



CITY COUNCIL AGENDA ITEM

Date: August 26, 2010

To: John Szerlag, City Manager

From: Mark F. Miller, Acting Assistant City Manager/Economic Development Services
Steven J. Vandette, City Engineer *SV*
William J. Huotari, Deputy City Engineer/Traffic Engineer *WJH*

Subject: Traffic Committee Recommendations
August 18, 2010

Background

The Traffic Committee considered these items at the August 18, 2010 meeting and made the following recommendations (minutes attached):

Recommendations

Recommend installation of a STOP sign on eastbound Cottonwood at Fernleigh (Item 3).

Recommend establishing a NO PARKING zone on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee, during school days only, between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m. (Item 4).

Recommend establishing fire lanes/tow away zones at 130 Town Center (Item 5).

Recommend establishing fire lanes/tow away zones at 5903-5953 John R (Item 6).

Financial Considerations

Signs cost approximately \$115.

Policy Considerations

Troy has enhanced the health and safety of the community.

A regular meeting of the Troy Traffic Committee was held Wednesday, August 18, 2010 in the Lower Level Conference Room at Troy City Hall. Pete Ziegenfelder called the meeting to order at 7:30 p.m.

1. Roll Call

PRESENT: Sarah Binkowski
Ted Halsey
Richard Kilmer
Pete Ziegenfelder

ABSENT: John Diefenbaker
Jan Hubbell
Gordon Schepke

Also present: Bill Huotari, Deputy City Engineer/Traffic Engineer
Yelena Guzyayeva, 1740 Witherbee
Frank Mediati, 3855 Fairfax Drive

2. Minutes – January 20, 2010

RESOLUTION #2010-08-03

Moved by Kilmer
Seconded by Binkowski

To approve the January 20, 2010 minutes.

YES: All-4
NO: None
ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
MOTION CARRIED

REGULAR BUSINESS

3. Install STOP Sign on Fernleigh at Cottonwood

Norbert Weinert of 3668 Fernleigh requests installation of a STOP sign on Fernleigh at Cottonwood. See attached report.

RESOLUTION #2010-08-04

Moved by Halsey
Seconded by Kilmer

Recommend installation of a STOP sign on eastbound Cottonwood at Fernleigh.

YES: All-4
 NO: None
 ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
 MOTION CARRIED

4. **Install NO PARKING Signs in front of 1740 Witherbee and along the side of the Property on Graefield.**

Sergey Guzyayev and Yelena Guzyayeva, of 1740 Witherbee, request that NO PARKING signs be installed along their property which fronts on Witherbee as well as Graefield. There is adequate parking on the Pembroke School property, but Ms. Guzyayeva told the committee that school visitors prefer to park on the street, half on her lawn, leaving trash, damaging the lawn and breaking their sprinkler system. The cars parked there also become a sight obstruction, making it difficult to see cars coming along Witherbee. She would prefer that parking be prohibited at all times.

In order to be consistent with parking regulations around other Troy schools, the committee would rather prohibit parking only during school arrival and dismissal times.

RESOLUTION #2010-08-05

Moved by Binkowski
 Seconded by Halsey

Recommend that a NO PARKING zone be established on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee, during school days only, between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

YES: All-4
 NO: None
 ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
 MOTION CARRIED

5. **Establish Fire Lanes at 130 Town Center**

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

RESOLUTION #2010-08-06

Moved by Halsey
 Seconded by Kilmer

Recommend establishing fire lanes/tow away zones at 130 Town Center, as recommended by the Fire Department.

YES: All-4
 NO: None
 ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
 MOTION CARRIED

6. Establish Fire Lanes at 5903-5953 John R

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

Frank Mediati, manager of the shopping center at 5903-5953 John R, addressed the committee. He objected to the usual Fire Lane signs, saying that vendors have to load and unload behind the shopping center. He proposed that the signs eliminate the words NO STANDING OR STOPPING, and proposed signs indicating FIRE LANE, NO PARKING, TOW AWAY ZONE. Lt. Calcia of the Fire Department and Lt. Livingston of the Police Department agreed that this was an acceptable compromise to allow vendors' vehicles to remain for a few minutes to load and unload.

RESOLUTION #2010-08-07

Moved by Halsey
 Seconded by Binkowski

Recommend establishing fire lanes/tow away zones at 5905 John R, as recommended by the Fire Department.

YES: All-4
 NO: None
 ABSENT: 3 (Diefenbaker, Hubbell, Schepke)
 MOTION CARRIED

7. Public Comment

No one wished to address the committee.

8. Other Business

There was no other business.

9. Adjourn

The meeting adjourned at 8:10 p.m.

Pete Ziegenfelder, Chairperson

Laurel Nottage, Recording Secretary



TRAFFIC COMMITTEE REPORT

July 12, 2010

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/Traffic Engineer

SUBJECT: Fernleigh at Cottonwood
Stop Sign Request

Background:

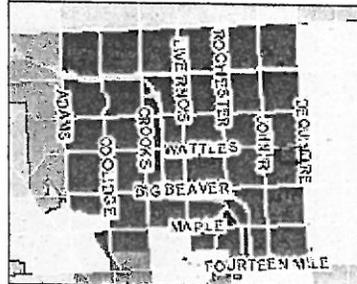
- Norbert Weinert of 3668 Fernleigh requests that a STOP sign be placed on Fernleigh at Cottonwood.
- Mr. Weinert stated that this intersection is used as a cut through to Wattles through Timbercrest Farms on the west side of Fernleigh.
- The speed limit on both streets is 25 mph.
- Fernleigh is a local gravel road, which runs north-south and is considered the major road at the intersection based on volumes and geometrics.
- Cottonwood is also a local paved street and runs east-west and is considered the minor road.
- Average daily traffic (ADT) on Fernleigh is 171 vehicles per day (vpd), while ADT on Cottonwood is 36 vpd.
- 85th percentile speeds are 28 mph on Fernleigh and 23 mph on Cottonwood.
- A review of the crash history shows no crashes over the past five (5) years.
- The major sight distance obstructions are the trees and shrubs in the southwest quadrant. This area will have a sidewalk constructed in the future when the new subdivision is complete, which would involve clearing of the area within the right-of-way. The majority of the existing trees and brush lie on private property and would not be removed as part of the sidewalk construction. A sketch of the southwest quadrant is included for your review.
- Pictures from April 2010 and July 2010 are attached to show this area before and after vegetation has established.
- The city requested that our traffic engineering consultant review the request and provide a report of their findings and recommendations (copy attached).
- The safe approach speed was found to be less than 10 mph.
- The report recommends that the intersection control be modified from "no traffic control" to a STOP sign on eastbound Cottonwood at Fernleigh.

