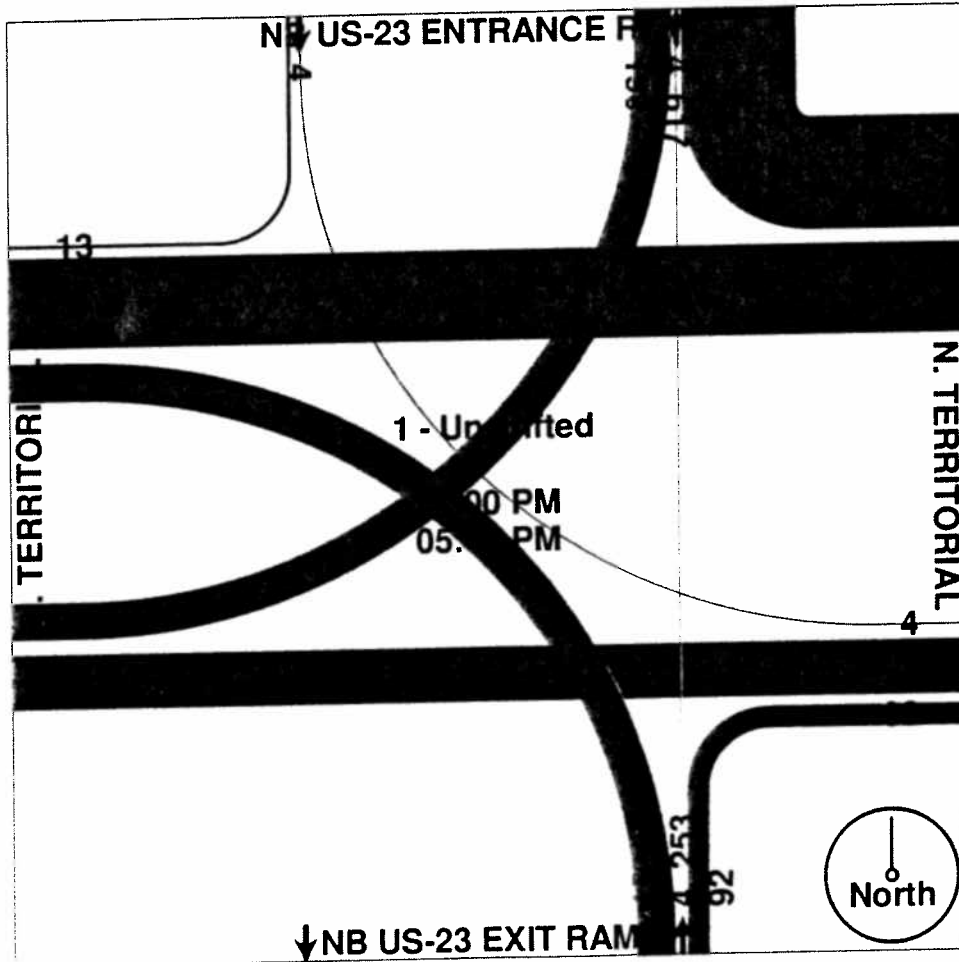
File Name : NTERRI~1

Site Code : 00000000

Start Date : 7/17/2014

Page No : 4

Start Time	NB US-23 ENTRANCE RAMP Southbound				N. TERRITORIAL Westbound				NB US-23 EXIT RAMP Northbound				N. TERRITORIAL Eastbound				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
	Peak Hour From 12:00 PM to 05:45 PM - Peak 1 of 1																
Intersection	05:00 PM																
Volume	13	0	4	17	463	372	0	835	92	4	157	253	0	225	150	375	1480
Percent	76.5	0.0	23.5		55.4	44.6	0.0		36.4	1.6	62.1		0.0	60.0	40.0		
05:00	1	0	1	2	122	108	0	230	17	2	40	59	0	64	31	95	386
Volume																	0.959
Peak Factor	05:30 PM				05:00 PM				05:15 PM				05:45 PM				
High Int.	5	0	1	6	122	108	0	230	26	1	41	68	0	63	33	96	
Volume				0.708				0.908				0.930				0.977	
Peak Factor																	





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## SEMCOG Road Segment Report

**North Territorial Rd from Whitmore Lake Rd to Territorial/S US 23 Ramp**

**PR 1426409 from mile point 16.903 to mile point 17.126**

**FALINK ID: 7782**

**Community:** Northfield Twp

**County:** Washtenaw

**Functional Class:** 6 - Rural Minor Arterial

**Direction:** -

**Length:** 0.223 miles

**Number Lanes, 2012:** 2

**Posted Speed:** 50 (Source:TCO)

**Route Classification:** Not a route

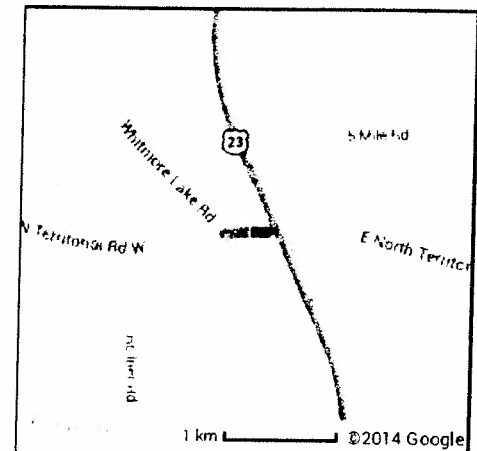
**Annual Crash Average, 2009-2013:** 3

**Traffic Volume, 2012:** 8,500 (Observed AADT)  
AADT values are derived from [Traffic Counts](#).

**Pavement Type, 2012:** Asphalt

**Pavement Rating, 2012:** Poor

### Street View



### Corridor Priorities

**Type:** Local

**Safety:** No High Crash Locations

**Pavement:** High

**Bridges:** Low

**Congestion:** Less than 15% of Corridor Congested

### Short-Range (TIP) Projects

No TIP projects for this segment.

### Long-Range Projects

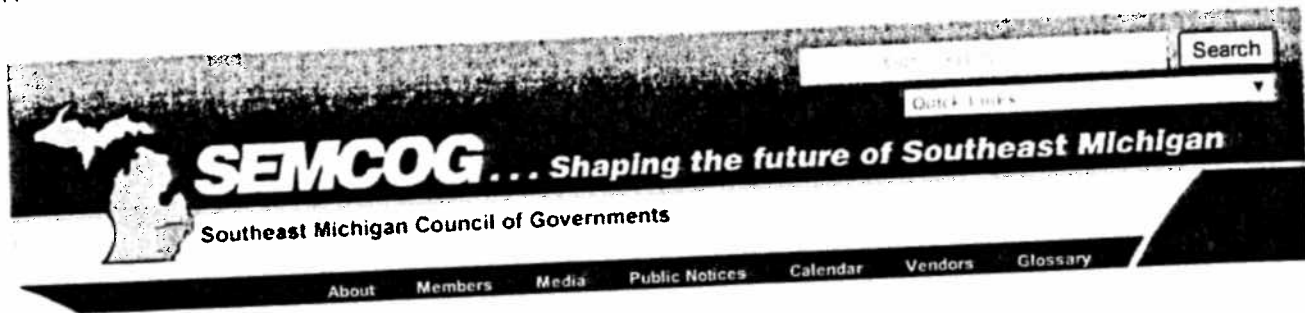
No long-range projects for this segment.

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## SEMCOG Road Segment Report

Whitmore Lake Rd from Warren Rd to North Territorial Rd

PR 4603187 from mile point 1.900 to mile point 5.456

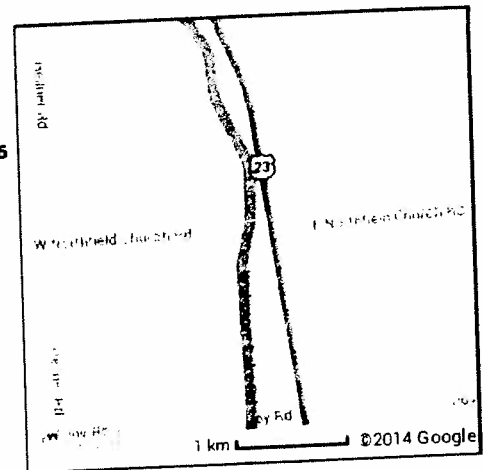
FALINK ID: 19912

Community: Ann Arbor Twp, Northfield Twp  
County: Washtenaw

Functional Class: 6 - Rural Minor Arterial

Direction: -  
Length: 3.556 miles  
Number Lanes, 2012: 2  
Posted Speed: 55 (Source:TCO)  
Route Classification: Not a route  
Annual Crash Average, 2009-2013: 16  
Traffic Volume, 2012: 3,300 (Observed AADT)  
AADT values are derived from Traffic Counts.  
Pavement Type, 2012: Asphalt  
Pavement Rating, 2012: Fair

### Street View



### Corridor Priorities

Type: Higher Local  
Safety: Low  
Pavement: Medium  
Bridges: Medium  
Congestion: Less than 15% of Corridor Congested

**Short-Range (TIP) Projects**  
No TIP projects for this segment.

**Long-Range Projects**  
No long-range projects for this segment.

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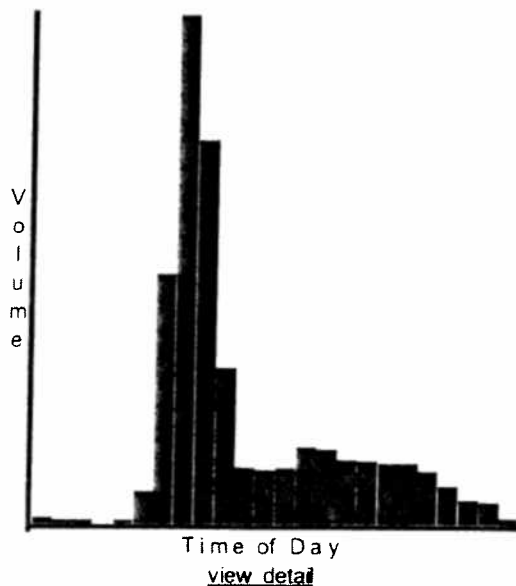
**SEMCOG**

# Transportation Data Management System

[Compare Another Count](#)
[Close Window](#)

VOLUME COUNT DATA INFO	
Location	0021910011_SB
Type	SPOT
Funct'l Class	-
County	Northfield Twp
Community	Washtenaw
Located On	Whitmore Lake Rd
From Road	
To Road	
NORTH OF	North Territorial Rd
Loc Dir	SB
Start Date	6/4/2014 12:00:00 PM
End Date	6/5/2014 12:00:00 PM
Start Time	12:00:00 PM
End Time	12:00:00 PM
Count Dir	
Count Source	0021910011
Filename	0021910011.txt
Notes	
Study	
Weather	
Bar	

INTERVAL: 15-MIN					
TIME	15-MIN INTERVAL				HOURLY COUNT
	1st	2nd	3rd	4th	
0:00-1:00	2	0	1	1	4
1:00-2:00	2	0	1	0	3
2:00-3:00	1	2	0	0	3
3:00-4:00	0	1	0	0	1
4:00-5:00	0	0	0	2	2
5:00-6:00	6	4	10	10	30
6:00-7:00	11	20	58	158	247
7:00-8:00	172	111	115	110	508
8:00-9:00	124	112	68	77	381
9:00-10:00	39	62	41	12	154
10:00-11:00	13	16	10	16	55
11:00-12:00	12	13	13	15	53
12:00-13:00	8	10	17	20	55
13:00-14:00	16	17	27	15	75
14:00-15:00	14	14	12	34	74
15:00-16:00	12	17	18	15	62
16:00-17:00	8	17	17	18	60
17:00-18:00	10	14	16	18	58
18:00-19:00	18	11	15	15	59
19:00-20:00	11	6	22	11	50
20:00-21:00	12	5	9	10	36
21:00-22:00	13	6	2	2	23
22:00-23:00	7	3	6	4	20
23:00-24:00	3	0	0	1	4
TOTAL					2,017



7/17/2014

**SEMCOG**

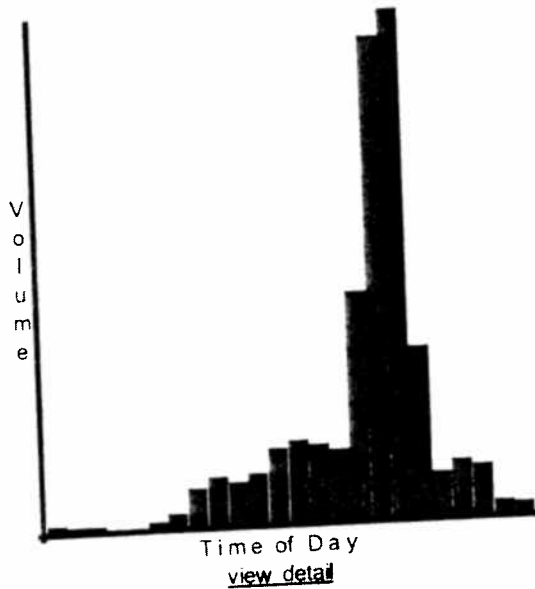
**Transportation Data Management System**

Compare Another Count

Close Window

VOLUME COUNT DATA INFO	
Location	0022020012_NB
Type	SPOT
Funct'l Class	-
County	Northfield Twp
Community	Washtenaw
Located On	Whitmore Lake Rd
From Road	
To Road	
SOUTH OF	North Territorial Rd
Loc Dir	NB
Start Date	6/5/2014 9:00:00 AM
End Date	6/6/2014 9:00:00 AM
Start Time	9:00:00 AM
End Time	9:00:00 AM
Count Dir	
Count Source	0022020012
Filename	0022020012.txt
Notes	
Study	
Weather	
Bar	<input checked="" type="checkbox"/>

INTERVAL: 15-MIN					
TIME	15-MIN INTERVAL				HOURLY COUNT
	1st	2nd	3rd	4th	
0:00-1:00	2	2	2	0	6
1:00-2:00	2	2	0	0	4
2:00-3:00	1	0	1	0	2
3:00-4:00	0	0	1	0	1
4:00-5:00	0	0	0	0	0
5:00-6:00	1	0	0	4	5
6:00-7:00	2	3	7	3	15
7:00-8:00	7	13	13	16	49
8:00-9:00	19	17	11	14	61
9:00-10:00	11	17	13	12	53
10:00-11:00	12	26	12	14	64
11:00-12:00	25	26	22	24	97
12:00-13:00	27	27	21	30	105
13:00-14:00	22	24	23	30	99
14:00-15:00	16	20	28	27	91
15:00-16:00	40	51	85	122	298
16:00-17:00	113	170	170	185	638
17:00-18:00	178	186	171	138	673
18:00-19:00	99	70	34	21	224
19:00-20:00	22	14	13	7	56
20:00-21:00	13	17	13	30	73
21:00-22:00	21	13	15	15	64
22:00-23:00	6	4	4	2	16
23:00-24:00	4	5	1	3	13
TOTAL					2,707



Existing Conditions  
AM Peak Hour

Nowatzky Truck & Trailer TIA  
Fleis & VandenBrink Engineering, Inc.



# HCM Signalized Intersection Capacity Analysis 2: US-23 SB Entrance Ramp/US-23 SB Exit Ramp & N. Territorial Road

Existing Conditions  
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖					↖		↖
Volume (vph)	0	388	311	43	119	0	0	0	0	235	0	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5					5.2		5.2
Lane Util. Factor		1.00			1.00					1.00		1.00
Frt		0.94			0.99					0.95		1.00
Flt Protected		1.00			0.99					1.00		1.00
Satd. Flow (prot)		1751			1838					1770		1583
Flt Permitted		1.00			0.76					0.95		1.00
Satd. Flow (perm)		1751			1422					1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	422	338	49	135	0	0	0	0	253	0	94
RTOR Reduction (vph)	0	41	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	719	0	0	184	0	0	0	0	253	0	94
Turn Type		NA		Perm	NA					Perm		Perm
Protected Phases		1			1					2		2
Permitted Phases				1						14.6		14.6
Actuated Green, G (s)		44.0			44.0					14.6		14.6
Effective Green, g (s)		44.0			44.0					0.21		0.21
Actuated g/C Ratio		0.63			0.63					5.2		5.2
Clearance Time (s)		5.5			5.5					3.0		3.0
Vehicle Extension (s)		0.2			0.2					372		333
Lane Grp Cap (vph)		1111			902					c0.14		0.06
v/s Ratio Prot		c0.41			0.13					0.68		0.28
v/s Ratio Perm					0.20					25.2		23.0
v/c Ratio		0.65			5.3					1.00		1.00
Uniform Delay, d1		7.8			1.29					5.0		0.5
Progression Factor		1.00			0.5					30.2		23.4
Incremental Delay, d2		2.9			7.3					C		C
Delay (s)		10.8			A							
Level of Service		B			A			0.0			28.4	
Approach Delay (s)		10.8			A			A			C	
Approach LOS		B			A							
<b>Intersection Summary</b>												
HCM 2000 Control Delay			15.0			HCM 2000 Level of Service				B		
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			69.3							10.7		
Intersection Capacity Utilization			64.9%			ICU Level of Service				C		
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 3: US-23 NB Exit Ramp/US-23 NB Entrance Ramp & N. Territorial Road

Existing Conditions

AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱		↰	↱			↕	
Volume (vph)	134	489	0	0	95	92	61	11	74	2	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		5.2	5.2			5.2	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		1.00			0.93		1.00	0.87			0.90	
Flt Protected		0.99			1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1843			1739		1770	1619			1650	
Flt Permitted		0.87			1.00		0.75	1.00			0.94	
Satd. Flow (perm)		1619			1739		1395	1619			1561	
Peak-hour factor, PHF	0.89	0.89	0.89	0.80	0.80	0.80	0.82	0.82	0.82	0.60	0.60	0.60
Adj. Flow (vph)	151	549	0	0	119	115	74	13	90	3	0	10
RTOR Reduction (vph)	0	0	0	0	37	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	700	0	0	197	0	74	103	0	0	2	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		5			5			6			6	
Permitted Phases	5						6			6		
Actuated Green, G (s)		47.2			47.2		11.4	11.4			11.4	
Effective Green, g (s)		47.2			47.2		11.4	11.4			11.4	
Actuated g/C Ratio		0.68			0.68		0.16	0.16			0.16	
Clearance Time (s)		5.5			5.5		5.2	5.2			5.2	
Vehicle Extension (s)		0.2			0.2		3.0	3.0			3.0	
Lane Grp Cap (vph)		1102			1184		229	266			256	
v/s Ratio Prot					0.11			c0.06				
v/s Ratio Perm		c0.43					0.05				0.00	
v/c Ratio		0.64			0.17		0.32	0.39			0.01	
Uniform Delay, d1		6.2			4.0		25.5	25.8			24.2	
Progression Factor		1.07			1.00		1.00	1.00			1.00	
Incremental Delay, d2		2.2			0.3		0.8	0.9			0.0	
Delay (s)		8.8			4.3		26.4	26.8			24.2	
Level of Service		A			A		C	C			C	
Approach Delay (s)		8.8			4.3			26.6			24.2	
Approach LOS		A			A			C			C	

### Intersection Summary

HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	10.7
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			












# HCM Unsignalized Intersection Capacity Analysis 4: Whitmore Lake Road & Nowatzke Drive

Existing Conditions  
AM Peak Hour

	WBL	WBR	SEL	SET	NWT	NWR
Movement	↙	↖	↗	↘	↙	↖
Lane Configurations	↙	↖	9	514	72	0
Volume (veh/h)	0	4		Free	Free	
Sign Control	Stop			0%	0%	
Grade	0%					
Peak Hour Factor	0.60	0.60	0.90	0.90	0.84	0.84
Hourly flow rate (vph)	0	7	10	571	86	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage		3				
Right turn flare (veh)				TWLT	TWLT	
Median type				2	2	
Median storage (veh)				433		
Upstream signal (ft)						
pX, platoon unblocked	0.79					
vC, conflicting volume	677	86	86			
vC1, stage 1 conf vol	86					
vC2, stage 2 conf vol	591					
vCu, unblocked vol	461	86	86			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	99			
cM capacity (veh/h)	541	973	1511			
Direction, Lane #	WB 1	SE 1	NW 1			
Volume Total	7	581	86			
Volume Left	0	10	0			
Volume Right	7	0	0			
cSH	243	1511	1700			
Volume to Capacity	0.03	0.01	0.05			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	20.2	0.2	0.0			
Lane LOS	C	A				
Approach Delay (s)	20.2	0.2	0.0			
Approach LOS	C					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			37.6%		ICU Level of Service	A
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis 5: Whitmore Lake Road & Tractor Supply Drive





















Existing Conditions  
AM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	10	504	64	3	2	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	11	531	69	3	3	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		TWLTL	TWLTL			
Median storage (veh)		2	2			
Upstream signal (ft)		1008				
pX, platoon unblocked					0.81	
vC, conflicting volume	72				622	70
vC1, stage 1 conf vol					70	
vC2, stage 2 conf vol					552	
vCu, unblocked vol	72				415	70
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	99				99	99
cM capacity (veh/h)	1528				568	992
Direction, Lane #	SE 1	SE 2	NW 1	SW 1		
Volume Total	11	531	72	17		
Volume Left	11	0	0	3		
Volume Right	0	0	3	13		
cSH	1528	1700	1700	1240		
Volume to Capacity	0.01	0.31	0.04	0.01		
Queue Length 95th (ft)	1	0	0	1		
Control Delay (s)	7.4	0.0	0.0	9.2		
Lane LOS	A			A		
Approach Delay (s)	0.1		0.0	9.2		
Approach LOS				A		
<b>Intersection Summary</b>						
Average Delay			0.4			
Intersection Capacity Utilization			36.5%	ICU Level of Service		A
Analysis Period (min)			15			

# HCM Signalized Intersection Capacity Analysis

## 1: Whitmore Lake Road & N. Territorial Road

Existing Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	283	19	73	440	59	148	402	124	8	46	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8		6.8	6.8		6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.96		1.00	0.93	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1845		1770	1830		1770	1797		1770	1740	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1845		1770	1830		1770	1797		1770	1740	
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.87	0.87	0.87	0.71	0.71	0.71
Adj. Flow (vph)	66	329	22	89	537	72	170	462	143	11	65	51
RTOR Reduction (vph)	0	2	0	0	3	0	0	7	0	0	23	0
Lane Group Flow (vph)	66	349	0	89	606	0	170	598	0	11	93	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	7.1	35.7		8.2	36.8		13.6	36.0		1.1	23.5	
Effective Green, g (s)	7.1	35.7		8.2	36.8		13.6	36.0		1.1	23.5	
Actuated g/C Ratio	0.07	0.33		0.08	0.34		0.13	0.33		0.01	0.22	
Clearance Time (s)	6.8	6.8		6.8	6.8		6.8	6.8		6.8	6.8	
Vehicle Extension (s)	2.0	6.0		2.0	6.0		2.0	6.0		2.0	6.0	
Lane Grp Cap (vph)	116	608		134	622		222	597		17	377	
v/s Ratio Prot	0.04	0.19		c0.05	c0.33		c0.10	c0.33		0.01	0.05	
v/s Ratio Perm												
v/c Ratio	0.57	0.57		0.66	0.97		0.77	1.00		0.65	0.25	
Uniform Delay, d1	49.1	30.0		48.7	35.2		45.8	36.1		53.4	35.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	2.6		9.2	29.9		13.2	37.1		49.2	1.0	
Delay (s)	52.8	32.6		57.9	65.1		59.0	73.2		102.6	36.0	
Level of Service	D	C		E	E		E	E		F	D	
Approach Delay (s)		35.8			64.2			70.1			41.8	
Approach LOS		D			E			E			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			59.2			HCM 2000 Level of Service				E		
HCM 2000 Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			108.2			Sum of lost time (s)				27.2		
Intersection Capacity Utilization			78.3%			ICU Level of Service				D		
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 2: US-23 SB Entrance Ramp/US-23 SB Exit Ramp & N. Territorial Road

