

SNOW AND ICE CONTROL PROCEDURES

Revised 06-10-16

TABLE OF CONTENTS

Snow and Ice Control Procedures	3-8
Snow Plowing Guidelines and Levels of Service	9
Administrative/Support Staff	10
Anti-Icing Routes	
Application Decision	11
Maps	12
Major Snow Plowing Routes	
Maps	13-17
Residential Snow Plowing Zones	
Maps	18-26
Operating Instructions and Safety Rules	27-28
Parking Lots/Sidewalk Cleaning Priorities	29
Ordinance References	30

CITY OF LORAIN
DEPARTMENT OF PUBLIC PROPERTY
SNOW AND ICE CONTROL PROCEDURES
October, 2014

The purpose of this Snow and Ice Control Manual is to establish the City's policy and level of service in respect to the management of snow and ice and maintenance of its road system during the winter months. It will also serve as a practical guide for cost effective snow removal operations in the City of Lorain.

1. IMPLEMENTATION

This Manual will be in effect during normal winter operations at times when weather conditions could cause accumulation of frost, sleet, ice, snow or other occurrences on the streets and public parking lots of the City of Lorain.

2. DEFINITION OF SUPERVISOR

As used in this Manual, "Supervisor" is defined as the person who is on duty at that time directing the snow/ice removal operations for the Department of Public Property. The following positions may serve as "Supervisors": Public Property Manager; Street Superintendent; Public Property Sub-Division Managers; and/or any other individual who may be assigned the responsibility of Supervisor.

3. WEATHER FORECASTING

Weather information is essential for the planning of snow and ice control operations and other weather-related emergencies. An effective weather service must provide critical information about the storm sufficiently in advance so that plans and preparations can be made.

The City will utilize the services of a professional weather forecasting service during the snow and ice season. This service will provide information to the City to help determine what impact present and forthcoming weather will have on overall operations.

The City will also continue to rely upon information from the National Weather Service and the City of Lorain Police Department as it relates to snow and ice conditions during the winter months.

4. MONITORING AND NOTIFICATION OF ICE AND SNOW ACTIVITY

Public Property and Police Department staff will monitor anticipated inclement weather. When necessary they will coordinate with each other regarding event intensity and winter maintenance procedures. During off-duty hours, weekends and holidays, the on-call Supervisor, Police Department and our contracted weather service provider will monitor weather and road conditions. In the event of inclement weather, Public Property Manager and the Street Superintendent will initiate the appropriate response action.

5. COMMUNICATIONS

All operators of snow and ice control equipment will keep in communication with the Supervisor at all times.

The Supervisor on duty will be the main line of communication between the Public Property Department and the Police Department. The Police Department will assist in advising the Public Property Department with current road conditions. It will be the sole responsibility of the Public Property Supervisor to direct the winter maintenance operations for the City of Lorain.

Media notifications of emergency parking bans, snow emergency declarations, road closures, and other contact for inquiries regarding road conditions will be made by the Public Property Department at the direction of the Safety/Service Department of the City of Lorain.

6. CITIZEN INQUIRES

All citizen issues concerning snow and ice control efforts will be routed to the Department of Public Property. The Supervisor will determine appropriate follow-up responses to citizen inquiries.

7. PRIORITIES FOR SNOW AND ICE CONTROL OPERATIONS

In order to make the most efficient use of available resources, we have established priorities using the assumption that the severity of a storm is not beyond the normal capabilities of the City's snow removal resources. Depending on the nature of the snowstorm, deviations could occur. The established priorities are as follows:

Arterial Streets	1 st Priority
Secondary Streets	2 nd Priority
Side Streets, cul-de-sacs	3 rd Priority
Alleys and Parking Lots	4 th Priority

8. EMERGENCIES

Emergencies are defined as follows, but not necessarily limited to:

1. Immediate need for Police, Fire and/or Emergency Medical assistance. If City emergency personnel must leave the public right-of-way to respond to an emergency, snow removal crews may provide necessary assistance such as opening a driveway or parking area to give access to them.
2. Isolated problem areas where access is urgently needed before all other areas are handled.
3. Icy conditions due to a water main break or clearing of streets due to debris blocking streets or access.

9. ICE CONTROL PROCEDURES

The objective of ice control is to provide a safe pavement surface for vehicular traffic by attempting to prevent a build-up of snow and ice on the pavement. Ice control also includes attempting to remove any build up that may occur. Typically ice control is conducted with the utilization of mechanical snow removal equipment and deicer products.

The City may also apply liquid deicers on designated streets prior to, and during, storm conditions, to prevent the bonding of snow and ice to the pavement; this activity is known as anti-icing. The effectiveness of deicers used in this process is directly related to pavement temperatures. Based upon conditions, Supervisors will have discretion as to when to implement this activity and the deicer products which may be utilized.

The City will apply ice control materials in accordance with their recommended use. Application rates and locations may vary depending upon the type of storm. The Supervisor will have discretion as to what materials are used and when they are applied.

10. USE OF SALT AND ABRASIVE MATERIALS

The City will typically use rock salt for deicing applications. Utilizing salt, pre-wetted with liquid deicer products offers several advantages over non-treated rock salt in the following ways: expediting the melting process; melting at lower pavement temperatures; reducing overall application rates; and reducing material waste. Based upon conditions, Supervisors will have the discretion as to what deicer materials are used during a respective storm event.

Pavement Temperature	Type of Precipitation	Road Surface Conditions	Plow	Salt/Deicers
Near 30°	Sleet/freezing rain	Wet pavement/icing	No	In most cases Supervisor discretion
Near 30°	Snow	Slush	Yes	In some cases Supervisor Discretion
20° - 30°	Sleet/Snow	Slush/Snow	Yes	In most cases Supervisor Discretion
15° -20°	Snow	Dry Pavement/Slick Areas	Yes	In most cases Supervisor Discretion
Below 15°	Snow	Dry Pavement	Yes	Supervisor discretion May cause additional accumulations on some pavement surfaces

11. SNOW CONTROL PROCEDURES

The depth and timing of snow accumulation, weather forecasts and traffic volumes, will normally dictate when snow plowing operations will begin. Plowing will take place during a storm as needed in an attempt to keep the accumulation on the pavement surface to less than desired guidelines.

Snow plowing operations will be carried out in accordance with the guidelines established for the various street classifications as set forth in the Snow Manual. Plowing operations may often times be done in conjunction with ice control activities.