Recommendations:

- Staff recommends that a STOP sign be placed on eastbound Cottonwood at Fernleigh.

Suggested Resolutions:

- a. Recommend installation of a STOP sign on eastbound Cottonwood at Fernleigh.
- b. Recommend no changes at the intersection of Cottonwood and Fernleigh.



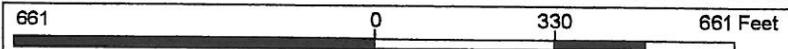
Legend

- Road Centerline
 - Major Road
 - Industrial Road
 - Local Road
- Hydrography Poly
- Hydrography Arc
- Parcels

Aerial Photos - 2008

- Red: Band_1
- Green: Band_2
- Blue: Band_3

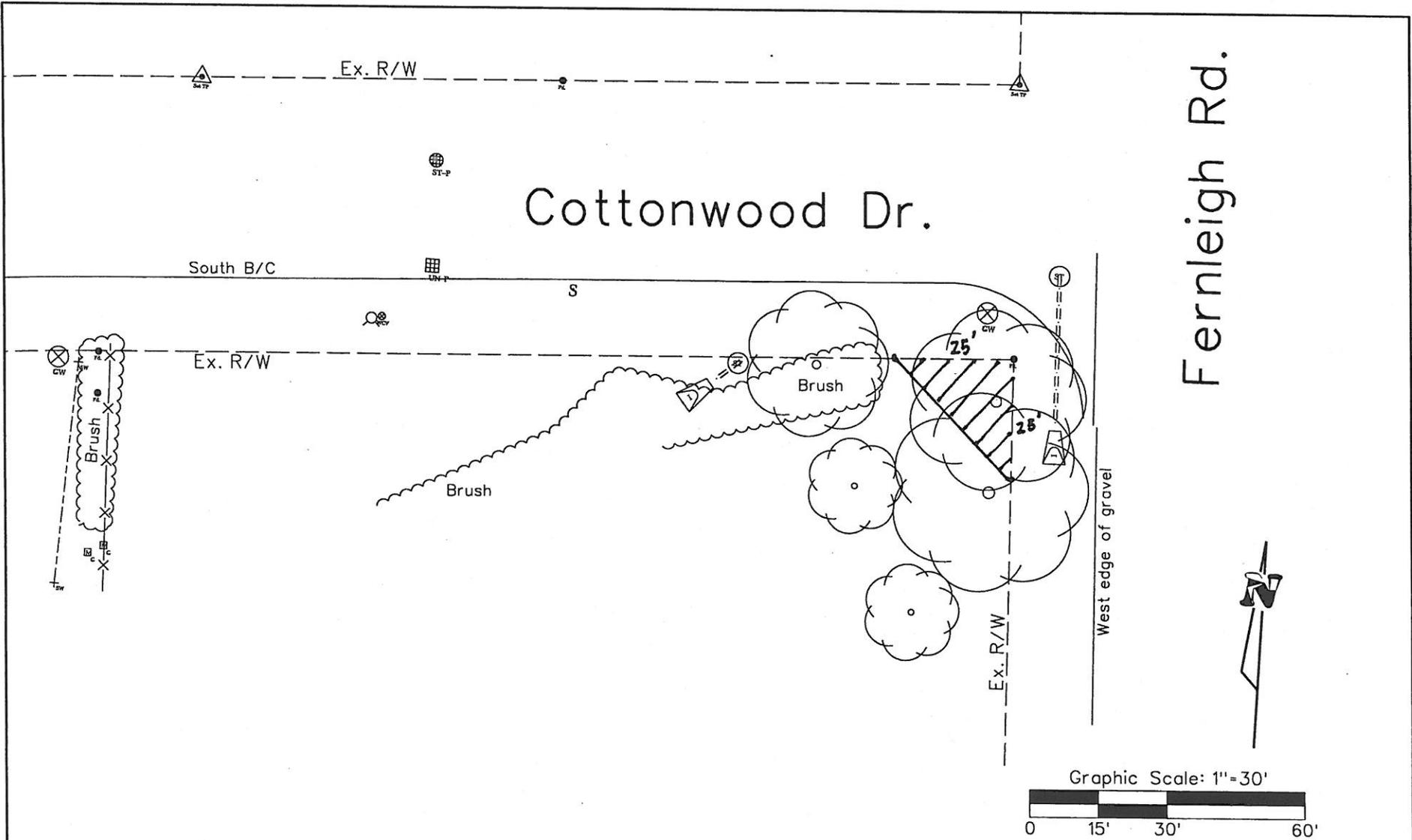
1: 3,965



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

Notes
Cottonwood at Fernleigh
STOP Sign Request

ITEM 3



Fernleigh Rd.

Cottonwood Dr.

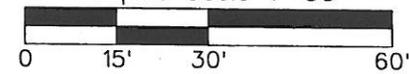
South B/C

Ex. R/W

Ex. R/W

West edge of gravel

Graphic Scale: 1"=30'



CITY OF TROY
OAKLAND COUNTY, MICHIGAN

Sketch of Intersection
SW Cor. of Fernleigh &
Cottonwood

FILE: Cottonwood_051810.DGN			
SCALE	DRAWN BY	NAME GJBIII	DATE 05
HOR. 1"=30'	CHECKED BY	NAME	DATE XX
VER. 1"=X'		SHEET NO.	JOB
	STEVEN J. VANDETTE, P.E.	10F1	N/A
	CITY ENGINEER		

Document Prepared By
George J. Ballard III, P.S.
Land Surveyor

DATE _____ REV. _____
CONTRACT NO.
N/A

ITEM 3

May 7, 2010



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

Subject: Traffic Control Recommendation for the intersection of Fernleigh Drive and Cottonwood Drive
OHM JN: 0128-10-0020

Dear Mr. Huotari:

As requested, we have reviewed the Fernleigh Drive/Cottonwood Drive intersection to determine the proper traffic control. The subject intersection is a T-intersection located in the City of Troy between John R and Dequindre Roads and south of Wattles Road. Fernleigh Drive is a local street, which runs north-south forming a T-intersection at the north end with Wattles Road and making a 90 degree turn to the east at the south end, becoming Winter Drive. Cottonwood Drive is a local street running in the east-west direction forming T-intersections at both ends (with Fernleigh Drive at the east end and Timbercrest Drive at the west end). The speed limit on both streets is 25 mph. There is currently no traffic control at the intersection. Reference the attachments for intersection photos.