Existing Conditions

PM Peak Hour


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↖					↖		↖
Volume (vph)	0	298	117	84	458	0	0	0	0	105	0	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5					5.2		5.2
Lane Util. Factor		1.00			1.00					1.00		1.00
Frt		0.96			1.00					1.00		1.00
Flt Protected		1.00			0.99					1.00		0.85
Satd. Flow (prot)		1792			1848					0.95		1.00
Flt Permitted		1.00			0.86					1770		1583
Satd. Flow (perm)		1792			1608					0.95		1.00
Peak-hour factor, PHF	0.82	0.82	0.82	0.95	0.95	0.95	0.92	0.92	0.92	1770		1583
Adj. Flow (vph)	0	363	143	88	482	0	0	0	0	0.90	0.90	0.90
RTOR Reduction (vph)	0	17	0	0	0	0	0	0	0	117	0	127
Lane Group Flow (vph)	0	489	0	0	570	0	0	0	0	0	0	0
Turn Type		NA		Perm	NA					117	0	127
Protected Phases		1			1					Perm		Perm
Permitted Phases				1								
Actuated Green, G (s)		47.2			47.2					2		2
Effective Green, g (s)		47.2			47.2					10.7		10.7
Actuated g/C Ratio		0.69			0.69					10.7		10.7
Clearance Time (s)		5.5			5.5					0.16		0.16
Vehicle Extension (s)		0.2			0.2					5.2		5.2
Lane Grp Cap (vph)		1232			1106					3.0		3.0
v/s Ratio Prot		0.27								276		246
v/s Ratio Perm					c0.35							
v/c Ratio		0.40			0.52					0.07		c0.08
Uniform Delay, d1		4.6			5.2					0.42		0.52
Progression Factor		1.00			0.93					26.2		26.6
Incremental Delay, d2		1.0			1.2					1.00		1.00
Delay (s)		5.5			6.1					1.1		1.8
Level of Service		A			A					27.2		28.4
Approach Delay (s)		5.5			6.1					C		C
Approach LOS		A			A		0.0				27.8	
							A				C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay		9.9										
HCM 2000 Volume to Capacity ratio		0.51										
Actuated Cycle Length (s)		68.6										
Intersection Capacity Utilization		69.9%								10.7		
Analysis Period (min)		15								C		
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 3: US-23 NB Exit Ramp/US-23 NB Entrance Ramp & N. Territorial Road

Existing Conditions

PM Peak Hour











												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	161	242	0	0	372	463	157	4	92	4	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		5.2	5.2			5.2	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		1.00			0.93		1.00	0.86			0.90	
Flt Protected		0.98			1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1826			1723		1770	1594			1653	
Flt Permitted		0.32			1.00		0.74	1.00			0.93	
Satd. Flow (perm)		588			1723		1381	1594			1561	
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.93	0.93	0.93	0.71	0.71	0.71
Adj. Flow (vph)	169	255	0	0	409	509	169	4	99	6	0	18
RTOR Reduction (vph)	0	0	0	0	62	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	424	0	0	856	0	169	103	0	0	5	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		5			5			6			6	
Permitted Phases	5						6			6		
Actuated Green, G (s)		44.0			44.0		13.9	13.9			13.9	
Effective Green, g (s)		44.0			44.0		13.9	13.9			13.9	
Actuated g/C Ratio		0.64			0.64		0.20	0.20			0.20	
Clearance Time (s)		5.5			5.5		5.2	5.2			5.2	
Vehicle Extension (s)		0.2			0.2		3.0	3.0			3.0	
Lane Grp Cap (vph)		377			1105		279	322			316	
v/s Ratio Prot					0.50			0.06				
v/s Ratio Perm		c0.72					c0.12				0.00	
v/c Ratio		1.12			0.77		0.61	0.32			0.02	
Uniform Delay, d1		12.3			8.8		24.9	23.3			21.9	
Progression Factor		1.06			1.00		1.00	1.00			1.00	
Incremental Delay, d2		83.5			5.3		3.7	0.6			0.0	
Delay (s)		96.6			14.1		28.5	23.9			21.9	
Level of Service		F			B		C	C			C	
Approach Delay (s)		96.6			14.1			26.8			21.9	
Approach LOS		F			B			C			C	

### Intersection Summary

HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	10.7
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Unsignalized Intersection Capacity Analysis 4: Whitmore Lake Road & Nowatzke Drive

Existing Conditions  
PM Peak Hour

						
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	4	10	4	134	664	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.76	0.76	0.87	0.87
Hourly flow rate (vph)	7	17	5	176	763	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type				TWLTL	TWLTL	
Median storage (veh)				2	2	
Upstream signal (ft)				433		
pX, platoon unblocked						
vC, conflicting volume	950	763	763			
vC1, stage 1 conf vol	763					
vC2, stage 2 conf vol	187					
vCu, unblocked vol	950	763	763			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	96	99			
cM capacity (veh/h)	437	404	849			
Direction, Lane #	WB 1	SE 1	NW 1			
Volume Total	23	182	763			
Volume Left	7	5	0			
Volume Right	17	0	0			
cSH	566	849	1700			
Volume to Capacity	0.04	0.01	0.45			
Queue Length 95th (ft)	3	0	0			
Control Delay (s)	14.0	0.3	0.0			
Lane LOS	B	A				
Approach Delay (s)	14.0	0.3	0.0			
Approach LOS	B					
<b>Intersection Summary</b>						
Average Delay		0.4				
Intersection Capacity Utilization		44.9%		ICU Level of Service		A
Analysis Period (min)		15				



# HCM Unsignalized Intersection Capacity Analysis 5: Whitmore Lake Road & Tractor Supply Drive

Existing Conditions  
PM Peak Hour

	SEL	SET	NWT	NWR	SWL	SWR
Movement						
Lane Configurations	↙	↑	↗		↙	↗
Volume (veh/h)	22	116	639	11	4	25
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.88	0.88	0.80	0.80
Hourly flow rate (vph)	27	141	726	12	5	31
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						2
Right turn flare (veh)						
Median type		TWLTL	TWLTL			
Median storage (veh)		2	2			
Upstream signal (ft)		1008				
pX, platoon unblocked					928	732
vC, conflicting volume	739				732	
vC1, stage 1 conf vol					195	
vC2, stage 2 conf vol					928	732
vCu, unblocked vol	739				6.4	6.2
tC, single (s)	4.1				5.4	
tC, 2 stage (s)					3.5	3.3
tF (s)	2.2				99	93
p0 queue free %	97				449	421
cM capacity (veh/h)	868					
Direction, Lane #	SE 1	SE 2	NW 1	SW 1		
Volume Total	27	141	739	36		
Volume Left	27	0	0	5		
Volume Right	0	0	12	31		
cSH	868	1700	1700	488		
Volume to Capacity	0.03	0.08	0.43	0.07		
Queue Length 95th (ft)	2	0	0	6		
Control Delay (s)	9.3	0.0	0.0	14.1		
Lane LOS	A			B		
Approach Delay (s)	1.5		0.0	14.1		
Approach LOS				B		
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			44.3%		ICU Level of Service	A
Analysis Period (min)			15			

# HCM Signalized Intersection Capacity Analysis

## 1: Whitmore Lake Road & N. Territorial Road

Existing Conditions W / Improvements  
AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↑	↱	↰	↑	↱	↰	↑	↱	↰	↑	↱
Volume (vph)	9	580	127	75	126	5	23	16	37	82	321	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.76	0.76	0.76	0.60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	9	611	134	99	166	7	38	27	62	92	361	48
RTOR Reduction (vph)	0	0	81	0	0	4	0	0	49	0	0	36
Lane Group Flow (vph)	9	611	53	99	166	3	38	27	13	92	361	12
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	1.2	46.8	46.8	10.7	56.3	56.3	4.5	24.1	24.1	8.7	28.3	28.3
Effective Green, g (s)	1.2	46.8	46.8	10.7	56.3	56.3	4.5	24.1	24.1	8.7	28.3	28.3
Actuated g/C Ratio	0.01	0.40	0.40	0.09	0.48	0.48	0.04	0.21	0.21	0.07	0.24	0.24
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0
Lane Grp Cap (vph)	18	742	630	161	892	758	67	382	324	131	448	381
v/s Ratio Prot	0.01	c0.33		c0.06	0.09		0.02	0.01		c0.05	c0.19	
v/s Ratio Perm			0.03			0.00			0.01			0.01
v/c Ratio	0.50	0.82	0.08	0.61	0.19	0.00	0.57	0.07	0.04	0.70	0.81	0.03
Uniform Delay, d1	57.9	31.7	22.0	51.4	17.5	16.0	55.5	37.7	37.4	53.1	42.0	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.7	8.6	0.2	4.8	0.3	0.0	6.4	0.2	0.1	13.0	12.0	0.1
Delay (s)	65.6	40.3	22.2	56.2	17.8	16.0	62.0	37.9	37.6	66.1	54.0	34.2
Level of Service	E	D	C	E	B	B	E	D	D	E	D	C
Approach Delay (s)		37.4			31.7			44.9			54.4	
Approach LOS		D			C			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay		42.2										
HCM 2000 Volume to Capacity ratio		0.82										
Actuated Cycle Length (s)		117.5										
Intersection Capacity Utilization		72.5%										
Analysis Period (min)		15										
c Critical Lane Group												
HCM 2000 Level of Service									D			
Sum of lost time (s)									27.2			
ICU Level of Service									C			

# HCM Signalized Intersection Capacity Analysis

## 1: Whitmore Lake Road & N. Territorial Road

Existing Conditions W / Improvements  
PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	↙	→	↘	↙	→	↘	↙	→	↘	↙	→	↘
Lane Configurations	↙	→	↘	↙	→	↘	↙	→	↘	↙	→	↘
Volume (vph)	57	283	19	73	440	59	148	402	124	8	46	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Frt	1.00	1.00	0.85	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.87	0.87	0.87	0.71	0.71	0.71
Adj. Flow (vph)	66	329	22	89	537	72	170	462	143	11	65	51
RTOR Reduction (vph)	0	0	15	0	0	47	0	0	97	0	0	43
Lane Group Flow (vph)	66	329	7	89	537	25	170	462	46	11	65	8
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	6.8	34.4	34.4	7.9	35.5	35.5	18.0	33.1	33.1	1.1	16.2	16.2
Effective Green, g (s)	6.8	34.4	34.4	7.9	35.5	35.5	18.0	33.1	33.1	1.1	16.2	16.2
Actuated g/C Ratio	0.07	0.33	0.33	0.08	0.34	0.34	0.17	0.32	0.32	0.01	0.16	0.16
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0
Lane Grp Cap (vph)	116	618	525	134	637	541	307	594	505	18	291	247
v/s Ratio Prot	0.04	0.18		c0.05	c0.29		c0.10	c0.25		0.01	0.03	
v/s Ratio Perm			0.00			0.02			0.03			0.01
v/c Ratio	0.57	0.53	0.01	0.66	0.84	0.05	0.55	0.78	0.09	0.61	0.22	0.03
Uniform Delay, d1	47.0	28.1	23.3	46.6	31.5	22.8	39.2	32.0	24.7	51.1	38.3	37.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.8	2.1	0.0	9.2	11.3	0.1	1.2	8.0	0.2	36.2	1.1	0.2
Delay (s)	50.8	30.2	23.3	55.8	42.9	22.9	40.4	40.0	25.0	87.3	39.3	37.3
Level of Service	D	C	C	E	D	C	D	D	C	F	D	D
Approach Delay (s)		33.1			42.5			37.3			42.7	
Approach LOS		C			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			38.6				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			103.7						27.2			
Intersection Capacity Utilization			67.1%						C			
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 1: Whitmore Lake Road & N. Territorial Road

Future Conditions  
AM Peak Hour

















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	580	143	79	126	5	39	26	41	82	331	43
Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.76	0.76	0.76	0.60	0.60	0.60	0.89	0.89	0.89
Adj. Flow (vph)	9	611	151	104	166	7	65	43	68	92	372	48
RTOR Reduction (vph)	0	0	89	0	0	4	0	0	52	0	0	36
Lane Group Flow (vph)	9	611	62	104	166	3	65	43	16	92	372	12
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	1.2	46.6	46.6	11.1	56.5	56.5	7.4	28.1	28.1	8.8	29.5	29.5
Effective Green, g (s)	1.2	46.6	46.6	11.1	56.5	56.5	7.4	28.1	28.1	8.8	29.5	29.5
Actuated g/C Ratio	0.01	0.38	0.38	0.09	0.46	0.46	0.06	0.23	0.23	0.07	0.24	0.24
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0
Lane Grp Cap (vph)	17	712	605	161	864	734	107	429	365	127	451	383
v/s Ratio Prot	0.01	c0.33		c0.06	0.09		0.04	0.02		c0.05	c0.20	
v/s Ratio Perm			0.04			0.00			0.01			0.01
v/c Ratio	0.53	0.86	0.10	0.65	0.19	0.00	0.61	0.10	0.04	0.72	0.82	0.03
Uniform Delay, d1	60.0	34.6	24.2	53.5	19.2	17.5	55.8	36.9	36.4	55.3	43.7	35.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	13.0	11.4	0.2	6.5	0.3	0.0	6.5	0.3	0.1	15.9	13.5	0.1
Delay (s)	73.0	46.0	24.4	60.0	19.5	17.5	62.3	37.2	36.5	71.2	57.2	35.3
Level of Service	E	D	C	E	B	B	E	D	D	E	E	D
Approach Delay (s)		42.1			34.7			46.2			57.7	
Approach LOS		D			C			D			E	
<b>Intersection Summary</b>												
HCM 2000 Control Delay		45.9										
HCM 2000 Volume to Capacity ratio		0.82										
Actuated Cycle Length (s)		121.8										
Intersection Capacity Utilization		82.3%										
Analysis Period (min)		15										
c Critical Lane Group												
HCM 2000 Level of Service									D			
Sum of lost time (s)									27.2			
ICU Level of Service									E			

# HCM Signalized Intersection Capacity Analysis

Future Conditions

2: US-23 SB Entrance Ramp/US-23 SB Exit Ramp & N. Territorial Road

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	391	312	43	121	0	0	0	0	235	0	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5					5.2		5.2
Lane Util. Factor		1.00			1.00					1.00		1.00
Frt		0.94			1.00					0.95		1.00
Flt Protected		1.00			0.99					0.95		1.00
Satd. Flow (prot)		1751			1839					1770		1583
Flt Permitted		1.00			0.77					0.95		1.00
Satd. Flow (perm)		1751			1425					1770		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	425	339	49	138	0	0	0	0	253	0	96
RTOR Reduction (vph)	0	41	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	723	0	0	187	0	0	0	0	253	0	96
Turn Type		NA		Perm	NA					Perm		Perm
Protected Phases		1			1							
Permitted Phases				1						2		2
Actuated Green, G (s)		44.0			44.0					14.6		14.6
Effective Green, g (s)		44.0			44.0					14.6		14.6
Actuated g/C Ratio		0.63			0.63					0.21		0.21
Clearance Time (s)		5.5			5.5					5.2		5.2
Vehicle Extension (s)		0.2			0.2					3.0		3.0
Lane Grp Cap (vph)		1111			904					372		333
v/s Ratio Prot		c0.41								c0.14		0.06
v/s Ratio Perm					0.13					0.68		0.29
v/c Ratio		0.65			0.21					25.2		23.0
Uniform Delay, d1		7.9			5.3					1.00		1.00
Progression Factor		1.00			1.29					5.0		0.5
Incremental Delay, d2		3.0			0.5					30.2		23.5
Delay (s)		10.8			7.4					C		C
Level of Service		B			A							
Approach Delay (s)		10.8			7.4			0.0			28.4	
Approach LOS		B			A			A			C	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			15.0									B
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			69.3							10.7		
Intersection Capacity Utilization			65.0%							C		
Analysis Period (min)			15									
c Critical Lane Group												











### 3: US-23 NB Exit Ramp/US-23 NB Entrance Ramp & N. Territorial Road

AM Peak Hour

Nowatzky Truck & Trailer TIA  
Fleis & VandenBrink Engineering, Inc.












# HCM Unsignalized Intersection Capacity Analysis 4: Whitmore Lake Road & Nowatzke Drive

Future Conditions  
AM Peak Hour

						
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (veh/h)	33	29	64	489	77	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.90	0.90	0.84	0.84
Hourly flow rate (vph)	55	48	71	543	92	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type				TWLT	TWLT	
Median storage (veh)				2	2	
Upstream signal (ft)				433		
pX, platoon unblocked	0.81					
vC, conflicting volume	779	93	95			
vC1, stage 1 conf vol	93					
vC2, stage 2 conf vol	686					
vCu, unblocked vol	610	93	95			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	88	95	95			
cM capacity (veh/h)	458	964	1499			
Direction, Lane #	WB 1	SE 1	NW 1			
Volume Total	103	614	95			
Volume Left	55	71	0			
Volume Right	48	0	4			
cSH	860	1499	1700			
Volume to Capacity	0.12	0.05	0.06			
Queue Length 95th (ft)	10	4	0			
Control Delay (s)	11.6	1.3	0.0			
Lane LOS	B	A				
Approach Delay (s)	11.6	1.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			2.5			
Intersection Capacity Utilization			45.9%	ICU Level of Service		A
Analysis Period (min)			15			

# HCM Unsignalized Intersection Capacity Analysis 5: Whitmore Lake Road & Tractor Supply Drive

Future Conditions  
AM Peak Hour

























						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	28	494	59	9	12	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.95	0.95	0.93	0.93	0.60	0.60
Hourly flow rate (vph)	29	520	63	10	20	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		TWLT	TL			
Median storage (veh)		2	2			
Upstream signal (ft)		1008				
pX, platoon unblocked					0.84	
vC, conflicting volume	73				647	68
vC1, stage 1 conf vol					68	
vC2, stage 2 conf vol					579	
vCu, unblocked vol	73				482	68
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	98				96	96
cM capacity (veh/h)	1527				539	995
Direction, Lane #	SE 1	SE 2	NW 1	SW 1		
Volume Total	29	520	73	55		
Volume Left	29	0	0	20		
Volume Right	0	0	10	35		
cSH	1527	1700	1700	1481		
Volume to Capacity	0.02	0.31	0.04	0.04		
Queue Length 95th (ft)	1	0	0	3		
Control Delay (s)	7.4	0.0	0.0	9.9		
Lane LOS	A			A		
Approach Delay (s)	0.4		0.0	9.9		
Approach LOS				A		
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			36.0%	ICU Level of Service		A
Analysis Period (min)			15			



# HCM Signalized Intersection Capacity Analysis

## 1: Whitmore Lake Road & N. Territorial Road

Future Conditions  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	283	29	89	440	59	158	404	140	8	49	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	0.95	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.82	0.82	0.82	0.87	0.87	0.87	0.71	0.71	0.71
Adj. Flow (vph)	66	329	34	109	537	72	182	464	161	11	69	51
RTOR Reduction (vph)	0	0	23	0	0	47	0	0	98	0	0	43
Lane Group Flow (vph)	66	329	11	109	537	25	182	464	63	11	69	8
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8			4			6			2
Actuated Green, G (s)	6.9	32.2	32.2	10.5	35.8	35.8	18.3	33.2	33.2	1.1	16.0	16.0
Effective Green, g (s)	6.9	32.2	32.2	10.5	35.8	35.8	18.3	33.2	33.2	1.1	16.0	16.0
Actuated g/C Ratio	0.07	0.31	0.31	0.10	0.34	0.34	0.18	0.32	0.32	0.01	0.15	0.15
Clearance Time (s)	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Vehicle Extension (s)	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0	2.0	6.0	6.0
Lane Grp Cap (vph)	117	575	489	178	640	543	310	593	504	18	286	243
v/s Ratio Prot	0.04	0.18		c0.06	c0.29		c0.10	c0.25		0.01	0.04	
v/s Ratio Perm			0.01			0.02			0.04			0.00
v/c Ratio	0.56	0.57	0.02	0.61	0.84	0.05	0.59	0.78	0.12	0.61	0.24	0.03
Uniform Delay, d1	47.2	30.2	25.0	44.9	31.5	22.8	39.5	32.2	25.2	51.3	38.8	37.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.7	2.7	0.1	4.3	10.9	0.1	1.8	8.2	0.3	36.2	1.2	0.2
Delay (s)	50.9	33.0	25.1	49.2	42.5	22.9	41.3	40.4	25.5	87.5	40.0	37.7
Level of Service	D	C	C	D	D	C	D	D	C	F	D	D
Approach Delay (s)		35.1			41.5			37.7			43.1	
Approach LOS		D			D			D			D	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			38.8									D
HCM 2000 Volume to Capacity ratio			0.85									
Actuated Cycle Length (s)			104.2							27.2		
Intersection Capacity Utilization			67.3%							C		
Analysis Period (min)			15									
c Critical Lane Group												

2: US-23 SB Entrance Ramp/US-23 SB Exit Ramp & N. Territorial Road

PM Peak Hour


















### Intersection Summary

# HCM Signalized Intersection Capacity Analysis

Future Conditions

## 3: US-23 NB Exit Ramp/US-23 NB Entrance Ramp & N. Territorial Road

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	252	0	0	382	463	160	4	92	4	0	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5			5.5		5.2	5.2			5.2	
Lane Util. Factor		1.00			1.00		1.00	1.00			1.00	
Frt		1.00			0.93		1.00	0.86			0.90	
Flt Protected		0.98			1.00		0.95	1.00			0.99	
Satd. Flow (prot)		1827			1725		1770	1594			1653	
Flt Permitted		0.30			1.00		0.74	1.00			0.93	
Satd. Flow (perm)		563			1725		1381	1594			1562	
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.93	0.93	0.93	0.71	0.71	0.71
Adj. Flow (vph)	173	265	0	0	420	509	172	4	99	6	0	18
RTOR Reduction (vph)	0	0	0	0	61	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	438	0	0	868	0	172	103	0	0	5	0
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		5			5			6			6	
Permitted Phases	5						6			6		
Actuated Green, G (s)		44.0			44.0		14.0	14.0			14.0	
Effective Green, g (s)		44.0			44.0		14.0	14.0			14.0	
Actuated g/C Ratio		0.64			0.64		0.20	0.20			0.20	
Clearance Time (s)		5.5			5.5		5.2	5.2			5.2	
Vehicle Extension (s)		0.2			0.2		3.0	3.0			3.0	
Lane Grp Cap (vph)		360			1104		281	324			318	
v/s Ratio Prot					0.50			0.06				
v/s Ratio Perm		c0.78					c0.12				0.00	
v/c Ratio		1.22			0.79		0.61	0.32			0.02	
Uniform Delay, d1		12.4			8.9		24.9	23.3			21.8	
Progression Factor		1.29			1.00		1.00	1.00			1.00	
Incremental Delay, d2		119.2			5.7		3.9	0.6			0.0	
Delay (s)		135.2			14.6		28.8	23.9			21.9	
Level of Service		F			B		C	C			C	
Approach Delay (s)		135.2			14.6			26.9			21.9	
Approach LOS		F			B			C			C	

