BURLINGTON PUBLIC WORKS

SNOW AND ICE CONTROL PLAN

SNOW AND ICE CONTROL PLAN

The purpose of this plan is to define the operational procedures and best management practices (BMP's) for storing and utilizing snow and ice control materials, and for performing winter maintenance activities. It defines the level of service that Burlington Public Works will strive to provide on our 95 miles of streets, 130 miles of sidewalks, and 20.85 combined miles of bike lanes.

Since storms vary dramatically and occur during a variety of traffic conditions, this Snow and Ice Control Plan is intended to be flexible. It is a guide structured to fit average conditions, but able to accommodate the wide variety of conditions that will be encountered by maintenance crews who are working to maintain safe roads and conditions.

STORM WARNING NOTIFICATION

The Department of Public Works Right of Way uses multiple weather services available online, such as National Oceanic and Atmospheric Administration (NOAA) and the Weather Channel. DPW will issue storm related public service announcements via the local media, Facebook, Twitter, and any City website **http://www.burlingtonvt.gov/**

Text messages:
GovDelivery https://public.govdelivery.com/accounts/VTBURLINGTON/subscriber/new

Facebook: https://www.facebook.com/BTVDPW

Twitter: @btvdpw

Phone: 802-658-SNOW

Burlington Public Works has also invested in (4) traffic message boards stationed along key arterial roadways that will warn residents of any winter parking bans.

PERSONNEL SCHEDULING

Our Right of Way crew of (17) full time Street Maintenance Workers and approximately (2) seasonal employees, which may vary due to budgetary constraints, or availability of applicants, maintain the streets and sidewalks. Large storms may require around the clock coverage. This will require help from outside work groups and departments. The Street Maintenance Manager will secure volunteers during the normal workday and create a plan based on the available manpower and weather conditions. The plan will be reviewed by the Assistant Director - Maintenance Division before implementing.

MOBILIZATION

When the decision has been made to react to a storm, the Street Maintenance Manager will mobilize the crew. Since all trucks, tractors and routes are assigned, all the employees need is the call to deploy. If a storm event is predicted after normal business hours, the personnel will be put "on-call" per the union contract and the on-call employees will make themselves available by telephone. The department is aware that employees may have personal needs that may arise and may not be able to be "on call" at all times. If an employee has a personal issue, they may address it with their direct supervisor.

While DPW Street Maintenance is tasked specifically with the staffing for snow and ice control operations, the employees of the Fleet Maintenance group have a responsibility to assist with equipment repairs. Once the decision has been made to respond to a storm event, during normal working hours the street Maintenance Manager will notify the Fleet Manager. The Fleet Manager will then schedule his employees to provide maintenance assistance. After normal working hours, if the foreman in charge determines that the streets and sidewalks need to be plowed he will call the "on-call" maintenance team.

SNOW AND ICE CONTROL MATERIALS

Road salt (NaCl) is the primary snow and ice control material. The salt is normally purchased under the State of Vermont contract. FY20 the contract was awarded to Cargill; the local distributor is Barrett's Trucking in Burlington @ 863-1311. DPW uses approximately 4000tons of road salt per year. The Street Maintenance Manager is responsible for the ordering and inventory of the salt. The entire salt inventory is stored at 645 Pine Street. Liquids like magnesium chloride (MgCl2) and Promelt Magic Minus Zero are being used to reduce the amounts of salt needed to clear the roads. Safety Data Sheets (SDS) are available in a binder in every truck and in the SDS binder located in the Street Maintenance area. As a courtesy, Burlington property owners are permitted to take (1) 5-gallon bucket of salt per winter from the salt shed at 645 Pine St. when it does not interrupt the City's operations.

EQUIPMENT INSPECTION

WEEKLY VEHICLE CHECK SHEET

UNIT#:			UNIT HOURS:		UNIT MILES:			
DATE:			OPERATOR:					
		Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
Registration,ins card,vsi								
Engine oil level								
Coolant level								
Power steering fluid								
Washer fluid								
Brake fluid								
Trans fluid level								
Hyd oil level								
DOT pre trip inspection								

* VISUAL WALK AROUND OF VEHICLE FOR ANY DAMAGE SUCH AS DENTS, DINGS, BROKEN OR CRACKED GLASS

* NOTE ANY DAMAGE ON THIS SHEET AND ALSO REPORT TO MANAGER

*TIRE CONDITION AND AIR PRESSURE

*INSPECT RADIATOR FOR DEBRIS BLOCKING AIR FLOW. SEE EQM IF CLEANING NEEDED

*GREASE ALL APPLICABLE LUBE FITTINGS, DAILY IF REQUIRED.

*TOP OFF FUEL TANK AT END OF SHIFT. CHECK FUEL LEVEL BEFORE SHIFT

*CLEAN INTERIOR OF VEHICLE OF DEBRIS AND CLEAN . WASH EXTERIOR IF NEEDED.

*DRAIN AIR TANKS DAILY AT END OF SHIFT.

RECYCLING TRUCKS, EMPTY PACKER CLEAN OUTS DAILY AT END OF SHIFT

*TANKER TRUCKS, EMPTY AND WASHE DEBRIS BODY, PROP OPEN TO DRY OVERNIGHT

* SWEEPERS CHECK AND CLEAN AIR FILTERS DAILY. REPLACE IF NEEDED

*SWEEPERS CLEAN AND WASH DEBRIS BODY AND PROP OPEN TO DRY

* NOTIFY EQM OF ANY UNSAFE CONDITION AND REMOVE UNIT FROM SERVICE AND TAG OUT OF SERVICE.

All City equipment; to include all plow trucks, loaders, and sidewalk tractors will be operator level inspected before any snow operations. Immediately following a

storm on the next regular business day, all equipment will be cleaned, greased, fluids levels checked, and a proper preventive maintenance check per the manufactures operator manual. All deficiencies will be reported immediately to DPW Fleet Services.

EQUIPMENT CALIBRATION

Every November, all truck spreaders and computerized spreader controls will be calibrated with salt (NaCl) per the manufactures operation manual. After every storm event, each truck will have the mileage and pounds per lane mile recorded. This task will be assigned to a working foreman and one other street maintenance worker.

TRAINING OF PERSONNEL

Training is a key part to our snow plans success. All operators are properly trained before using any equipment utilizing operator manuals, manufacturers trainers, our in house trained employees, and on the job training. All employees will be able to properly operate, and maintain the equipment before actually plowing snow. Before the first snow storm, all operators will drive their route, getting familiar with obstacles such as high manholes, trees, narrow roads, mailboxes, etc. Any reported obstructions will be reported to the Right of Way Inspector for further action. Every truck has a binder with all route maps, bike routes, CCTA emergency routes, and the list of dead end roads.

SNOW ROUTE ASSIGNMENT

All operators will be assigned a route, whether it is in a truck or a sidewalk tractor. Continuity is important in assigning routes and equipment. Operators will learn the best way to battle snow and ice if they are doing the same streets every storm and will know areas that need special attention such as bridges, on and off ramps,

hills, curves, school zones, and bike lanes. The same with the equipment, the operators in the same truck or tractor will know how it handles and what the vehicles limits are.

The sizes of the routes are designed for the City's fleet of trucks and tractors. There are 10 large trucks, 1 small truck for dead ends and narrow streets, and 11 tractors. Of the 10 large trucks, 1 is a spare in case of a break down. With the 11 tractors, 2 are spares. Depending on the accumulation of snow, it could take an operator with a large truck approximately 5-7 hours to plow their route once. An operator on a sidewalk route will take approximately 6-7 hours to plow their route, if they are salting at the same time it will take 8-9 hours to complete once.

LOADING PROCEDURES

The loading of salt in all trucks will be by the oldest available loader in the fleet. The operation will be conducted by qualified City employees only. The trucks will be loaded to their max GVWR and not overloaded. The loader will have operator level preventive maintenance after every storm event and all loading procedures will be supervised by an assigned working foreman.

SALTING AND PLOWING PROCEDURES

Salting Operations

Streets will be salted during light storms where minor accumulations of snow are expected. This requires the use of 6 large trucks that will salt the primary streets with priorities going to the routes coming into and exiting

the City, primary roads leading into neighborhoods, school zones, downtown, intersections, and bike lanes. Not every street is salted unless there is a prediction of ice.

Plowing Operations

Plowing of the streets is the same regardless of the amount of snow predicted. The City owns (10) large plow trucks with (1) being used as a spare in case of break down and (1) small truck for dead ends and narrow streets. We can add plows to (1) front end loader for additional help in major storms.

