



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GREETHER
DIRECTOR

March 8, 2017

TO: All Interested Citizens, Organizations, and Government Agencies

SUBJECT: FINDING OF NO SIGNIFICANT IMPACT
City of Flint, Genesee County
Service Line Replacement
Drinking Water Revolving Fund Project No. 7421-01

The purpose of this notice is to seek public input and comment on a preliminary decision by the Michigan Department of Environmental Quality (DEQ) that an Environmental Impact Statement (EIS) is not required to implement recommendations discussed in the attached Environmental Assessment of a water supply project plan submitted by the applicant mentioned above.

HOW WERE ENVIRONMENTAL ISSUES CONSIDERED?

Part 54, Safe Drinking Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, being Sections 324.5401 to 324.5418 of the Michigan Compiled Laws Annotated, requires the DEQ to evaluate all environmental implications of a proposed water supply project. The DEQ has done this by incorporating a detailed analysis of the environmental impact of the proposed alternatives in its review and approval process. A project plan was prepared by the applicant and reviewed by the State. The DEQ has prepared the attached Environmental Assessment and found that the proposed project does not require the preparation of an EIS.

WHY IS AN EIS NOT REQUIRED?

Our environmental review concluded that no significant environmental impacts would result from the proposed action. Any adverse impacts have either been eliminated by changes in the project plan or will be reduced by the implementation of the mitigative measures discussed in the attached Environmental Assessment.

HOW DO I GET MORE INFORMATION?

A map depicting the location of the proposed project is attached. This information is also available on our website at www.michigan.gov/cleanwaterrevolvingfund under "Related Links." The Environmental Assessment presents additional information on the project, alternatives that were considered, impacts of the proposed action, and the basis for our decision. Further information can be obtained by calling or writing one of the contact people listed below.

HOW DO I SUBMIT COMMENTS?

Any comments supporting or disagreeing with this preliminary decision should be submitted to me at DEQ, Drinking Water and Municipal Assistance, Revolving Loan Section, Constitution Hall, P.O. Box 30241, Lansing, Michigan 48909-7741. We will not take any action on this project plan for 30 calendar days from the date of this notice in order to receive and consider any comments.

WHAT HAPPENS NEXT?

In the absence of substantive comments during this period, our preliminary decision will become final. The applicant will then be eligible to receive loan assistance from this Agency to construct the proposed project.

Any information you feel should be considered by the DEQ should be brought to our attention. If you have any questions, please contact Mr. Eric Pohan, the project manager, at 517-284-5416, or you may contact me. Your interest in this process and the environment is appreciated.

Sincerely,



Sonya T. Butler, Section Manager
Revolving Loan Section
Drinking Water and Municipal Assistance
517-284-5433

Attachments

**DEPARTMENT OF ENVIRONMENTAL QUALITY
City of Flint, Genesee County
Service Line Replacement
Drinking Water Revolving Fund (DWRP)
Environmental Assessment
March 2017**

Applicant: City of Flint, Genesee County

Authorized Representative: Ms. JoLisa McDay, Water Plant Supervisor
Address: 1101 South Saginaw Street
Flint, Michigan 48502

Project No.: 7421-01

I. PROJECT DESCRIPTION

The city of Flint is located approximately 66 miles northwest of the city of Detroit in Genesee County and contains a land area of 32.8 square miles.

Flint has a residential population of 99,002 as of 2014 according to data provided by the Genesee County Metropolitan Planning Commission (GCMPC). The GCMPC predicts the population will decrease to 79,365 by the year 2040. U.S. Census data estimates a population of 98,310 persons in 2015.

The proposed project includes the investigation and replacement of up to 6,000 residential water service lines constructed of lead or galvanized pipe with new copper pipe. The water service lines will require either full-length or partial replacement depending on the existing material. Any portion of the service line not constructed of copper pipe from the water main to the water meter, which could be located either inside or outside of each identified residence, will be replaced. In addition, each residential location will also have its curb stop and curb box replaced. The total project (service line replacement and restoration) is estimated to cost up to \$40,000,000, depending on bids.

II. SYSTEM HISTORY

In 1967, Flint switched its primary water source, the Flint River, to Lake Huron water that was purchased and supplied by the Detroit Water and Sewerage Department (DWSD). A single 72-inch concrete transmission pipeline, built in 1965 by DWSD, carried finished water from the DWSD Lake Huron water treatment facility to Flint's water distribution system. During that time, Flint's Water Treatment Plant (WTP), originally constructed in 1952, was kept ready for use as an emergency backup. Flint's WTP operated two or three times each year, for 10-day periods, to ensure that the WTP was prepared for emergency use. In April of 2014, Flint stopped purchasing treated water from the DWSD and began to treat water from the Flint River at the Flint WTP on a temporary basis until a connection with the newly established Karegnondi Water Authority's pipeline could be built to deliver raw water from Lake Huron. When the source was switched, additional corrosion control additives were not used, which contributed to the leaching of metals such as lead, iron, and copper from service lines and household plumbing. In October of 2015, Flint discontinued the use of the Flint River and began to once again purchase treated water

from the DWSD, which as of January 1, 2016, is known as the Great Lakes Water Authority (GLWA). Since that time, additional corrosion control additives have been introduced to the water supply so the protective scale in the pipes of the distribution system will begin to rebuild. The GLWA will continue to supply water to Flint.