Background on Traffic Control Determination

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

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

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

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

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

The use of a YIELD sign is intended to assign the right-of-way at intersections where it is not usually necessary to stop before proceeding into the intersection. Conversely, the STOP sign is intended for use where it is usually necessary to stop before proceeding into the intersection. The following conditions should be fully evaluated to determine how the right-of-way should be assigned:

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

Traffic Volumes

24-Hour traffic volumes were provided by the City of Troy. The counts indicate the average daily traffic (ADT) on Fernleigh Drive to be 171 with Cottonwood Drive at 36. The highest peak hour volumes along each road are 17 for Fernleigh Drive and 6 on Cottonwood Drive. The MMUTCD indicates that multi-way STOP control could be warranted if there were at least 300 vehicles per hour from the major street approaches and 200 units (vehicles, pedestrians and bicycles) per hour from the minor street approaches for the same eight hours on an average day. Based on the peak hour volumes alone, the option of multi-way STOP control does not meet warrants. In addition, the traffic volumes at the intersection are not directionally balanced, which is required for multi-way STOP control.

With the pedestrian and vehicular traffic added together (assuming 20 pedestrians per hour) this location is still far below warrant thresholds for multi-way STOP control. All traffic counts are provided as an attachment to this letter. Pedestrian traffic has not been counted at the intersection.

Crash Analysis

Based on information provided by the City of Troy there have been no crashes reported at this intersection in the past five years.

Approach Speeds

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

Types of Highways

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

Sight Distance

The major sight distance obstructions at the intersection are the trees and shrubs in southwest quadrant. The trees, shrubs and sight distance come into play when determining the safe approach speeds for the intersection. The safe approach speed is the speed at which a vehicle can approach an intersection and still stop in time to avoid a collision with a vehicle on the cross street. Safe approach speeds are determined through calculations.

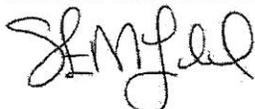
Mr. William Huotari, I
May 7, 2010
Page 3

When the safe approach speed is found to be less than 10 mph for the minor road, a STOP sign is commonly used. In this case, the safe approach speed on Cottonwood Drive was found to be less than 10 mph; therefore a STOP sign is the recommended treatment. The safe approach speed calculation spreadsheet is attached for your reference.

Recommendation

OHM recommends that the intersection control be modified from "no traffic control" to a STOP sign on the Cottonwood Drive eastbound approach to the intersection. We recommend against modifying the intersection to multi-way STOP control.

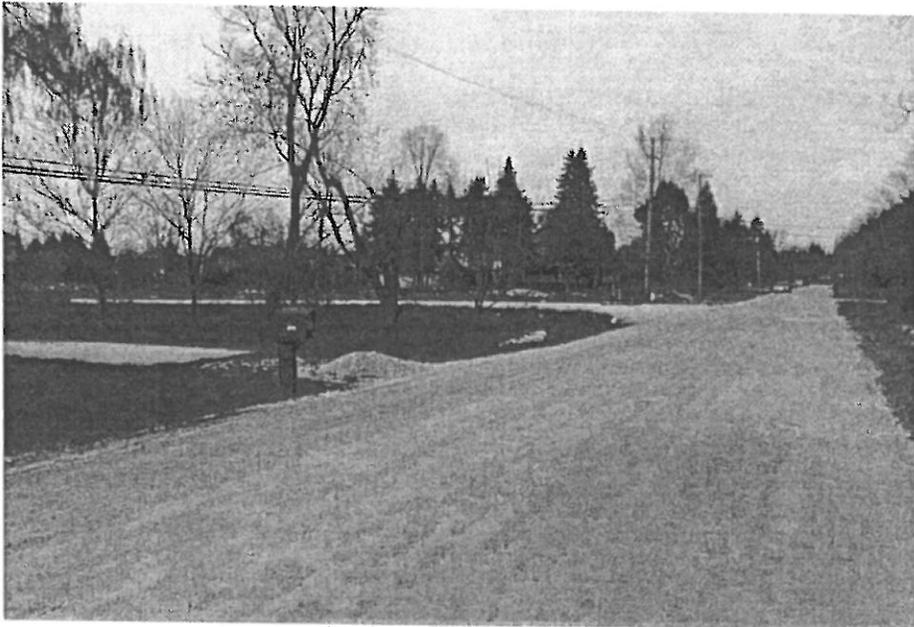
Sincerely,
Orchard Hiltz & McCliment, Inc.



Steven M. Loveland, PE, PTOE
Traffic Project Engineer

Attachments:

- Intersection Photos
- Traffic Counts
- Safe Approach Speed Calculation Spreadsheet.