The (9) large plow trucks are assigned a route and each route starts with its primary street, leading to its secondary main, and then into the neighborhood streets. (Truck route maps appendix B.) The (1) small plow truck is assigned a list of narrow and dead end streets. (Narrow and dead street list appendix B.)

Sidewalk Plowing and salting

There are (9) sidewalk routes and are plowed during the day concurrently with street, and bike lane plowing. Extra attention is given to the downtown, Old North End, areas around schools and school crossing guard locations.

During a night time snow push back or any night time plowing operation, sidewalk plowing usually starts around 3 a.m. so that the sidewalks are open when school begins. This time could vary depending on the size of the storm.

If the storm exceeds 12” of snow and there are snow banks along the sidewalk, we will have to snow blow every sidewalk. This will take considerable time and manpower. This operation could take up to 24 hours or more. Again the priorities are downtown, Old North End, and school zones. We normally have many equipment failures while snow blowing, so having fleet services available is key.

We routinely plow, scrape, and sometimes salt the sidewalks during the day to maintain a safe environment.

Accessibility (Handicapped) Parking Spaces

Burlington has a large amount of handicapped parking spaces that must be cleared of snow. This will take place once the streets and sidewalks have been cleared. After the storm, the department will start clearing the spaces starting from the downtown, working their way to the outskirts of the city. With the limited amount of manpower available it may take many days before all spaces can be cleared of snow. If a resident has a particular handicap parking space that needs immediate attention, please call DPW Customer Service @ 863-9094.

Bike lanes

Burlington currently has 18 miles of bike lanes (curbside, defined by paint only), .85 miles of protected bike lanes, and 2 miles of shared use paths.. They are located on residential, and main arterial roads, and the bike lane

will be plowed to the curb. DPW will dispatch a sidewalk tractor to clean the protected bike lanes of snow and salt. All unprotected bike lanes will be plowed utilizing city plow trucks in the corresponding plow route, and when plowing is complete a sidewalk tractor will clean and salt the bike lane as needed. When accumulated snow reaches levels that impact the City's ability to keep the bike lanes properly cleared, we will post the street for no parking in that area if needed, and perform snow removal operations. (Appendix A)

GMT Bus Routes

Burlington is a major hub for public transportation. Many of the priority routes are also major routes for the GMT public transportation system. The operators are familiar with their routes and understand the importance of the public transportation system. We routinely review the routes with the DPW Drivers. GMT passenger facilities (bus stops and shelters) are maintained by GMT and not the City of Burlington.

Performance Capabilities

As stated earlier, Burlington has 95 miles of roads, 130 miles of sidewalks, and 20.85 combined miles of bike lanes. During the average year we receive 80 inches of snow. Of course this is only an average and what really matters is when it falls, and how many snow events we have to deal with. Generally speaking, the length of the storm rather than the amount of snow determines how we deal with it. Our plans are built around these capabilities.

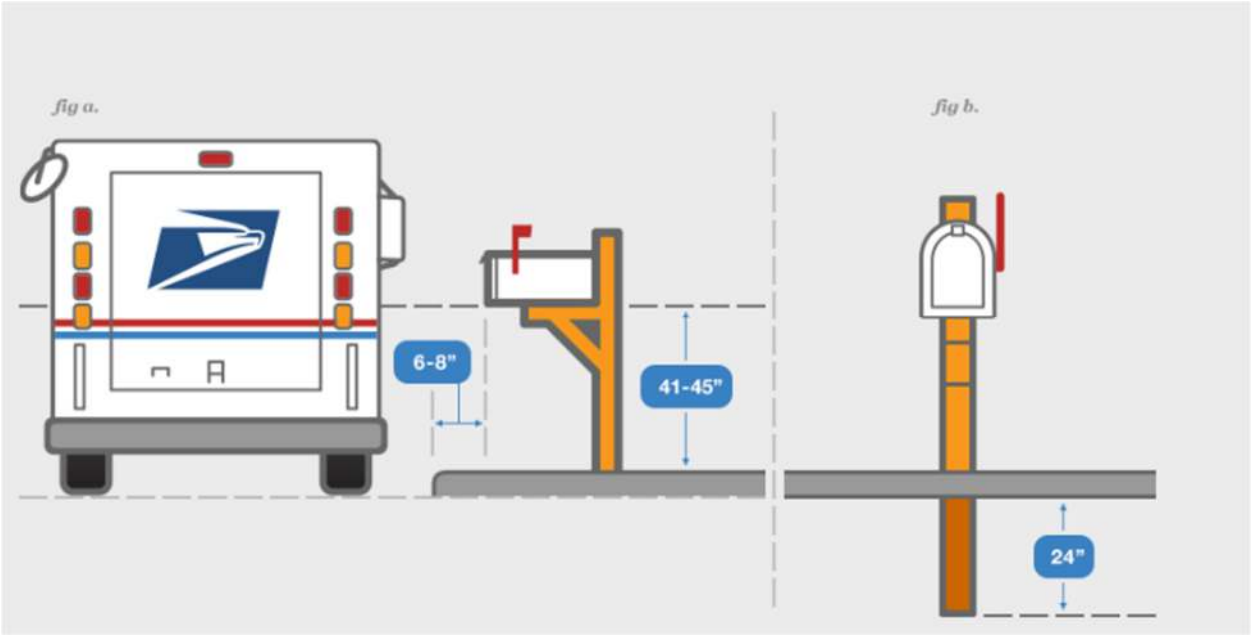
Street plowing routes	**10**
Hours to plow every street once	**5 to 7**
Hours to salt all streets @ 500 lbs. mile	**4**
Sidewalk plow routes	**9**
Hours to plow every sidewalk once	**8**
Hours to snow blow every sidewalk once (depending on depth and weight of snow)	**24 - 30**
Hours to salt every sidewalk	**12**

SNOW STORAGE

Snow removed from the City streets, greenbelts, parking lots, and parking meter spaces will be stored at 702 Lake Street in Burlington. This area is for the storage of City removed snow and not for any private contractor, unless contracted by a City department. This site is a former oil tank farm near the waterfront and has been an ideal storage area as the berm keeps contaminants from reaching the lake. This storage area will be cleaned of any trash and debris every spring.

SNOW OPERATION DAMAGES

1. **Mailboxes and other structures within the Right-of-Way**
   Occasionally mailboxes and other property may be damaged by snow plowing operations due to poor visibility, the mailbox being buried in a snow bank or the weight /volume of snow being plowed. The damage is not deliberate and in most cases unavoidable. Burlington Public Works is not responsible for damage and does not repair, replace or re-erect mailboxes that are located within the right-of-way unless physically struck by a DPW plow truck. In these cases, the property owner shall submit a claim to the City for reimbursement. All mailboxes must be installed to the USPS standards.



Many residents have basketball nets in the right of way, these not only interfere with plowing to the curb, but during inclement weather the plow operator may not see the basketball net and damage the basketball net and City equipment. The City will not be responsible for any damages to basketball nets within the right of way. If any basketball nets are found in the right of way, the DPW Excavation Inspector will be notified and will have it removed.

While removing the snow from the sidewalks we find many fences, borders and decorative landscaping close to the sidewalk. This presents quite a challenge for the department to operate the tractors safely. We ask that all landscaping be built at least 12” from the sidewalk in order to minimize damage to private and city property. Burlington Public Works will not be responsible for any damages to landscaping or fences that are within 12” of the sidewalk. All reported damage will be inspected by our Right of Way Inspector, and if the inspection finds the City responsible, an insurance claim will be made with our agent.

2. **Plantings in the right of way**

   Snow removal from the streets and sidewalks are a challenging task and there are many obstacles that the operators have to maneuver around, and the major items being trees and shrubs. While great care is taken not to damage the tree or shrubbery, the property owner must maintain the vegetation so it does not impede the right of way. While the City equipment may damage the vegetation, the trees and shrubbery may also damage the equipment. **The department will not be responsible for any damage to any plantings encroaching on the right of way.**

3. **Accident Protocol**

   Plowing snow in a large truck with a wing plow takes a special skill. Public Works employees are highly skilled and properly trained before they operate any commercial vehicle. Vehicle accidents will happen, and when they do, the following must happen:

   a. Stop vehicle in a safe area.
   b. Check all people involved for injuries. Call 911 if needed.
   c. The DPW employee will call their supervisor either by cell phone or by 2-way radio and inform him of the situation.
   d. Supervisor will call the Burlington Police Department. A police report will be taken, the DPW employee will receive a copy of the report, if the report is not available, you are required to obtain the incident number.
   e. If the vehicle is able to be driven, it must report to DPW Fleet Services for an evaluation before continuing on with snow plow operations.
   f. All accidents must be reported to the Assistant Director – Maintenance Division and the insurance company. The Assistant Director will report all the proper information on the Travelers Insurance Portal.