III. EXISTING FACILITIES

The Flint water conveyance system has a network of over 500 miles of water distribution and transmission mains ranging from 4 inches to 72 inches in diameter. The majority of the main, up to 24 inches in diameter, is constructed of cast iron or ductile iron pipe. Transmission mains 24 inches and larger are primarily constructed of steel piping. A majority of the pipe in the system is at least 70 years old; however, some areas of the system have an average age of 96 years. Every year, a large number of breaks occur within the system. From 2010-2013, an average of 155 breaks occurred each year, and from 2014-2015, this average increased to 277 breaks per year. These breaks, which are repaired by city staff, result in serious water service disruptions and potential water quality problems to customers of the system.

Flint has approximately 32,000 residential water service lines in the system. It is estimated that the city has as many as 29,100 non-copper (partial or full) water service lines. Approximately 22,500 of these could be to occupied homes. Flint has replaced approximately 700 water service lines since March 2016.

Flint's water system also includes the Dort Reservoir, a 20-million-gallon (MG) ground storage facility, a 2-MG elevated storage tank, and a 3-MG ground storage tank all located at the WTP site; the Cedar Street Reservoir, which is a 20-MG ground storage facility located between 1-69 and Swartz Creek, off of Cedar Street; the West Side Reservoir, a 12-MG ground storage facility located near Mackin Road and Jean Avenue; as well as multiple pumping stations located throughout the city.

IV. POTENTIAL ALTERNATIVES

Alternative 1 - The No-Action Alternative

The no-action alternative is not an option for Flint due to the presence of lead service lines in the system. If no improvements are made, the system will continue to operate with lead and galvanized piping contributing to potential public health risks.

Alternative 2 – Regional Alternative

Flint is currently receiving treated water from the GLWA as part of the regional system. The service lines in Flint would still require replacement to reduce the potential public health risks. The regional alternative is not an option to resolve the public health risks.

Alternative 3 – Service Line Replacement

The service line replacement project identifies 6,000 residential homes for replacement. This project will be split into 10 zones, each containing 600 replacement locations (see attached maps for area locations). These zones were selected to be replaced first based on several factors, including the concentration of known lead and galvanized water service lines, active water accounts, the population density of children and the elderly, and the amount of lead in the water as determined by testing. Existing water

service lines consist of lead, galvanized, and copper pipe. At each location, the portion of the pipe constructed with lead and/or galvanized pipe will be replaced with new copper pipe. The industry standard for service line replacements is copper. Copper is a biocidal material that forms a protective coating, or patina, when in contact with water and is extremely resistant to corrosion when buried in soil. Purchased in a coil, copper is easily manipulated and allows for long service lines without the need for joints. In addition, the curb stop and box will also be replaced. The water service lines will be installed by both open-cut and trenchless installation. The construction method will depend on various factors including existing material of the service line, location and path of the line, and obstructions such as trees or permanent features. Trenchless technologies will be used whenever possible to limit excavation on private property.

V. PROPOSED PROJECT

The selected alternative for this project is Alternative 3, Service Line Replacement. The estimated timeline for construction is from April 2017 to October 2017. Residents will be notified by Flint with an approximate date when construction will occur at their home. It is expected that 22 replacements will be completed in each zone per week. The construction of an “average” full replacement would consist of excavating, installing pipe from the curb stop to the water main, installing pipe from the curb stop to the residential home, connecting to the water meter, installing a new curb stop with fittings and curb box, curb cut, and perform testing and flushing to validate the line is operational. Contractors or city staff will then backfill the trenches and complete restoration. If the service line is replaced by the open-cut method, the existing pipe will be removed from the ground and the materials will be recycled. In some cases where a trenchless replacement can be performed, the existing service line will be disconnected and remain buried in place.

VI. DIRECT IMPACTS

Flint’s water system is currently meeting federal Lead and Copper Rule action level requirements. However, the state continues to recommend that residents use filtered drinking and cooking water for everyone in their household while construction activities are underway. There is a chance lead scaling will be dislodged from the pipes during construction as the city replaces service and transmission lines; if this happens, individual households may have periodic spikes in lead level readings. As a precaution, the state will continue to provide filter cartridges due to the ongoing lead service line replacement program. Even after a home has its service line replaced, continued use of a filter is recommended until city and state officials confirm it is safe to use unfiltered drinking and cooking water.

VII. SHORT-TERM IMPACTS

The short-term impacts of the proposed project include general construction-related impacts. Each residence identified for service line replacement may have a trench dug from the street to the home. In some cases, construction workers will have to enter the home to connect the new line to the water meter located inside of the home. Home access may be needed to take water samples for lead testing. These inconveniences should only take one or two days, as crews are expected to complete 4.5 homes per day on average. Mitigation techniques will include, but are not limited to, traffic and safety hazard control, dust control, noise control, soil and sedimentation control, and restoration measures.

VIII. PROJECT COSTS

The proposed project will cost up to \$40,000,000, depending on bids. It is estimated a cost of \$5,000 per home to cover the lead service line removal and restoration of the project area. Funding for this project will be made available by the Water Infrastructure Improvements for the Nation (WIIN) Act, \$40M, through the DWRF as a loan with 100-percent principal forgiveness to Flint. As a result, Flint will not have to pay back the loan; therefore, this project will not impact the water rates. Additional funding may be secured for eligible homes from the U.S. Department of Health and Human Services, Children's Health Insurance Program (CHIP). CHIP covers lead abatement in Medicaid-eligible homes. A list of CHIP homes will be reviewed monthly to cross reference with homes identified for lead service line removal. It is estimated that 1,400 homes are eligible for CHIP funding as of March 1, 2017.