Typically on major snow routes, plow trucks will operate in teams. Team plowing may consist of two or more plows operating together to provide for the removal of snow from the street between the centerline and the curb line in one pass. This eliminates the need to make repeated passes to plow the streets to the curb line. On local residential streets when only one snow plow unit is used, it may be necessary to make two or more passes in each direction to completely clear the street of accumulated snow.

If weather forecasts indicate a significant increase in pavement temperatures during or after a storm event, supervisors will have discretion regarding plowing and/or deicer applications. If forecasts indicate that the snow and/or ice will dissipate in a time period deemed reasonable by the Public Property Manager or their designee, applicable procedures will be implemented. With the environmental and budgetary impacts of deicers, informed decisions and practices need to be utilized in the City of Lorain operational plan.

12. SNOW FENCE

The Public Property Department may elect to place snow fence where it could potentially minimize blowing snow from accumulating on the road surface. Snow fence will be placed on private property only with mutual consent between the property owner and the City. The City will have sole discretion as to when and where to place snow fence.

13. EQUIPMENT AVAILABLE

The primary equipment available to remove snow and ice will be supplied the Department of Public Property. The Parks Department will assist by removing snow from public parking lots and City maintained sidewalks and trails. Utility Department equipment can be used on an as needed basis as well.

14. MANPOWER AVAILABLE

The primary staffing for snow removal and ice control will be supplied by the Department of Public Property. During major events, personnel from other City departments may be utilized to assist with snow and ice removal efforts.

15. TYPE OF EQUIPMENT

16. The City utilizes many different types of equipment during snow and ice control operations. The equipment utilized is chosen to fit the job that must be performed at that time.

For snow plowing activities the City typically utilizes reversible plows, "V" plows, as well as front end loaders. In addition, the City has the ability to utilize wing plows for more efficient and effective plowing operations.

17. EQUIPMENT MAINTENANCE AND REPAIR

The City will typically schedule a mechanic to be on duty whenever 8 or more operators are assigned to work during a shift. In addition, it may be necessary to have mechanics on duty at other times. Such determination will be made by the Fleet Manager or Supervisor on duty at the time.

18. TOWING VEHICLES ILLEGALLY PARKED – DECLARATION EMERGENCY PARKING BAN

Cars parked on the streets during a snow removal effort may be ticketed and/or towed away in accordance with Chapter 357.06. A snow emergency parking ban may be declared by the Mayor, Safety/Service Director or their designee. The Police Department and various media sources will be notified when the parking ban is initiated.

19. SIDEWALK – PRIVATE RESPONSIBILITY

All sidewalks adjacent to private property are the responsibility of the property owner. The City's responsibility is to plow the streets and keep them open to traffic. Due to the location of some sidewalks and the volume of snow being moved off of the streets, there may be occurrences when plowing operations may deposit significant amounts of snow onto the sidewalks. When this occurs, it is the responsibility of the adjacent property owner to remove all snow from the sidewalk.

20. DRIVEWAYS – PRIVATE

City snow plows will not clear private driveway aprons except under an emergency condition and with the approval of the Supervisor. The snow placed in driveways/aprons by City plows is the responsibility of the property owner to remove. Snow from a private driveway may not be placed on or pushed across a City Street in accordance with Chapter 357.021 "Prohibition on Removal of Snow so as to Impede Traffic"

21. PLOWING PRIVATE PROPERTY

The City will not plow or clear snow or ice from private property except under an emergency condition and with the approval of the Supervisor.

22. MAILBOXES

The City will typically plow snow within the confines from curb line to curb line of a street. During frequent periods of heavy snowfall accumulations the adjacent resident will be responsible for cleaning snow around their mailbox to assure delivery of mail. The resident is also responsible for assuring that the mailbox is properly installed as required by the United States Postal Service Guidelines.

These guidelines require the face of the mailbox to be installed 6" behind the back of the curb and it should be constructed to be able to withstand snow cleaning efforts by the City. Any mailbox determined to be damaged by City snowplows which is also in compliance with U.S. Postal Service Guidelines will be replaced by the Department of Public Property with a Step-2 mailbox of the City's choice. Residents who wish any other type of box and post will need to file a damage claim with the City of Lorain Law Department and await their decision prior to any replacement being issued.

23. REPORTS

A storm record will be completed by the Department of Public Property for each snow event. This record should contain operating times, weather conditions and resources committed.

24. DISCLAIMER

This manual may be affected by at least one or more of the following events which could delay or alter snow and ice control by the City:

1. Equipment breakdown
2. Vehicles disabled in deep snow
3. Weather so severe as to cause work to be stopped for the safety of all personnel
4. Unforeseen conditions and emergencies
5. Significant medical related emergencies

25. DISTRIBUTION OF MANUAL

This Manual shall be distributed to the following:

- A. Mayor
- B. Safety/Service Director
- C. City Council
- D. Chief of Police
- E. Fire Chief

SNOW AND ICE CONTROL PROCEDURES

LEVEL OF SERVICE GOALS FOR CITY STREETS

LEVELS OF SERVICE DETERMINATION

In an effort to promote operational awareness, levels of service goals have been established for the various street classifications within the City's jurisdiction. While these goals have been developed by the Public Property Department based on various types of criteria, they are primarily defined for the benefit of the employees who have responsibility for performing the maintenance duties associated with snow and ice events throughout the winter.

Factors such as service level expectations, responsible use of deicer chemicals, road safety and budgetary considerations are just some of the criteria considered in the development of these goals. While the agency will strive to meet these goals, it is important to understand that the time it may take to achieve them will be dependent upon weather conditions and other factors that may be outside the control of the City.

CLASSIFICATION	Snow Depth at Which Plowing Typically will begin		Full Pavement Width that Typically will be cleared After Ending of Storm
	Desirable	Maximum	
Major Snow Routes	2"	4"	4 hours
Secondary's	2"	6"	8 hours
Side Streets, cul-de-sacs	2"	6"	24 hours
Alleys/Parking Lots	2"	6"	24 hours

SNOW AND ICE CONTROL PROCEDURES

ADMINISTRATIVE/SUPPORT STAFF

Title	Supervisor	Phone #
Public Property Manager	Lori Garcia	440-258-3510
Street Superintendent		
Superintendent Mechanics		
Working Crew Leader	Don Queen	440-522-0238
Working Crew Leader	Jason Graves	440-308-6165
Working Crew Leader	Greg Zeise	440-670-1576
Park Working Crew Leader	Mark McIlwaine	440-242-9421