PARKING LIMITATIONS

Burlington does not have a seasonal parking ban like most towns in our region. It is the responsibility of the Public Works Director to declare a winter parking ban. Parking bans are declared on a case by case basis. Criteria for a parking ban include length of storm, amount of snow during the storm and how much snow is already on the streets and has not been plowed to the curb. By City ordinance **20-56** the ban must be declared by 3p.m. in order to be in effect by 10 p.m. that evening until 8 a.m. the following morning, except in Zone F (downtown zone) where the ban is in effect from midnight until 6 a.m. In other cases, where snow needs to be removed from the City right of way, the City will do so by posting the street for no parking either with signage or by bagging meters. During this time there will be no parking in accordance to the date and times stated on the sign, or meter bag.

Parking Ban Notification

Parking bans are warned in the following manner:

1. Using the City parking ban light system

2. Sending a press release to local radio and television stations, and print outlets

3. Posting alerts on social media, including Facebook & Twitter

4. Sending out text messages and e-mails via GovDelivery. BPD currently also uses the VT Alert system to send text, auto-call and email notifications.

5. An up to date recording on 658-SNOW

Once the Director calls a ban, the street maintenance foreman will notify the parking enforcement supervisor, who is responsible for the enforcement of the winter parking ban. Second, he will activate up to 90 plus flashing parking ban lights. These lights are located at the entrances of the City, important intersections, and throughout the City's neighborhoods. They are a visual warning to the residents that a parking ban is in effect.

The DPW Foreman in charge of the plowing crew will meet with the parking enforcement crew at 9:30 p.m. at the police department to review and cover any last details.

Vehicles must be off of the streets during these hours if a ban is declared or they will be towed. While parking bans make it easier to plow snow, it is difficult for some people to find alternative parking. DPW does offer free parking in the City owned parking garages as an option. Parking is available in the Marketplace and the Cherry St Parking Garages on the lower decks only. Vehicles must be removed by 7:30 am or they will be charged the full day's rate**.** Additional information can be found at http://www.burlingtonvt.gov/.

While a winter parking ban is not called for every storm, if residents have access to off street parking, we urge them to use it. Additional information can be found at http://www.burlingtonvt.gov/dpw/parking/winter-parking

The City currently has 3 designated tow areas.

Lake St. Extension: Vehicles towed from the Old North End and west of Willard St. from Pearl St. to Maple St.

Gosse Court, North Ave to the end: Vehicles towed from the New North End.

Oakledge Park parking lot: Vehicles towed from the south end and west of Willard St. from Maple St. south.

When the lots are full, vehicles found on the street could also be towed to the nearest street the Public Works Department designates as a drop-off point. This would be a street that has been cleared of snow. For car owners to find their vehicle, please call (802) 540-2380.

AFTER STORM RESPONSIBILITIES

It is expected that 12 hours after a snow storm that every City street will have been plowed. The Street Maintenance Foreman will inspect every City street to ensure that the streets are cleared and passable. The department will continue to patrol the streets and maintain them to be safe and passible. It is possible that the downtown and some narrow streets may have to have the snow removed. If this service is needed, it will happen approximately 2-3 days after the storm using City owned equipment. Snow removal downtown usually happens in the early morning hours. For the narrow streets, dead end streets, and bike lanes we will post the streets for "no parking" and remove the snow during the day.

SNOW RELATED CITY ORDINANCES

27-84 Throwing snow into street prohibited.

No person shall throw or put, or cause to be thrown or put, snow or ice in the part of the street known as the travel portion nor on a sidewalk of a street.

(Rev. Ords. 1962, § 4303; 1969 Cum. Supp., § 4303)

27-2 Enclosing highway; erecting fence or encroachment; nuisance.

No person shall enclose a part of the highway or street, or erect a fence, building or other encroachment, or make obstructions, or create a nuisance on a highway or street, or continue such enclosure, fence, building, encroachment or nuisance on a highway or street.

(Rev. Ords. 1962, § 4209)

Appendix A Bike Lanes

Bike Lanes / Buffered Bike Lanes	Start / End	Bike Lane/Facility Width
Austin Dr north/east	Queen City Park Rd to Red Rocks	5'
Austin Dr south/west	Queen City Park Rd to Red Rocks	5'
Colchester Ave westbound	Mill St to Prospect St	5'/6'
Colchester Ave eastbound	Prospect St to East Ave	
Colchester Ave eastbound	Greenmount Cemetery to Mill St	5'/6'
College St eastbound	Union St to S. Prospect St	4'
East Ave southbound	Colchester Ave to Carrigan Dr	4'
Ethan Allen Parkway eastbound	North Ave to Farrington Pkwy	6.5' with buffer
Flynn Ave westbound	Pine St to Briggs St	6'
Flynn Ave eastbound	Briggs St to Shelburne St	5'/6'
Riverside Ave eastbound	N. Prospect St to Salmon Hole	
Riverside Ave westbound	Salmon Hole to N. Prospect St	
Main St eastbound	University Heights to Spear St	4'
Main St westbound	Spear St to University Heights	4'
Winooski Ave southbound	Decatur St to Pearl St	7'
Winooski Ave southbound	Maple St to Howard St	
Winooski Ave northbound	Howard St to Maple St	
North Ave northbound	Sherman St to Plattsburg Ave	6'
North Ave southbound	Plattsburg Ave to Berry St	
Park St southbound	North St to Sherman St	5'
Park St northbound	Pearl St to Sherman St	5'
North Champlain St northbound	Pearl St to Manhattan Dr	5'
Pine St southbound	Main St to Home Ave	5'

Pine St northbound	Home Ave to Locust St	5'
Willard St northbound	Cliff St to Maple St	
Willard St southbound	North St to Maple St	5'
Pearl St eastbound	Battery St to Prospect St	5'
Pearl St westbound	Winooski Ave to Battery St	5'
Mansfield Ave northbound	Colchester Ave to North St	
Sherman St eastbound	Park St to N Champlain St	5'

QB Separated Bike Lanes		
Union St northbound	Main St to Winooski Ave	6'
Elmwood Ave northbound & southbound	Grant St to Peru St	5'
North Champlain 2-way on east side	Sherman St to Peru St	8'
North Ave northbound	south of Rt 127 intersection	5'
Sherman St	Park St to North Ave	6'
Neighborhood Greenways		
ONE Greenway	Mansfield Ave to Sherman St	N/A
Advisory Lanes		
Flynn Ave westbound	Lake Forest Dr to Oakledge Park	5'
Flynn Ave eastbound	Oakledge Park to Lake Forest Dr	5'
Shared Lanes		
Colchester Ave both directions		N/A
Flynn Ave westbound	Shelburne Rd to Pine St	N/A
Pine St northbound	Locust St to Maple St(?)	N/A
Mansfield Ave southbound	North St to Colchester Ave	N/A
Winooski Ave northbound	Decatur St to Riverside Ave	N/A
Winooski Ave southbound	Riversie Ave to Decatur St	N/A
College St westbound	Prospect St to Union St	N/A
Pearl St westbound	Prospect St to S Winooski Ave	N/A
Shared Use Paths		
Riverside Ave	Winooski Ave to Mill St	8'
Colchester Ave	Mansfield Ave to East Ave	8'
Main St		12'
Parkway		9'

Appendix B – Narrow and Dead End Street List

DEAD END AND NARROW STREETS

MAIN ST AND SOUTH END	**CROSS ROAD AND SPECIAL DIRECTIONS**
ADAMS CT	SHELBURNE RD, **AT LEFT TURN, CLEAN RIGHT SIDE DRIVEWAY ENTRANCE**
LUDWIG CT	HOOVER ST, **BACKDRAG AND PLOW ACROSS HOOVER ST**
REDSTONE TERR	HOOVER ST
ALFRED ST	SHELBURNE RD
PEROTTA PL	HOOVER ST
GOVE CT	SHELBURNE RD
GOLDEN PL	HOWARD ST
SPRUCE CT	SPRUCE ST
ELM TERR	S. WINOOSKI AVE
BROWNS CT	KING ST
BEECH ST	WILLARD AND SOUTH UNION
KINGSLAND TERR	SOUTH UNION
UNIVERSITY TERR	MAIN ST, **BACKDRAG AND PLOW OUT**
PINE PLACE	PINE ST, **NO SIDEWALK, SALT AND CLEAN WELL**
LEDGEMERE ST	MARIAN ST
CATHERINE ST	LOCUST AND ST. PAUL