Looking north along Fernleigh



Looking East along Cottonwood (trees and shrub obstructions on SW quadrant)



Looking northeast from Cottonwood



Looking south along Fernleigh

ITEM 3

APRIL 2010

Safe Approach Speed Calculation

Fernleigh and Cottonwood
City of Troy, MI

Major = Fernleigh
Local = Cottonwood

Date: 5/7/2010
Analyst: S. Loveland

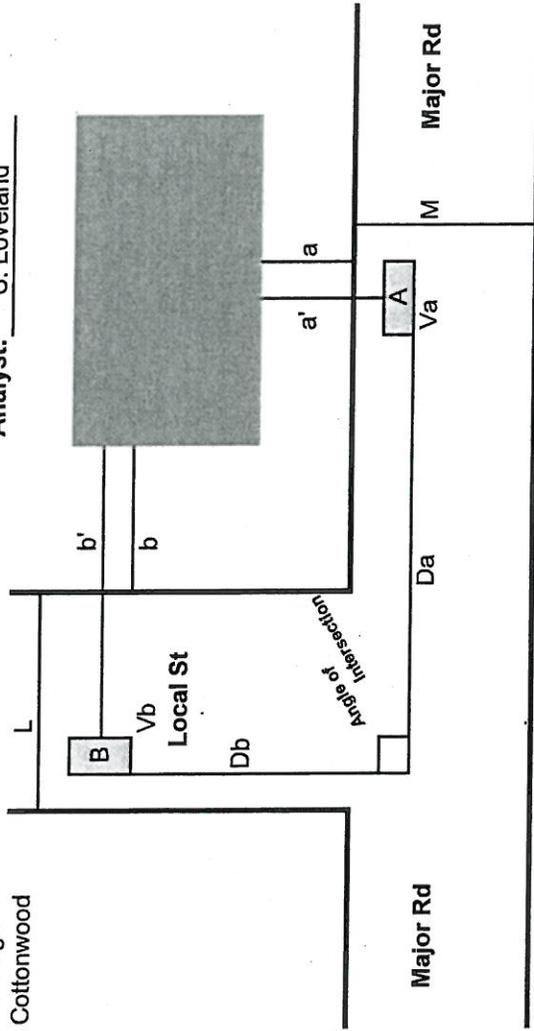
Measured:

Width of Roads
Major: M = 24 (ft)
Local: L = 26 (ft)

Distance to Obstruction (tree in SW quadrant)
a = 24 (ft)
b = 22 (ft)

Angle of Intersection
Delta = 90 (degrees)

Major Rd Posted
Speed Limit = 25 (mph)



Assumed:

Speed of Vehicle A = Posted Speed Limit
on Major Road + 5 (mph)
Va = 30 (mph)

Perception / Reaction Time (AASHTO)
t = 2.0 (sec)

Coefficient of friction (AASHTO)
f = 0.40

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

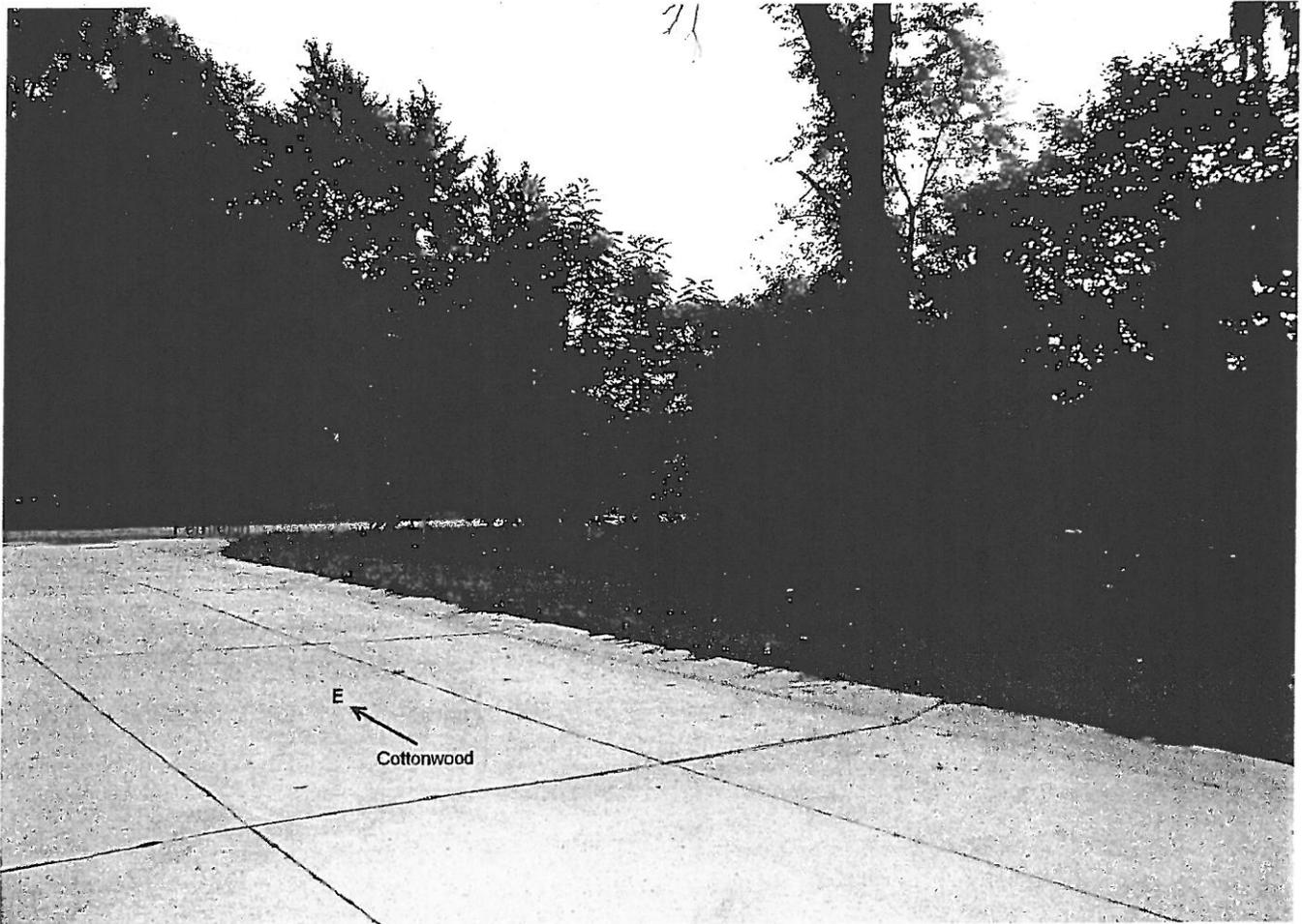
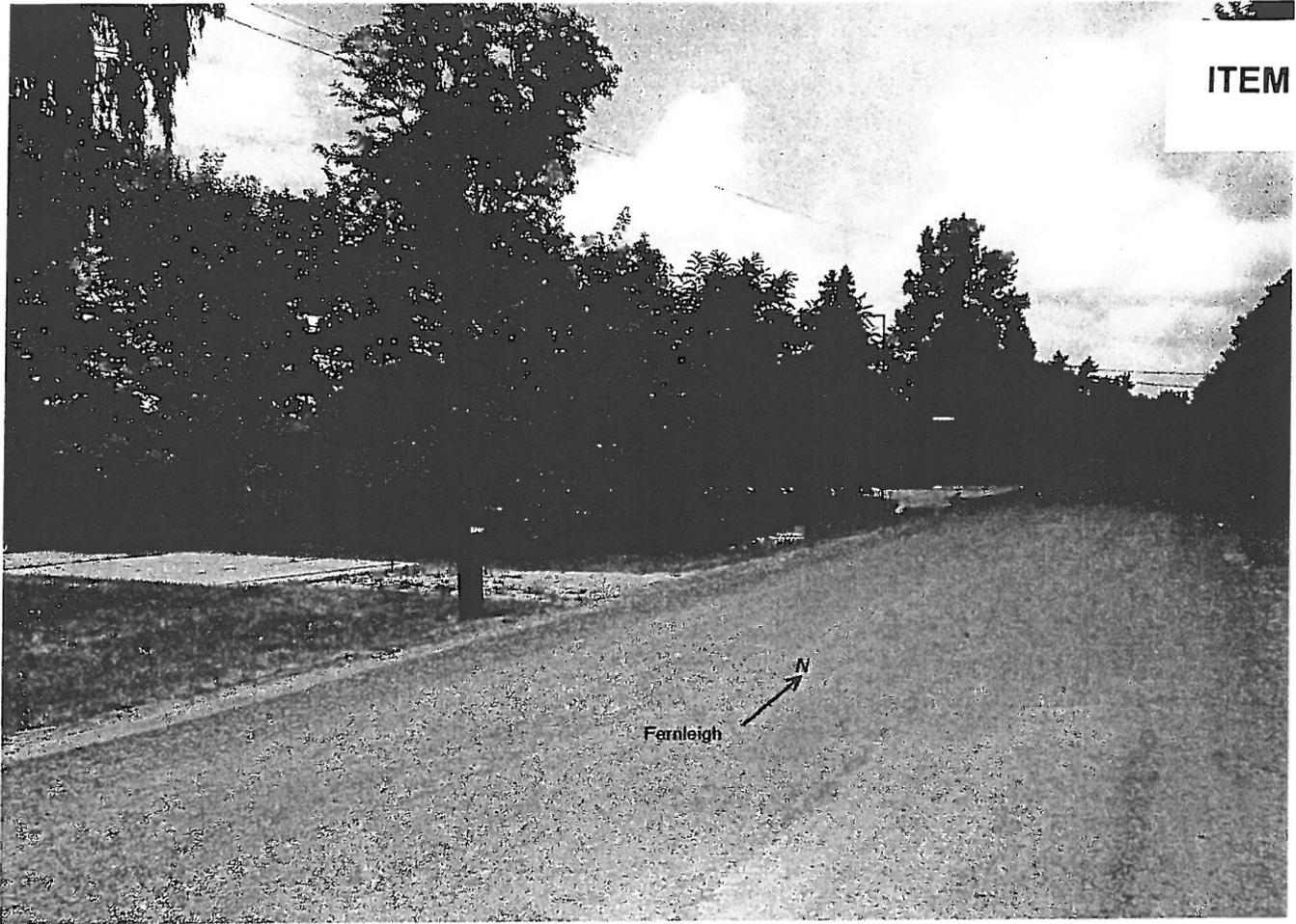
Intermediate Calculations:

Da = 178
Db = 42
a' = 33
b' = 38

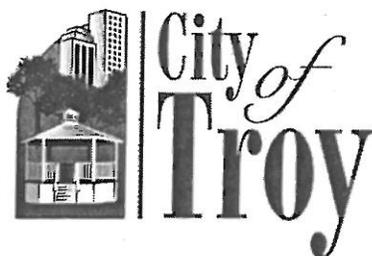
Calculated Safe Approach Speed for Vehicle
Approaching on Local Rd
Vb = 7.6 (mph)

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

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



JULY 2010



TRAFFIC COMMITTEE REPORT

July 26, 2010

TO: Traffic Committee

FROM: Bill Huotari, Deputy City Engineer/Traffic Engineer *WJA*

SUBJECT: 1740 Witherbee Drive – NO Parking Signs Request

Background:

- Mr. Sergey Guzyayev of 1740 Witherbee requests that NO Parking signs be installed along his property fronting Witherbee as well as Graefield.
- 1740 Witherbee is located directly across from Pembroke Elementary School.
- Mr. Guzyayev reports that during the school year, vehicles park near his property when dropping off or picking up children from the school.
- He also reports that vehicles have driven across his lawn causing damage to his irrigation system five (5) times which he has paid to repair.
- His issues became exacerbated when No Parking signs were installed on the south side of Witherbee, from Eton to Graefield (TCO #06-01-P, Council approval November 13, 2006).
- The north side of Witherbee is currently posted No Parking due to fire hydrants located along the north side of the road.
- When TCO #06-01-P was considered at the October 18, 2006 Traffic Committee meeting, affected residents attended the Traffic Committee meeting to oppose full-time parking prohibition on the south side of Witherbee.
- A compromise was reached at that meeting and No Parking signs were subsequently approved, but the restrictions were limited to School Days Only, between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

Recommendations:

- Staff recommends that No Parking signs be installed as requested by the resident on both sides of the property at 1740 Witherbee with the following limitations, to be consistent with the previously approved TCO #06-01-P:
 - Prohibit parking on the south side of Witherbee from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee during school days only between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.

Suggested Resolutions:

- a. Recommend that a NO PARKING zone be established on the south side of Witherbee, from Graefield to the west property line of 1740 Witherbee and on the west side of Graefield, from Witherbee to the south property line of 1740 Witherbee during school days only between the hours of 8:15 – 9:15 a.m. and 3:15 – 4:15 p.m.
- b. Recommend no changes at 1740 Witherbee.