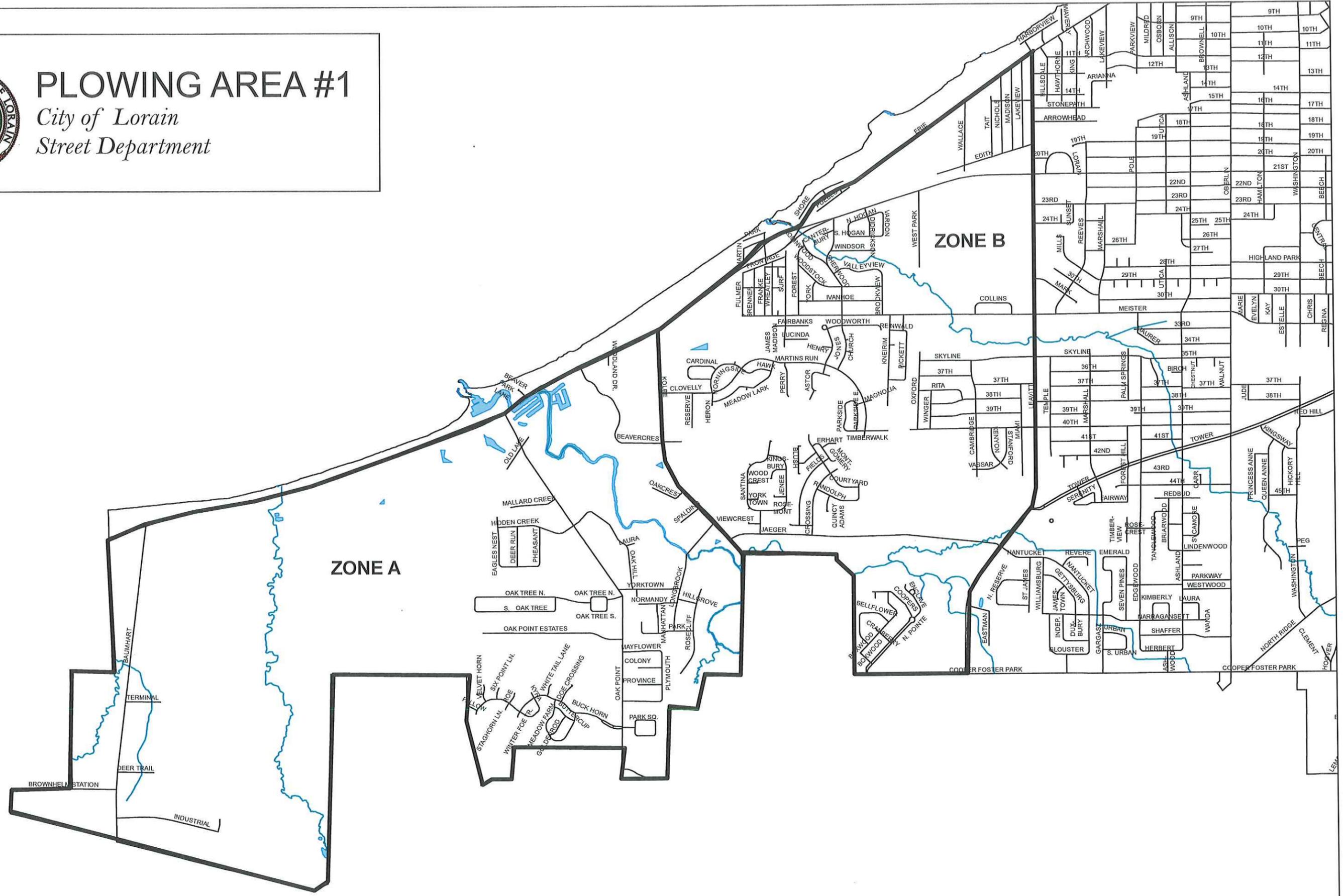
Anti-Icing Application Decision Flowchart

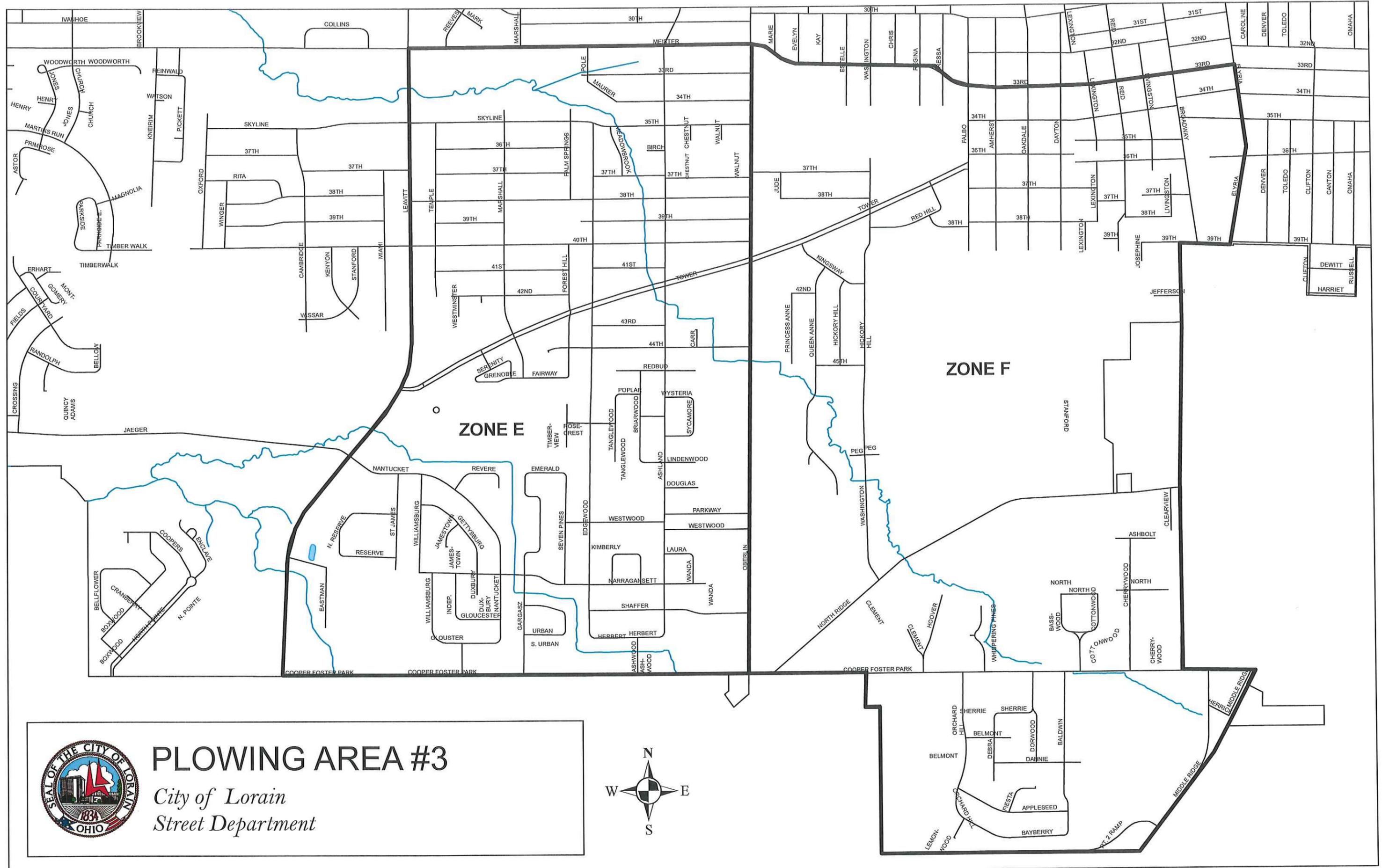
Review/monitor weather Forecast
Is snow or frost predicted within the next three days?
Yes
Is rain predicted before the snow?
No
Is the pavement temperature 15° or greater
Yes
Is the dew point at least 3° below the air temperature?
Yes
Is the relative humidity level 70% or less?
Yes
Is the pavement dry?
Yes
Are the winds less than 15 miles per hour if loose snow is present?
Yes
Does sufficient time exist for pavement to dry before the pavement temperature falls
Yes
Apply anti-icing material at 40 gallons per lane mile.