IX. FUTURE PROJECTS

The WIIN Act appropriated \$100 million to Flint and requires a state match of \$20 million. Flint intends to use up to \$40 million for service line replacement. The first 6,000 service lines are outlined in this Environmental Assessment (EA). Other projects using WIIN funding will be covered in future EAs. All additional work and timelines will be presented in future EAs before construction is started.

X. EXISTING ENVIRONMENT AND POTENTIAL ENVIRONMENTAL IMPACTS

Protected Animal and Plant Communities

A Section 7 review on the United States Fish and Wildlife Service Web site was completed by Rowe Engineering. This review indicated that Genesee County has potential habitat for the federally endangered Indiana bat, the federally threatened Northern long-eared bat, the Eastern massasauga rattlesnake, and the Eastern prairie fringed orchid. However, based on the urban location of the proposed project and that all construction activities will happen in residential yards and paved streets, a no-effect determination was made for impact on these species and their habitat.

A search was also completed on the Michigan Natural Feature Inventory Rare Species Explorer. In addition to the species identified in the Section 7 review, this search also identified potential habitat for the Peregrine Falcon, Henslow's Sparrow, Spotted Turtle, and slippershell mussel, as well as a variety of flowering plants in Genesee County. None of the species listed, however, had potential habitats that would be impacted by construction occurring in residential yards and paved streets.

Other Potential Project Impacts

A review by the State Historic Preservation Officer (SHPO) noted that several early Native American sites have been recorded in Flint, including early burials and cemeteries. Based on the nature of the work being performed, SHPO has made a no-adverse effect determination on the project because the likelihood of inadvertently disturbing human remains during this project is low. However, the State Archaeologist has a protocol that will be followed in the event of the discovery of human remains. This process will include stopping work on the site, reporting the discovery to the State Archaeologist, notifying local law enforcement, obtaining a permit for disinterment from the local Department of Health or by court order, and an examination of the remains performed by a physical

anthropologist. A final report on the discovery will be prepared, and in cases of Native American remains, Flint will be in contact with the appropriate tribal authority for the return of the discovered remains. All human remains and artifacts will be recovered in a respectful and culturally appropriate manner.

Fourteen Tribal Historic Preservation Officers were invited to comment on the project regarding the presence of their ancestral sites at construction locations; none objected to the project construction.

XI. PUBLIC PARTICIPATION

A public hearing was held on June 13, 2016, at 6 p.m., in the City of Flint Council Chambers. Rowe Professional Services Company presented the project plan to the Flint City Council and members of the public in attendance. At the conclusion of the presentation, the hearing was opened to the public for questions, and numerous residents made remarks regarding the project plan and presentation. Many were concerned that the proposed projects would cause an increase in water bills in Flint. However, since this loan includes 100-percent principal forgiveness, water rates will not increase due to this project. All other comments related to service line replacement were considered during the development of the project. A resolution of plan adoption was passed by the council on June 27, 2016, and by the Receivership Transition Advisory Board on June 29, 2016.