### Intersection Summary

HCM 2000 Control Delay	48.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	10.7
Intersection Capacity Utilization	99.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

# HCM Unsignalized Intersection Capacity Analysis












## 4: Whitmore Lake Road & Nowatzke Drive

Future Conditions  
PM Peak Hour

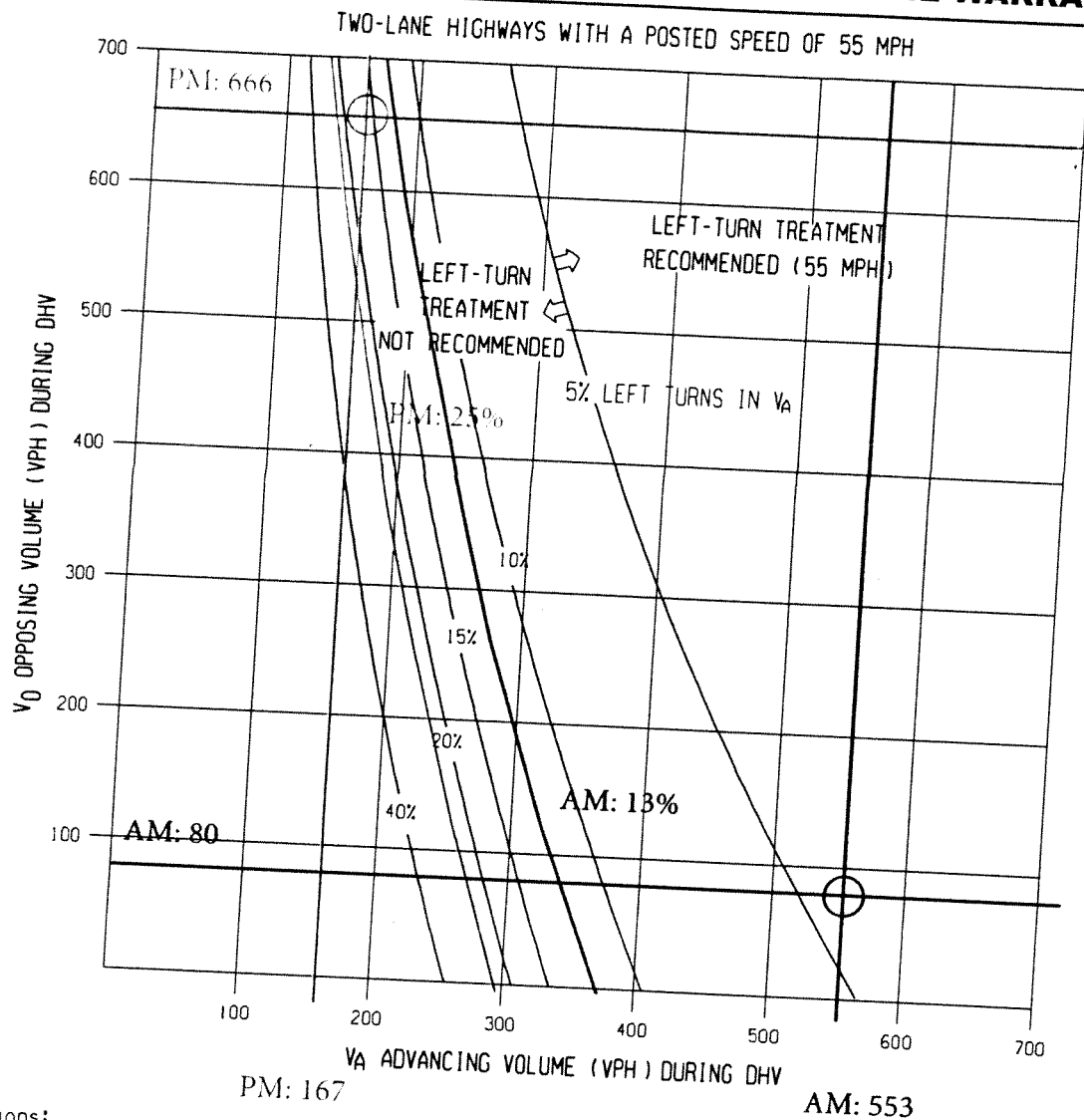
Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations	↰	↰	↰	↰	↰	↰
Volume (veh/h)	13	57	33	134	655	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.60	0.60	0.76	0.76	0.87	0.87
Hourly flow rate (vph)	22	95	43	176	753	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		3				
Median type						
Median storage (veh)				TWLT	TWLT	
Upstream signal (ft)				2	2	
pX, platoon unblocked	0.98			433		
vC, conflicting volume	1022	759	766			
vC1, stage 1 conf vol	759					
vC2, stage 2 conf vol	263					
vCu, unblocked vol	1015	759	766			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)	5.4					
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	77	95			
cM capacity (veh/h)	427	406	848			
Direction, Lane #	WB 1	SE 1	SE 2	NW 1		
Volume Total	117	43	176	766		
Volume Left	22	43	0	0		
Volume Right	95	0	0	13		
cSH	499	848	1700	1700		
Volume to Capacity	0.23	0.05	0.10	0.45		
Queue Length 95th (ft)	22	4	0	0		
Control Delay (s)	16.0	9.5	0.0	0.0		
Lane LOS	C	A				
Approach Delay (s)	16.0	1.9		0.0		
Approach LOS	C					
<b>Intersection Summary</b>						
Average Delay		2.1				
Intersection Capacity Utilization		45.3%		ICU Level of Service		A
Analysis Period (min)		15				

# HCM Unsignalized Intersection Capacity Analysis 5: Whitmore Lake Road & Tractor Supply Drive

Future Conditions  
PM Peak Hour

						
Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	31	116	599	70	23	58
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.82	0.82	0.88	0.88	0.80	0.80
Hourly flow rate (vph)	38	141	681	80	29	72
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						2
Median type		TWLTL	TWLTL			
Median storage (veh)		2	2			
Upstream signal (ft)		1008				
pX, platoon unblocked						
vC, conflicting volume	760				938	720
vC1, stage 1 conf vol					720	
vC2, stage 2 conf vol					217	
vCu, unblocked vol	760				938	720
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	96				94	83
cM capacity (veh/h)	852				450	428
Direction, Lane #	SE 1	SE 2	NW 1	SW 1		
Volume Total	38	141	760	101		
Volume Left	38	0	0	29		
Volume Right	0	0	80	72		
cSH	852	1700	1700	597		
Volume to Capacity	0.04	0.08	0.45	0.17		
Queue Length 95th (ft)	3	0	0	15		
Control Delay (s)	9.4	0.0	0.0	14.7		
Lane LOS	A			B		
Approach Delay (s)	2.0		0.0	14.7		
Approach LOS				B		
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			46.0%	ICU Level of Service	A	
Analysis Period (min)			15			

# WHITMORE LAKE ROAD & NOWATZKE DRIVE LT LANE WARRANT



## Instructions:

1. The family of curves represent the percentage of left turns in the advancing volume ( $V_A$ ). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of 5, the designer should estimate where the curve lies.
2. Read  $V_A$  and  $V_0$  into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the line in #1. If the point is to the right of the line, then a left-turn lane is recommended. If the point is to the left of the line, then a left-turn is not recommended based on traffic volumes.

**LEFT TURN LANE  
SHOULD BE CONSIDERED**



TRAFFIC AND SAFETY  
NOTE

TRAFFIC VOLUME GUIDELINES  
FOR LEFT-TURN LANES AT  
UNSIGNALIZED INTERSECTIONS

DRAWN BY: MTS

08/05/2004

CHECKED BY: JAT

PLAN DATE:

FILE: K:\DGN\ts notes\Note605A tsn.dgn

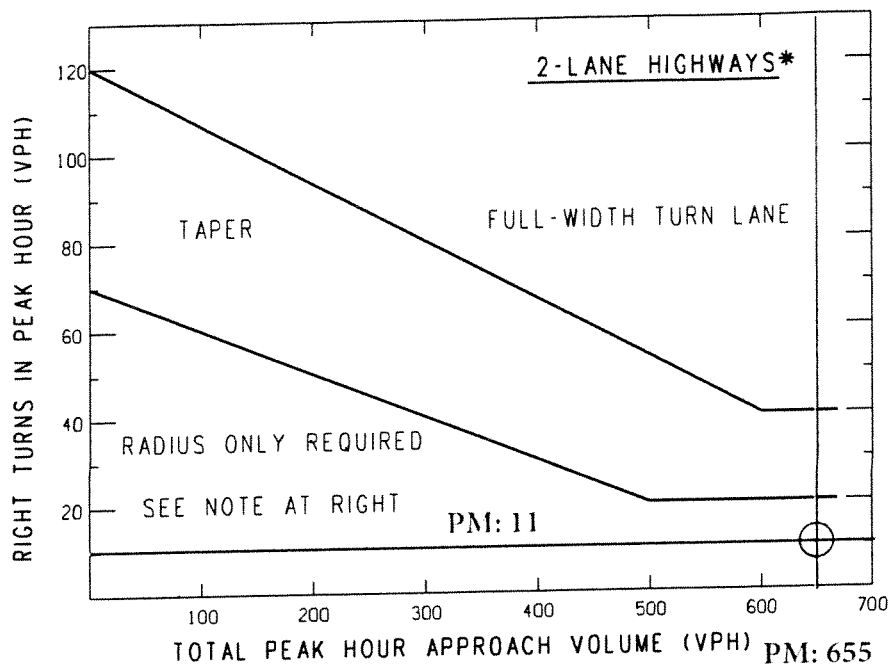
605A

SHEET

5 OF 6

REV. 08/05/2004

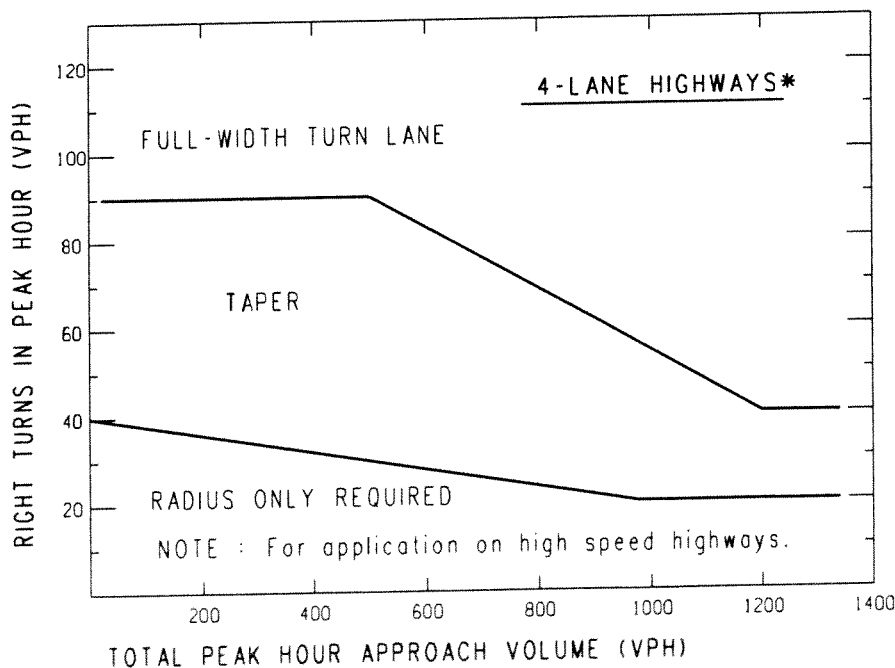
# WHITMORE LAKE ROAD & NOWATZKE DRIVE RT LANE WARRANT



NOTE:  
For posted speeds at or under 45 mph, peak hour right turns greater than 40 vph, and total peak hour approach less than 300 vph, adjust right turn volumes.

Adjust peak hour right turns = Peak hour right turns - 20

**RADIUS ONLY REQUIRED**



\*If a center left-turn lane exists (i.e. 3 or 5 lane highway), subtract the number of left turns in approach volume from the total approach volume to get an adjusted total approach volume.

## Sample Problem:

The Design Speed is 55 mph. The Peak Hour Approach Volume is 300 vph. The Number of Right Turns in the Peak Hour is 100 vph. Determine if a right turn lane is recommended.

## Solution:

Figure indicates that the intersection of 300 vph and 100 vph is located above the upper trend line; thus, a right-turn lane may be recommended.



TRAFFIC AND SAFETY  
NOTE

TRAFFIC VOLUME GUIDELINES  
FOR RIGHT-TURN LANES AND TAPERS

DRAWN BY: MTS

08/05/2004

CHECKED BY: JAT

PLAN DATE:

604A

SHEET  
2 OF 2

FILE: K:\DGN\ts notes\Note604A tsn.dgn

REV. 08/05/2004



**REQUIRED NOTICE**  
REQUIRED LIFT SERVICE PARKING  
1 PER 600 SQ. FT. OF FLOOR AREA  
1 PER FOUR EMPLOYEES  
3 PER SERVICE BAY  
3 PER BAY PAVING REQUIRED  
REQUIRED RESTROOMS/STALL PARKING:  
1 PER PATRONAGE  
1 PER EMPLOYEE  
REQUIRED ELEVATOR  
REQUIRED ELEVATOR VEHICLE REPAIR  
10 PER BAY  
10 PER BAY  
1 PER TWO EMPLOYEES  
Proposed PARKING:  
24 STRECHORD STALLS

**SETBACKS FOR GENERAL CONSTRUCTION**  
FRONT: 35'

**CONSULTANTS**

**PREMIER CIVIL  
ENGINEERING**

505 742-3344  
1400 Street Louis, #1000  
Phone: (514) 889-2165  
Fax: (514) 889-2167



## MEMO

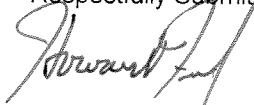
**To:** Northfield Township Board  
**From:** Howard Fink  
**Date:** 9/18/2014  
**Re:** Nowatzke

---

Dear Township Board,

We confirmed with Bill Lenaghan that all of the site issues indicated in Kurt's letter (attached) have been addressed.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Howard Fink", written in dark ink.

Howard Fink, Township Manager

# Northfield Township

Building & Zoning Department

---

To: Northfield Township Planning Commission

From: Kurt Weiland, Zoning Administrator

Subject: Nowatzke Truck & Trailer

Date: August 20, 2014

---

On August 13, 2014, I have inspected the Nowatzke Truck & Trailer site, located at 6900 Whitmore Lake Road to verify compliance with the General Commercial section of the Northfield Township Zoning Ordinance as required under the conditional use process. This inspection found the public hearing sign (4'X4') mounted on the fence along Whitmore Lake Road.

This inspection found the following violations and concerns;

1. Vehicles for sale along US23 appear to be encroaching into the required rear yard setback.

*Section 32.02(F) "Display of any vehicles shall not be within street right-of-way, in any required side or rear yard, or in any required transition strip".*

2. Outside storage of materials equipment, and waste products related to minor repairs of vehicles.

*Section 32.03 Conditional Uses (M); Minor repair of vehicles, provided all work, materials, equipment, and waste products shall be contained within a completely enclosed building.*

Many of the semi-trailers stored on site appear to have been sitting in the same place for some time and some do not appear to be road worthy. I believe a time limit should be set for any trailers that do not have current road certifications, such as thirty days (30). This would include those waiting for repairs, otherwise we have would appears to be a junkyard.

**NORTHFIELD TOWNSHIP BOARD AGENDA**  
**September 23, 2014 - - 7:00 PM**  
**8350 Main Street, 2<sup>nd</sup> Floor**

CALL TO ORDER  
PLEDGE/INVOCATION  
ROLL CALL  
ADOPT BALANCE OF AGENDA  
CALL TO THE PUBLIC  
CORRESPONDENCE and ANNOUNCEMENTS

**AGENDA ITEMS:**

1. Time Limit Protocol for Presentations +
2. Non-Motorized Path Update
3. People's Express Update
4. Health Insurance Update
5. Adding Budget line for Washtenaw County Recycling Event/County Clean-up Day
6. Horseshoe Lake sewer fund balance disbursement
7. Final Approval for Conditional Use +
8. Assessing Contract

2<sup>ND</sup> CALL TO THE PUBLIC  
BOARD MEMBER COMMENTS  
ADJOURNMENT

\* Denotes previous backup; + denotes no backup in package

This notice is posted in compliance with PA 267 of 1976 as amended (Open Meetings Act) MCLA 41.72A (2) (3) and the Americans with Disabilities Act. (ADA) individuals with disabilities requiring auxiliary aids or services should contact the Northfield Township Office, (734-449-2880) seven days in advance.

# NORTHFIELD TOWNSHIP

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Memo

**To:** Northfield Township Board  
**From:** Howard Fink  
**Date:** 9/18/2014  
**Re:** Non-Motorized Path

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Dear Township Board,

Following opening the Non – Motorized Path bids, two board members expressed interest in evaluating the proposals in a sub-committee setting. We have settled on four firms that Mr. Dockett, Ms. Otto and myself will be interviewing for further information; Tetra Tech, OHM, Midwestern and Metro Consulting Associates. We currently have Tetra Tech and Metro Consulting Associates scheduled Thursday and Friday respectively. I hope to have all four interviewed by our workshop meeting and have a recommendation to the board on which firm to chose. Ultimately, it is the full board's decision and the final engineering company will need to be ratified by the full board. Please note that the four companies we are interviewing were chosen by evaluating the companies according to the point schedule we adopted as part of the RFP. Mr. Dockett requested that we interview Metro Consulting as well.

Respectfully Submitted,



Howard Fink

July 26, 2014

Lenore M. Zelenock  
C/O PEX and NHS  
PO Box 441  
Whitmore Lake, MI 48189

Northfield Township Board Members and Northfield Township Manager  
8350 Main Street  
Whitmore Lake, MI 48189

Dear Northfield Township Board Members and Northfield Township Manager,

As you may recall, I gave a presentation to the Northfield Township board members on behalf of the People's Express (PEX) and Northfield Humans Services (NHS) board members on November 26, 2013. In response to that presentation, on April 25, 2014, the Northfield Township manager's assistant provided the following inquiries for more information (email attached). Our responses are below.

**Item 1: Matching fund paperwork/RFP from the FTA**

The FTA (Federal Transit Authority) does not require a RFP (Request for Proposal). The agreement is actually with AAATA (Ann Arbor Area Transportation Authority) which pays 50% of the expenses for transportation in rural areas.

**Item 2: Ridership paperwork for Northfield Township for the past year**

The ridership in Northfield Township has dramatically decreased and is negligible with the residents required to pay the full cost for transportation (\$10 for pick-up and \$1.25 per mile) due to no supporting funds from Northfield Township so we are no longer tracking the rides for Northfield Township residents.

**Item 3: Doug's salary for PEX**

Doug's salary for PEX is \$60,000. Including in his salary is the usage of a vehicle and Doug pays taxes for the usage. Doug receives no health insurance. Last year, Doug made a donation to PEX of \$10,000.

Doug manages a budget of around \$900,000 for PEX. He manages 17 PEX employees. In addition, Doug is instrumental in ensuring PEX has continually obtained grants and contacts over the years.

**Item 4: A breakdown for a community donating the \$20,000 you are asking for from Northfield Township (for example Wixom is donating \$20,000)**

**a. How many vehicles do they have?**

Wixom has a not to exceed contract for \$20,000. No vehicles are specifically allocated for Wixom. It is a pay as you go service so the city pays two-thirds of each ride; starting at \$9 and going up to \$18 per ride. The resident pays the balance approximately \$3 up to \$9.

**b. How many people do they service?**

For Wixom, the contract is for 400 seniors on the eligibility list provided by Wixom. To receive rides, the riders need to request 3 days in advance.

**c. What are the people paying per ride there?**

The riders pay 30% of the fare and Wixom pays the rest (e.g. for a 10 mile trip the rider pays \$8 and Wixom pays \$18).

**d. Basically – Why are they charged \$20,000 and what are they getting for it?**

As mentioned above, for Wixom, it is a pay as you go service. The contract is for 400 eligible seniors for rides as needed and as available.

Other locations have different contracts. For example, the contract with South Lyon is for \$66,000. The residents pay \$2 for a ride anywhere in the township and \$4 outside of the township. The cost is for one way.

The proposal for Northfield Township is for \$20,000. Northfield Township would get a dedicated vehicle. The cost for the residents will be \$1 anywhere in the township and \$5 to Ann Arbor. Again, the cost is for one way.

**Item 5: What is your 5 & 10 year model of sustainability if the JARC grant (for example) isn't funded in 3 or 4 years?**

PEX has been obtaining grants for over sixteen years. In addition to grants, PEX has contracts with two cities and three townships. Also, Doug and his staff are always seeking new grants and new contracts. There could be a time when PEX does not receive an existing grant then PEX would need to adjust its services appropriately. This would be similar to townships and households make adjustment based on lost income.

**Item 6: And there was one question from the Northfield Human Services presentation: Are you receiving any funding from U of M or Community Mental Health for transporting people with disabilities?**

NHS is not receiving any funding from U of M or Community Mental Health for transporting people with disabilities. If any Northfield Township board member or community members are aware of such funding, we would appreciate a contact name so we could pursue the funding.

We appreciate your inquires. One goal of PEX is to work with Northfield Township to provide affordable transportation to the residents of Northfield Township like we do for many other communities (e.g. South Lyon, Saline, Wixom, Milan, Lyon Charter Township, and Green Oak Township). We would like to suggest you contact these communities and obtain their feedback on the services provided by PEX.

Please contact me if more information is required or if you have any questions.

We look forward to hearing from you so we can work together to provide affordable transportation to the residents of Northfield Township.