Mr. William J. Huotari
Deputy City Engineer/Traffic Engineer
500 West Big Beaver
Troy, MI 48084

In addition to our conversation in City Hall, we report:

During the schooldays of Pembroke Elementary School, many different private cars park near our property for dropping off and picking up kids to and from school. The curbs on the streets outside our home on the streets Witherbee and Graefield are very low. Because of that, the cars always drive onto our lawn, and the kids walk on the grass. This by itself is not a problem, but there is always garbage left behind, and tire tracks on our lawn. The situation became worse a couple years ago when near almost all the houses on our main street, Witherbee, "no parking" signs were set up. We have repaired our sprinkler system, which has been damaged by cars driving onto the lawn, 5 times. Another major issue with cars parking near our house is all the cars block the view of kids crossing the street, and more importantly block the view of cars driving by. This is a safety hazard that the schoolchildren acting as "crossing guards" **cannot** handle, especially such high volumes of traffic all cramped in one lane.

Because of the reasons stated above, we ask that you please set up "no parking" signs on our territory on the streets Witherbee and Graefield. It will be a modification well worth any time or money spent.

I have included picture of the streets mentioned on page 2 of this document. Thank you very much for your interest in our matter.

Sincerely,

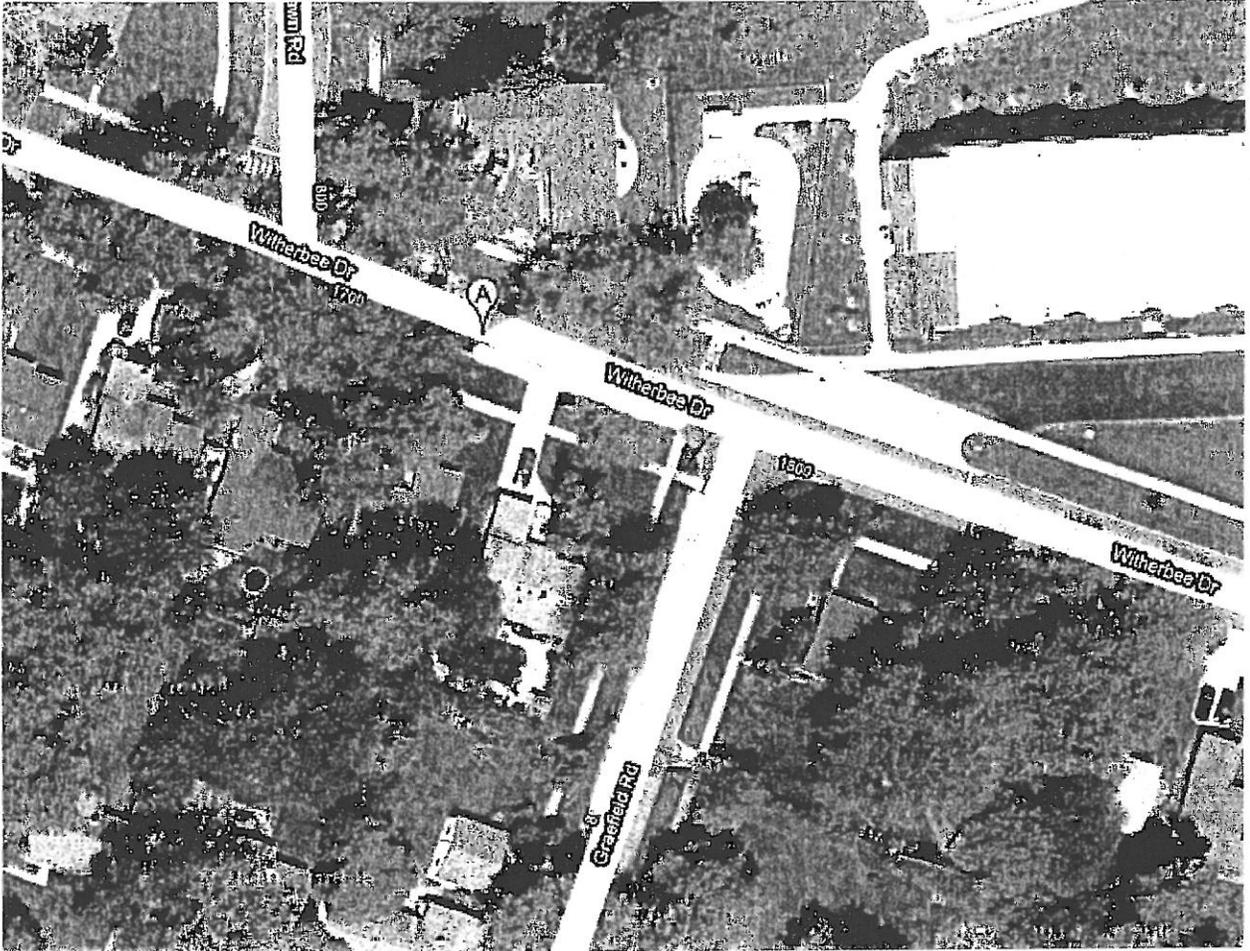
Sergey Guzyayev and Yelena Guzyayeva

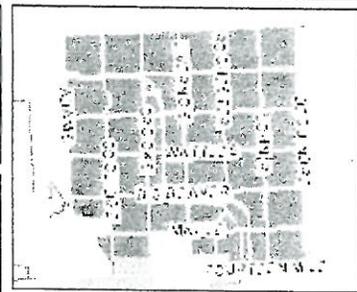
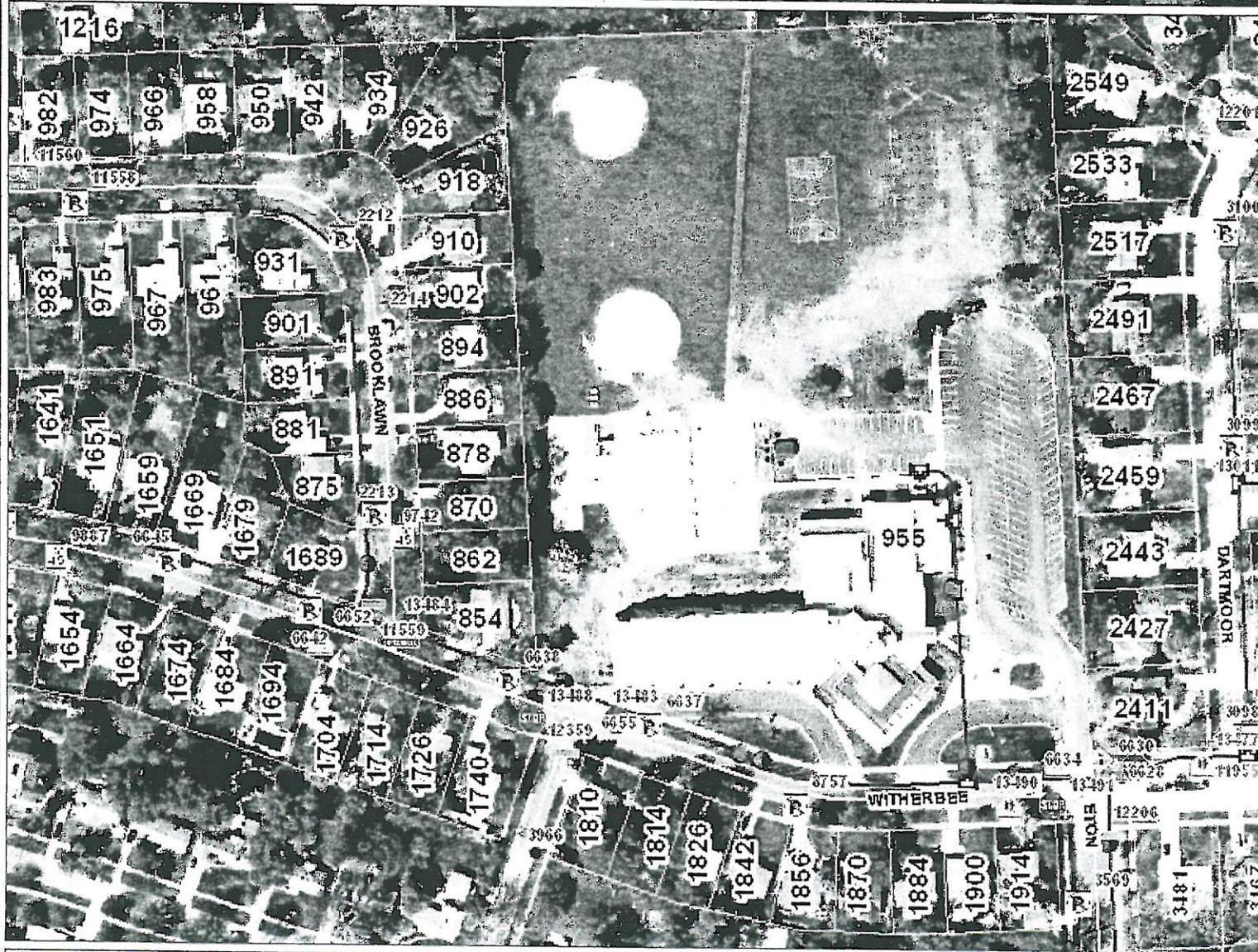
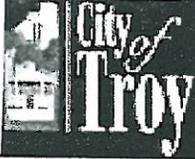
1740 Witherbee Dr.

Troy, MI 48084

sergey.guzyayev@gmail.com

Yellow lines indicated which areas to be blocked off.



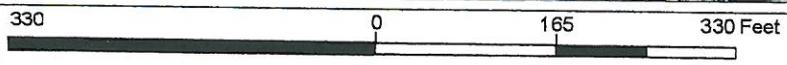


- ### Legend
- #### Street Signs
- <all other values>
 - AAR
 - B3-1
 - B3-3 - INTERSTATE HIGHWAY 75
 - B4-5
 - B5-1L
 - B5-1R
 - B6-2R - INTERSTATE HIGHWAY 7
 - BUS
 - CITYLIMITS - CITY LIMITS
 - CUSTOM SIGN
 - D1-1
 - D1-2
 - D1-3A
 - D10-2 - MILEPOST (2 DIGIT)
 - D11-1
 - D2-3
 - D3-1
 - D3-2
 - D4-2
 - D7-1
 - D7-2
 - D9-1
 - D9-14
 - D9-1A
 - E1-3
 - E1-4
 - E6-2A
 - GAS
 - M1-1
 - M1-4 - US ROUTE MARKER
 - M2-2 - JUNCTION SIGN
 - M3-1 - NORTH AUXILIARY MARKER
 - M3-2 - EAST AUXILIARY MARKER
 - M3-3 - SOUTH AUXILIARY MARKER
 - M3-4