MAIN ST TO MANHATTEN DR

THIBAULT PKWY	COLCHESTER AVE
NASH PLACE	COLCHESTER AVE
LATHAM COURT	COLCHESTER AVE
CALARCO CT	COLCHESTER AVE
COLCHESTER CT	COLCHESTER AVE
CHASE LANE	CHASE ST
RUMSEY LANE	CHASE ST
CHASE ST	BARRETT ST, **BACK DRAG END OF ST**.
VERMONT PARK	HILLSIDE TERR, RIVERSIDE AVE
HYDE ST	ARCHIBALD ST
GERMAIN ST	ARCHIBALD ST
CHARLES ST	NORTH WILLARD
RUSSELL ST	NORTH WILLARD

CONVERSE COURT	HICKOK PL
LAFAYETTE PL	PEARL ST
ORCHARD TERR	BUELL ST
CLOAREC CT	INTRVALE AVE
ALLEN ST	ELMWOOD AVE
MYTRLE ST	PARK ST
POPLAR ST	NORTH CHAMPLAIN ST
CROWLEY ST	NORTH AVE
SUNSET CT	NORTH AVE
VOLTZ ST	MANHATTEN DR

OVER →

NEW NORTH END	**CROSS ROADS AND SPECIAL INSTRUCTIONS**
POIRIER PL	NORTH AVE, **BACK DRAG END OF STREET AND PLOW OUT**
PLATTSBURG AVE EXT (GRIT PIT RD)	PLATTSBURG AVE, **PLOW PAST THE LAST HOUSE**
RIVERVIEW DR (CAMP DAISY RD)	NOTHVIEW DR
NORTH COVE ROADS (2)	NORTH AVE EXTENSION, **RIGHT BRANCH OF ROAD NEEDS TO PLOWED OUT**
APPLETREE PT ROAD	**DIRT ROAD, PLOW TO THE END**
SUNSET CLIFF RD	**DIRT ROAD, PLOW TO END**
LORI LANE	**ONLY PLOW ROTARY ON LEFT SIDE**
WEST ST	NORTH AVE

ALL STREETS ON THIS LIST WILL BE INSPECTED BY THE STREET MAINTENCE FORMAN AFTER THE STORM.

Plow Route #1

Areas to pay close attention to

Ledge Rd

Fern Hill (N Prospect)

Maple St

Cliff St

GMT Routes

Maple St

Cliff St

Prospect St

Bike Lanes

N/S Willard St

Plow Route #2

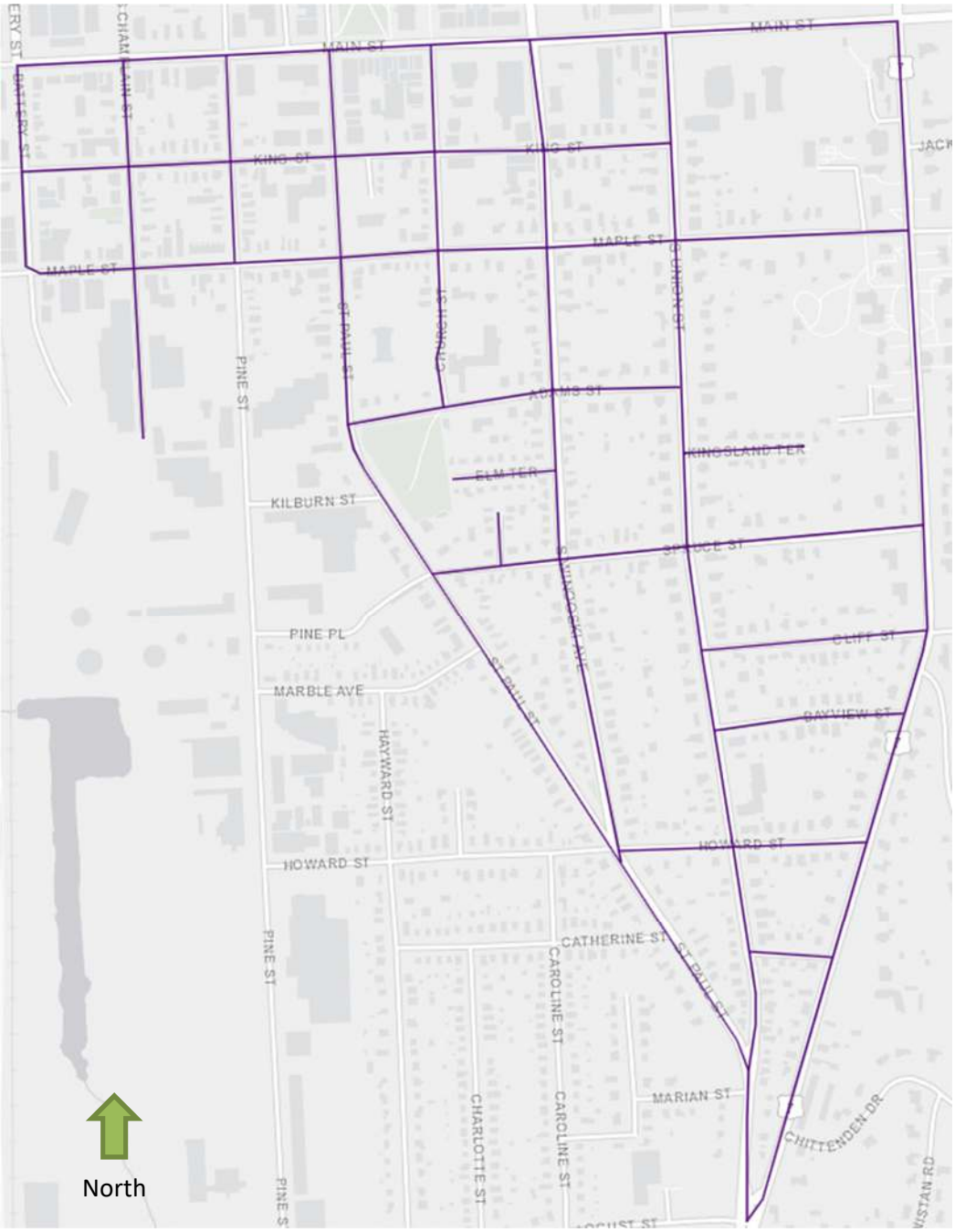
GMT Routes
Cherry St
Pearl St
Main St
North St
Colchester Ave
Battery St
Elmwood Ave
Grant St
N Winooski Ave
Bike Lanes
S Winooski Ave
N Union St
N Winooski Ave
N Willard St
Mansfield Ave
Pearl St
Colchester Ave
East Ave
College St

Plow Route #3

GMT Routes
Pine St
Shelburne St
Industrial Pkwy
Howard St
Bike Lanes
Pine St Main – Home
Flynn Ave
Austin Dr

Plow Route #4

GMT Routes
Main St
Maple St
Cliff St
Kilburn St
S Union St
St Paul St
Howard St
Bike Lanes
S Winooski Ave
S Union St
S Willard St