Yours Truly,



Lenore M. Zelenock

PEX and NHS Board Member

Mobile: 734-395-6983 – [tlzteam@yahoo.com](mailto:tlzteam@yahoo.com)

# NORTHFIELD TOWNSHIP

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Memo

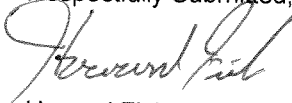
**To:** Northfield Township Board  
**From:** Howard Fink  
**Date:** 9/18/2014  
**Re:** Health Insurance Update

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Dear Township Board,

Health insurance updates are underway. Traditional fully insured renewals are not coming back competitive and as it stands, we will not be able to offer similar benefits under the hard caps as we have in the past. Many of the Affordable Care Act regulations are hindering us and seem to have created an increase in rates. We are exploring another option. We are quoting a self funded option under the Cofinity Network through Aetna. It is not a traditional self funding system, but rather a hybrid of a fully insured plan and self funded option. We would be responsible for a worst case scenario for all employees and then receive a check at the end of the year if a better result occurred. Blue Cross offers this option as well but it is not competitive. We hope that this will be able to restore our benefits package at the levels it has been in the past. In order to quote this option, every full time employee is required to fill out a health questionnaire, which is in progress. We are planning for a full presentation at the October workshop.

Respectfully Submitted,



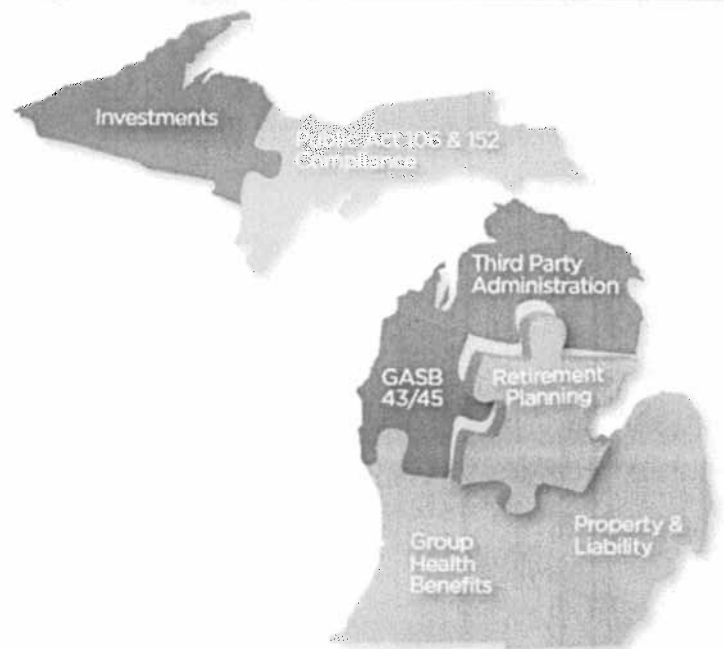
Howard Fink

**Proposal for**

## **Northfield Township**

**Burnham&Flower**  
INSURANCE GROUP

service  
administration  
consulting



Presented by  
**Jack Schmitz**  
September 4, 2014

315 South Kalamazoo Mall . Kalamazoo, MI 49007

800.748.0554 [health.bfgroup.com](http://health.bfgroup.com)



# Northfield Township

007011521-0001

4 Employees

Effective Date: 12/1/2014



Current Plan	Mapped Renewal Plan	SB Alternative #1
Blue Cross/Blue Shield Simply Blue PPO \$1000	Blue Cross/Blue Shield Simply Blue PPO Gold \$1000	Blue Cross/Blue Shield Simply Blue PPO Gold \$1500

## In Network Benefits

Office Visit Copays - Primary/Specialty	\$30/\$30	\$20/\$40	\$20/\$40
Chiropractic Copay	\$30	\$30	\$30
Emergency Room Copay	\$150	\$150	\$150

Urgent Care Copay	\$30	\$60	\$60
Deductible	\$1,000/\$2,000	\$1,000/\$2,000	\$1,500/\$3,000
Coinsurance	80% After Deductible	80% After Deductible	80% After Deductible
Maximum Out-of-Pocket	\$3,500/\$7,000	\$3,500/\$7,000	\$3,500/\$7,000
Employer Contribution			

## Out of Network Benefits

Deductible	\$2,000/\$4,000	\$2,000/\$4,000	\$3,000/\$6,000
Coinsurance	60% After Deductible	60% After Deductible	60% After Deductible
Maximum Out of Pocket	\$7,000/\$14,000	\$7,000/\$14,000	\$7,000/\$14,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$5/\$25/\$50	\$15/\$50/50%/20%/ 25%	\$15/\$50/50%/20%/ 25%
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## Dental

Dental	Traditional Plus Plan 3 100/75/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)
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## Vision

Vision	Blue Vision 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10
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## Premium

### Medical

Monthly Rate	\$3,163.06	\$5,265.17	\$5,121.22
Estimated Monthly Premium	\$3,163.06	\$5,265.17	\$5,121.22
Estimated Annual Premium	\$37,956.72	\$63,182.04	\$61,454.64
Estimated Annual ACA Taxes and Fees	\$2,377.20	\$3,861.24	\$3,750.60
HRA/HSA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$40,333.92	\$67,043.28	\$65,205.24
Estimated Amount of Premium Change		\$26,709.36	\$24,871.32
Estimated Percentage Change		66.22%	61.66%

Elective Abortions Are Included

# Northfield Township

Effective Date: 12/1/2014

SB Alternative #2	SB Alternative #3	SB Alternative #4	BCN Alternative #1
Blue Cross/Blue Shield Simply Blue PPO Silver \$2000	Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$3000	Blue Cross/Blue Shield Simply Blue PPO HSA Gold \$2000 w/Contribution	Blue Care Network BCN HMO Gold \$1000
\$40/\$60	70% After Deductible	80% After Deductible	\$20/\$40
\$40	70% After Deductible	80% After Deductible	\$40
\$250	70% After Deductible	80% After Deductible	\$150 After Deductible (includes imaging)
\$60	70% After Deductible	80% After Deductible	\$50
\$2,000/\$4,000	\$3,000/\$6,000	\$2,000/\$4,000	\$1,000/\$2,000
80% After Deductible	70% After Deductible	80% After Deductible	80% After Deductible
\$6,350/\$12,700	\$6,350/\$12,700	\$4,500/\$9,000	\$3,500/\$7,000
		\$1,000/\$2,000	
\$4,000/\$8,000	\$6,000/\$12,000	\$4,000/\$8,000	No Coverage
60% After Deductible	60% After Deductible	60% After Deductible	No Coverage
\$12,700/\$25,400	\$12,700/\$25,400	\$9,000/\$18,000	No Coverage
\$20/\$60/50%/20%/25%	\$20/\$60/50%/20%/ 25% After Deductible	\$15/\$50/50%/20%/ 25% After Deductible	\$4/\$15/\$40/\$80/20%/20%
Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)
Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10
\$4,613.05	\$4,030.53	\$4,561.43	\$4,906.92
\$4,613.05	\$4,030.53	\$4,561.43	\$4,906.92
\$55,356.60	\$48,366.36	\$54,737.16	\$58,883.04
\$3,361.44	\$2,914.80	\$3,322.32	\$2,065.44
\$0.00	\$0.00	\$6,000.00	\$0.00
\$58,718.04	\$51,281.16	\$64,059.48	\$60,948.48
\$18,384.12	\$10,947.24	\$23,725.56	\$20,614.56
45.58%	27.14%	58.82%	51.11%

# Northfield Township

007011521-0001  
4 Employees

Effective Date: 12/1/2014



Mapped Renewal Plan	PH Alternative #1	PH Alternative #2
Blue Cross/Blue Shield Simply Blue PPO Gold \$1000	Priority Health PPO Gold 1000	Priority Health PPO Silver 2000

## In Network Benefits

Office Visit Copays - Primary/Specialty	\$20/\$40	\$20/\$35	\$30/\$45
Chiropractic Copay	\$30	\$20	\$30
Emergency Room Copay	\$150	\$150 (Includes Imaging)	\$150 (Includes Imaging)
Urgent Care Copay	\$60	\$75	\$75
Deductible	\$1,000/\$2,000	\$1,000/\$2,000	\$2,000/\$4,000
Coinsurance	80% After Deductible	80% After Deductible	70% After Deductible
Maximum Out-of-Pocket	\$3,500/\$7,000	\$3,800/\$7,600	\$6,000/\$12,000

## Out of Network Benefits

Deductible	\$2,000/\$4,000	\$2,000/\$4,000	\$4,000/\$8,000
Coinsurance	60% After Deductible	60% After Deductible	50% After Deductible
Maximum Out of Pocket	\$7,000/\$14,000	\$7,600/\$15,200	\$12,000/\$24,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$15/\$50/50%/20%/ 25%	\$15/\$50/\$80/20%/ 20%	\$20/\$60/\$80/20%/20%
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## Dental

Dental	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Dental Plan-A 1000 Contributory 100/80/50	Dental Plan-A 1000 Contributory 100/80/50
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## Vision

Vision	Blue Vision SG 12-12-12 \$5/\$10	Pediatric Coverage Only	Pediatric Coverage Only
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## Premium

### Dental

Monthly Rate		\$275.76	\$275.76
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### Medical

Monthly Rate	\$5,265.17	\$6,148.59	\$5,323.84
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Estimated Monthly Premium	\$5,265.17	\$6,424.35	\$5,599.60
Estimated Annual Premium	\$63,182.04	\$77,092.20	\$67,195.20
ACA Taxes and Fees are Included			
Estimated Annual ACA Taxes and Fees	\$3,861.24		
HRA/HSA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$67,043.28	\$77,092.20	\$67,195.20
Estimated Amount of Premium Change		\$10,048.92	\$151.92
Estimated Percentage Change		14.99%	0.23%

Elective Abortions Are Not Included

# Northfield Township

Effective Date: 12/1/2014

PH Alternative #3	PH Alternative #4	PH Alternative #5
Priority Health PPO HSA Gold 1250 5-tier Rx	Priority Health PPO HSA Bronze \$3000	Priority Health HMO Gold 1000
100% After Deductible	60% After Deductible	\$20/\$35
100% After Deductible	60% After Deductible	\$20
100% After Deductible	60% After Deductible	\$150 (Includes Imaging)
100% After Deductible	60% After Deductible	\$75
\$1,250/\$2,500	\$3,000/\$6,000	\$1,000/\$2,000
100% After Deductible	60% After Deductible	80% after deductible
\$2,000/\$4,000	\$6,350/\$12,700	\$3,800/\$7,600
\$2,500/\$5,000	\$6,000/\$12,000	No Coverage
70% After Deductible	50% After Deductible	No Coverage
\$4,000/\$8,000	\$12,700/\$25,400	No Coverage
\$20/\$60/\$80/20%/ 20% After Deductible	\$20/\$60/\$80/20% /20%	\$15/\$50/\$80/20%/20%
Dental Plan-A 1000 Contributory 100/80/50	Dental Plan-A 1000 Contributory 100/80/50	Dental Plan-A 1000 Contributory 100/80/50
Pediatric Coverage Only	Pediatric Coverage Only	Pediatric Coverage Only
\$275.76	\$275.76	\$275.76
\$6,271.93	\$4,400.35	\$5,327.86
\$6,547.69	\$4,676.11	\$5,603.62
\$78,572.28	\$56,113.32	\$67,243.44
\$0.00	\$0.00	\$0.00
\$78,572.28	\$56,113.32	\$67,243.44
\$11,529.00	(\$10,929.96)	\$200.16
17.20%	-16.30%	0.30%

# Northfield Township

007011521-0001

4 Employees

Effective Date: 12/1/2014



Mapped Renewal Plan	HAP Alternative #1	HAP Alternative #2
Blue Cross/Blue Shield Simply Blue PPO Gold \$1000	HAP HAP PPO 1000 Gold	HAP HAP PPO HSA 1500 Gold

## In Network Benefits

Office Visit Copays - Primary/Specialty	\$20/\$40	\$30/\$50	80% After Deductible
Chiropractic Copay	\$30	\$30	80% After Deductible
Emergency Room Copay	\$150	\$200	80% After Deductible
Urgent Care Copay	\$60	\$65	80% After Deductible
Deductible	\$1,000/\$2,000	\$1,000/\$2,000	\$1,500/\$3,000
Coinsurance	80% After Deductible	100% After Deductible	80% After Deductible
Maximum Out-of-Pocket	\$3,500/\$7,000	\$3,000/\$6,000	\$2,000/\$4,000

## Out of Network Benefits

Deductible	\$2,000/\$4,000	\$2,000/\$4,000	\$3,000/\$6,000
Coinsurance	60% After Deductible	50% After Deductible	50% After Deductible
Maximum Out of Pocket	\$7,000/\$14,000	\$6,000/\$12,000	\$4,000/\$8,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$15/\$50/50%/20%/ 25%	\$15/\$40/50%/50%	80% After Deductible
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## Dental

Dental	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Small Group Dental Plan 100/50/50	Small Group Dental Plan 100/50/50
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## Vision

Vision	Blue Vision SG 12-12-12 \$5/\$10	Pediatric Coverage Only	Pediatric Coverage Only
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## Premium

### Dental

Pediatric Only		\$25.82	\$25.82
Adult		\$36.85	\$36.85

### Medical

Monthly Rate	\$5,265.17	\$6,308.98	\$5,951.86
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Estimated Monthly Premium	\$5,265.17	\$6,530.08	\$6,172.96
Estimated Annual Premium	\$63,182.04	\$78,360.96	\$74,075.52
ACA Taxes and Fees are Included			
Estimated Annual ACA Taxes and Fees	\$3,861.24		
HRA/HSA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$67,043.28	\$78,360.96	\$74,075.52
Estimated Amount of Premium Change		\$11,317.68	\$7,032.24
Estimated Percentage Change		16.88%	10.49%

Elective Abortions Are Not Included

HAP Alternative #3

HAP  
HAP EPO  
1000 Gold

\$30/\$50

\$30

\$200

\$65

\$1,000/\$2,000

100% After Deductible

\$3,000/\$6,000

No Coverage

No Coverage

No Coverage

\$15/\$40/50%/50%

Small Group Dental Plan  
100/50/50

Pediatric Coverage Only

\$25.82

\$36.85

\$6,079.72

\$6,300.82

\$75,609.84

\$0.00

\$75,609.84

\$8,566.56

12.78%

# Northfield Township

007011521-0002  
15 Employees

Effective Date: 12/1/2014



Current Plan	Mapped Renewal Plan	SB Alternative #1
Blue Cross/Blue Shield Simply Blue PPO HSA \$3,000/20% with Rx	Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$3000	Blue Cross/Blue Shield Simply Blue PPO HSA Gold \$2000 w/Contribution

## In Network Benefits

Office Visit Copays - Primary/Specialty	80% After Deductible	70% After Deductible	80% After Deductible
Chiropractic Copay	80% After Deductible	70% After Deductible	80% After Deductible
Emergency Room Copay	80% After Deductible	70% After Deductible	80% After Deductible

Urgent Care Copay	80% After Deductible	70% After Deductible	80% After Deductible
Deductible	\$3,000/\$6,000	\$3,000/\$6,000	\$2,000/\$4,000
Coinsurance	80% After Deductible	70% After Deductible	80% After Deductible
Maximum Out-of-Pocket	\$4,000/\$8,000	\$6,350/\$12,700	\$4,500/\$9,000
Employer Contribution			\$1,000/\$2,000

## Out of Network Benefits

Deductible	\$6,000/\$12,000	\$6,000/\$12,000	\$4,000/\$8,000
Coinsurance	60% After Deductible	60% After Deductible	60% After Deductible
Maximum Out of Pocket	\$8,000/\$16,000	\$12,700/\$25,400	\$9,000/\$18,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$10/\$40/\$80 After Deductible	\$20/\$60/50%/20%/ 25% After Deductible	\$15/\$50/50%/20%/ 25% After Deductible
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## Dental

Dental	Traditional Plus Dental Coverage - Plan 3 100/75/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)
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## Vision

Vision	Blue Vision 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10
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## Premium

### Medical

Monthly Rate	\$12,399.48	\$12,856.98	\$14,796.58
Estimated Monthly Premium	\$12,399.48	\$12,856.98	\$14,796.58
Estimated Annual Premium	\$148,793.76	\$154,283.76	\$177,558.96
Estimated Annual ACA Taxes and Fees	\$9,111.96	\$9,588.44	\$11,074.08
HSA/HRA Contribution	*\$66,614.14	\$0.00	\$28,000.00
Total Estimated Annual Premium	\$224,519.86	\$163,872.20	\$216,633.04
Estimated Amount of Premium Change		(\$60,647.66)	(\$7,886.82)
Estimated Percentage Change		-27.01%	-3.51%

Elective Abortions Are Included

\*Based on employer HSA contributions of 1-28-14 and 7-17-14.

# Northfield Township

Effective Date: 12/1/2014

SB Alternative #2	BCN Alternative #1
Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$4000	Blue Care Network BCN HMO Gold \$2000

80% After Deductible	\$20/\$40
80% After Deductible	\$40
80% After Deductible	\$150 after Deductible (includes imaging)
80% After Deductible	\$50
\$4,000/\$8,000	\$2,000/\$4,000
80% After Deductible	80% After Deductible
\$6,350/\$12,700	\$3,500/\$7,000

\$8,000/\$16,000	No Coverage
60% After Deductible	No Coverage
\$12,700/\$25,400	No Coverage

\$20/\$60/50%/20%/25% After Deductible	\$4/\$15/\$40/\$80/20%/ 20%
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Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)
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Blue Vision SG 12-12-12 \$5/\$10	Blue Vision SG 12-12-12 \$5/\$10
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\$12,429.72	\$15,791.47
\$12,429.72	\$15,791.47
\$149,156.64	\$189,497.64
\$9,259.44	\$7,009.20
\$0.00	\$0.00
\$158,416.08	\$196,506.84
(\$66,103.78)	(\$28,013.02)
-29.44%	-12.48%



# Northfield Township

007011521-0002  
15 Employees

Effective Date: 12/1/2014



Mapped Renewal Plan	PH Alternative #1	PH Alternative #2
Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$3000	Priority Health PPO HSA Gold 1250 5-tier Rx	Priority Health PPO HSA Bronze \$3000

## In Network Benefits

Office Visit Copays - Primary/Specialty	70% After Deductible	100% After Deductible	60% After Deductible
Chiropractic Copay	70% After Deductible	100% After Deductible	60% After Deductible
Emergency Room Copay	70% After Deductible	100% After Deductible	60% After Deductible
Urgent Care Copay	70% After Deductible	100% After Deductible	60% After Deductible
Deductible	\$3,000/\$6,000	\$1,250/\$2,500	\$3,000/\$6,000
Coinsurance	70% After Deductible	100% After Deductible	60% After Deductible
Maximum Out-of-Pocket	\$6,350/\$12,700	\$2,000/\$4,000	\$6,350/\$12,700

## Out of Network Benefits

Deductible	\$6,000/\$12,000	\$2,500/\$5,000	\$6,000/\$12,000
Coinsurance	60% After Deductible	70% After Deductible	50% After Deductible
Maximum Out of Pocket	\$12,700/\$25,400	\$4,000/\$8,000	\$12,700/\$25,400

## Prescription Drug Coverage

Prescription Drug Coverage	\$20/\$60/50%/20%/ 25% After Deductible	\$20/\$60/\$80/20%/ 20% After Deductible	\$20/\$60/\$80/20%/ 20% After Deductible
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## Dental

Dental	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Dental Plan-A 1000 Ortho Contributory 100/80/50/50	Dental Plan-A 1000 Ortho Contributory 100/80/50/50
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## Vision

Vision	Blue Vision SG 12-12-12 \$5/\$10	Pediatric Coverage Only	Pediatric Coverage Only
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## Premium

### Dental

Monthly Rate		\$1,886.01	\$1,886.01
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### Medical

Monthly Rate	\$12,856.98	\$19,932.13	\$13,984.29
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Estimated Monthly Premium	\$12,856.98	\$21,818.14	\$15,870.30
Estimated Annual Premium	\$154,283.76	\$261,817.68	\$190,443.60
ACA Taxes and Fees are Included			
Estimated Annual ACA Taxes and Fees	\$9,588.44		
HSA/HRA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$163,872.20	\$261,817.68	\$190,443.60
Estimated Amount of Premium Change		\$97,945.48	\$26,571.40
Estimated Percentage Change		59.77%	16.21%

Elective Abortions Are Not Included

# Northfield Township

Effective Date: 12/1/2014

PH Alternative #3	PH Alternative #4
Priority Health PPO HSA Bronze \$4000	Priority Health HMO HSA Gold 1250 5-tier Rx
60% After Deductible	100% After Deductible
60% After Deductible	100% After Deductible
60% After Deductible	100% After Deductible
60% After Deductible	100% After Deductible
\$4,000/\$8,000	\$1,250/\$2,500
60% After Deductible	100% after deductible
\$6,350/\$12,700	\$2,000/\$4,000
\$8,000/\$16,000	No Coverage
50% After Deductible	No Coverage
\$12,700/\$25,400	No Coverage
\$20/\$60/\$80/20%/20% After Deductible	\$15/\$50/\$80/20%/20% After Deductible
Dental Plan-A 1000 Ortho Contributory 100/80/50/50	Dental Plan-A 1000 Ortho Contributory 100/80/50/50
Pediatric Coverage Only	Pediatric Coverage Only

\$1,886.01	\$1,886.01
\$12,923.89	\$17,326.32
\$14,809.90	\$19,212.33
\$177,718.80	\$230,547.96
\$0.00	\$0.00
\$177,718.80	\$230,547.96
\$13,846.60	\$66,675.76
8.45%	40.69%

# Northfield Township

007011521-0002  
15 Employees

Effective Date: 12/1/2014



Mapped Renewal Plan	HAP Alternative #1	HAP Alternative #2
Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$3000	HAP HAP PPO HSA 2000 Silver	HAP HAP PPO 3000 Bronze

## In Network Benefits

Office Visit Copays - Primary/Specialty	70% After Deductible	100% After Deductible	\$45/\$60
Chiropractic Copay	70% After Deductible	100% After Deductible	\$30
Emergency Room Copay	70% After Deductible	100% After Deductible	\$200
Urgent Care Copay	70% After Deductible	100% After Deductible	\$65
Deductible	\$3,000/\$6,000	\$2,000/\$4,000	\$3,000/\$6,000
Coinsurance	70% After Deductible	100% After Deductible	100% After Deductible
Maximum Out-of-Pocket	\$6,350/\$12,700	\$4,000/\$8,000	\$6,350/\$12,700

## Out of Network Benefits

Deductible	\$6,000/\$12,000	\$4,000/\$8,000	\$6,000/\$12,000
Coinsurance	60% After Deductible	50% After Deductible	50% After Deductible
Maximum Out of Pocket	\$12,700/\$25,400	\$8,000/\$16,000	\$15,000/\$30,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$20/\$60/50%/20%/ 25% After Deductible	\$20/\$40/50%/50% After Deductible	\$20/\$60/50%/50% After Deductible
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## Dental

Dental	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Small Group Dental Plan 100/80 50	Small Group Dental Plan 100/80 50
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## Vision

Vision	Blue Vision SG 12-12-12 \$5/\$10	Pediatric Coverage Only	Pediatric Coverage Only
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## Premium

### Dental

Pediatric Only		\$25.82	\$25.82
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### Medical

Monthly Rate	\$12,856.98	\$16,127.61	\$13,339.81
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Estimated Monthly Premium	\$12,856.98	\$16,566.55	\$13,778.75
Estimated Annual Premium	\$154,283.76	\$198,798.60	\$165,345.00
ACA Taxes and Fees are Included			
Estimated Annual ACA Taxes and Fees	\$9,588.44		
HSA/HRA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$163,872.20	\$198,798.60	\$165,345.00
Estimated Amount of Premium Change		\$34,926.40	\$1,472.80
Estimated Percentage Change		21.31%	0.90%

Elective Abortions Are Not Included

## Renewal Disclosure

McLaren declined to quote the group, because Northfield Township is located outside of their coverage area.