PLOWING AREA #1

City of Lorain
Street Department





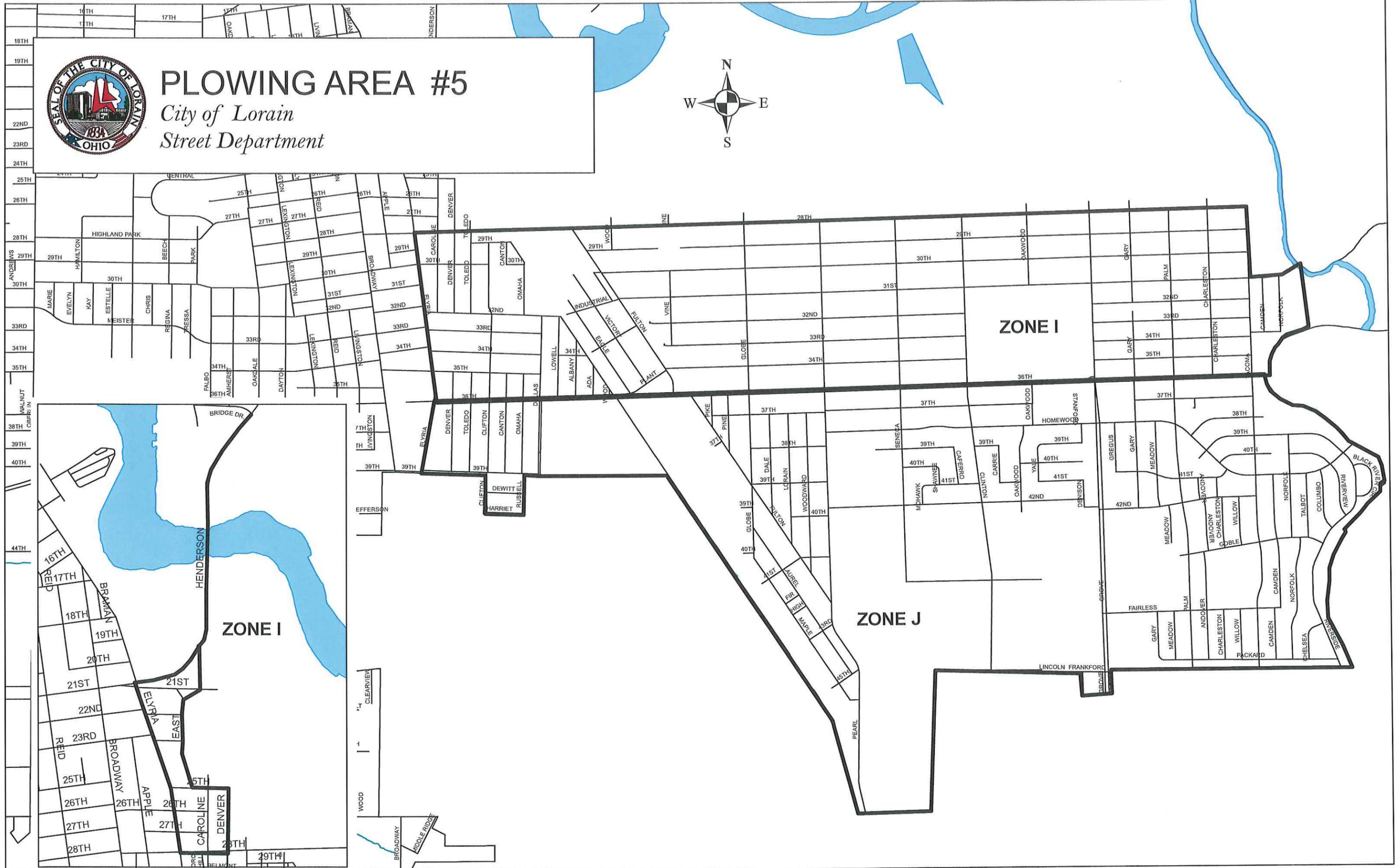
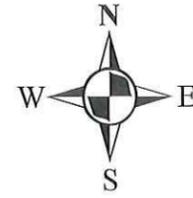
PLOWING AREA #3
City of Lorain
Street Department