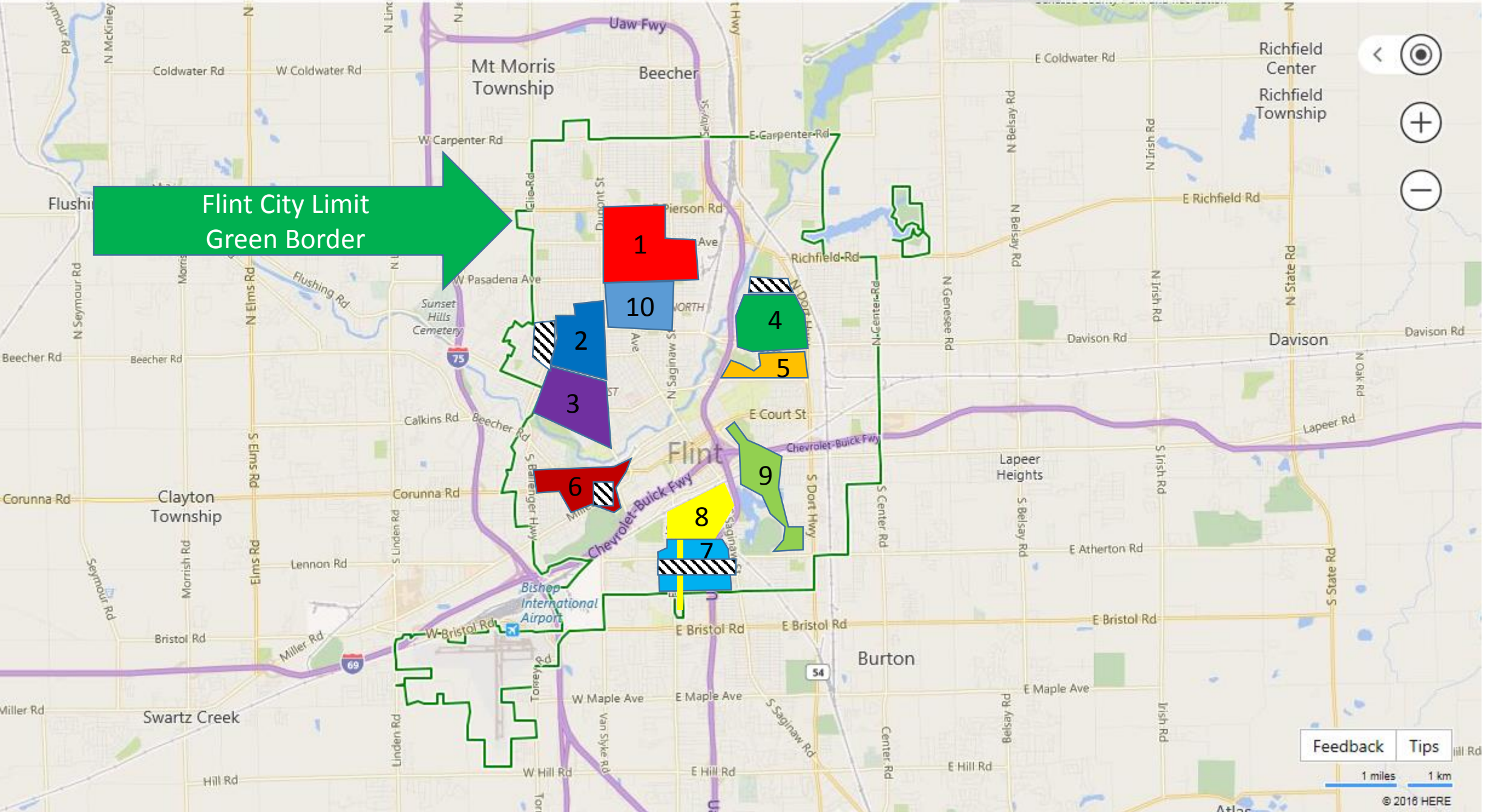
XII. REASONS FOR CONCLUDING NO SIGNIFICANT IMPACTS

This project will take Flint one step closer towards the goal of removing all lead material from the water distribution system. The proposed project will work towards providing Flint a reliable distribution system. The short-term, minor construction impacts are outweighed by the improvements that will be performed to Flint's water distribution system and the reduced threat to public health.

Questions regarding this Environmental Assessment should be directed to:

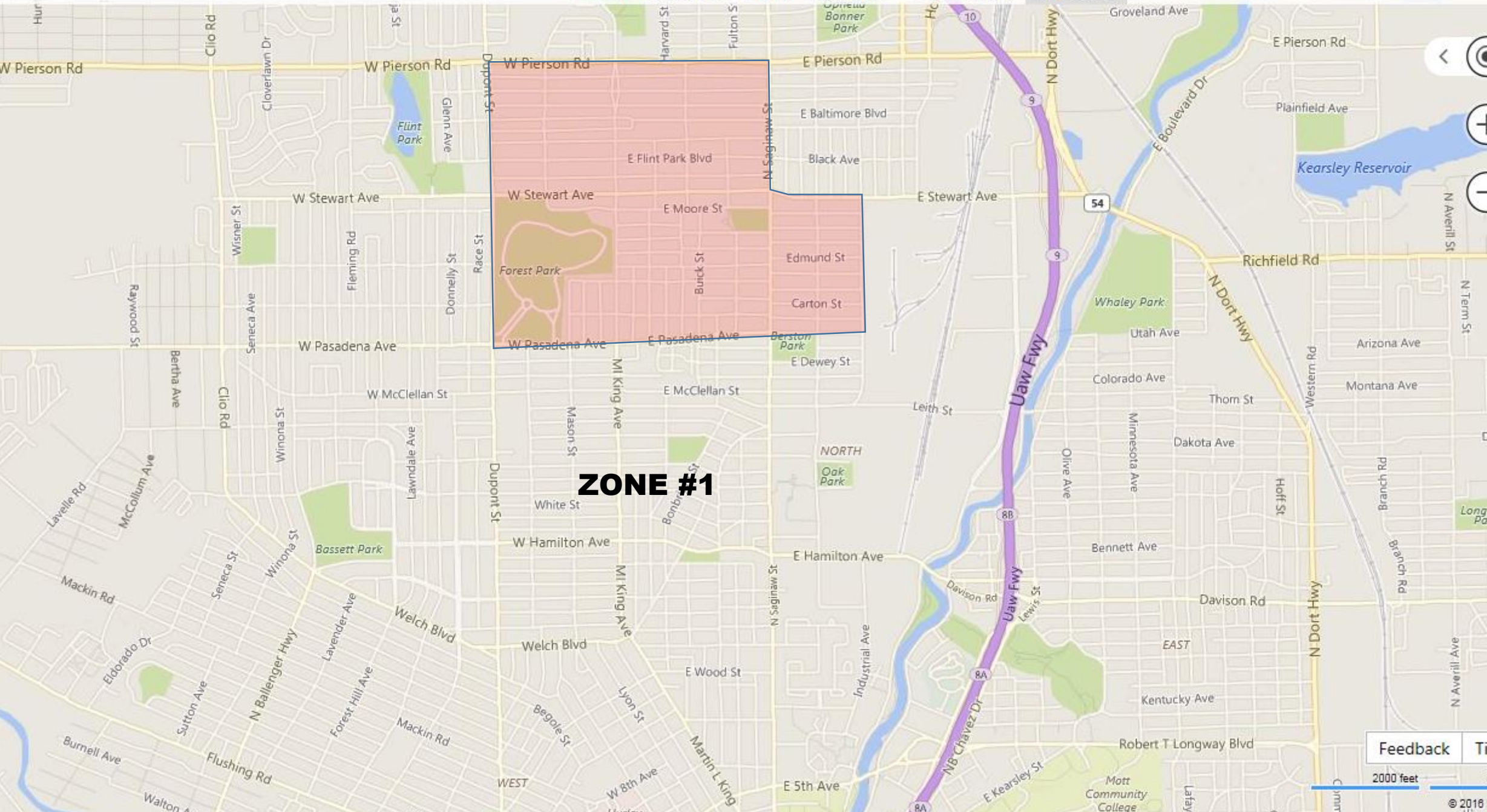
Ms. Sonya T. Butler, Section Manager
Revolving Loan Section
Drinking Water and Municipal Assistance Division
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, Michigan 48909-7741
Telephone: 517-284-5433
E-Mail: butlers2@michigan.gov