One of the provisions of the Affordable Care Act (ACA) is that premiums are now age-rated for each participant. The premiums presented are illustrative based on the census provided. If enrollment changes (i.e. new employee/dependent, termination of employee/dependent, correction of birth dates or the employee/dependent's age changes before the effective date) the premium will change. Final premium/rates will be determined based on the enrollment submitted as of the effective date.

Taxes and fees were implemented in January 2014 as mandated by the Affordable Care Act (5-7%). The proposed taxes were computed from BCBSM Tax and Fee Estimator. The figures are only estimates and may change based on actual billings.

A change in the proposed effective date may require a change in the proposed premium rates. Plan design offerings could be discontinued or revised if the effective date of the change goes into the next quarter.

## Compensation Disclosure

We offer guidance in the selection of the product and policy that most appropriately meets your needs and will receive compensation for placing this coverage with any of the carriers presented. Compensation may include payments, commission, fees, awards, overrides, bonuses, contingent commissions, loans, gifts, prizes, stock options or any other form of valuable consideration. The carrier's compensation programs change periodically and will not be a determining factor as to where your business is placed. The main factors influencing where your coverage is placed is the financial rating and stability of the carrier, plan design, and service.

## KEY CONTACTS

Jack Schmitz - Manager of Group Benefits Sales (Extension 3171)

email: jschmitz@bfgroup.com



Jack joined Burnham & Flower in 2006, bringing over 23 years of benefits knowledge with him including his experience as a Regional Group Sales Manager for a national insurance company. Jack specializes in using Health Reimbursement Arrangements (HRAs), Health Savings Accounts (HSAs) and other unique funding mechanisms to help municipalities control employee benefits costs. In addition, Jack assists municipalities with understanding State and Federal laws and has taught several compliance seminars on COBRA and HIPAA.

J. Joseph Brogger II, CBC - Manager, Third Party Administrative Services (Extension 3182) email: jbrogger@bfgroup.com



Joe joined Burnham & Flower in 2010 and brings 27 years experience in the employee benefits industry. His area of expertise is self-funding and consumer driven health plans. In addition to earning the designation of Chartered Benefit Consultant (CBC), Joe has taught several Continuing Education courses on Health Reimbursement Arrangements (HRAs) and Health Savings Accounts (HSAs).

Thomas Armintrout, Account Manager (Extension 3118)

email: tarmintrout@bfgroup.com



Tom joined Burnham & Flower in 2002. He is knowledgeable in many areas of the insurance industry due to serving in a variety of roles before joining the account management team in 2010. Tom's experience in the employee benefits field spans over 18 years, with a specialty in plan design and member advocacy.

Jeanette Meyer - Group Benefits/ Member Advocacy Specialist (Extension 3184)

email: jmeyer@bfgroup.com



Jeanette joined Burnham & Flower in 2010 as an Agent Liaison and Member Advocate. She has over 15 years of experience in employee benefits administration and customer service. In her role as Member Advocacy Specialist, Jeanette coordinates agency services for our Michigan and Ohio employers and works with our Ohio clients to solve claims and administration questions.

Debbie Schnelker, Manager - Proposals & Underwriting (Extension 3186)

email: dschnelker@bfgroup.com



Debbie joined Burnham & Flower in February 2012. She began her insurance career in the Underwriting Department of a large third party administrator in 1981. She gained valuable experience and insight into the reinsurance market and was promoted to Supervisor of Underwriting Services. In 1994, Debbie accepted a position with an Indiana Managing General Underwriter and five years later, joined a Florida based MGU. Debbie is a licensed Life and Health agent in Michigan.

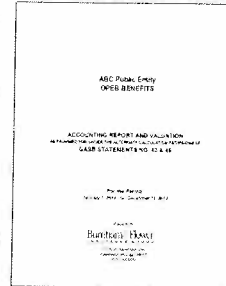
### We are not just an insurance broker.

In addition to all of the value added services listed below, our staff will act as an intermediary assisting employees with any claims disputes they may have with the carrier. Employees may sign a HIPAA release form allowing our staff to work directly with the carrier, saving them time and frustration.



#### Third Party Administration

As a leading employee benefits administrator, we offer plans that are customized to meet your specific needs. We provide a variety of options including HRAs, HSAs, and FSAs.



#### GASB 45, PA 106 & 152 Compliance

We have the trust documents and valuation tools available to keep you in compliance with the changes in State and Federal regulations.

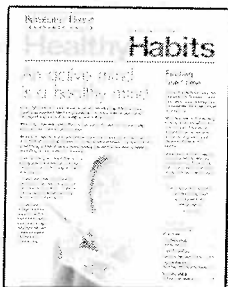


#### Benefits and Enrollment guide

We customize your employee communications materials to help your employees develop a complete understanding of their benefit plans.



**Compliance** With all the changes in healthcare, Certain State and Federal Regulations require employers to provide disclosures of regulations to all employees.



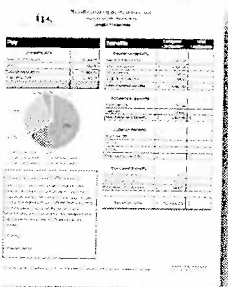
#### Healthy Habits

On your toolkit you will find a link to our Healthy Habits Newsletter. This monthly newsletter is designed to educate you on the benefits of adopting healthy lifestyles.



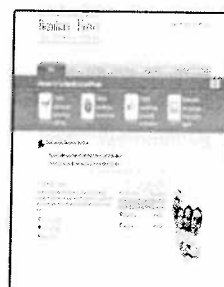
#### Toolkit

Toolkit is an on-line virtual warehouse of all of the insurance coverage that you have with Burnham & Flower.



#### Benefit Statements

Our optional Benefits Statement gives your employees a complete analysis of their pay and benefits.



#### Online Portal

Our online administration portal provides up-to-the-minute account information. View claims, access balances and transactions as they are incurred.



315 South Kalamazoo Mall  
Kalamazoo, MI 49007  
800.748.0554  
[www.bfgroup.com](http://www.bfgroup.com)

# Northfield Township

007011521-0002  
15 Employees

Effective Date: 12/1/2014



Mapped Renewal Plan	PH Alternative #1	PH Alternative #2
Blue Cross/Blue Shield Simply Blue PPO HSA Bronze \$3000	Priority Health PPO HSA Gold 1250 5-tier Rx	Priority Health PPO HSA Silver \$2000

## In Network Benefits

Office Visit Copays - Primary/Specialty	70% After Deductible	100% After Deductible	70% After Deductible
Chiropractic Copay	70% After Deductible	100% After Deductible	70% After Deductible
Emergency Room Copay	70% After Deductible	100% After Deductible	70% After Deductible
Urgent Care Copay	70% After Deductible	100% After Deductible	70% After Deductible
Deductible	\$3,000/\$6,000	\$1,250/\$2,500	\$2,000/\$4,000
Coinsurance	70% After Deductible	100% After Deductible	70% After Deductible
Maximum Out-of-Pocket	\$6,350/\$12,700	\$2,000/\$4,000	\$4,000/\$8,000

## Out of Network Benefits

Deductible	\$6,000/\$12,000	\$2,500/\$5,000	\$4,000/\$8,000
Coinsurance	60% After Deductible	70% After Deductible	50% After Deductible
Maximum Out of Pocket	\$12,700/\$25,400	\$4,000/\$8,000	\$8,000/\$16,000

## Prescription Drug Coverage

Prescription Drug Coverage	\$20/\$60/50%/20%/ 25% After Deductible	\$20/\$60/\$80/20%/ 20% After Deductible	\$20/\$60/\$80/20%/20% After Deductible
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## Dental

Dental	Blue Dental PPO Plus SG 100/80/50/50 (\$1,000 Annual Max)	Dental Plan-A 1000 Ortho Contributory 100/80/50/50	Dental Plan-A 1000 Ortho Contributory 100/80/50/50
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## Vision

Vision	Blue Vision SG 12-12-12 \$5/\$10	Pediatric Coverage Only	Pediatric Coverage Only
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## Premium

### Dental

Monthly Dental Rate		\$1,886.01	\$1,886.01
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### Medical

Monthly Rate	\$12,856.98	\$19,932.13	\$16,012.59
Estimated Monthly Premium	\$12,856.98	\$21,818.14	\$17,898.60
Estimated Annual Premium	\$154,283.76	\$261,817.68	\$214,783.20
ACA Taxes and Fees are Included			
Estimated Annual ACA Taxes and Fees	\$9,588.44		
HSA/HRA Contribution	\$0.00	\$0.00	\$0.00
Total Estimated Annual Premium	\$163,872.20	\$261,817.68	\$214,783.20
Estimated Amount of Premium Change		\$97,945.48	\$50,911.00
Estimated Percentage Change		59.77%	31.07%

Elective Abortions Are Not Included



# Northfield Township

Effective Date: 12/1/2014

PH Alternative #3	PH Alternative #4	PH Alternative #5
Priority Health PPO HSA Bronze \$4000	Priority Health HMO HSA Gold 1250 5-tier Rx	Priority Health PPO HSA Bronze \$3000

60% After Deductible	100% After Deductible	60% After Deductible
60% After Deductible	100% After Deductible	60% After Deductible
60% After Deductible	100% After Deductible	60% After Deductible
60% After Deductible	100% After Deductible	60% After Deductible
\$4,000/\$8,000	\$1,250/\$2,500	\$3,000/\$6,000
60% After Deductible	100% after deductible	60% After Deductible
\$6,350/\$12,700	\$2,000/\$4,000	\$6,350/\$12,700

\$8,000/\$16,000	No Coverage	\$6,000/\$12,000
50% After Deductible	No Coverage	50% After Deductible
\$12,700/\$25,400	No Coverage	\$12,700/\$25,400

\$20/\$60/\$80/20%/20% After Deductible	\$15/\$50/\$80/20%/20% After Deductible	\$20/\$60/\$80/20% /20% After Deductible
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Dental Plan-A 1000 Ortho Contributory 100/80/50/50	Dental Plan-A 1000 Ortho Contributory 100/80/50/50	Dental Plan-A 1000 Ortho Contributory 100/80/50/50
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Pediatric Coverage Only	Pediatric Coverage Only	Pediatric Coverage Only
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\$1,886.01	\$1,886.01	\$1,886.01
\$12,923.89	\$17,326.32	\$13,984.29
\$14,809.90	\$19,212.33	\$15,870.30
\$177,718.80	\$230,547.96	\$190,443.60
\$0.00	\$0.00	\$0.00
\$177,718.80	\$230,547.96	\$190,443.60
\$13,846.60	\$66,675.76	\$26,571.40
8.45%	40.69%	16.21%

**\$2,000 HDHP**

## Benefit

\$2,000 Annual Deductible

Unlimited Lifetime



This table outlines **what you pay** for covered services. Refer to the Summary Plan Description for a detailed list of the plan's benefits, limitations and exclusions.

	IN-NETWORK	OUT-OF-NETWORK
<b>DEDUCTIBLE &amp; COINSURANCE</b> (Medical and pharmacy combined)		
<b>Annual Deductible</b> <i>Individual/Family</i> (Embedded Deductible)	\$2,000 / \$4,000	\$4,000 / \$8,000
<b>Coinsurance</b>	0%	30%
<b>ANNUAL COINSURANCE OUT-OF-POCKET MAXIMUM</b> (Medical and pharmacy combined)		
<i>Individual/Family</i>	\$2,000 / \$4,000	\$7,000 / \$14,000
<b>PREVENTION &amp; WELLNESS</b> Per Affordable Care Act	0% no deductible	30% after deductible
<b>PHYSICIAN CARE</b>		
Telemedicine	TelaDoc Consult 0% after deductible	Not Covered
<b>Office Visits</b>		
Primary Care	0% after deductible	30% after deductible
Specialists	0% after deductible	30% after deductible
In-Hospital Visits	0% after deductible	30% after deductible
Surgery	0% after deductible	30% after deductible
Urgent Care	0% after deductible	0% after deductible
Spine Manipulation	0% after deductible	30% after deductible
<b>DIAGNOSTIC PROCEDURES</b>		
Diagnostic X-rays and laboratory services	0% after deductible	30% after deductible
Colonoscopy (with diagnosis)	0% after deductible	30% after deductible
<b>HOSPITAL CARE</b>		
Room and Board (including maternity)	0% after deductible	30% after deductible
Emergency Room	0% after deductible	0% after deductible
Outpatient Surgery	0% after deductible	30% after deductible
Lab / X-ray	0% after deductible	30% after deductible
Outpatient Dialysis / Chemotherapy	0% after deductible	30% after deductible
<b>OTHER MEDICAL SERVICES</b>		
Skilled Nursing Facility <i>Limited 30 days per member per calendar year</i>	0% after deductible	30% after deductible
Hospice Care (outpatient)	0% after deductible	30% after deductible
Home Health Care <i>60 visits per calendar year</i>	0% after deductible	30% after deductible
Ambulance Service	0% after deductible	30% after deductible
Occupational, Speech and Physical Therapy	0% after deductible	30% after deductible
Prosthetic	0% after deductible	30% after deductible
Organ Transplants	0% after deductible	30% after deductible

	IN-NETWORK	OUT-OF-NETWORK
<b>PRESCRIPTION DRUGS &amp; DIABETIC CARE SUPPLIES</b> <i>If you fill a prescription for a brand name drug when a generic is available, any excess cost of the brand over the approved generic will not be covered by the plan. The difference in price between brand and generic does not contribute to the deductible. Non-formulary drug expenses do not contribute to the deductible and are not covered by the plan.</i>		
<b>Retail Pharmacy</b> <i>Up to 30-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered except in emergencies
Brand Name Drugs	0% after deductible	Not covered except in emergencies
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 100 syringes 200 lancets 200 test strips	0% after deductible	Not covered
<b>Mail Order Pharmacy</b> <i>Up to 90-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered
Brand Name Drugs	0% after deductible	Not covered
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 300 syringes 600 lancets 600 test strips	0% after deductible	Not covered

**Pre-certification Penalty:** Certain procedures or medical care require pre-certification in order to qualify for full benefits. Failure to pre-qualify will result in \$250 penalty per service, procedure or confinement.

**Please Note:** this schedule applies as indicated in the Summary Plan Description. This schedule must be read in conjunction with the entire Summary Plan Description and has no meaning by itself.

**Please Note:** Visit limitations apply to Occupational, Speech, and Physical Therapy. Please refer to Summary Plan Document.

**Please Note:** Each individual in a family is not required to contribute more than one (1) individual Deductible amount to a family Deductible. Please refer to the Summary Plan Document.

**\$3,000 HDHP**

## Benefit

\$3,000 Annual Deductible

Unlimited Lifetime



This table outlines **what you pay** for covered services. Refer to the Summary Plan Description for a detailed list of the plan's benefits, limitations and exclusions.

	IN-NETWORK	OUT-OF-NETWORK
<b>DEDUCTIBLE &amp; COINSURANCE</b> (Medical and pharmacy combined)		
<b>Annual Deductible</b> Individual/Family (Embedded Deductible)	\$3,000 / \$6,000	\$6,000 / \$12,000
<b>Coinsurance</b>	0%	30%
<b>ANNUAL COINSURANCE OUT-OF-POCKET MAXIMUM</b> (Medical and pharmacy combined.)		
Individual/Family	\$3,000 / \$6,000	\$9,000 / \$18,000
<b>PREVENTION &amp; WELLNESS</b> Per Affordable Care Act	0% no deductible	30% after deductible
<b>PHYSICIAN CARE</b>		
Telemedicine	TelaDoc Consult 0% after deductible	Not Covered
<b>Office Visits</b>		
Primary Care	0% after deductible	30% after deductible
Specialists	0% after deductible	30% after deductible
In-Hospital Visits	0% after deductible	30% after deductible
Surgery	0% after deductible	30% after deductible
Urgent Care	0% after deductible	0% after deductible
Spine Manipulation	0% after deductible	30% after deductible
<b>DIAGNOSTIC PROCEDURES</b>		
Diagnostic X-rays and laboratory services	0% after deductible	30% after deductible
Colonoscopy (with diagnosis)	0% after deductible	30% after deductible
<b>HOSPITAL CARE</b>		
Room and Board (including maternity)	0% after deductible	30% after deductible
Emergency Room	0% after deductible	0% after deductible
Outpatient Surgery	0% after deductible	30% after deductible
Lab / X-ray	0% after deductible	30% after deductible
Outpatient Dialysis / Chemotherapy	0% after deductible	30% after deductible
<b>OTHER MEDICAL SERVICES</b>		
Skilled Nursing Facility Limited 30 days per member per calendar year	0% after deductible	30% after deductible
Hospice Care (outpatient)	0% after deductible	30% after deductible
Home Health Care 60 visits per calendar year	0% after deductible	30% after deductible
Ambulance Service	0% after deductible	30% after deductible
Occupational, Speech and Physical Therapy	0% after deductible	30% after deductible
Prosthetic	0% after deductible	30% after deductible
Organ Transplants	0% after deductible	30% after deductible

	IN-NETWORK	OUT-OF-NETWORK
<b>PRESCRIPTION DRUGS &amp; DIABETIC CARE SUPPLIES</b> <i>If you fill a prescription for a brand name drug when a generic is available, any excess cost of the brand over the approved generic will not be covered by the plan. The difference in price between brand and generic does not contribute to the deductible. Non-formulary drug expenses do not contribute to the deductible and are not covered by the plan.</i>		
<b>Retail Pharmacy</b> <i>Up to 30-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered except in emergencies
Brand Name Drugs	0% after deductible	Not covered except in emergencies
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 100 syringes 200 lancets 200 test strips	0% after deductible	Not covered
<b>Mail Order Pharmacy</b> <i>Up to 90-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered
Brand Name Drugs	0% after deductible	Not covered
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 300 syringes 600 lancets 600 test strips	0% after deductible	Not covered

**Pre-certification Penalty:** Certain procedures or medical care require pre-certification in order to qualify for full benefits. Failure to pre-qualify will result in \$250 penalty per service, procedure or confinement.

**Please Note:** this schedule applies as indicated in the Summary Plan Description. This schedule must be read in conjunction with the entire Summary Plan Description and has no meaning by itself.

**Please Note:** Visit limitations apply to Occupational, Speech, and Physical Therapy. Please refer to Summary Plan Document.

**Please Note:** Each individual in a family is not required to contribute more than one (1) individual Deductible amount to a family Deductible. Please refer to the Summary Plan Document.

**\$5,000 HDHP****Benefit**

\$5,000 Annual Deductible

Unlimited Lifetime



This table outlines **what you pay** for covered services. Refer to the Summary Plan Description for a detailed list of the plan's benefits, limitations and exclusions.

	IN-NETWORK	OUT-OF-NETWORK
<b>DEDUCTIBLE &amp; COINSURANCE</b> <i>(Medical and pharmacy combined)</i>		
<b>Annual Deductible</b> <i>Individual/Family</i> <i>(Embedded Deductible)</i>	\$5,000/\$10,000	\$7,500/\$15,000
<b>Coinsurance</b>	0%	30%
<b>ANNUAL COINSURANCE OUT-OF-POCKET MAXIMUM</b> <i>(Medical and pharmacy combined)</i>		
<i>Individual/Family</i>	\$5,000/\$10,000	\$10,000/\$20,000
<b>PREVENTION &amp; WELLNESS</b> Per Affordable Care Act	0% no deductible	30% after deductible
<b>PHYSICIAN CARE</b>		
Telemedicine	TelaDoc Consult 0% after deductible	Not Covered
<b>Office Visits</b>		
Primary Care	0% after deductible	30% after deductible
Specialists	0% after deductible	30% after deductible
In-Hospital Visits	0% after deductible	30% after deductible
Surgery	0% after deductible	30% after deductible
Urgent Care	0% after deductible	0% after deductible
Spine Manipulation	0% after deductible	30% after deductible
<b>DIAGNOSTIC PROCEDURES</b>		
Diagnostic X-rays and laboratory services	0% after deductible	30% after deductible
Colonoscopy (with diagnosis)	0% after deductible	30% after deductible
<b>HOSPITAL CARE</b>		
Room and Board (including maternity)	0% after deductible	30% after deductible
Emergency Room	0% after deductible	0% after deductible
Outpatient Surgery	0% after deductible	30% after deductible
Lab/X-ray	0% after deductible	30% after deductible
Outpatient Dialysis/Chemotherapy	0% after deductible	30% after deductible
<b>OTHER MEDICAL SERVICES</b>		
Skilled Nursing Facility <i>Limited 30 days per member per calendar year</i>	0% after deductible	30% after deductible
Hospice Care (outpatient)	0% after deductible	30% after deductible
Home Health Care <i>60 visits per calendar year</i>	0% after deductible	30% after deductible
Ambulance Service	0% after deductible	30% after deductible
Occupational, Speech and Physical Therapy	0% after deductible	30% after deductible
Prosthetic	0% after deductible	30% after deductible
Organ Transplants	0% after deductible	30% after deductible

	IN-NETWORK	OUT-OF-NETWORK
<b>PRESCRIPTION DRUGS &amp; DIABETIC CARE SUPPLIES</b> <i>If you fill a prescription for a brand name drug when a generic is available, any excess cost of the brand over the approved generic will not be covered by the plan. The difference in price between brand and generic does not contribute to the deductible. Non-formulary drug expenses do not contribute to the deductible and are not covered by the plan.</i>		
<b>Retail Pharmacy</b> <i>Up to 30-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered except in emergencies
Brand Name Drugs	0% after deductible	Not covered except in emergencies
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 100 syringes 200 lancets 200 test strips	0% after deductible	Not covered
<b>Mail Order Pharmacy</b> <i>Up to 90-day supply. Day supply limits do not apply to diabetic care supplies.</i>		
Generic Drugs	0% after deductible	Not covered
Brand Name Drugs	0% after deductible	Not covered
Non-Formulary Drugs	Not covered	Not covered
Injectable Drugs (including insulin)	0% after deductible	Not covered except in emergencies
Diabetic Care Supplies (quantities shown only): 300 syringes 600 lancets 600 test strips	0% after deductible	Not covered

**Pre-certification Penalty:** Certain procedures or medical care require pre-certification in order to qualify for full benefits. Failure to pre-qualify will result in \$250 penalty per service, procedure or confinement.

**Please Note:** this schedule applies as indicated in the Summary Plan Description. This schedule must be read in conjunction with the entire Summary Plan Description and has no meaning by itself.

**Please Note:** Visit limitations apply to Occupational, Speech, and Physical Therapy. Please refer to Summary Plan Document.