PLOWING AREA #5

City of Lorain
Street Department



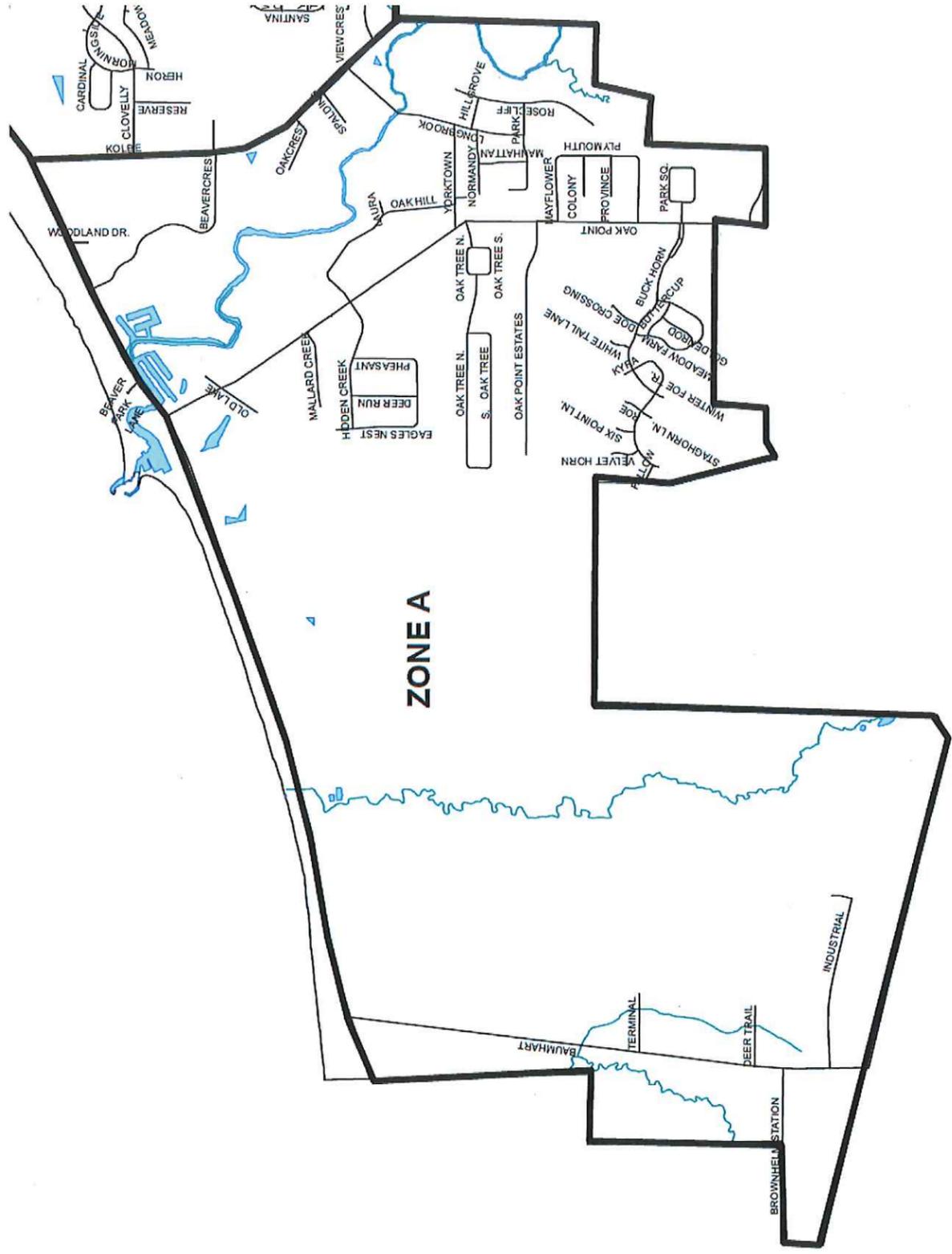
ZONE HANDOFF MAP

Date: _____

Driver 1 _____

Driver 2 _____

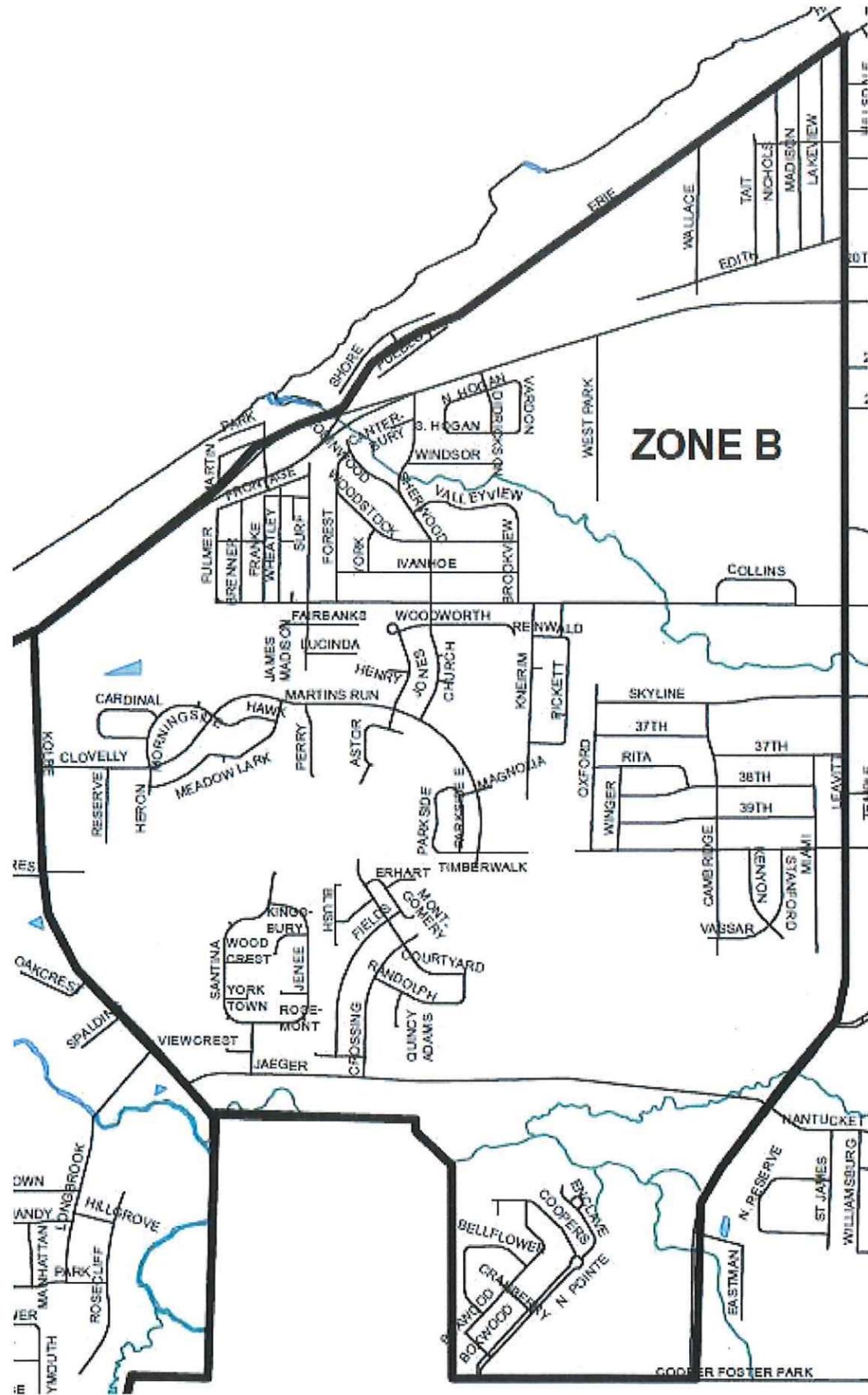
Driver 3 _____



ZONE HANDOFF MAP

Date:

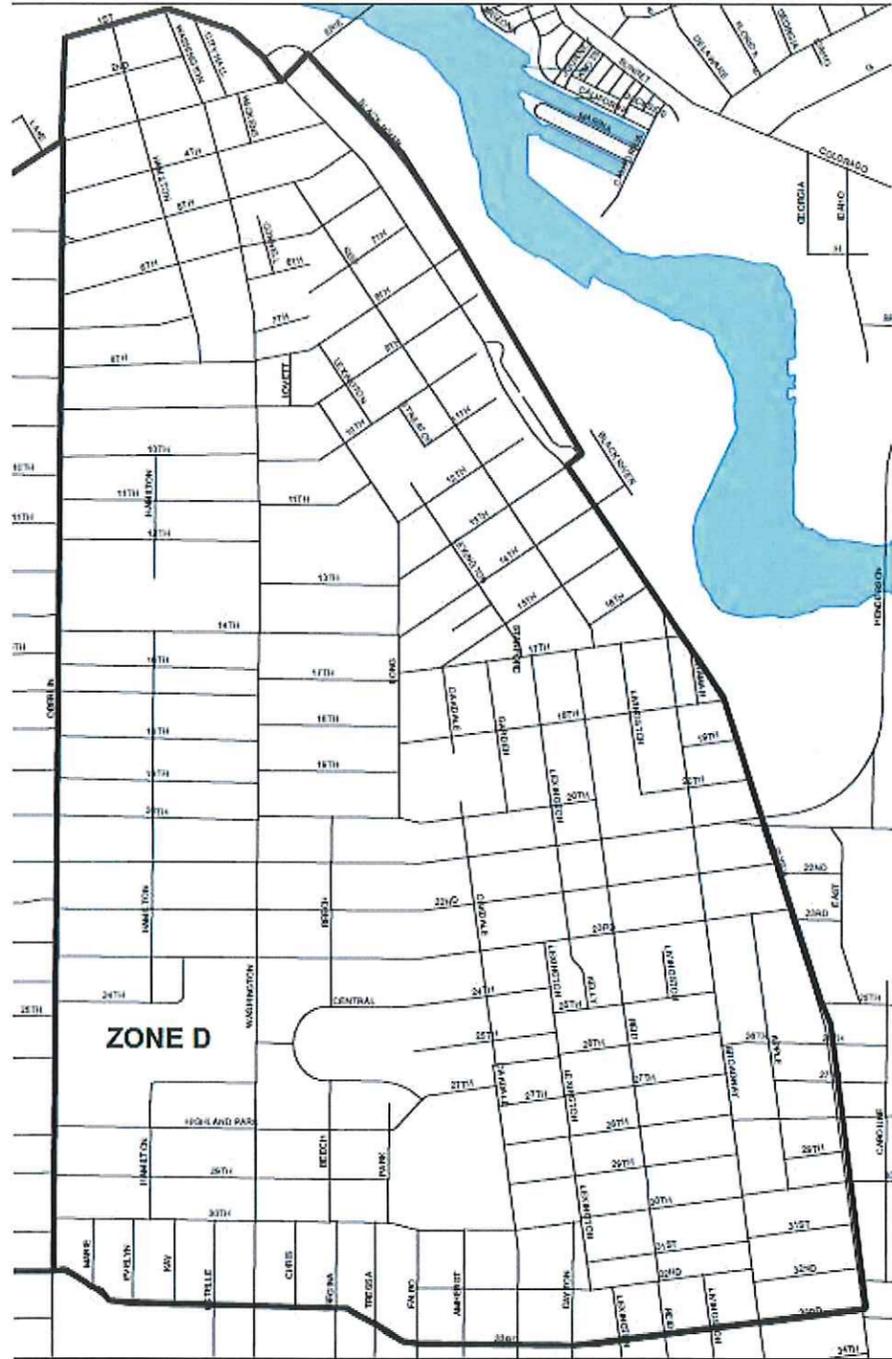
Driver 1 _____ Driver 2 _____ Driver 3 _____



ZONE HANDOFF MAP

Date: _____

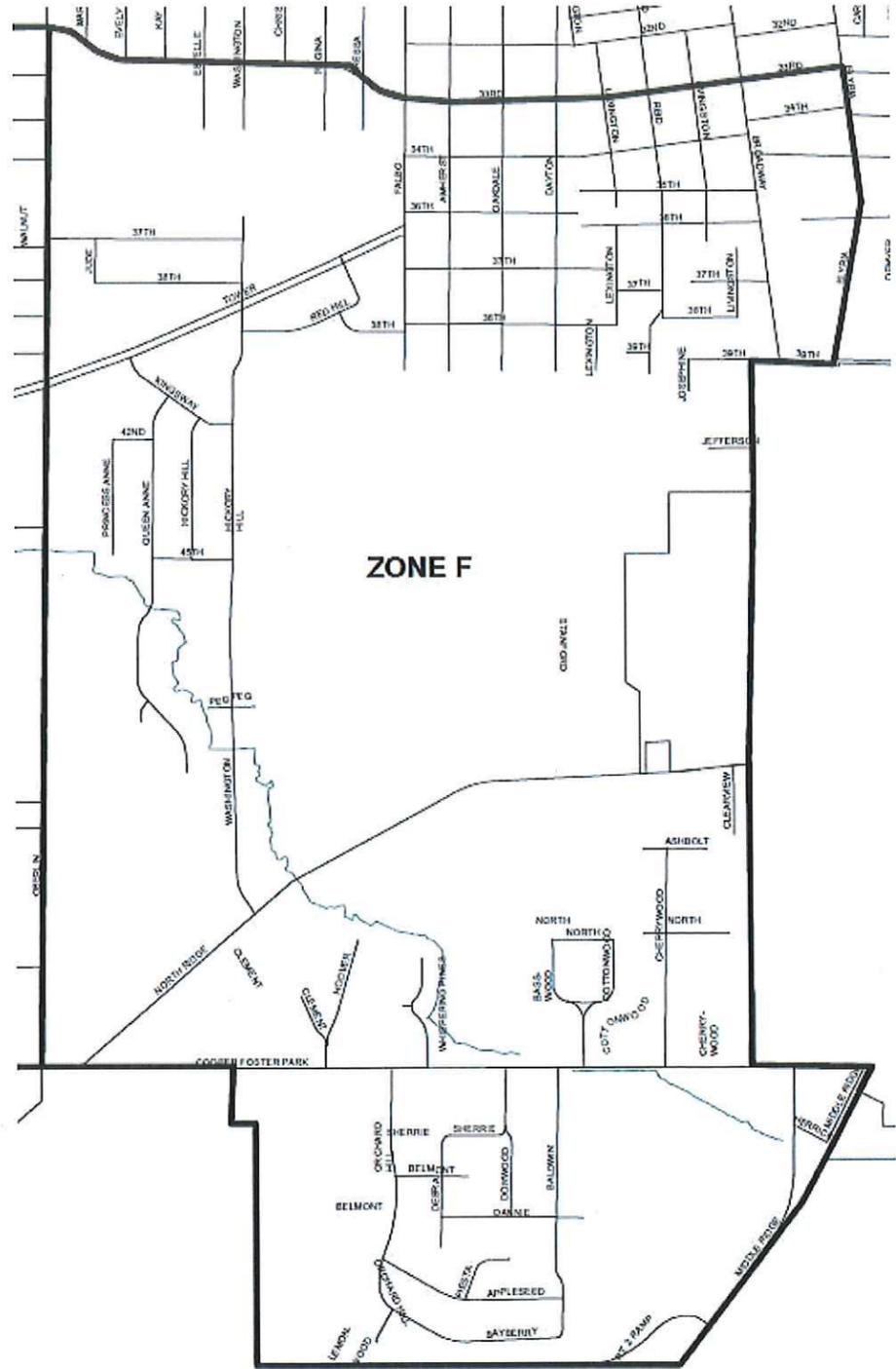
Driver 1 _____ Driver 2 _____ Driver 3 _____