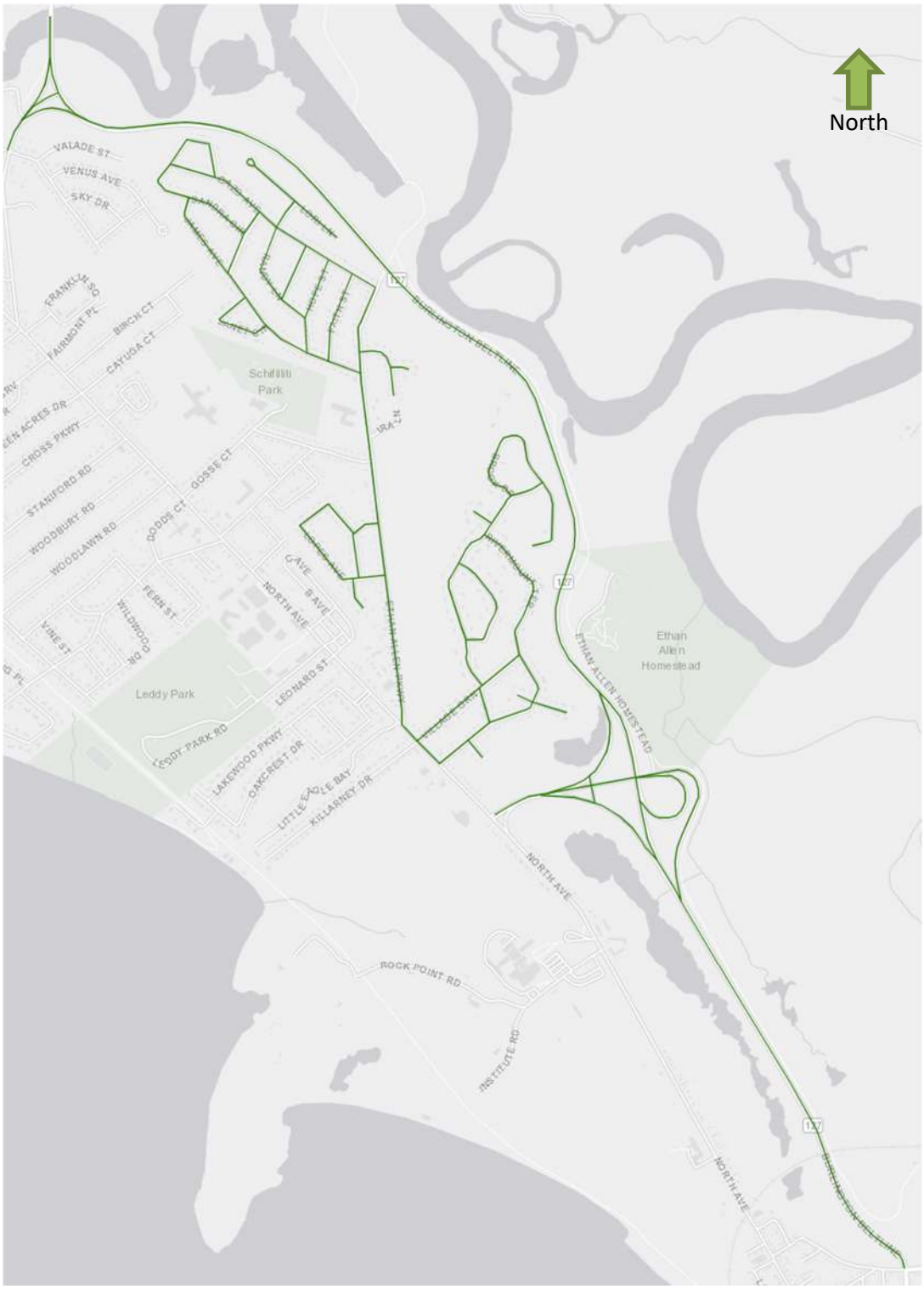


Plow Route #5

GMT Routes
North Ave
Riverside Ave
Colchester Ave
Bike Lanes
North Willard St
Colchester Ave
Riverside Ave