**Please Note:** Each individual in a family is not required to contribute more than one (1) individual Deductible amount to a family Deductible. Please refer to the Summary Plan Document.

# NORTHFIELD TOWNSHIP

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## MEMO

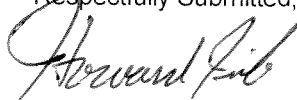
**To:** Northfield Township Board  
**From:** Howard Fink  
**Date:** 9/18/2014  
**Re:** Recycling Event / Household Hazardous Waste Pickup

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Dear Township Board,

Last year, we had our first ever County Household Hazardous Waste pickup day. It was a huge success. We are asking the county waste management division to hold this event again and make it a regular, yearly occurrence in Northfield Township. They do ask for the community to partner with them on a small percentage of the cost. There is no set amount that they require. I am recommending a donation of \$2000 from the Township for next year's Clean-up Day. I would like to take that out of our contingency line item for next year's event and build that into the budget in proceeding years. Attached you will find the results of the event. One thing I can assure you of is that this event provides excellent value for our residents.

Respectfully Submitted,



Howard Fink



# Northfield Clean Up Day Report

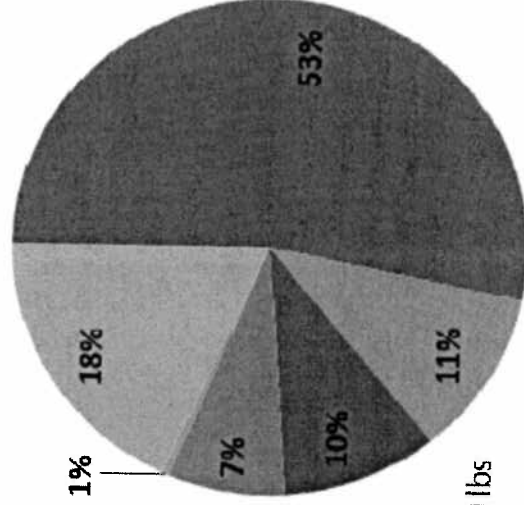
Saturday June 14, 2014  
Northfield Township Hall

BACKGROUND INFO	
<b>TOTAL SPONSORSHIP: \$1342.00</b> Gate Donations: \$1,180 Lunch Donation (Marco's): \$162	<b>Cars: 201 total</b> <b>Cost per car: \$61.00/car</b> <b>Total Event Cost: \$12,250</b>

## VOLUMES

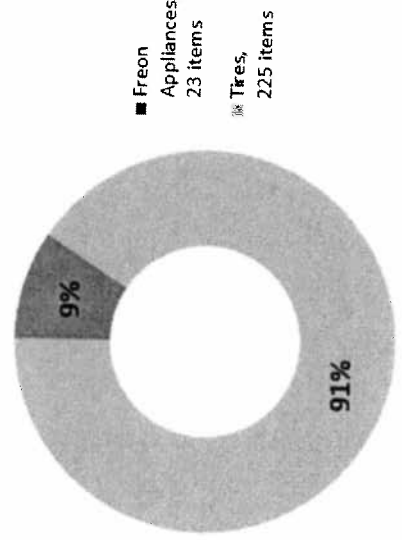
- Non-Regulated: 8,349 lbs
- Flammable: 1,160
- Pesticides: 1,697 lbs
- Batteries: 1,550 lbs
- Latex Paint: 1,155 lbs
- Fluorescents: 72 lbs

■ Other(acids, corrosives, etc.): 2,889 lbs



- Electronics, 10,636 lbs
- HHW, 15,713 lbs
- Recycling, 2,810 lbs

Total weight: 29,160 lbs  
Total cost/lb: \$0.47/lb



**JAMES E. COX  
NORTHFIELD TOWNSHIP  
WATER POLLUTION CONTROL FACILITY  
11500 LEMEN ROAD WHITMORE LAKE MICHIGAN  
PHONE 734-449-4159 FAX 734-449-4302**

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**To: Northfield Township Board of Trustees**

**From: Tim Hardesty-Wastewater Treatment Plant Superintendent**

**Date: August 29<sup>th</sup>, 2014**

**Subject: Horseshoe Lake Refund**

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At the July 2014 Board meeting it was voted to return the excess money from the special assessment district at Horseshoe Lake to the current property owners as was suggested by Miller-Canfield. It was also voted upon at this meeting to hold back \$87,681 for repairs and equipment for the Horseshoe Lake district. It is my understanding that since that meeting there have been a number of Horseshoe Lake residents that are not happy with that decision. One of the criteria of Public Act 222 regarding sewer back-ups and making a claim, says that once a defect has been identified it needs to be repaired in a timely manner. The eight defects we identified in 2013 at Horseshoe Lake were budgeted to be repaired out of the Horseshoe Lake fund. If this money were not available, the funds would have to come out of the budget line of either collection system or repairs and maintenance. If the Board decides to return all or a portion of the "hold back" money, then I would probably have to make a budget amendment at the end of this fiscal year.

Thank you for your consideration,

Tim Hardesty

## HORSESHOE LAKE SEWER DISTRICT

There are eight different areas of the collection system piping that are in need of repair. The repair quote for these eight repairs is \$40,000.

The three pump stations at Horseshoe Lake were installed in 1978. We would like to replace the pumps, floats, and motor starters at each station.

8- Repairs	\$40,000
4- Model 3085 pumps, 50' floats	\$20,964
2- Model 3102 pumps 50' floats	\$12,644
4- Motor starters/phase converters	\$2636
15% contingency	<u>\$11,437</u>
Grand Total	\$87,681

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

**\*\* Please Note - This is the original list from the 1970's. Names listed are not necessarily the names of current property owners \*\***

NAME	ADDRESS	TAX CODE	ZONING	ASSD		TOTAL		FRONTAGE LOCATION	ASSM CHARGE
				FRONTAGE	FRONTAGE	FRONTAGE	FRONTAGE		
Alessandrini, Angela	7011 Oakman	48127 090-439-00	SR2	90	90	90	90	N'Wly Side Lakeshore Dr	\$1,575.00
Alexander, Leslie	Rt 1	48189 060-477-00	SR2	70	70	70	70	S. side Dartmoor	\$1,225.00
Alexander, Ronald	98 Lakeview	48189 106-036-00	SR1	105	105	105	105	SE Side Lakeview	\$1,837.00
Altermatt, Elfrieda	15524 Juliana	48021 090-428-00	SR2	30.1	30.1	30.1	30.1	w Side Lakeshore Dr	\$526.00
Altmann, Charles	7935 Coyle	48186 018-002-00	SR2	160.9	160.9	160.9	160.9	NW Side Coyle Rd	
		018-004-00		111	111	111	111		\$4,742.00
Ammon, Herman J	192 Brentwood	48141 105-021-00	SR2	35	35	35	35	S Side Lakeview	\$612.00
Amsinger, Edward	21102 Lancaster	48236 090-047-00	SR2	30.1	30.1	30.1	30.1	w Side Lakeshore Dr	\$526.00
Andison, Anna M	1709 Oak St	48192 090-320-00	SR2	30	30	30	30	N Side Maple Ave	\$525.00
Ansley, Kenneth	285 Maple Grove	48189 060-278-00		105	105	105	105	S Side Deleware	
		060-302-00	SR2	70	70	175	175	N Side Maple Grove	\$3,062.00
Applegate, June	228 W 12th	46360 060-106-00	SR2	35	35	35	35	S Side Beachway	\$612.00
Arbogast, Albert/Kathryn	7760 Lakeshore	48189 085-069-00		40	40	40	40	S'ly Side	
		085-070-00	SR1	40	40	80	80	Lakeshore Dr	\$1,400.00
Aron, Nicholas	6270 Charlesworth	48128 090-369-00	SR2	90	90	90	90	SW Side Lakeshore Dr	\$1,575.00
Atkinson, Wilfred	9032 Burnette	48226 060-215-00	SR2	35	35	35	35	S Side Beachway	\$612.00
Aeschlimann Equipment	Six mile Rd	48189 017-020-00	GC	160	160	160	160	S Side 6 Mile Rd	\$2,800.00
Arnold, Jack	12 Greenland	48189 105-057-00	SR1	100	100	100	100	S Side Greenland	\$1,750.00

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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Andeer KE and Hansen, SE	520 Six Mile	W Lake	48189 017-016-14	AR	220	220	S Side 6 Mile Rd	\$3,850.00
Avey, Kay	329 Maple Grove	W Lake	48189 060-308-00	SR2	70	70	N Side Maple Grove	\$1,225.00
Abick, Walter	4069 Clippert	Detroit	48210 090-351-00	SR2	82	82	SW Side Lakeshore Dr	\$1,435.00
Ball, Charles	657 6 Mile Rd	W Lake	48189 085-075-00	SR1	50	50	W Side 6 Mile Rd	\$875.00
Baranowski, William	3463 Livernois	Detroit	48229 090-318-00	SR2	90	90	N Side Maple Ave	\$1,575.00
Bartlett, Thomas	9135 Butternut	W Lake	48189 090-076-00	SR2	90	90	S Side Hillsdale Ave	\$1,575.00
Bauer, E	15 Schrum	W Lake	48189 105-108-00	SR1	120	120	N Side Schrum	\$2,100.00
Barret, Charles	323 Dartmoor	W Lake	48189 060-450-00	SR2	105	105	N Side Dartmoor	\$1,837.00
Beck, Agnes	1707 Broadway	A Arbor	48189 060-226-00	SR2	35	35	S Side Beachway	\$612.00
Beitel, Robert J Sr	69 Schrum	W Lake	48189 105-102-00		25			
			105-104-00		100		N Side Schrum	
			105-103-00	SR1	25	150		\$2,625.00
Bennett, Dixie	2315 Shelly	Ypsilanti	48197 060-177-00	SR2	173.8	173.8	N Side Beachway	\$3,041.00
Bennett, Ronald L	7812 Lake Shore	W Lake	48189 090-027-00	SR2	114.2	114.2	E'ly Side Lake Shore	\$1,998.00
Berman, Meyer L	31700 W 7 Mile	Livonia	48154 060-259-00	SR2	35	35	N Side Delaware	\$612.00
Bitner, Robert	7725 Shady Beach	W Lake	48189 060-374-00	SR2	40	40	W Side Shady Beach	\$700.00
Bittner, Kenneth M	3129 N Blair	Royal Oak	48068 060-095-060	SR2	70	70	NW Side Shady Beach Dr	\$1,225.00
Bodzin, LJ	16072 Ellsworth	Detroit	48227 060-092-00	SR2	35		NW Side Shady Beach Dr	
	(continued)		060-060-00	SR2	102.9		S Side Shady Beach	

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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(continued)									
		060-529-00	SR2	70		N Side 6 Mile			
		060-265-00	SR2	35		S Side Deleware			
		060-154-00	SR2	43.1	286	SW Side Grove Rd			\$5,005.00
Boguszewski, Adam	8103 Evergreen	48227 090-049-00	SR2	30		SW Side			
		090-410-00	SR2	14.5	44.5	Lake Shore Dr			\$778.00
Bolvani, Frank & Mary	1710 Sheffield	48008 090-337-00	SR2	60	60	N Side Park Ave			\$1,050.00
Bolvani, Frank	1710 Sheffield	48008 090-334-00	SR2	66.8	66.8	N Side Park Ave			\$1,169.00
Bolvani, Frank	1710 Sheffield	48008 090-336-00	SR2	30	30	N Side Park Ave			\$525.00
Boston, Larry	11331 Auburndale	48154 060-019-00	SR2	35	35	NE Side Shady Beach			\$612.00
Bondie, Marvin J	46620 Ford Rd	48170 060-264-00	GC	35	35	W Side Delaware			\$612.00
Boxrud, James N	84 Schrum	48189 105-076-00	SR1	160		S Side			
		105-078-00	SR1	20	180	Schrum Dr			\$3,150.00
Brady, Debra Jean &	362 Grove	48189 060-199-00	SR2	70		N Side Beachway Dr			
Karen Elizabeth Rem		060-200-00	SR2	139.6	209.6				\$2,794.00
Briningstull, Francis	350 Maple Grove	48189 060-329-00	SR2	35		S Side Maple Grove			
		060-330-00	SR2	70	105				\$1,837.00
Bronikowski, Benedict	19100 Harman	48122 060-012-00	SR2	70	70	NE Side Shady Beach			\$1,225.00
Buckberry, Doris	9247 Silverside	48178 018-009-00	SR2	120.6	120.6	NW Side Coyle Rd			\$2,110.00
Buege, Herbert E	Rt 3 Box 445 c/o Mrs. F. W. Reed City	49677 060-067-00	SR2	35	35	SW Shady Beach Dr			\$612.00

Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Burkhart, Ben W	701 Wesley	A Arbor	48104 060-014-00	SR2	70	NE Side Shady Beach	\$2,163.00
			060-076-00	SR2	53.6	123.6 SW Side Shady Beach	
Cackette, Arthur Thomas	Rt1	W Lake	48189 060-195-00	SR2	105	N Side	
			060-197-00	SR2	45	Beachway Ave	
			060-195-00	SR2	40	190 SW Side Grove St	\$3,325.00
Calvary Baptist Church	279 Dartmoor	W Lake	48189 060-433-00	SR2	70	S Side Dartmoor	
					105	175 S Side Farmont	\$3,062.00
Capps Construction Co	1143 Ellis	Ypsilanti	48197 060-418-00	SR2	75	W Side Shady Beach	\$1,312.00
Carey, Merceda B	9043 Butternut	W Lake	48189 060-097-00	SR2	64.6	64.6 NW Side Shady Beach Dr	\$1,130.00
Carnes, Lester & Joan	9334 Puritan	Detroit	48238 090-362-00	SR2	30	30 SW Side Lakeshore Dr	\$525.00
Christoph, Carl & Rosellen	284 Schrum Dr	W Lake	48189 105-084-00	SR1	100	100 S Side Schrum	\$1,750.00
Christoph, Carl & Rosellen	284 Schrum Dr	W Lake	48189 105-086-00	SR1	62	62 S Side Schrum	\$1,085.00
Chynoweth, Vivian	8000 Aston	Detroit	48228 090-354-00	SR2	30	SW Side Lakeshore Dr	
			090-355-00	SR2	60	90	\$1,575.00
Clark, John	675 Highland	W Lake	48189 090-065-00		30		
			090-061-00		90	N Side Highland	
			090-063-00	SR2	30	150	\$2,625.00
Clark, Carl W	306 S Main	Plymouth	48170 090-357-00	SR2	40	40 SW Side Lakeshore Dr	\$700.00
Clay, James G	755 6 Mile	W Lake	48189 090-025-00	SR2	45	105 N Side 6 Mile (Horseshoe)	\$1,837.00

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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(continued)						
		090-021-00	60			
		090-017-00	60	165		\$2,887.00
Clay, James G	755 6 Mile	48189 060-281-00	SR2	105	105	N Side 6 Mile (Horseshoe) \$1,837.00
Clay, James	755 6 Mile	48189 090-041-00	SR2	60		S Side Highland Ave
		090-015-00		30	90	N Side 6 Mile (Horseshoe) \$1,575.00
Clay, James	755 6 Mile	48189 090-013-00	SR2	60	60	N Side 6 Mile (Horseshoe) \$1,050.00
Clay, Jas. & Velma	761 6 Mile	48189 090-016-00	SR2	30	30	N Side 6 Mile (Horseshoe) \$525.00
Chamberlin, Craig	103 Alpine	060-216-00	SR2	175	175	S Side Beachway \$3,062.00
Cadray, Raymond	7920 Shady Beach Dr	48189 060-023-00	SR2	70	70	NE Side Shady Beach \$1,225.00
Clayton, Huggins	9 Greenland	48189 105-068-00	SR1	96	96	N Side Greenland \$1,680.00
Conner, Charles	PO Box 736	48189 060-359-00	SR2	105	105	N Side Glenmoor \$1,837.00
Conkey, Charles	33 Greenland	48189 105-059-00	SR1	50	50	S Side Greenland \$875.00
Cole, Norman	40 Beachway	48189 060-227-00	SR2	175	175	S Side Beachway \$3,062.00
Cole, James H	18915 Sorrento	48105 060-081-10	SR2	35	35	SW Side Shady Beach \$612.00
Cole, James H Jr	18915 Sorrento	48105 060-016-00	SR2	37	37	NE Side Shady Beach \$647.00
Conkey, Charles	33 Greenland	48189 105-067-00	SR1	85	85	N Side Greenland \$1,487.00
Conner, Charles	7940 Shady Beach	48189 060-065-00	W Lake	70		SW Side
		060-069-00		81.5		Shady Beach Dr
		060-361-00		140		N Side Glenmoor
(continued)						



Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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(continued)									
Cook, Dale C	223 N Kenwood	Royal Oak	48167	105-013-00	SR1	34	34	NE Side Shady Beach	\$7,017.00
Cort, Drayton J	6864 6 Mile	Northville	48167	060-155-00	SR2	72.5	72.5	E Side Lakeview	\$595.00
Crawford, Carl	304 Glenmoor Rt2	W Lake	48189	060-381-00	SR2	105	105	SW Side Grove	\$1,268.00
Crowell, Millard D	254 Lakeview	W Lake	48189	105-014-00	SR1	34		S Side Glenmoor	\$1,837.00
				105-015-00		100.5		S & E Side Lakeview	
				105-087-00		101	235.5	N Side Lakeview	\$4,121.00
	254 Lakeview	W Lake	48189	105-082-00	SR1	153.3	153.3	S Side Schrum	\$2,682.00
Curtis, Donald L.D.	8405 Main St	W Lake	48189	008-037-00	GC	50.1	50.1	W Side Whitmore Lake	\$876.00
Czyzewski, John J	30055 Maplewood	Garden City	48135	008-046-000	SR2	201.7	201.7	E Side Whitmore Lake	\$3,529.00
Darling, Rosie, et al.	111 Beachway Dr Rt2	W Lake	48189	060-179-00	SR2	70	70	N Side Beachway	\$1,225.00
Dawson, Rose M	55 Greenland	W Lake	48189	105-064-00	SR1	115	115	N Side Greenland	\$2,012.00
DeFrane, Wellington T	5426 Linwood	Detroit	48238	090-437-00	SR2	60		N Wly Side Lakeshore Dr	
				090-330-00	SR2	60		S Wly Side Maple Ave	
				090-009-00	SR2	60		N Side 6 Mile	
				090-011-00	SR2	30		(Horseshoe )	
				017-013-00	SR1	132		E Side	
				017-014-00	SR1	68	410	6 Mile Rd	\$7,175.00

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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DeFrane, Wellington T.	5486 Stanton Ave	Detroit	48208 060-322-00	SR2	80	W. side Shady Beach Dr	
			090-064-00	SR2	30	N. Side Highland	
			060-225-00	SR2	35	S. side Beachway	
			060-099-00	SR2	42.5	N. side Maple Grove	
			090-383-00	SR2	30	S. side Maple Ave	
			090-106-00	RC	30	N. side Hillsdale Ave	
			090-068-00	SR2	40.1	E'ly Side	
			090-096-00	SR2	30	317.6 Lakeshore Dr	\$5,558.00
DeLanois, Jack	Box 136 RR1	Belle	65013 060-006-00	SR1	35	E Side	
			060-007-00		47	82 Shady Beach Dr	\$1,435.00
DeGroff, Edward	40 S Staebler	Ann Arbor	48104 060-044-00	SR2	140	N Side Shady Beach Dr	
			060-072-00	SR2	35	175 SW Side Shady Beach	\$3,062.00
Dellabaugh, Linda M	322 Maple GroveW I	W Lake	48189 060-332-00	SR2	70	70 S Side Maple Grove	\$1,225.00
Delp, Anna	14891 Greydale	Detroit	48226 060-205-00	SR2	35	35 S Side Beachway	\$612.00
Dixon, Otto M Jr	374 Maplegrove	W Lake	48189 060-367-00	SR2	70	N Side Glenmoor	
			060-326-00		70	S Side	
			060-328-00		35	175 Maple Grove	\$3,062.00
Dougherty, Milo	1991 Glendale	Detroit	48226 060-046-00	SR2	35	N Side	
			060-143-00		35	70 Shady Beach Dr	\$1,225.00

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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Dumont, Russell	188 Lakeview	W Lake	48189 105-026-00	SR1	70	70	S Side Lakeview	\$1,225.00
Dunn, Mary A	556 Washington	Holland	49423 060-365-00	SR2	35			
			060-366-00		35	70	N Side Glenmoor	\$1,225.00
Duquette, Vern J	9880 Garvett	Livonia	48150 060-319-00	SR2	82.6	82.6	W Side Shady Beach	\$1,445.00
Dziewit, Frank T	8882 Arlington	Pontiac	48054 060-035-00	SR2	70		NE Side	
			060-031-00		70		Shady Beach DR	
			060-008-00		47	187	E Side Shady Beach	\$3,272.00
Dellabaugh, Marvin	332 Maplegrove	W Lake	48189 060-334-00	SR2	105	105	S Side Maple Grove	\$1,837.00
Eastman, Newton J	1226 E Hayes	Hazel Park	48030 090-100-00	RC	150	150	N Side Hillsdale	\$2,625.00
Eichstadt, Robert H	1730 N Vernon	Dearborn	48128 090-399-00	SR2	30		SW Side	
			090-400-00	SR2	30	60	Lake Shore Dr	\$1,050.00
Engwis, Jan	7729 Shady Beach	W Lake	48189 060-372-00	SR2	106.4	106.4	W Side Shady Beach	\$1,862.00
Eschliman, Kenneth	405 6 Mile	W Lake	48189 060-536-00	SR2	197	197	E Side Shady Beach	\$3,447.00
Eschliman, Susan	405 6 Mile	W Lake	48189 085-011-00	SR2	97.5	97.5	S Side Ideal	\$1,706.00
Fackler, Glenn R	23218 Springbrook	Farmington	48024 105-018-00	SR1	35	35	S Side Lakeview	\$612.00
Francisco, Charles L	1608 N Maple	Ann Arbor	48103 060-292-00	SR2	180	180	SE Side Coyle	\$3,150.00
Farr, Warren W	20 Schrum	W Lake	48189 105-070-00	SR1	131	131	S Side Schrum	\$2,292.00
Filkins, Norma B	500 6 Mile	W Lake	48189 017-016-10	AR	150	150	S Side 6 Mile Rd	\$2,625.00
Fillmore, Herbert	279 Beachway	W Lake	48189 060-191-00	SR2	105	105	N Side Beachway Dr	\$1,837.00