ZONE HANDOFF MAP

Date: _____

Driver 1 _____ Driver 2 _____ Driver 3 _____



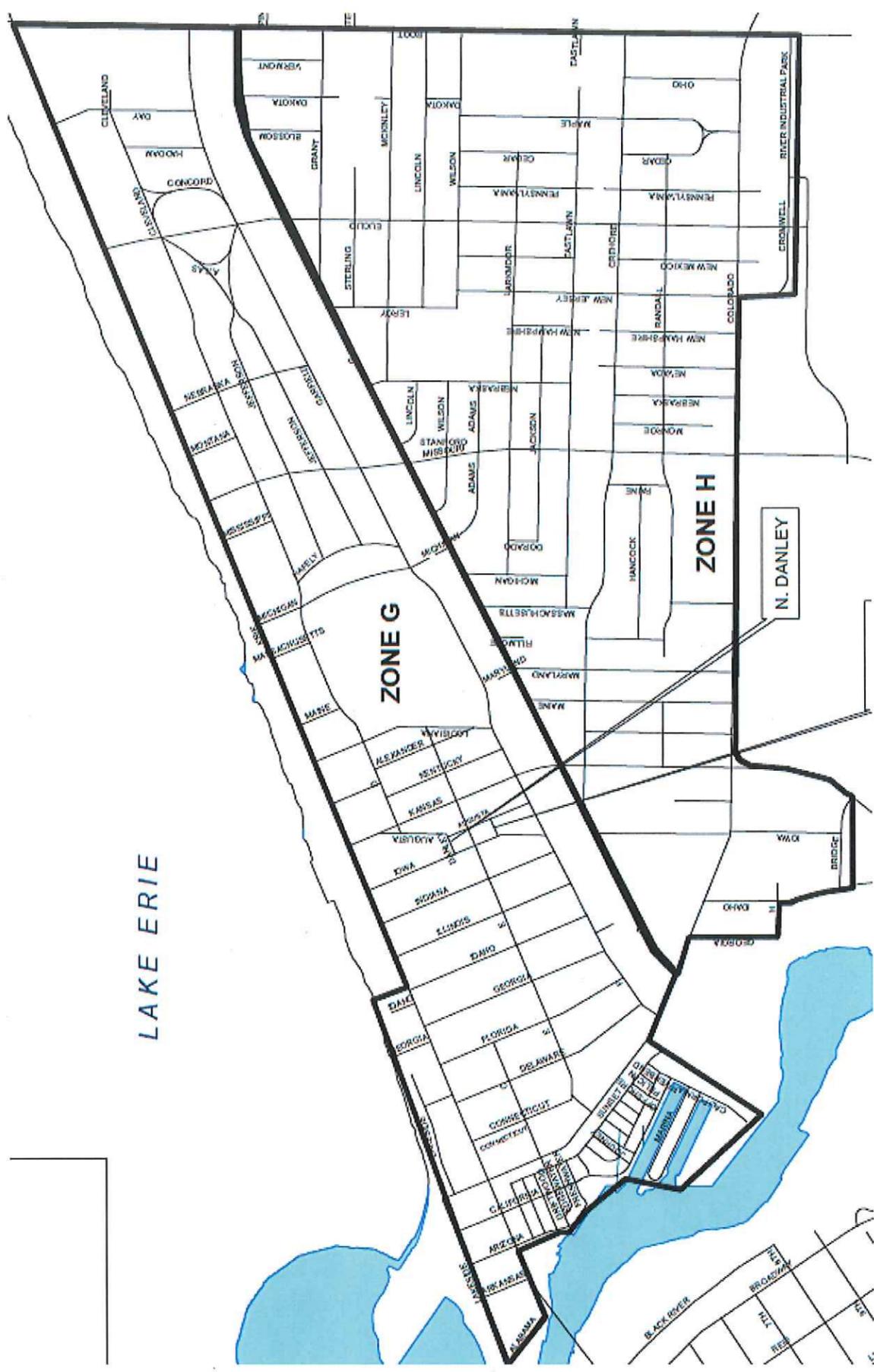
ZONE HANDOFF MAP

Date: _____

Driver 1 _____

Driver 2 _____

Driver 3 _____

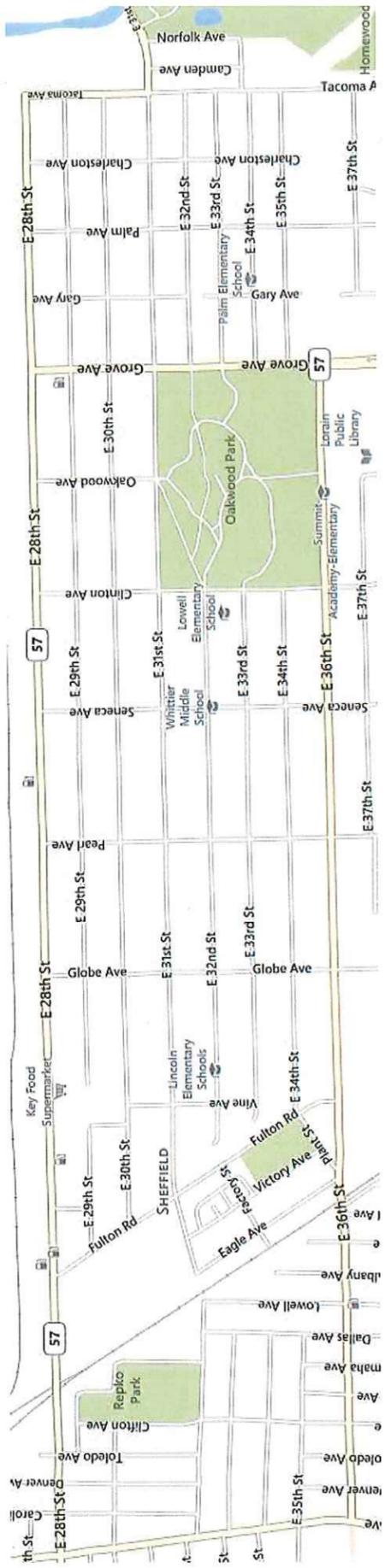


ZONE HANDOFF MAP

Date:

Driver 1 _____ Driver 2 _____ Driver 3 _____

ZONE I



Operating Instructions and Safety Rules

1. WORK HOURS

For major storm events, two types of shifts may be scheduled: Two twelve (12) hour shifts; or one sixteen (16) hour shift and one eight (8) hour . These shifts will be established at the discretion of the Public Property Manager.

2. SAFETY PROCEDURES

Safety is paramount during any snow storm. The following safety rules will be observed by all equipment operators.

A. Check your snow removal equipment prior to leaving the yard and also the following:

1. All work lights and emergency lights
2. Two-way radio
3. Snow plow and frame for damage
4. Rear view mirrors
5. Flags and reflectors
6. Windshield wipers
7. Heater and defroster
8. All necessary mapping for snow and ice removal
9. Vehicle inspection items

B. Report any non-working equipment to Supervisor immediately. Supervisor will determine corrective action and the scheduling of any repair.

C. Use reasonable caution in operation of snow removal equipment

D. Drive cautiously

E. Utilize caution when operating in cramped quarters

F. Know your route and any fixed objects covered by snow

G. Obey all traffic laws

H. Do not follow traffic too closely

I. Slow down prior to turning---your plow will tend to push you where it wants to go

J. Equipment involved in snow and ice control operations is emergency equipment, but you as the operator, must obey all traffic laws and provide right-of-way to other vehicles

3. ACCIDENTS

Report all moving vehicle accidents and all property damage immediately to your Supervisor who will then notify the Police Department if required.

4. CARE AND USE OF EQUIPMENT

The snow plow operator is responsible for routine maintenance and cleanliness of the vehicle. Report any maintenance needed to the Supervisor or mechanic on duty. Check vehicle before and after use for any maintenance needed or damage to equipment. Fill out Pre-Trip forms daily. The vehicle should be refueled at the end of each operator's shift.

5. RADIO COMMUNICATIONS

Operators are to take duty instructions from the Supervisor on duty. The Police may report road conditions or other issues to the Public Property Department Supervisor. It will be the role of the Manager of the Department of Public Property or the Street Superintendent to direct all winter maintenance related operations.

6. DAILY REPORT