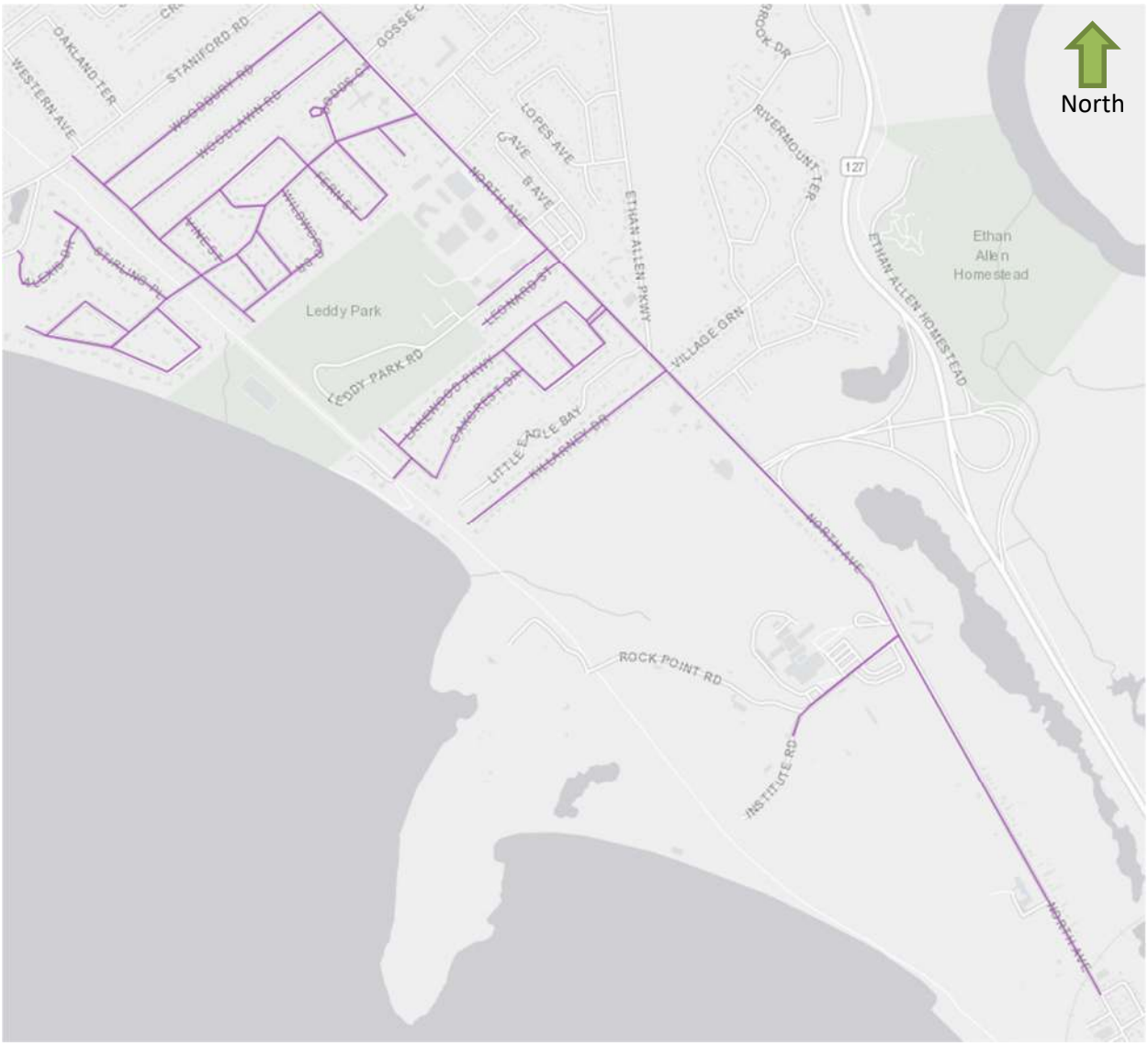
Plow Route #6

GMT Routes
North Ave
Bike Lanes
North Ave



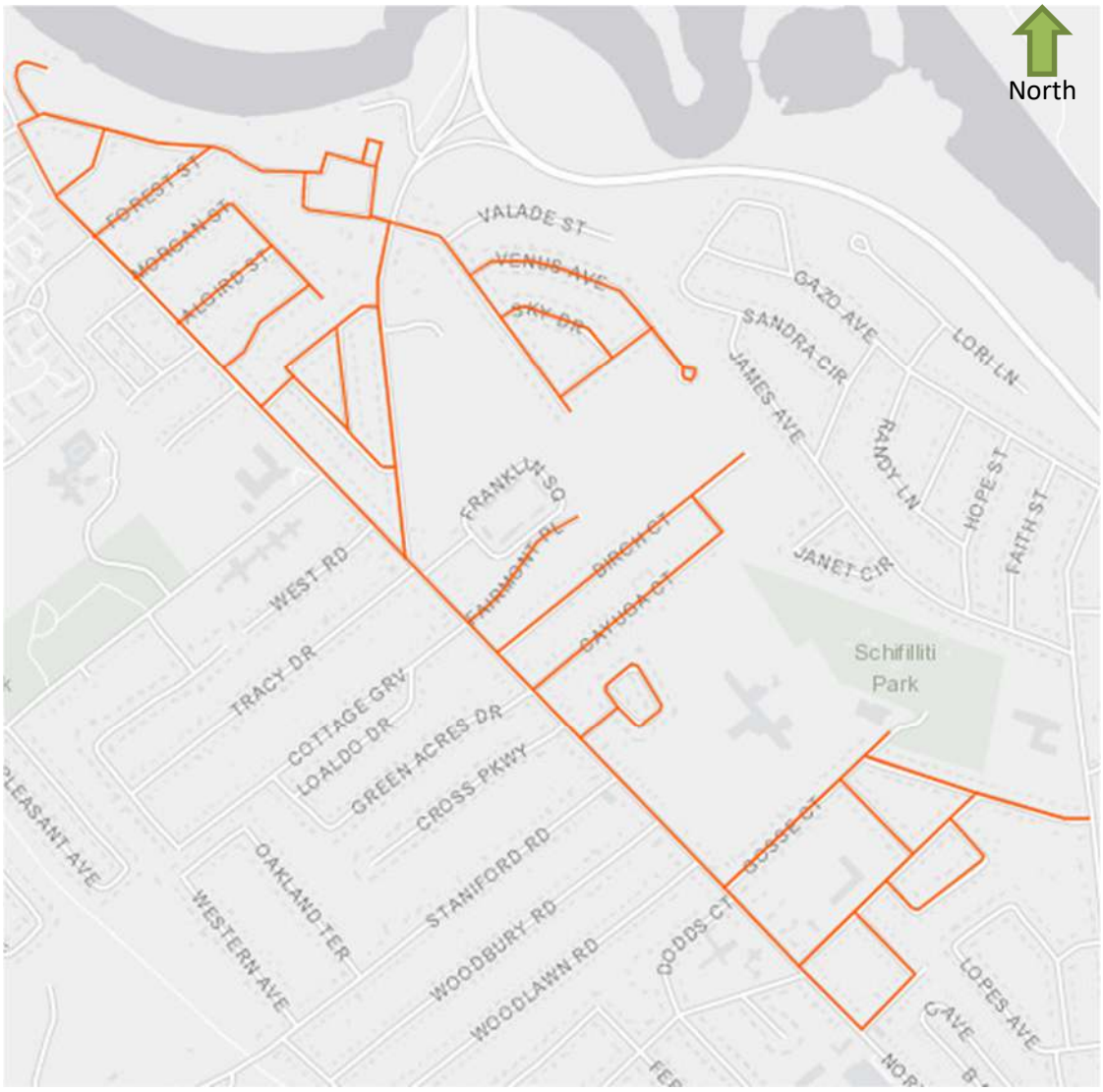
Plow Route #7

GMT Routes
North Ave
Bike Lanes
North Ave



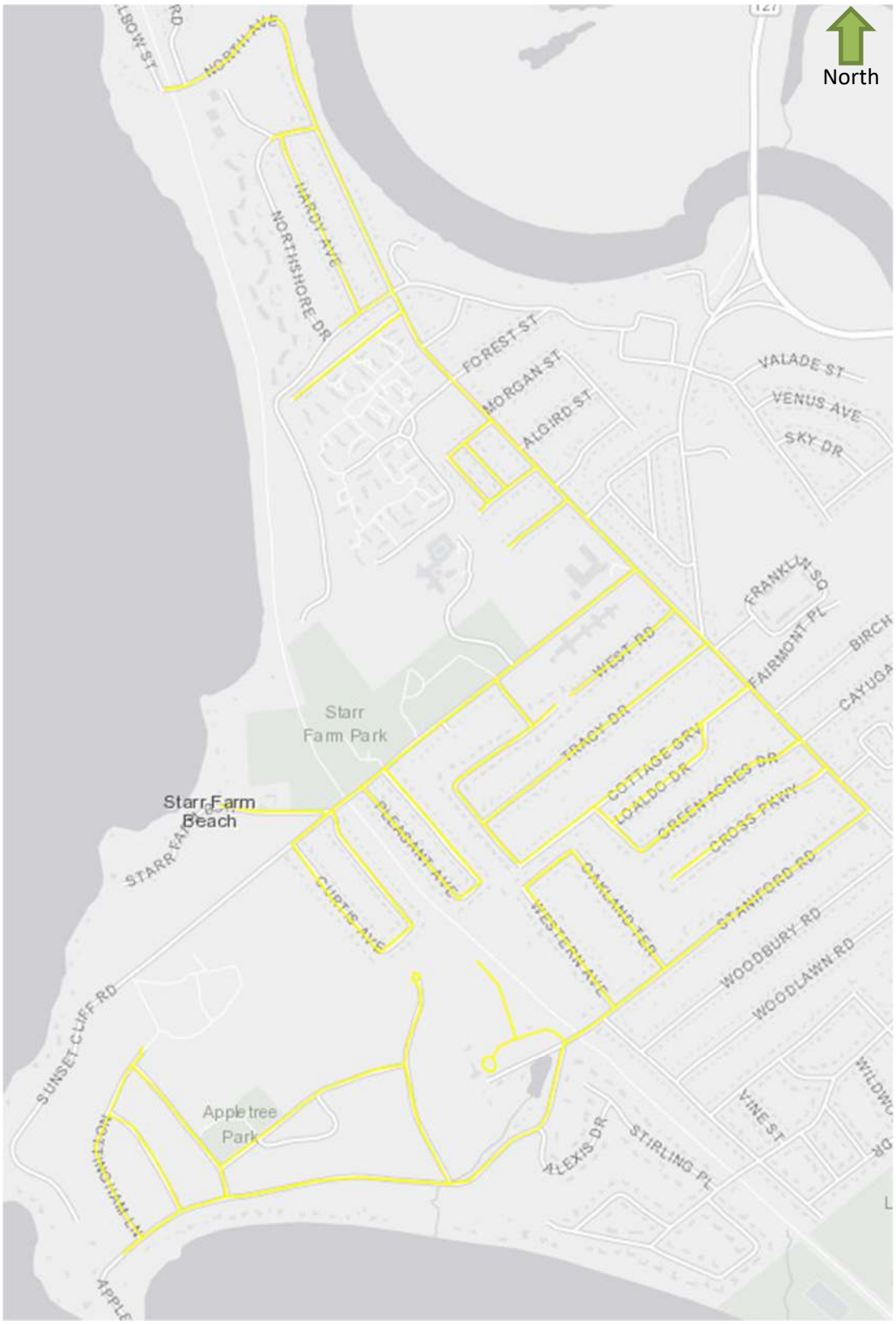
Plow Route #8

GMT Routes
North Ave



Plow Route #9

GMT Routes
North Ave
Bike Lanes
North Ave



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SNOW AND ICE CONTROL PLAN

The purpose of this plan is to define the operational procedures and best management practices (BMP's) for storing and utilizing snow and ice control materials, and for performing winter maintenance activities. It defines the level of service that Burlington Public Works will strive to provide on our 95 miles of streets, 130 miles of sidewalks, and 20.85 combined miles of bike lanes.

Since storms vary dramatically and occur during a variety of traffic conditions, this Snow and Ice Control Plan is intended to be flexible. It is a guide structured to fit average conditions, but able to accommodate the wide variety of conditions that will be encountered by maintenance crews who are working to maintain safe roads and conditions.

STORM WARNING NOTIFICATION

The Department of Public Works Right of Way uses multiple weather services available online, such as National Oceanic and Atmospheric Administration (NOAA) and the Weather Channel. DPW will issue storm related public service announcements via the local media, Facebook, Twitter, and any City website **http://www.burlingtonvt.gov/**

Text messages:
GovDelivery https://public.govdelivery.com/accounts/VTBURLINGTON/subscriber/new

Facebook: https://www.facebook.com/BTVDPW

Twitter: @btvdpw

Phone: 802-658-SNOW

Burlington Public Works has also invested in (4) traffic message boards stationed along key arterial roadways that will warn residents of any winter parking bans.

PERSONNEL SCHEDULING

Our Right of Way crew of (17) full time Street Maintenance Workers and approximately (2) seasonal employees, which may vary due to budgetary constraints, or availability of applicants, maintain the streets and sidewalks. Large storms may require around the clock coverage. This will require help from outside work groups and departments. The Street Maintenance Manager will secure volunteers during the normal workday and create a plan based on the available manpower and weather conditions. The plan will be reviewed by the Assistant Director - Maintenance Division before implementing.

MOBILIZATION

When the decision has been made to react to a storm, the Street Maintenance Manager will mobilize the crew. Since all trucks, tractors and routes are assigned, all the employees need is the call to deploy. If a storm event is predicted after normal business hours, the personnel will be put "on-call" per the union contract and the on-call employees will make themselves available by telephone. The department is aware that employees may have personal needs that may arise and may not be able to be "on call" at all times. If an employee has a personal issue, they may address it with their direct supervisor.

While DPW Street Maintenance is tasked specifically with the staffing for snow and ice control operations, the employees of the Fleet Maintenance group have a responsibility to assist with equipment repairs. Once the decision has been made to respond to a storm event, during normal working hours the street Maintenance Manager will notify the Fleet Manager. The Fleet Manager will then schedule his employees to provide maintenance assistance. After normal working hours, if the foreman in charge determines that the streets and sidewalks need to be plowed he will call the "on-call" maintenance team.