Washtenaw County, Northfield Township, Michigan  
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Fiori, Joseph	15196 Troy	Taylor	48180 060-071-00	SR2	35	35	SW Side Shady Beach	\$612.00
Fitzgerald, Martha& Ester	8325 Whitmore Lake	W Lake	48189 008-043-00	SR1	100.4	100.4	W Side Whitmore Lake	\$1,757.00
Fleck, Ada	4960 Woodruff	Lakewood	90713 060-261-00	SR2	35	35	N Side Delaware	\$612.00
Florida, Catherine M	624 Hillsdale	W Lake	48189 090-074-00	SR2	91	91	S Side Hillsdale Ave	\$1,592.00
Ford, Leonard	624 Highland	W Lake	48189 090-031-00	SR2	126.6		S Side Highland Ave	
			090-023-00	SR2	45	171.6	N Side 6 Mile (Horseshoe)	\$3,003.00
Francois, Herbert W	122 Hawkins	Ypsilanti	48197 060-556-00	SR2	88.6		SE Side Shady Beach	
			060-068-00	SR2	35		SW Side Shady Beach	
			060-408-00	SR2	70		N Side Fairmount	
			060-201-00	SR2	35	228.6	S Side Beachway	\$4,000.00
Fritz, Robert W	32 Schrum	Ann Arbor	48103 105-072-00	SR1	100	100	S Side Schrum	\$1,750.00
Fritz, William J	74 Schrum	W Lake	48189 105-034-00	SR1	70	70	SE Side Lakeview	\$1,225.00
Fritz, William J Jr	74 Schrum	W Lake	48189 105-074-00	SR1	200	200	S Side Schrum	\$3,500.00
Fulkerson, Donald E	201 N Mill	Plymouth	48170 060-317-00	SR2	35		N Side	
			060-318-00	SR2	35	70	Maple Grove	\$1,225.00
Falcone, Steve	93 Schrum	W Lake	48189 105-098-00	SR1				
			105-100-00	SR1	126	126	N Side Schrum	\$2,205.00
Fisher, Warren I	809 Edgewood	Ann Arbor	48103 105-054-00	SR1	7		S Side	
			105-056-00	SR1	45	52	Greenland	\$910.00

Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Galehouse, Clark	7716 Shady beach	W Lake	48189 060-545-00	SR2	140	140	E Side Shady Beach	\$2,450.00
Gallup- Silkworth Co	2141 S State	Ann Arbor	48104 018-017-00	HC	320	320	S Side 6 Mile Rd	\$5,600.00
Galuska, Anthony	34730 Stuart	Romulus	48174 105-050-00	SR1	150		NW Side Lakeview	
			105-048-00	SR1	98.6		SE Side Lakeview	
			008-045-00	SR1	223.3	471.9	E Side Whitmore Lake	\$8,258.00
Garry, Lenore L	670 Highland	W Lake	48189 090-038-00	SR2	45	45	S Side Highland Ave	\$787.00
Gatman, Walter	15753 Thomas	Allen Park	48101 060-073-00	SR2	70	70	SW Side Shady Beach	\$1,225.00
Gilbert, Donald W	7548 Norene	W Lake	48189 060-375-00	SR2	40		W Side Shady Beach	
			060-266-00	SR2	70		S Side Deleware	
			060-416-00	SR2	70	180	N Side Fairmount	\$3,150.00
Gilliam, James	4451 Shangrila	Pinckney	48169 060-204-00	SR2	35	35	S Side Beachway	\$612.00
Goebel, Mark & Elizabeth	1217 Crestwood	Ypsilanti	48197 060-363-00	SR2	140	140	N Side Glenmoor	\$2,450.00
Goff, Charles	1175 Donna	W Lake	48189 060-107-00	SR2	37.5		S Side Beachway	
			060-089-00	SR2	35	72.5	NW Side Shady Beach Dr	\$1,268.00
Graham, Lucille	1467 Woodland	Ann Arbor	48104 090-102-00	RC	30	30	N Side Hillsdale	\$525.00
Glover, Lucille	10634 Nine Mile	W Lake	48189 090-001-00	SR2	100		N Side	
			090-003-00	SR2	60	160	6 Mile Rd	\$2,800.00
Graham, Gary & Patricia	505 6 Mile	W Lake	48189 085-022-00	SR1	37		E Side	
			085-023-00		35.9		Oliver	

(continued)

Washtenaw County, Northfield Township, Michigan

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\*\* Please Note - This is the original list from the 1970's. Names listed are not necessarily the names of current property owners \*\*

(continued)									
		085-024-00	37	109.9	Street				\$1,923.00
Goniwicha, Dennis	8425 Whitmore Lake	W Lake	48189 008-039-00	GC	99	99	W Side Whitmore Lake		\$1,732.00
Grandmason, Jean	856 E Grand Blvd	Detroit	48226 060-087-00	SR2	72	72	NW Side Shady Beach Dr		\$1,260.00
Grandsden, Keith R	632 Highland	W Lake	48189 090-033-00	SR2	90	90	S Side Highland Ave		\$1,575.00
Grostick, Raymond	225 E State St	Brighton	48116 105-060-00	SR1	102.5	102.5	S Side Greenland		\$1,793.00
Grostick, Raymond	80 Lakeview	W Lake	48189 105-041-00	SR1	70	70	SE Side Lakeview		\$1,225.00
Gutchess, Von E	PO Box 1416	Battle Creek	49016 060-400-00	SR2			N Side		
			060-401-00	77			Fairmount		
			060-481-00				S Side		
			060-483-00	119	196		Dartmoor		\$3,430.00
Glumb, Thomas & Diane	650 6 Mile	W Lake	48189 017-012-00	SR1	379	379	E Side 6 Mile		\$6,632.00
Hales, Delores J	13318 Sequoia Rt3	S Lyon	48178 008-028-00	GC	80	80	W Side Whitmore Lake		\$1,400.00
Halterman, Oliver E	Box201	W Lake	48189 090-391-00	SR2	112	112	N Ely Side Lakeshore		\$1,960.00
Hammond, Geraldine	14626 Greenlawn	Detroit	48238 090-375-00	SR2	30.5	30.5	N Ely Side Lakeshore		\$533.00
Hargrove, Willie & Ella	25711 Stanford	D Hts	48125 090-395-00	SR2			N Ely Side Lakeshore		
			090-397-00	125					
			090-385-00	90	215		S Side Maple		\$3,762.00
Heeres, Willard J	3971 Grand Haven	Muskegon	49441 060-231-00	SR2	111.8	111.8	SE Side Coyle		\$1,956.00
Heilman, Arnold&Emil	8169 Ravine	Westland	48184 090-376-00	SR2	61				

Washtenaw County, Northfield Township, Michigan

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\*\* Please Note - This is the original list from the 1970's. Names listed are not necessarily the names of current property owners \*\*

(continued)									
Henry, William	Box 311	W Lake	48189 090-416-00	SR2	60	30.5	91.5	N Ely Side Lakeshore	\$1,601.00
Hensler, Carl	312 Dartmoor	W Lake	48189 060-472-00	SR2	140	60	60	SW Side Lakeshore Dr	\$1,050.00
Hendrickson, Daniel J	535 6 Mile	W Lake	48189 085-035-00	SR1	110	140	140	S Side Dartmoor	\$2,450.00
Hepner, Sandra	361 Grove	W Lake	48189 060-115-00	SR2	44	110	110	N Side 6 Mile	\$1,925.00
Hinz, Raymond	405 Pauline	Ann Arbor	48189 060-540-00	SR2	44	44	44	NE Side Grove	\$770.00
Hogan, Leo	309 Dartmoor	W Lake	48189 060-430-00	SR2	105	140	140	E Side Shady Beach	\$2,450.00
Hogan, Clarence	1288 Dartmoor	W Lake	060-448-00	SR2	140	245	245	N Side Dartmoor	\$4,287.00
Hollister, Earl L	8006 Lake Shore	W Lake	48189 060-475-00	SR2	52.5	52.5	52.5	S Side Dartmoor	\$918.00
		W Lake	48189 090-381-00	SR2	82.5			N Ely Side Lakeshore	
			090-398-00						
			090-321-00		60	142.5	142.5	N Side Maple	\$2,493.00
Holt, Dorothy M	333 Fairmount	W Lake	48189 060-412-00	SR2	105	105	105	N Side Fairmount	\$1,837.00
Holt, David W	5053 Bidwell	Brighton	48116 008-038-00	GC	100	100	100	W Side Whitmore Lake	\$1,750.00
Howard, John	45 Delaware	W Lake	48189 060-234-00	SR2	141				
			060-236-00		35				
			060-237-00		70	246	246	N Side Delaware	\$4,305.00
Howe, Margaret	2824 Brandywine	Ann Arbor	48104 060-041-00	SR2	70	70	70	N Side Shady Beach Dr	\$1,225.00
Howland, Milton P	1685 Miller	Ann Arbor	48104 060-422-00	SR2	140	140	140	S Side Fairmount	\$2,450.00

Washtenaw County, Northfield Township, Michigan  
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Huffmaster, Ernest et al.	3624 Napier	Plymouth	48170 090-133-00	RC	51	51	N Ely Side Lakeshore	\$892.00
Huffmaster, Arthur	930 N rosevere	Dearborn	48128 090-414-00	SR2	60	60	SW Side Lakeshore Dr	\$1,050.00
Humble, Lewis & Margaret	537 E Shore	W Lake	48189 008-047-00	SR1	161.8	161.8	W Side Whitmore Lake	\$2,831.00
Hunt, Chester M	8365 Whitmore	W Lake	48189 008-040-00	GC	501.8	501.8	W Side Whitmore Lake	\$8,767.00
Hynes,EB	29576 City Center	Warren	48093 060-202-00	SR2	70	70	s Side Beachway	\$1,225.00
Howard, Janet K	350 Deleware	W Lake	48189 060-269-00	SR2	35			
			060-270-00	SR2	35	70	S Side Deleware	\$1,225.00
Heilman, Chris A	381 6 Mile	W Lake	48189 060-506-00	SR2	110		W Side Shady Beach	
			060-534-00		105	215	N Side 6 Mile	\$3,762.00
Jackson, Lester	8859 Warwick	Detroit	48228 090-368-00	SR2	30	30	SW Side Lakeshore Dr	\$525.00
Jackson, Lester J	8859 Warwick	Detroit	48228 090-367-00	SR2	30	30	SW Side lakeshore Dr	\$525.00
Johnson, Samuel E	5259 Dexter Rd	Ann Arbor	48103 060-268-00	SR2	35		S Side Deleware	
			060-314-00		70	105	N Side Maple Grove	\$1,837.00
Johnson, Mrs Harold	1557 Cambridge	Clearwater	33516 105-039-00	SR1	70	70	SE Side Lakeview	\$1,225.00
Kalisz, John	19580 Henry	Melvindale	48122 060-084-00	SR2	48.1	48.1	SW Side Shady Beach	\$806.00
Kalte, Arthur	Box 281	W Lake	48189 090-339-00	SR2	90	90	N Side Park Ave	\$1,575.00
Kartje, Glenn M	39595 Winesap	Plymouth	48171 090-444-00	SR2	89.5	89.5	N Wly Side Lakeshore Dr	\$1,566.00
Kelley, Patrick O	101 Lakwview	W Lake	48189 105-062-00	SR1	149.2	149.21	NW Side Lakeview (Highlan	\$2,611.00



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Kelley, Peter S	8310 Main	W Lake	48189 105-079-00	SR1	52.2	N Side Lakeview	
			105-030-00		35	S Side Lakeview	
			105-017-00		25	S Side Lakeview	
			105-101-00		50	162.2 N Side Schrum	\$2,838.00
Konazeski, Alex	20117 Angling	Livonia	48154 090-350-00	SR2	141.6	141.6 N Ely Side Lakeshore	\$2,478.00
Kelly, Peter			008-036-00	AR	300	300 E Side Whitmore Lake	\$5,250.00
Kincaid, Noah	7908 Coyle	W Lake	48189 060-174-00	SR2	75.5	75.5 SE Side Coyle	\$1,321.00
Kincaid, Gurney	7900 Coyle	W Lake	48189 060-175-00	SR2	120	SE Side Coyle	
			060-229-00		181	301 SE Side Coyle	\$5,267.00
Kornexl, John	7806 Whitmore Lake	W Lake	48189 060-347-00	HC	69.4		
			060-391-00	HC	97.6	167 SE Side Coyle	\$2,922.00
Kosky, Joseph T	9277 Hubert	Allen Park	48101 060-093-00	SR2	70		
			060-010-00	SR2	70	14 NW Side Shady Beach Dr	\$2,450.00
Kraizman, Jack	2316 Guardian Bldg	Detroit	48226 090-108-00	RC	68.7	N Side Hillsdale	
			090-112-00	RC	130.3	199 E Ly side Lakeshore	\$3,482.00
Kruse, Clemens A	1718 Waverly	Ann arbor	48104 105-031-00	SR1	37	S Side Lakeview	
			105-096-00		79.5	N Side Schrum	
			105-092-00		150	N Side Schrum	
			105-094-00		200	466.5 N Side Schrum	\$8,163.00

Washtenaw County, Northfield Township, Michigan  
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Kranick, John J	9205 Garfield	W Lake	48189 060-186-00	SR2	105	105	N Side Beachway/E 23	\$1,837.00
Kregaski, Ronald	5665 Geddes	Ann Arbor	48189 060-020-00	SR2	35	35	NE Side Shady Beach	\$612.00
Kretschmar, Albertina	231 McKinley	GP Farms	48236 060-379-00	SR2	105	105	S Side Glenmoor	\$1,837.00
LeFave, Robert L	10539 Heenan	W Lake	48189 060-075-00	DR2	35	35	SW Side Shady Beach	\$612.00
Laidlaw, Ralph M	388 Maple Grove	W Lake	48189 060-369-00	SR2	70	70	N Side Glenmoor	\$1,225.00
Laidlaw, Ralph & Marion	388 Maple Grove	W Lake	48189 060-324-00	SR2	105	105	S Side Maple Grove	\$1,837.00
Lakin, James	2317 NW 115th	Oklahoma City	73120 085-014-00	SR1	80		E Side Edmund	
			085-020-00	SR1	531.9	611.9	E Side Oliver	\$10,708.00
Langendam, John A	314 Lakeview	W Lake	48189 105-004-00	SR1	68	68	E Side Lakeview	\$1,190.00
Lansky, Gilbert	2508 Brockman	Ann Arbor	48104 060-410-00	SR2	70			
			060-414-00	SR2	175	246	N Side Fairmount	\$4,287.00
Lansky, Samuel S. et al.	2128 Wallingford	Ann Arbor	48104 060-547-00	SR2	140	140	E Side Shady Beach	\$2,450.00
LaPrell, George	11727 Kenton	W Lake	48189 060-250-00	SR2	70	70	N Side Delaware	\$1,225.00
LaRoue, Francis W	7955 Shady Beach	W Lake	48189 060-063-00	SR2	105	105	SW Side Shady Beach	\$1,837.00
Lato, Walter J	688 6 Mile	W Lake	48189 017-015-00	SR1	80.7	80.7	E Side 6 Mile	\$1,412.00
Layton, Bobby	644 Highland	W Lake	48189 090-035-00	SR2	30			
			090-036-00		30			
			090-037-00		30	90	S Side Highland Ave	\$1,575.00

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Leach, Barbara & Loretta A	Alle 1513 Rio Verde	West Covina	085-057-00	SR1	40	40	W Side 6 Mile Rd	\$700.00
Leapley, Delbert C	8501 Winans Lake	Brighton	48116 018-001-00	SR2	201.7	201.7	NW Side Coyle Rd	\$3,529.00
Lemon, Donna M	8562 Main St	W Lake	48189 060-468-00	SR2	70	70	S Side Dartmoor	\$1,225.00
Lesser, Dr Morton B	26789 woodward	H Woods	48070 090-442-00	SR2	45	45	N Wly Side Lakeshore Dr	\$787.00
Lesser, Jack	24632 Harden	Southfield	48075 090-441-00	SR2	30	30	N Wly Side Lakeshore Dr	\$525.00
Lofquist, Kenneth	451 Six Mile	W Lake	48189 085-011-10	SR1	236.5	236.5	W Side Edmund	\$4,138.00
Lolmaugh, Starr D	7932 Coyle	W Lake	48189 060-136-00	SR2	113.5			
			060-138-00	SR2	149.8	263.3	SE Coyle	\$4,706.00
Loomis, Jesse W Jr	7827 Faust	Detroit	48238 060-004-00	SR2	105	105	SE Side Shady Beach	\$1,837.00
Lund, Garry	229 Fairmount	W Lake	48189 060-403-00	SR2	210	210	N Side Fairmount	\$3,675.00
Lund, Mrs Frank	8834 Whitmore Lake	W Lake	48189 060-428-00	SR2	227.5		S Side Fairmount	
			060-452-00	SR2	35	262.5	N Side Fairmount	\$4,593.00
Lund, Frank & Marilyn	224 Fairmount	W Lake	48189 060-437-00	SR2	105			
			060-441-00		70	175	S Side Fairmount	\$3,062.00
Lundholm, Richard W Jr	786 N Abbe Rd	Elyria	060-273-00	SR2	70	70	S Side Deleware	\$1,225.00
Lupi, Ralph	Rt 1	W Lake	48189 060-132-00	SR2	15		S Side Grove	
			060-052-00		116.7		SE Side Coyle	
			060-053-00		40			
	(continued)		060-056-00		35		S Side Shady Beach	

Washtenaw County, Northfield Township, Michigan

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(continued)									
		060-058-00	280						
		060-134-00	146.5	668.2	SE Side Coyle				\$11,081.00
Lupi, Donald J & Ferne	40 Grove	48189 018-005-00	SR2	138.8	NW Side Coyle Rd				\$2,429.00
Lussow, Beryl E T	13524 Tuller Ave	48226 060-256-00	SR2	70	N Side Delaware				
		060-034-00	35	105	NE Side Shady Beach				\$1,837.00
Laski, Theodore	7680 Shady Beach	48189 060-543-00	SR2	105	E Side Shady Beach				\$1,837.00
Lavictoire, David	210 Schrum	48189 105-080-00	SR1	204.4	N Side Lakeview				\$3,577.00
Magee, Keith C	7904 Shady Beach	48189 060-018-00	SR2	33	NE Side Shady Beach				\$577.00
Manor, Frank R	728 6 Mile	48189 017-011-00	SR1	66	S Side 6 Mile Rd (Horseshoe				\$1,155.00
Marks, Lloyd	656 Fairford	48236 090-343-00	SR2	180	N Ely Side Lakeshore				\$3,150.00
Marszalek, John	PO Box 267	48189 090-345-00	87		S Side Park Ave				
		090-363-00	SR2	30	SW Side Lakeshore Dr				\$2,047.00
Marszalek, Mina	20829 Orangelawn	48228 090-366-00	SR2	35	SW Side Lakeshore Dr				\$612.00
McCrie, James	28761 Bartett	48024 090-403-00	SR2	30	SW Side Lakeshore Dr				\$525.00
Maxwell, Stewart P	2320 Georgetown	48104 090-404-00	SR2	45	SW Side Lakeshore Dr				\$878.00
McEown, E C	284 Lakeview	48189 105-009-00	SR1	68	E Side Lakeview				\$1,190.00
McGarry, Milford	253 Deleware	48189 060-248-00	SR2	140	N Side Delaware				\$2,450.00
McKenzie, Herbert W	14842 Bentler	48223 090-378-00	SR2	30.5	N Ely Side lakeshore				\$533.00

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Mercier, Mary A	6544 Crane	Ypsilanti	48197 017-010-00	SR1	132	132	S Side 6 Mile (Horseshoe)	\$2,310.00
Merritt, Robert J	14509 Ellen	Livonia	48154 090-323-00	SR2	53.4	53.4	N Side Maple Ave	\$934.00
Miesel, MA & EB Oberiber	8324 Whittaker	Detroit	48209 090-384-00	SR2	30	30	S Side Maple Ave	\$525.00
Millen, Max H	7877 Coyle	W Lake	48189 018-008-00	SR2	180.9	180.9	NW Side Coyle Rd	\$3,165.00
Misko, Michael	4252 Calhoun	Dearborn	48126 090-380-00	SR2	73.3	73.3	N Ely Side Lakeshore	\$1,282.00
Moellering, David J	7926 Shady Beach	W Lake	48189 060-025-00	SR2	140	140	NE Side Shady Beach	\$2,450.00
Madhouse, Ralph & Richard	9680 M 36	W Lake	48189 017-007-10	SR1	360	360	E Side 6 Mile	\$6,300.00
Mofatt, Kenneth R	7630 Shady Beach	W Lake	48189 060-538-00	SR2	105	105	E Side Shady Beach	\$1,837.00
Moore, Ray	24340 Puritan	Detroit	48239 090-360-00	SR2	60	60	SW Side Lakeshore Dr	\$1,050.00
Morton, Mathilda	R2	W Lake	48189 090-080-00		60		S Side Hillsdale Ave	
			090-059-00	SR2	100	160	N Side Highland	\$2,800.00
Mosavat, Hosain M	PO Box 92	W Lake	48189 060-479-00	SR2	70	70	S Side Dartmoor	\$1,225.00
Muir, Mary Ann	44370 N Umlerland	Plymouth	48170 105-043-00	SR1	70	70	SE Side Lakeview	\$1,225.00
Mundt, Schubert E	319 W Washington	Howell	48843 060-464-00	SR2	105		S Side Dartmoor	
			060-531-00	SR2	140		N Side	
			085-038-00	SR1	127.1		6 Mile Rd	
			060-459-00	SR2	80		W Side	
			060-463-00	SR2	60		Shady Beach DR	
			060-505-00	SR2	80		Beach Dr	

(continued)

Washtenaw County, Northfield Township, Michigan  
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(continued)									
		085-031-00	SR1	142.1		S Ly Side			
		085-039-00	SR1	120		Lake Shore Dr			
		085-025-00	SR1	277		E Side			
		085-028-00	SR1	40	1171.2	Oliver			\$20,496.00
Marszalek, Mina	PO Box 374	48189 090-364-00	SR2	57.5	57.5	SW Side Lakeshore Dr			\$1,006.00
Moroney, Van B Sr	1453 Wisteria	48103 060-457-00		105		N Side Dartmoor			
		060-420-00	SR2	108.2	213.2	W Side Shady Beach			\$3,731.00
Nelson, Jens	5408 Seebaltd	48228 060-280-00	SR2	35	35	S Side Deleware			\$612.00
Novothy, Albert	11699 Long Ave	48227 090-379-00	SR2	91.6	91.6	NE Side Lakeshore			\$1,603.00
Nelson, Oren	PO Box 377	48189 060-526-00		70					
		060-528-00	SR2	35	105	N Side 6 Mile			\$1,837.00
Napierski, Norbert	7938 Shady beach	48189 060-027-00	SR2	74.6	74.6	NE Side Shady Beach			\$1,305.00
O'Doherty, Lena c/o Monsen's	8505 Main	48189 008-034-00	GC	100	100	W Side Whitmore Lake			\$1,750.00
Olson, Edward & Sue	792 6 Mile	017-002-15	SR1	91.5	91.5	S Side 6 Mile			\$1,601.00
Pagel, Carl H	622 Six Mile	48189 017-009-00	SR1	150	150	E Side 6 Mile			\$2,625.00
Parker, Virginia	1293 Cedar St	48192 060-001-00	SR2	41.9	41.9	SE Side Shady Beach			\$733.00
Palmer, Mary E	Attica	060-277-00	SR2	35	35	S Side Deleware			\$612.00
Palmeter, Lewis	2735 S Wagner	48103 060-346-00	HC	35	35	SE Side Coyle			\$612.00
Perlongo, Linda Sue	7567 Whitmore	48189 060-168-00							