Flint City Limit
Green Border



Feedback Tips

1 miles 1 km



ZONE #1

Feedback

2000 feet

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ZONE #2



Feedback

1000 feet

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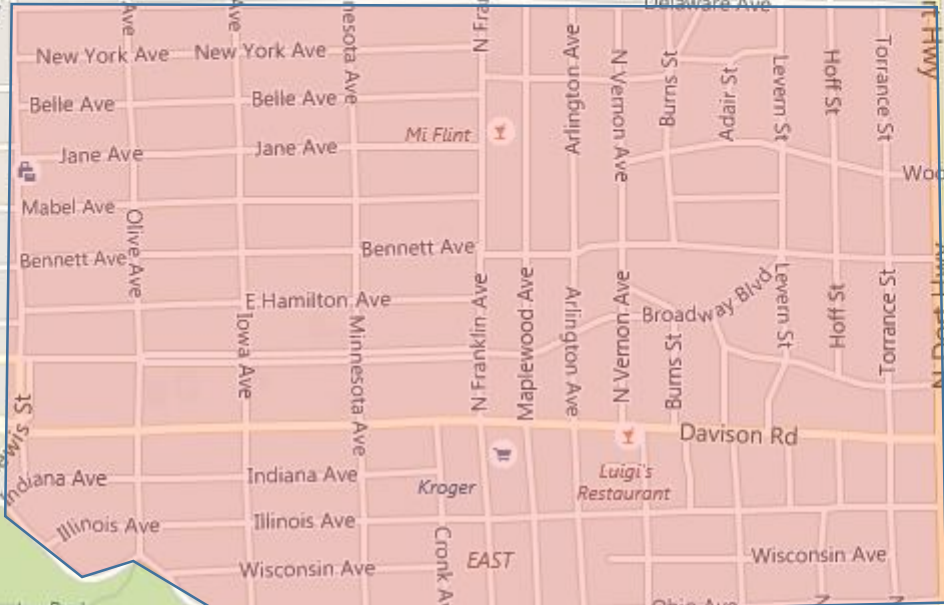
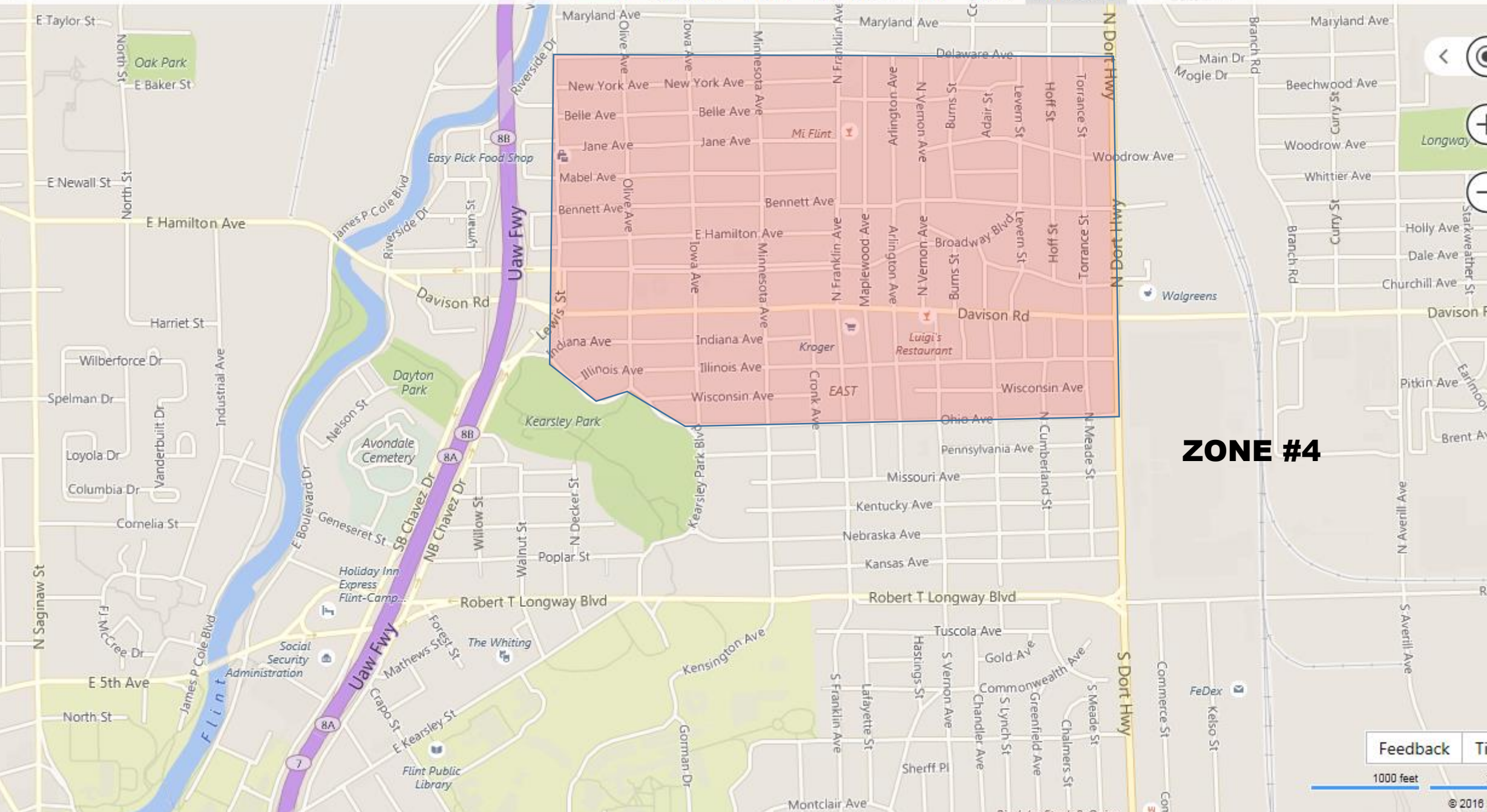
ZONE #3