SNOW AND ICE CONTROL MATERIALS

Road salt (NaCl) is the primary snow and ice control material. The salt is normally purchased under the State of Vermont contract. FY20 the contract was awarded to Cargill; the local distributor is Barrett's Trucking in Burlington @ 863-1311. DPW uses approximately 4000tons of road salt per year. The Street Maintenance Manager is responsible for the ordering and inventory of the salt. The entire salt inventory is stored at 645 Pine Street. Liquids like magnesium chloride (MgCl2) and Promelt Magic Minus Zero are being used to reduce the amounts of salt needed to clear the roads. Safety Data Sheets (SDS) are available in a binder in every truck and in the SDS binder located in the Street Maintenance area. As a courtesy, Burlington property owners are permitted to take (1) 5-gallon bucket of salt per winter from the salt shed at 645 Pine St. when it does not interrupt the City's operations.

EQUIPMENT INSPECTION

WEEKLY VEHICLE CHECK SHEET

UNIT#:			UNIT HOURS:		UNIT MILES:			
DATE:			OPERATOR:					
		Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
Registration,ins card,vsi								
Engine oil level								
Coolant level								
Power steering fluid								
Washer fluid								
Brake fluid								
Trans fluid level								
Hyd oil level								
DOT pre trip inspection								

* VISUAL WALK AROUND OF VEHICLE FOR ANY DAMAGE SUCH AS DENTS, DINGS, BROKEN OR CRACKED GLASS

* NOTE ANY DAMAGE ON THIS SHEET AND ALSO REPORT TO MANAGER

*TIRE CONDITION AND AIR PRESSURE

*INSPECT RADIATOR FOR DEBRIS BLOCKING AIR FLOW. SEE EQM IF CLEANING NEEDED

*GREASE ALL APPLICABLE LUBE FITTINGS, DAILY IF REQUIRED.

*TOP OFF FUEL TANK AT END OF SHIFT. CHECK FUEL LEVEL BEFORE SHIFT

*CLEAN INTERIOR OF VEHICLE OF DEBRIS AND CLEAN . WASH EXTERIOR IF NEEDED.

*DRAIN AIR TANKS DAILY AT END OF SHIFT.

RECYCLING TRUCKS, EMPTY PACKER CLEAN OUTS DAILY AT END OF SHIFT

*TANKER TRUCKS, EMPTY AND WASHE DEBRIS BODY, PROP OPEN TO DRY OVERNIGHT

* SWEEPERS CHECK AND CLEAN AIR FILTERS DAILY. REPLACE IF NEEDED

*SWEEPERS CLEAN AND WASH DEBRIS BODY AND PROP OPEN TO DRY

* NOTIFY EQM OF ANY UNSAFE CONDITION AND REMOVE UNIT FROM SERVICE AND TAG OUT OF SERVICE.

All City equipment; to include all plow trucks, loaders, and sidewalk tractors will be operator level inspected before any snow operations. Immediately following a

storm on the next regular business day, all equipment will be cleaned, greased, fluids levels checked, and a proper preventive maintenance check per the manufactures operator manual. All deficiencies will be reported immediately to DPW Fleet Services.

EQUIPMENT CALIBRATION

Every November, all truck spreaders and computerized spreader controls will be calibrated with salt (NaCl) per the manufactures operation manual. After every storm event, each truck will have the mileage and pounds per lane mile recorded. This task will be assigned to a working foreman and one other street maintenance worker.

TRAINING OF PERSONNEL

Training is a key part to our snow plans success. All operators are properly trained before using any equipment utilizing operator manuals, manufacturers trainers, our in house trained employees, and on the job training. All employees will be able to properly operate, and maintain the equipment before actually plowing snow. Before the first snow storm, all operators will drive their route, getting familiar with obstacles such as high manholes, trees, narrow roads, mailboxes, etc. Any reported obstructions will be reported to the Right of Way Inspector for further action. Every truck has a binder with all route maps, bike routes, CCTA emergency routes, and the list of dead end roads.

SNOW ROUTE ASSIGNMENT

All operators will be assigned a route, whether it is in a truck or a sidewalk tractor. Continuity is important in assigning routes and equipment. Operators will learn the best way to battle snow and ice if they are doing the same streets every storm and will know areas that need special attention such as bridges, on and off ramps,

hills, curves, school zones, and bike lanes. The same with the equipment, the operators in the same truck or tractor will know how it handles and what the vehicles limits are.

The sizes of the routes are designed for the City's fleet of trucks and tractors. There are 10 large trucks, 1 small truck for dead ends and narrow streets, and 11 tractors. Of the 10 large trucks, 1 is a spare in case of a break down. With the 11 tractors, 2 are spares. Depending on the accumulation of snow, it could take an operator with a large truck approximately 5-7 hours to plow their route once. An operator on a sidewalk route will take approximately 6-7 hours to plow their route, if they are salting at the same time it will take 8-9 hours to complete once.

LOADING PROCEDURES

The loading of salt in all trucks will be by the oldest available loader in the fleet. The operation will be conducted by qualified City employees only. The trucks will be loaded to their max GVWR and not overloaded. The loader will have operator level preventive maintenance after every storm event and all loading procedures will be supervised by an assigned working foreman.

SALTING AND PLOWING PROCEDURES

Salting Operations

Streets will be salted during light storms where minor accumulations of snow are expected. This requires the use of 6 large trucks that will salt the primary streets with priorities going to the routes coming into and exiting

the City, primary roads leading into neighborhoods, school zones, downtown, intersections, and bike lanes. Not every street is salted unless there is a prediction of ice.

Plowing Operations

Plowing of the streets is the same regardless of the amount of snow predicted. The City owns (10) large plow trucks with (1) being used as a spare in case of break down and (1) small truck for dead ends and narrow streets. We can add plows to (1) front end loader for additional help in major storms.

The (9) large plow trucks are assigned a route and each route starts with its primary street, leading to its secondary main, and then into the neighborhood streets. (Truck route maps appendix B.) The (1) small plow truck is assigned a list of narrow and dead end streets. (Narrow and dead street list appendix B.)

Sidewalk Plowing and salting

There are (9) sidewalk routes and are plowed during the day concurrently with street, and bike lane plowing. Extra attention is given to the downtown, Old North End, areas around schools and school crossing guard locations.

During a night time snow push back or any night time plowing operation, sidewalk plowing usually starts around 3 a.m. so that the sidewalks are open when school begins. This time could vary depending on the size of the storm.

If the storm exceeds 12” of snow and there are snow banks along the sidewalk, we will have to snow blow every sidewalk. This will take considerable time and manpower. This operation could take up to 24 hours or more. Again the priorities are downtown, Old North End, and school zones. We normally have many equipment failures while snow blowing, so having fleet services available is key.

We routinely plow, scrape, and sometimes salt the sidewalks during the day to maintain a safe environment.

Accessibility (Handicapped) Parking Spaces

Burlington has a large amount of handicapped parking spaces that must be cleared of snow. This will take place once the streets and sidewalks have been cleared. After the storm, the department will start clearing the spaces starting from the downtown, working their way to the outskirts of the city. With the limited amount of manpower available it may take many days before all spaces can be cleared of snow. If a resident has a particular handicap parking space that needs immediate attention, please call DPW Customer Service @ 863-9094.

Bike lanes

Burlington currently has 18 miles of bike lanes (curbside, defined by paint only), .85 miles of protected bike lanes, and 2 miles of shared use paths.. They are located on residential, and main arterial roads, and the bike lane

will be plowed to the curb. DPW will dispatch a sidewalk tractor to clean the protected bike lanes of snow and salt. All unprotected bike lanes will be plowed utilizing city plow trucks in the corresponding plow route, and when plowing is complete a sidewalk tractor will clean and salt the bike lane as needed. When accumulated snow reaches levels that impact the City's ability to keep the bike lanes properly cleared, we will post the street for no parking in that area if needed, and perform snow removal operations. (Appendix A)

GMT Bus Routes

Burlington is a major hub for public transportation. Many of the priority routes are also major routes for the GMT public transportation system. The operators are familiar with their routes and understand the importance of the public transportation system. We routinely review the routes with the DPW Drivers. GMT passenger facilities (bus stops and shelters) are maintained by GMT and not the City of Burlington.

Performance Capabilities

As stated earlier, Burlington has 95 miles of roads, 130 miles of sidewalks, and 20.85 combined miles of bike lanes. During the average year we receive 80 inches of snow. Of course this is only an average and what really matters is when it falls, and how many snow events we have to deal with. Generally speaking, the length of the storm rather than the amount of snow determines how we deal with it. Our plans are built around these capabilities.