Washtenaw County, Northfield Township, Michigan  
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(continued)						
Perry, John P	330 Delaware	W Lake	48189 060-171-00	SR2	50	\$1,032.00
					50	
					175	
					S Side Delaware	
			060-310-00	SR2	70	\$4,287.00
					245	
					N Side Maple Grove	
Pfeifer, Ronald P	7611 Capital	W Lake	48189 085-052-10	SR1	170	\$2,975.00
					170	
					N Side 6 Mile	
Phipps, John R	666 Hillsdale	W Lake	48189 090-078-00	SR2	40	\$1,575.00
					40	
					S Side Hillsdale Ave	
Pike, Josephine	41321 Memphis	Sterling Hts	48078 060-233-00	SR2	40	\$700.00
					40	
					SE Side Coyle	
Pattering, David	783 6 mile	W Lake	48189 090-007-00	SR2	120	\$2,100.00
					120	
					N Side 6 Mile (horseshoe)	
Pelaiski, Eugene	26339 Sheahan	D Hts	48127 090-341-00	SR2	60	\$1,050.00
					60	
					N Side Park Ave	
Pomo, Andrew	283 Schrum	W Lake	48189 105-090-00	SR1	90	\$1,575.00
					90	
					N Side Shrum	
Pohoreske, Peter	7923 Lakeshore	W Lake	48189 090-418-00		60	
					SW Side	
			090-420-00	SR2	45	\$1,837.00
					105	
					Lake Shore Dr	
Poore, Frieda J	7895 Shady Beach	W Lake	48189 060-082-00	SR2	68.4	\$1,198.00
					68.4	
					SW Side Shady Beach	
Popovics, Helen	20260 Rosemont	Detroit	48238 060-212-00	SR2	140	\$2,450.00
					140	
					S Side Shady Beach	
Porter, Robert M	332 Lakeview	W Lake	48189 105-001-00		68	
					E Side Lakeview	
			105-089-00	SR1	68.9	\$2,395.00
					136.9	
					N Side Schrum	
Price, Thomas	9015 Burnette	Detroit	48227 060-214-00	SR2	35	\$612.00
					35	
					s Side Beachway	
Perlongo, Herman	7567 Whitmore	W Lake	48189 060-181-00	SR2	35	\$612.00
					35	
					N Side Beachway	
Quinn, Tom R	1205 Wilbur	Pinckney	48169 060-252-00	SR2	140	\$2,450.00
					140	
					N Side Delaware	
Ragle, George & Judy	747 6 Mile	W Lake	48189 090-019-00	SR2	150	\$2,625.00
					150	
					N Side 6 Mile (Horseshoe)	

Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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Randazzo, Bustiano J	6430 Cambridge	D Hts	48125 060-021-00	SR2	75	75	NE Side Shady Beach	\$1,312.00
Rapp, Jerry	346 Fairmount	W Lake	48189 060-426-00	SR2	52.5	52.5	S Side Fairmount	\$918.00
Rappley, Charles L	560 6 Mile	W Lake	48189 017-016-12	AR	150	150	S Side 6 Mile	\$2,625.00
Rasch, Dorothy	6716 Torrer	Detroit	48227 090-431-00	SR2	30.1	30.1	w Side Lakeshore Dr	\$526.00
Reed, Edwin P	15415 Piedmont	Detroit	48223 090-432-00					
			090-433-00	SR2	60.1	60.1	w Side Lakeshore Dr	\$1,051.00
Rebman, Paul	9040 Garfield	W Lake	48189 060-189-00	SR2	105	105	N Side Beachway Dr	\$1,837.00
Rinesmith, Cecil & Beth	7764 Shady Beach	W Lake	48189 060-549-00	SR2	70	70	E Side Shady Beach	\$1,225.00
Roech, Robert A	508 W Hudson	Royal Oak	48067 105-011-00	SR1	68	68	E Side Lakeview	\$1,190.00
Reisner, Marsha	15000 Dickens	Sherman Oaks	090-373-00	SR2	89.9	89.9	S Wly Side Maple Ave	\$1,573.00
Rice, Jerry	7932 Coyle	W Lake	48189 060-172-00	SR2	179.2	179.2	S Side Elm/S Side Coyle	\$3,136.00
Rinesmith, Cecil	260 Glenmore	W Lake	48189 060-383-00	SR2	315	315	S Side Glenmoor	\$5,512.00
Rinesmith, Golda	86 Elm	W Lake	48189 060-170-00	SR2	35	35	S Side Elm	\$1,225.00
			060-171-00		35	70		
Rinesmith, Marvin	321 Beachway	W Lake	48189 060-194-00	SR2	35	35	N Side Beachway	\$612.00
Ripple, Charles	7851 Whitmore	W Lake	48189 018-007-00	SR2	120.6	120.6	NW Side Coyle Rd	\$2,110.00
Ritten, Julius	1991 Glendale	Detroit	48227 060-445-00	SR2	35	35	N Side Dartmoor	\$612.00
Rizzo, Edward	725 e N Territoial	W Lake	48189 060-445-00	SR2	35	35	NE Side Shady Beach	\$612.00
Roberts, Jonnie	875 Ottawa	Troy	48084 090-131-00	RC	120	120	N Ely Side Lakeshore	\$2,100.00



Washtenaw County, Northfield Township, Michigan  
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Robertson, Richard A	19310 Joy Rd	Detroit	48228 090-426-00	SR2	30.1	30.1	w Side Lakeshore Dr	\$526.00
Robson, William J	11417 N Shore	W Lake	48189 060-254-00		105		N Side Delaware	
			060-090-00		70		NW Side Shady Beach Dr	
			060-104-00		76.9		S Side Beachway	
			060-103-00		35		E Side Shady Lane	
			060-102-00		35		E Side Shady Lane	
Romans, Ben	2615 Verna	Ypsilanti	060-101-00		35		E Side Shady Lane	
			060-100-00	SR2	35	391.9	E Side Shady Lane	\$6,858.00
			48197 085-090-00	SR1	49.7	49.7	S Ly side Lakeshore	\$869.00
			48197 060-077-00	SR2	76.2	76.2	SW Side Shady Beach	\$1,333.00
			48189 060-009-00	SR2	35	35	NE Side Shady Beach	\$612.00
Rondy, Raymon	29634 Robert	Livonia	48189 090-162-00	RC	90	90	N Side Raymond	\$1,575.00
Rosseels, Gustave	1233 Bending	Ann Arbor	48103 105-003-00	SR1	34	34	E Side Lakeview	\$595.00
Roth Mrs Mary	44946 Brockton	Utica	48087 060-258-00	SR2	35	35	N Side Delaware	\$612.00
Rinesmith, Donald	910 Duncan	Ann Arbor	48103 060-405-00	SR2	70	70	N Side Fairmount	\$1,225.00
Rouse, Bonnie	351 Maple Grove	W Lake	48189 060-312-00		35			
			060-313-00	SR2	35	70	N Side Maple Grove	\$1,225.00
Rowen, John J	365 Grove	W Lake	48189 060-113-00	SR2	70	70	NE Side Grove	\$1,225.00
Rumberger, David L	12071 Stoney Cr	Milan	48160 060-188-00	SR2	35	35	E 23/ N Side Beachway	\$612.00

Washtenaw County, Northfield Township, Michigan  
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Russeau, Lawrence	317 Maple Grove	W Lake	48189 060-306-00	SR2	105	105	105	N Side Maple Grove	\$1,837.00
Russo, Sam	3414 Ashton	Gr Rapids	49506 060-085-00	SR2	70	70	70	SW Side Shady Beach	\$1,225.00
Rinesmith, Marvin	321 Beachway	W Lake	48189 060-193-00	SR2	35	35	35	N Side Beachway	\$612.00
Sack, Raymond	254 Fairmount	W Lake	48189 060-435-00		105			S Side Fairmount	
			060-443-00	SR2	105	105	210	N Side Dartmoor	\$3,675.00
SBJ Development	175 W Apple	Muskegon	49443 060-524-00	SR2	175	175	175	N Side 6 Mile	\$3,062.00
Sampeer, Eleanor	17658 Stahelin	Detroit	48219 090-425-00	SR2	37.6	37.6	37.6	w Side Lakeshore Dr	\$658.00
Satterla, Hattie	30 Deleware	W Lake	48189 060-288-00	SR2	70	70	70	S Side Deleware	\$1,225.00
Sawall, Michael	8105 Lake Side	W Lake	48189 090-352-00	SR2	60	60	60	SW Side Lakeshore Dr	\$1,050.00
Schmidt Inc	319 W Washington	Howell	48842 060-461-00	SR2	60	60	60	W Side Shady Beach	\$1,050.00
Shunk, Norma	134 Lakeview	W Lake	48189 105-032-00	SR1	105.5	105.5	105.5	SE Side Lakeview	\$1,846.00
Schirmer, Ralph G	16500 Westmoreland	Detroit	48219 105-028-00	SR1	105	105	105	S Side Lakeview	\$1,837.00
Schlegel, AP	Rt 1	Alto	060-357-00	SR2	105	105	105	N Side Glenmoor	\$1,837.00
Schultz, Richard G	19320 Lathers	Livonia	48152 090-429-00	SR2	60.1	60.1		w Side Lakeshore Dr	
			090-110-00	RC	70.1	130.2	130.2	E Ly side Lakeshore	\$2,278.00
Schwartz, Jack M	6944 Heather Ln	W Bloomfield	48033 090-029-00		150			E Ly side Lakeshore	
			090-026-00		48.6			N Side 6 Mile Rd	
			090-034-00	SR2	85.6	284.2	284.2	N Wly Side Lakeshore Dr	\$4,973.00
Schwartz, Sidney	16325 Crescent	SouthfieldMI	48075 105-007-00	SR1	68	68	68	E Side Lakeview	\$1,190.00

Washtenaw County, Northfield Township, Michigan  
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Selent, Arthur	1425 Ravenwood	Ann Arbor	48103 060-294-00	SR2	69.4				
			060-344-00	HC	145	214.4	SE Side Coyle	\$3,752.00	
Severence, Charles	PO Box 294	W Lake	48189 060-116-00	SR2	113.7	113.7	NE Side Grove	\$1,989.00	
Shack, Charles	7864 Lake Shore	W Lake	48189 090-071-00						
			090-072-00	SR2	60.1	60.1	E Ly side Lakeshore	\$1,051.00	
Sherman, Maurice & Mary Lou	16806 Iverness	Detroit	48238 090-129-00	RC	109.2	109.2	N Ely Side Lakeshore	\$1,911.00	
Simon, Randall	8015 Lake Shore	W Lake	48189 090-371-00	SR2	118.6	118.6	SW Side Lakeshore Dr	\$2,075.00	
Sight, Peter	11441 N Shore DR	W Lake	48189 008-044-00	SR1	178	178	W Side Whitmore Lake	\$3,115.00	
Schmidt Inc	319 W Washington	Howell	48843 060-466-00	SR2	70	70	S Side Dartmoor	\$1,225.00	
Sneedon, William P	7722 Lake Shore	W Lake	48189 085-042-00	SR1	40	40	S Ly side Lakeshore	\$70.00	
Shilling,Jack J	7221 e Compton	Paramount	90725 085-085-00	SR1	40	40	S Ly side Lakeshore	\$700.00	
Shrodes, Elsie M	1821 Green	Detroit	48228 090-347-00	SR2	30	30	N Ely Side Lakeshore	\$525.00	
Smalley, Eliza A	156 Church	Highland Park	48203 060-275-00	SR2	70	70	S Side Deleware	\$1,225.00	
Smith, WE	338 Dartmoor	W Lake	48189 060-470-00	SR2	105		S Side Dartmoor		
			060-002-00		140	245	SE Side Shady Beach	\$4,287.00	
Smith ,SA	14312 Salem	Detroit	48226 090-012-00	SR2	30	30	N Side 6 Mile (Horseshoe)	\$525.00	
Smitter, Elmer & louise	454 6 Mile Rd	W Lake	48189 017-017-00	AR	150	150	S Side 6 Mile	\$2,625.00	
Snell, Vincent	182 E Shore	W lake	48189 090-332-00	SR2	71.3	71.3	E Ly side Maple	\$1,247.00	
Sorenson, Roger	345 Dartmoor	W Lake	48189 060-453-00	SR2	105	105	N Side Dartmoor	\$1,837.00	

Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Sparrow, Kenneth	1472 Cleveland	L Park	48146 090-401-00	SR2	60	60	SW Side Lakeshore Dr	\$1,050.00
Spicer, Howard B	10989 9 Mile	S Lyon	48178 060-474-00	SR2	52.5	52.5	S Side Dartmoor	\$918.00
St Charles, Stephen	24 Deleware	W Lake	48189 060-290-00	SR2	164.8	164.8	S Side Deleware	\$2,884.00
Steer, Dr and Mrs Donald	7923 Lakeshore	Wlake	48189 090-422-00	SR2	45	45	SW Side Lakeshore Dr	\$787.00
Steer, Donald R.	PO Box 237	W. Lake	48189 090-423-00	SR2	30		SW side	
			090-424-00	SR2	36.1	66.1	Lake Shore Dr	\$1,156.00
Stein, Leroy & Dorothy	602 Cass St	Monroe	48161 060-316-00	SR2	35	35	S Side Maple Grove	\$612.00
Stewart, Charles N	12010 Ward	Detroit	48227 060-336-00	SR2	140	140	S Side Maple Grove	\$2,450.00
Stillion, Charles m	266 dartmoor	W Lake	48189 017-008-00	SR1	150	150	E Side 6 Mile	\$2,625.00
Stillion, Roberta J.	274 Ideal St.	W. Lake	48189 060-517-00	SR2	35		Back Lot	
			060-518-00	SR2	35	70	Line	\$1,225.00
Stuteville, George R	9963 N Main St	W lake	48189 085-009-00	SR2	94	Lot 9-14	N Side	
			085-009-00	SR1	110.3		Ideal Pl	
			060-542-00	SR1	35		E Side Shady Beach	
			085-017-00	SR1	228.8		S Ly side Lakeshore	
			060-219-00	SR2	85	553.1	S Side Beachway	\$9,679.00
Szegda, Walter	772 6 Mile	W Lake	48189 017-006-00	SR1	156.3	156.3	S Side 6 Mile (Horseshoe)	\$2,735.00
Szegda, Michael Sr	780 6 Mile	W Lake	48189 017-002-00	SR1	117.5	117.5	S Side 6 Mile	\$2,056.00
Szegda, Michael & Linda	776 6 Mile	W Lake	48189 017-002-10	SR1	77	77	S Side 6 Mile (Horseshoe)	\$1,347.00

Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Szegda, John	734 6 Mile	W Lake	48189 017-005-00	SR1	156.3	156.3	S Side 6 Mile (Horseshoe)	\$2,735.00
Stokes, Frank W	64 Lakeview	W Lake	48189 105-045-00	SR1				
			105-046-00		105	105	SE Side Lakeview	\$1,837.00
Shack, Charles	1011 Vaughn	Ann Arbor	48107 090-073-00	SR2	40.1	40.1	E Ly side Lakeshore	\$701.00
Taggart, Gerald	7741 Spencer	S Lyon	48178 090-070-00	SR2	30.1		Ely Side Lakeshore	
			090-066-00		30			
			090-067-00		49.6	109.7	N Side Highland	\$1,919.00
Tam, Robert	32764 Old Franklin RD	Farmington	48024 090-348-00	SR2	60	60	N Ely Side Lakeshore	\$1,050.00
Tarnaski, Raymond	2324 N Circle	Ann Arbor	48104 090-358-00	SR2	50	50	SW Side Lakeshore Dr	\$875.00
Temrowski, Leeroy H	510 Neff	GP Woods	48230 085-091-00	SR1	175		N'Wly Side Lake Shore Dr.	
			085-088-00	SR1	80		S'ly Side Lake Shore Dr.	
			085-006-00	SR1	80			
			085-001-00	SR2	71.3		N Side Lakeshore	
			085-067-00	SR1	80		S Ly side Lakeshore	
			085-019-00	SR1	53	539.3		\$9,437.00
Temrowski, Joe	8829 Van Dyke	Detroit	48227 085-029-00		40			
			085-030-00	SR1	40	80	E Side Oliver	\$1,400.00

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Washtenaw County, Northfield Township, Michigan  
Special Assessment Roll No.3

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(continued)									
Twomey, Timothy J.	10080 Maplelawn	Detroit	48238 060-371-00	SR2	35	35	N. side Glenmoor		\$612.00
Tolman, Norman G.	Edmund		085-013-00	SR1	257.4	257.4	E. side Edmund		\$4,504.00
Thompson, Gene	114 Beachway	W. Lake	48189 060-224-00	SR2	35	35	S. Side Beachway		\$612.00
Urquhart, Brian A.		Ann Arbor	48108 060-287-00	SR2	210	210	S. Side Delaware		\$3,675.00
Valentine, Russell	95 Delaware	W. Lake	48189 060-239-00	SR2	140	140	N. side Delaware		\$2,450.00
Valentine, H.	PO Box 717	W. Lake	48189 060-210-00	SR2	70	70	S. Side Beachway		\$1,225.00
Valentine, Walter & Jennylee	336 Beachway	W. Lake	48189 060-208-00	SR2	70	70	S. Side Beachway		\$1,225.00
Vanderburg Realty	30937 Ford Rd.	Garden City	48135 105-019-00	SR1	70	70	S. Side Lakeview		\$1,225.00
Vanderburg, Gilbert et al.	8181 Wayne Rd.	Westland	48185 060-047-00	SR2	34	34	N. side Shady Beach Dr.		\$595.00
Vealey, Bruce	2815 NW Pine	Ocala	32670 060-037-00	SR2	35.4		NE side Shady Beach		
			085-027-00	SR1	40	75.4	E. side Oliver St.		\$1,319.00
Warner, Alvina W.	214 Packard Rd.	Ann Arbor	18104 085-066-00	SR1	40.1	40.1	S'ly Side Lake Shore Dr.		\$701.00
Welch, Ceylon L.	7635 Huron River Dr.	Dexter	48130 060-551-00	SR2	105	105	E. side Shady Beach		\$1,837.00
Warner, Alvina W.	226 Packard	Ann Arbor	48104 085-065-00	SR1	37.5		S'ly Side Lake Shore Dr.		
			090-436-00	SR2	30	67.5	N'Wly Side Lake Shore Dr.		\$1,181.00
Weiland, Steven	PO Box 267	W. Lake	48189 060-206-00	SR2	70	70	S. Side Beachway		\$1,225.00
Welch, Mrs. E.	7770 Shady Beach	W. Lake	48189 060-108-00	SR2	164.3	164.3	N. side Beachway Ave.		\$2,875.00
Wheeler, Faith	371 Grove	W. Lake	48189 060-110-00	RC	35	35	N. side Beachway Ave.		\$612.00

Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Wheeler, Faith	371 Grove	W. Lake	48189 060-079-00	SR2	70	70	SW side Shady Beach Dr.	
			060-111-00	SR2	70	140	NE Side Grove Dr.	\$2,450.00
White, Gene A.	69 Schrum Dr.	W. Lake	48189 105-106-00	SR1	100	100	N. side Schrum	\$1,750.00
Whitehead, W. P.	295 Maple Grove	W. Lake	48189 060-304-00	SR2	70	70	N. side Maple Grove	\$1,225.00
Wilson, Emory	Rt.2	W. Lake	48189 018-003-00	SR2	65	65	NW side Coyle Rd.	\$1,137.00
Wilson, William & Genevieve	7959 Lake Shore Dr., Box 51	W. Lake	48189 090-411-00	SR2	46.7	46.7	SW side Lake Shore Dr.	\$817.00
Winisky, Hilda	20 Heights Ave.	Northfield	44067 060-377-00	SR2	245	245	S. side Glenmoor	\$4,287.00
Wolfe, Howard E.	12891 Rutland	Detroit	48228 105-022-00	SR1	35	35	S. side	
			105-023-00	SR1	35	70	Lakeview	\$1,225.00
Wood, John F., Jr.	13406 Arnold	Detroit	48239 085-086-00	SR1	80	80	S'y Side Lake Shore Dr.	\$1,400.00
Wilkins, Lawrence, A.	295 Fairmount	W. Lake	48189 060-406-00	SR2	140	140	S. side Fairmount	\$2,450.00
Wusthoff, Marvin P.	7625 Capital	W. Lake	48189 085-037-00	SR1	50	50	N. side	
			085-052-00		50	100	6 Mile Rd.	\$1,750.00
Wooley, Donald	10634 Nine Mile Rd.	W. Lake	48189 017-007-00	SR1	132	132	S. side 6 Mile Rd. (Horseshoe)	\$2,310.00
Wujcik, Anna	13523 Gallagher St.	Detroit	48238 090-005-00	SR2	90	90	N. side 6 Mile Rd. (Horseshoe)	\$1,575.00
Wuster, Ralph	Rt. 1	W. Lake	48189 018-006-00	SR2	222.4	222.4	NW side Coyle Rd.	\$3,892.00
Yek, Zirl E.	760 Six Mile Rd (c/o Fed. Lar	W. Lake	48189 017-003-00	SR1	78.2	78.2	S. side 6 Mile Rd.	
			017-004-00	SR1	78.2	156.4	(Horseshoe Ave)	\$2,737.00
Young, Gregory A.	836 N. Rosevere	Dearborn	48128 060-038-00	SR2	119.4	119.4	N. side Shady Beach Dr.	\$2,089.00



Washtenaw County, Northfield Township, Michigan

Special Assessment Roll No.3

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Yunghans, George E.	1601 Clark, Room 508	Detroit	48226 060-376-00	SR2	35	35	S. side Glenmoor	\$612.00
Zander, Russell et al.	32215 Dover	Garden City	48135 090-406-00	SR2	75	30	SW side	
			090-408-00	SR2	30	105	Lake Shore Dr.	\$1,837.00
Zellman, David M.	18111 Wyoming	Detroit	48236 060-040-00	SR2	35	35	N. side Shady Beach Dr.	\$612.00
Zello, James V.	3315 Platt Rd.	Ann Arbor	48104 090-040-00	SR2	45	45	S. side Highland	\$787.00
Total								\$793,505.00

# NORTHFIELD TOWNSHIP

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## MEMO

**To:** Northfield Township Board  
**From:** Howard Fink  
**Date:** 9/18/2014  
**Re:** Assessing Contract

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Dear Township Board,

The 4 month contract with Assessment Administrative Services will be ending soon. So far, things have been going very well. I've been happy with the services that they provide. I had a discussion with Paul Burns this morning, and he indicated that things were going smoothly on his end as well, and they are very professional to work with. It has been an easy transition for everyone involved. Marilyn and I will be meeting with Lisa on Friday morning to discuss next steps. We will have information to share with the Board at the Workshop

Respectfully Submitted,



Howard Fink