Upon completion of the shift, operators will be required to turn in completed zone maps. Working Crew Leaders will be required to fill out a Daily Report sheet. This sheet will document location, date and material usage.

PARKING LOTS/SIDEWALK CLEANING PRIORITIES

1. Police – Sally port area
2. City Hall Lot
3. Tax Building (ramp is to be cleared and salted)
4. Health Department Lot
5. 6th Street church lot (by Lorain National)
6. Port Authority parking lot and train station
7. 3 lots between 7th & 8th St. across from Catholic Social Services.
8. Parking lots behind cosmetology school along Black River Lane
9. First Street parking lot by Utilities. (City owned vehicles are directed to park here overnight when a storm is expected so the City Hall lot can be cleared with no cars in the way)
10. Fire Station at Broadway and 14th (just area in front as you return to the garage)
11. Bascule Bridge sidewalks
12. Sidewalks on Broadway from W. Erie to 10th Street

ORDINANCE NO. 2-15

AN ORDINANCE AMENDING ORD #153-14 PASSED ON OCTOBER 20, 2014
ESTABLISHING CHAPTER 357 SNOW EMERGENCIES OF THE
CODIFIED ORDINANCES OF THE CITY OF LORAIN AND DECLARING AN
EMERGENCY

WHEREAS, Lorain City Council passed Ordinance #153-14 establishing Chapter
357 Snow Emergencies for the City of Lorain;

WHEREAS, it is necessary to amend Ordinance #153-14 in order to declare
regulations on parking in the best interest of public policy and safety.

NOW, THEREFORE BE IT ORDAINED BY THE COUNCIL OF THE CITY OF LORAIN,
STATE OF OHIO:

SECTION I. That Chapter 357, Section 357.04 NO PARKING DURING A SNOW
EMERGENCY, AND NO PARKING EXCEPTIONS

which reads as follows:

357.04 NO PARKING DURING A SNOW EMERGENCY, AND NO PARKING
EXCEPTIONS

(a) The areas where the No Parking restriction will be imposed during a snow
emergency is hereby defined as any street, avenue, boulevard, parkway or highway
within City limits, with the exceptions of addresses that do not have a dedicated
driveway. During a snow emergency, cars parked over sidewalks shall not be cited.

(b) In addition to the prohibitions on parking provided for in this chapter in
cases of a declared snow emergency, parking is prohibited as defined in 357.04(a) from
December 1st through the following March 31st from the hours of 2:00 a.m. to 6:00 a.m.
regardless of whether a snow emergency has been declared.

Shall be amended to read as follows:

357.04 NO PARKING DURING A SNOW EMERGENCY, AND NO PARKING
EXCEPTIONS

(a) The areas where the No Parking restriction will be imposed during a snow
emergency is hereby defined as any street, avenue, boulevard, parkway or highway
within City limits, with the exceptions of addresses that do not have a dedicated
driveway. During a snow emergency, cars parked over sidewalks shall not be cited.