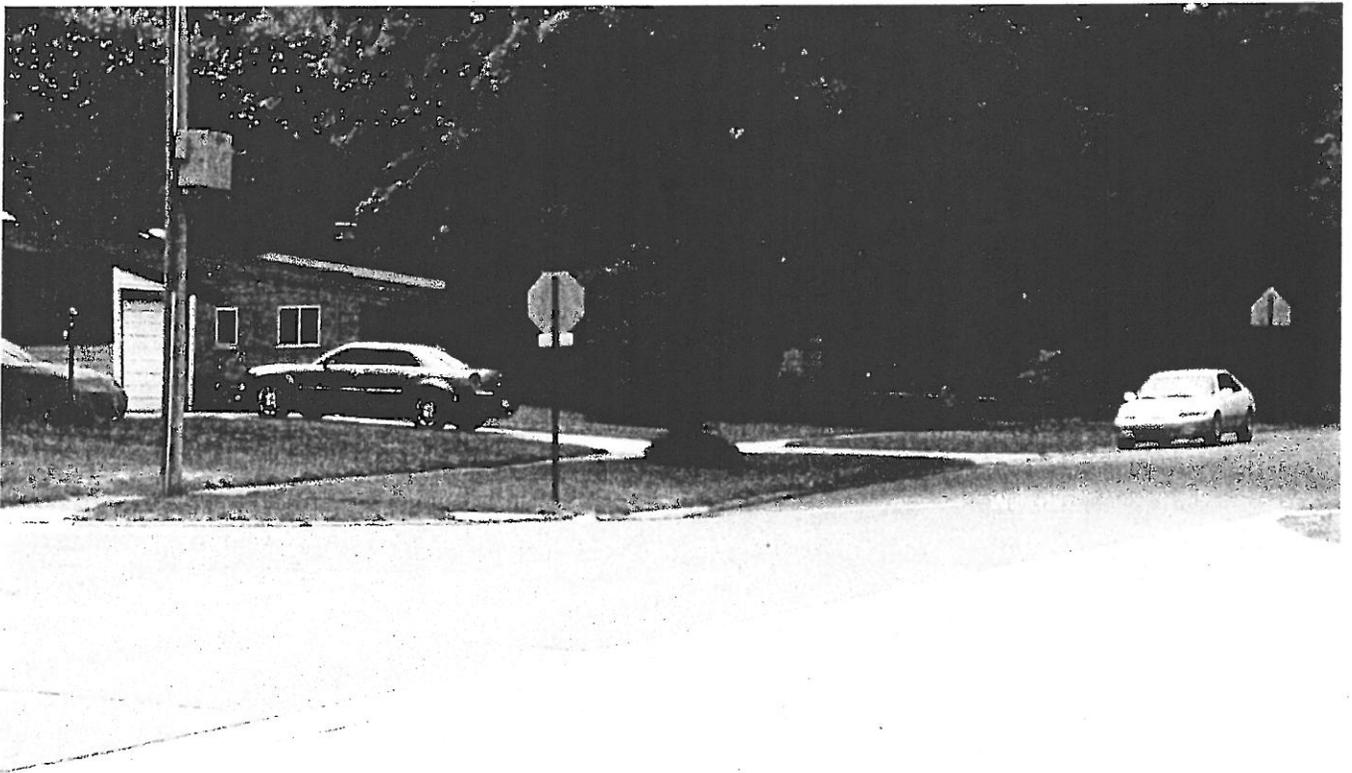
1: 1,980



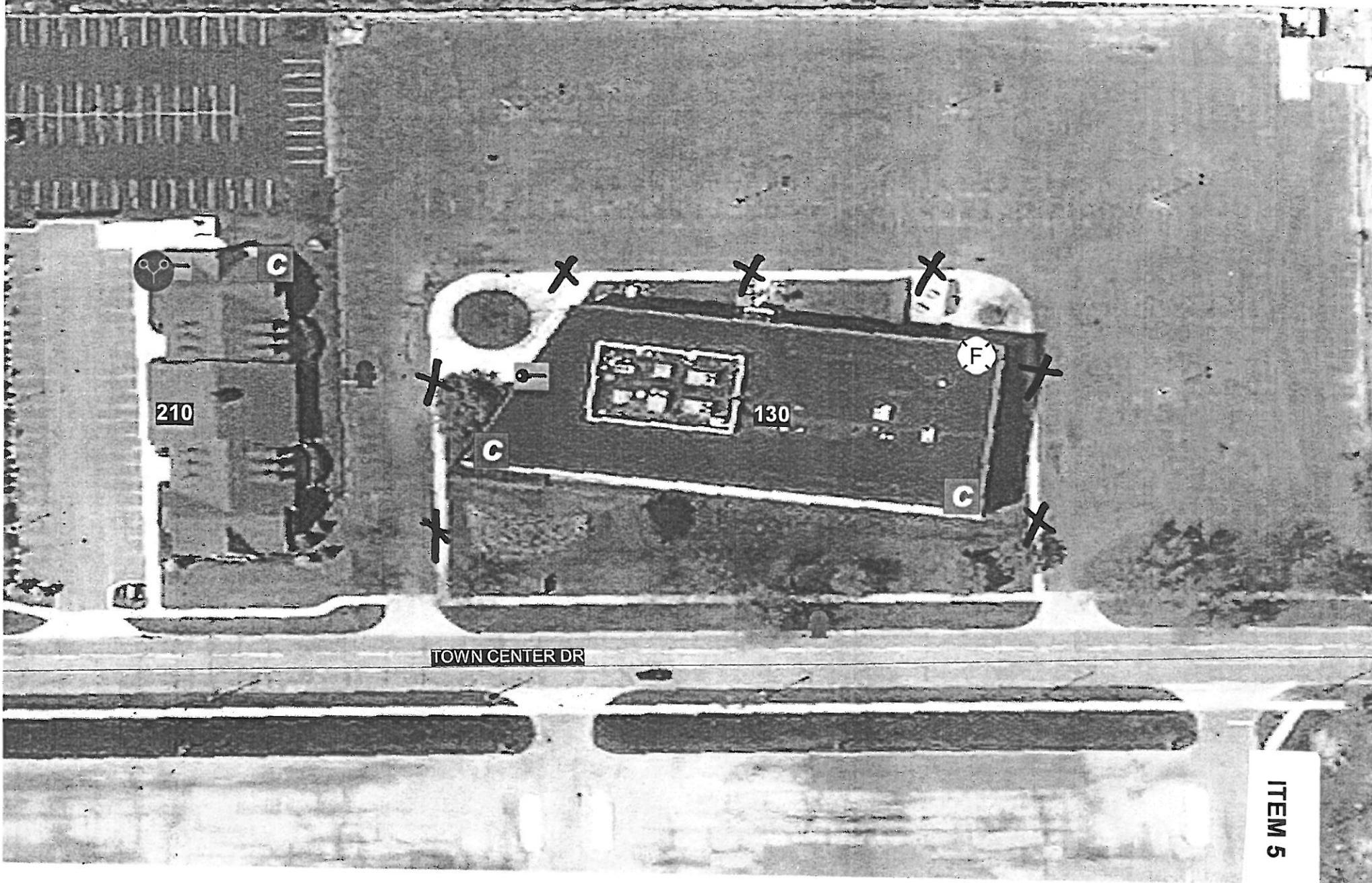
Notes
Enter Map Description



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



130 TOWN CENTER - FIRE LANES



ITEM 5

EMERALD LAKES PLAZA - FIRE LANES