Feedback

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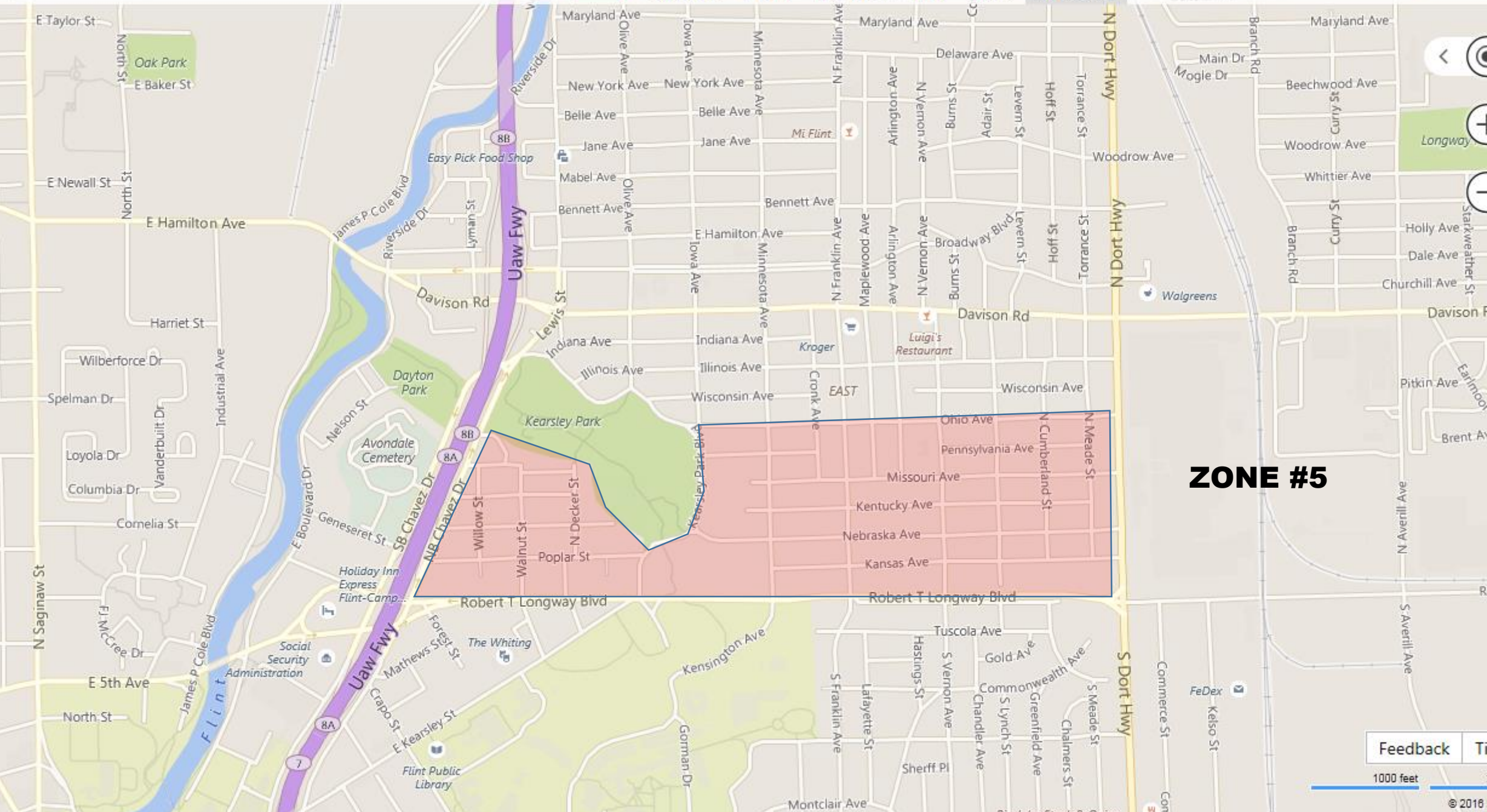


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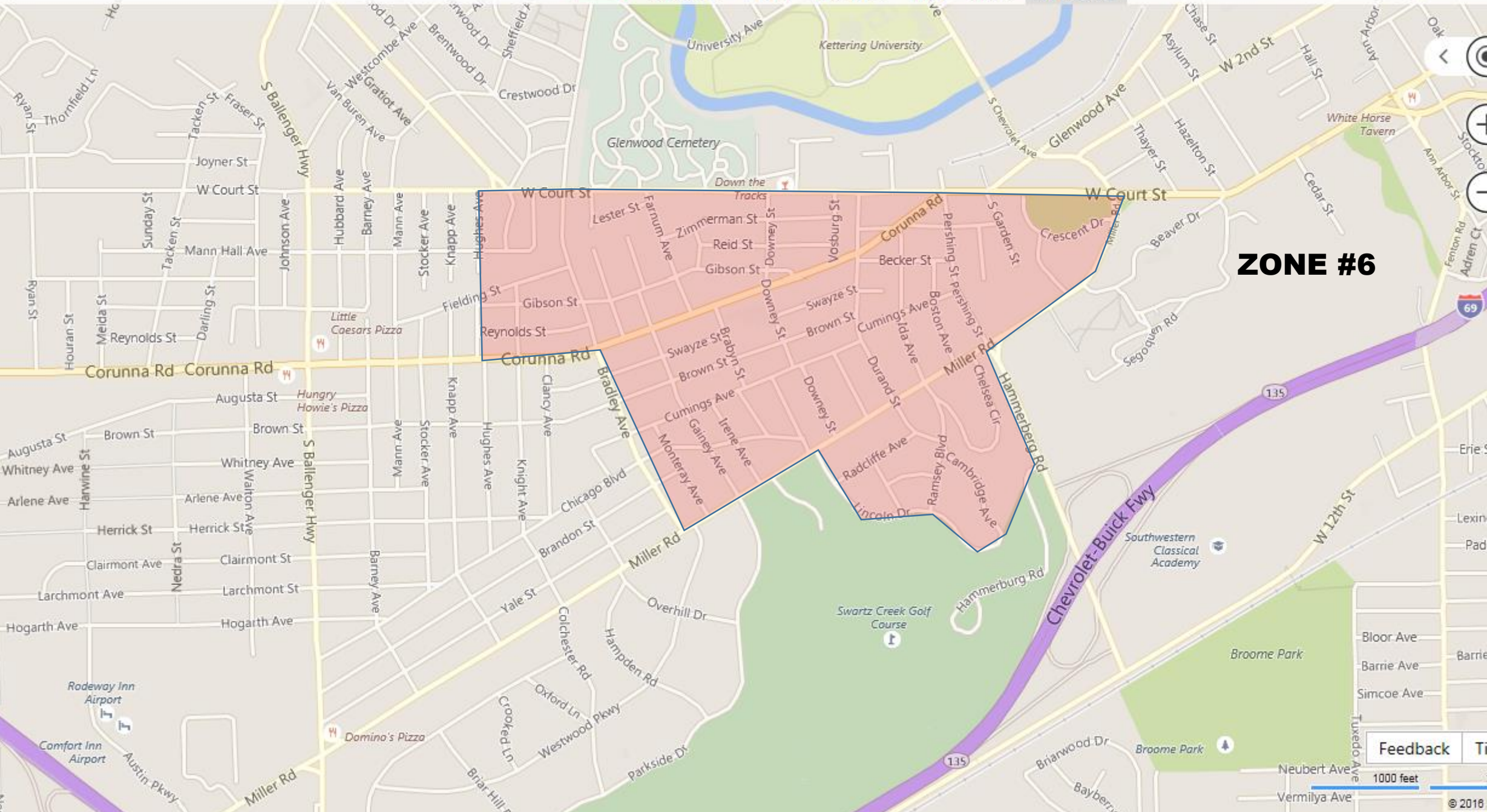
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ZONE #5

Feedback

1000 feet



ZONE #6

Feedback

1000 feet

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ZONE #7



Feedback

1000 feet



Directions

Traffic

My Places

Print

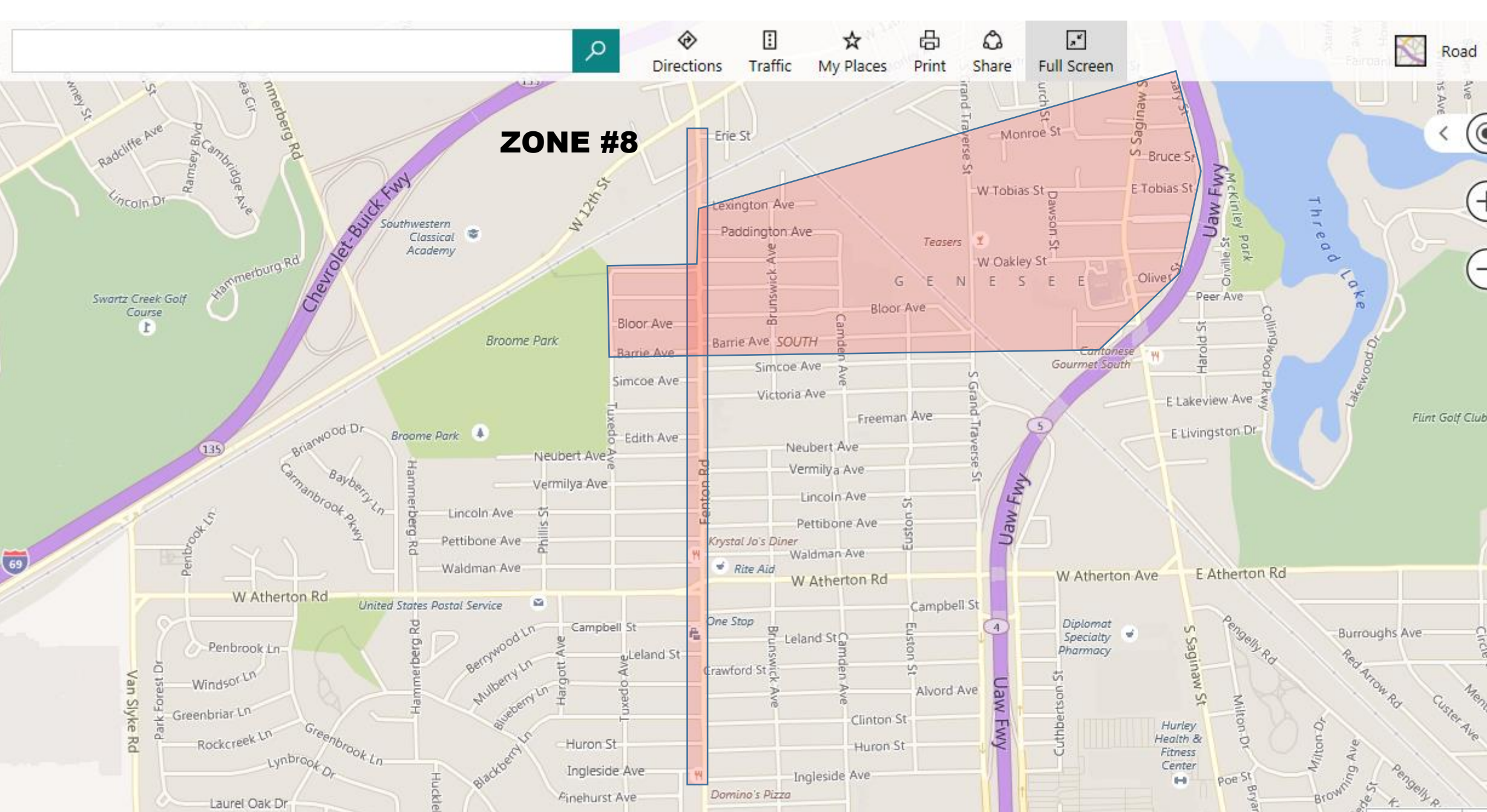
Share

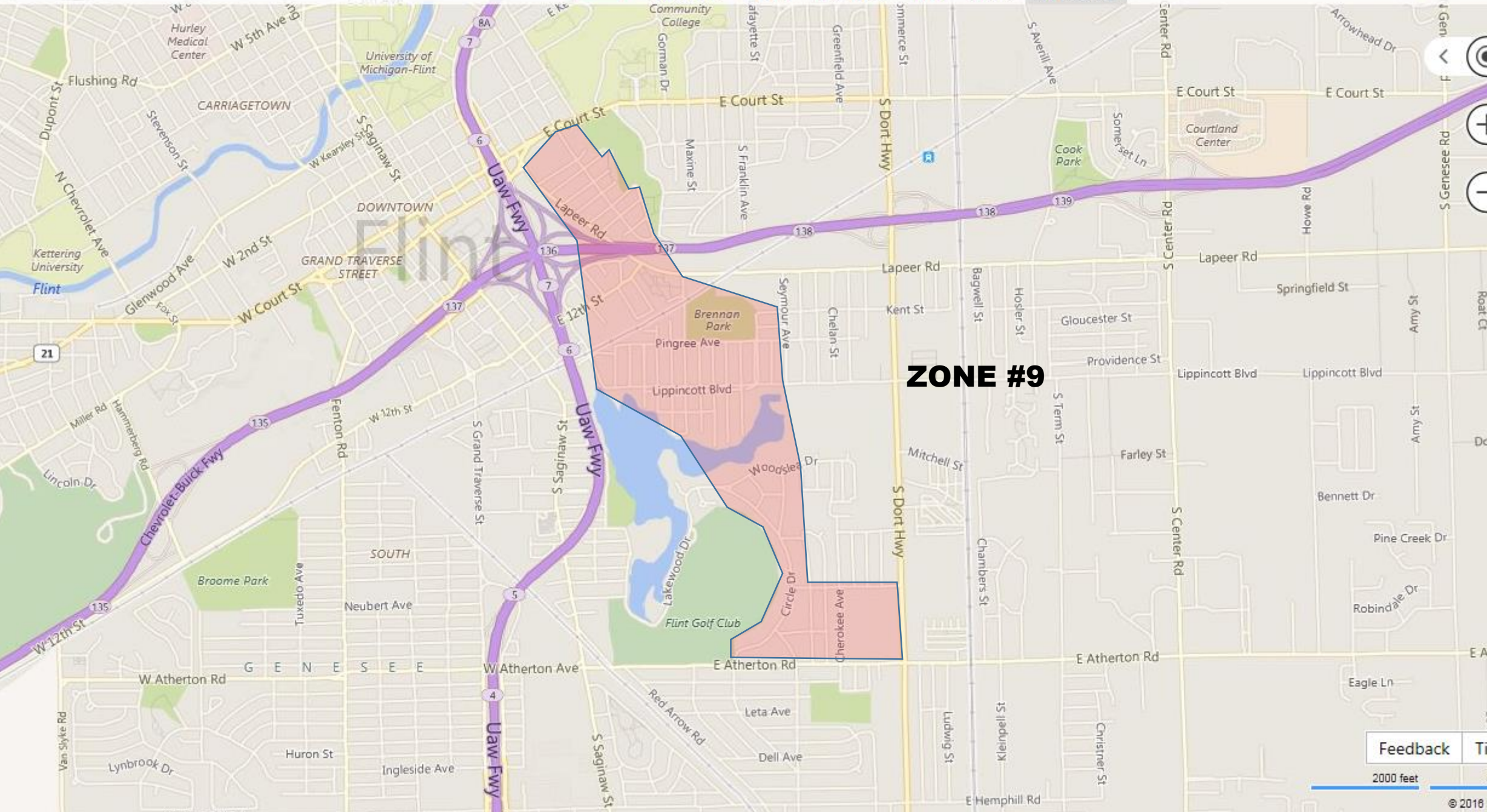
Full Screen



Road

ZONE #8





ZONE #9

Feedback

2000 feet

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ZONE #10

Feedback

2000 feet

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