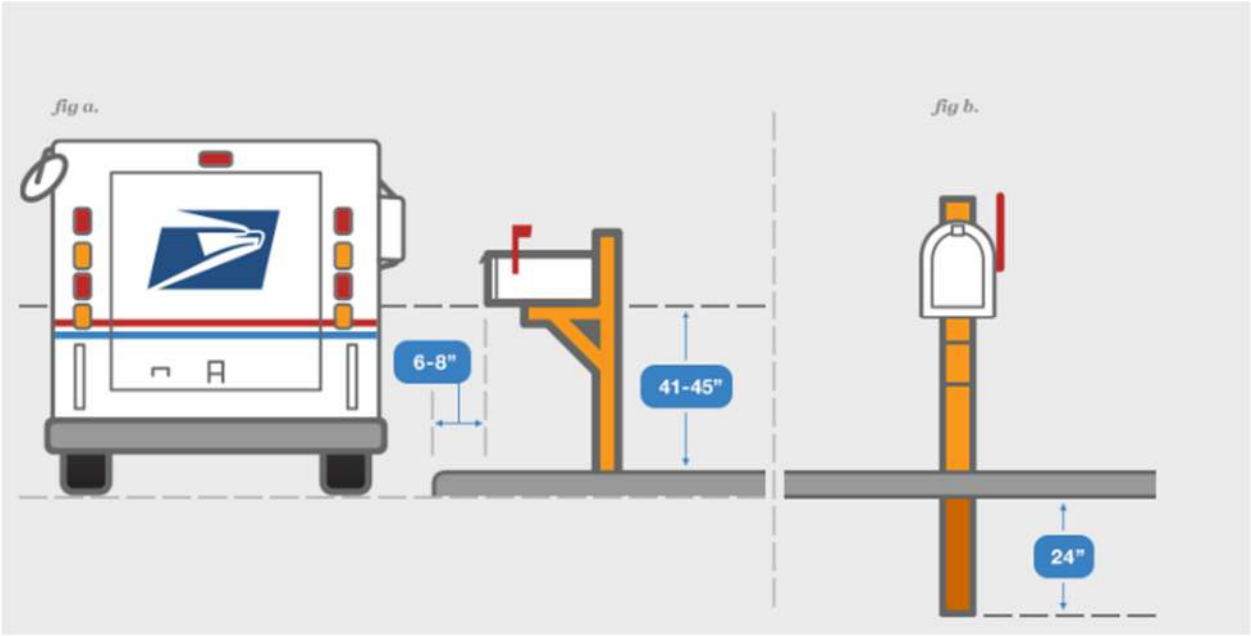
Street plowing routes	**10**
Hours to plow every street once	**5 to 7**
Hours to salt all streets @ 500 lbs. mile	**4**
Sidewalk plow routes	**9**
Hours to plow every sidewalk once	**8**
Hours to snow blow every sidewalk once (depending on depth and weight of snow)	**24 - 30**
Hours to salt every sidewalk	**12**

SNOW STORAGE

Snow removed from the City streets, greenbelts, parking lots, and parking meter spaces will be stored at 702 Lake Street in Burlington. This area is for the storage of City removed snow and not for any private contractor, unless contracted by a City department. This site is a former oil tank farm near the waterfront and has been an ideal storage area as the berm keeps contaminants from reaching the lake. This storage area will be cleaned of any trash and debris every spring.

SNOW OPERATION DAMAGES

1. **Mailboxes and other structures within the Right-of-Way**
   Occasionally mailboxes and other property may be damaged by snow plowing operations due to poor visibility, the mailbox being buried in a snow bank or the weight /volume of snow being plowed. The damage is not deliberate and in most cases unavoidable. Burlington Public Works is not responsible for damage and does not repair, replace or re-erect mailboxes that are located within the right-of-way unless physically struck by a DPW plow truck. In these cases, the property owner shall submit a claim to the City for reimbursement. All mailboxes must be installed to the USPS standards.



Many residents have basketball nets in the right of way, these not only interfere with plowing to the curb, but during inclement weather the plow operator may not see the basketball net and damage the basketball net and City equipment. The City will not be responsible for any damages to basketball nets within the right of way. If any basketball nets are found in the right of way, the DPW Excavation Inspector will be notified and will have it removed.

While removing the snow from the sidewalks we find many fences, borders and decorative landscaping close to the sidewalk. This presents quite a challenge for the department to operate the tractors safely. We ask that all landscaping be built at least 12” from the sidewalk in order to minimize damage to private and city property. Burlington Public Works will not be responsible for any damages to landscaping or fences that are within 12” of the sidewalk. All reported damage will be inspected by our Right of Way Inspector, and if the inspection finds the City responsible, an insurance claim will be made with our agent.

2. **Plantings in the right of way**

   Snow removal from the streets and sidewalks are a challenging task and there are many obstacles that the operators have to maneuver around, and the major items being trees and shrubs. While great care is taken not to damage the tree or shrubbery, the property owner must maintain the vegetation so it does not impede the right of way. While the City equipment may damage the vegetation, the trees and shrubbery may also damage the equipment. **The department will not be responsible for any damage to any plantings encroaching on the right of way.**

3. **Accident Protocol**

   Plowing snow in a large truck with a wing plow takes a special skill. Public Works employees are highly skilled and properly trained before they operate any commercial vehicle. Vehicle accidents will happen, and when they do, the following must happen:

   a. Stop vehicle in a safe area.
   b. Check all people involved for injuries. Call 911 if needed.
   c. The DPW employee will call their supervisor either by cell phone or by 2-way radio and inform him of the situation.
   d. Supervisor will call the Burlington Police Department. A police report will be taken, the DPW employee will receive a copy of the report, if the report is not available, you are required to obtain the incident number.
   e. If the vehicle is able to be driven, it must report to DPW Fleet Services for an evaluation before continuing on with snow plow operations.
   f. All accidents must be reported to the Assistant Director – Maintenance Division and the insurance company. The Assistant Director will report all the proper information on the Travelers Insurance Portal.

PARKING LIMITATIONS

Burlington does not have a seasonal parking ban like most towns in our region. It is the responsibility of the Public Works Director to declare a winter parking ban. Parking bans are declared on a case by case basis. Criteria for a parking ban include length of storm, amount of snow during the storm and how much snow is already on the streets and has not been plowed to the curb. By City ordinance **20-56** the ban must be declared by 3p.m. in order to be in effect by 10 p.m. that evening until 8 a.m. the following morning, except in Zone F (downtown zone) where the ban is in effect from midnight until 6 a.m. In other cases, where snow needs to be removed from the City right of way, the City will do so by posting the street for no parking either with signage or by bagging meters. During this time there will be no parking in accordance to the date and times stated on the sign, or meter bag.

Parking Ban Notification

Parking bans are warned in the following manner:

1. Using the City parking ban light system

2. Sending a press release to local radio and television stations, and print outlets

3. Posting alerts on social media, including Facebook & Twitter

4. Sending out text messages and e-mails via GovDelivery. BPD currently also uses the VT Alert system to send text, auto-call and email notifications.

5. An up to date recording on 658-SNOW

Once the Director calls a ban, the street maintenance foreman will notify the parking enforcement supervisor, who is responsible for the enforcement of the winter parking ban. Second, he will activate up to 90 plus flashing parking ban lights. These lights are located at the entrances of the City, important intersections, and throughout the City's neighborhoods. They are a visual warning to the residents that a parking ban is in effect.

The DPW Foreman in charge of the plowing crew will meet with the parking enforcement crew at 9:30 p.m. at the police department to review and cover any last details.

Vehicles must be off of the streets during these hours if a ban is declared or they will be towed. While parking bans make it easier to plow snow, it is difficult for some people to find alternative parking. DPW does offer free parking in the City owned parking garages as an option. Parking is available in the Marketplace and the Cherry St Parking Garages on the lower decks only. Vehicles must be removed by 7:30 am or they will be charged the full day's rate**.** Additional information can be found at http://www.burlingtonvt.gov/.

While a winter parking ban is not called for every storm, if residents have access to off street parking, we urge them to use it. Additional information can be found at http://www.burlingtonvt.gov/dpw/parking/winter-parking

The City currently has 3 designated tow areas.

Lake St. Extension: Vehicles towed from the Old North End and west of Willard St. from Pearl St. to Maple St.

Gosse Court, North Ave to the end: Vehicles towed from the New North End.

Oakledge Park parking lot: Vehicles towed from the south end and west of Willard St. from Maple St. south.

When the lots are full, vehicles found on the street could also be towed to the nearest street the Public Works Department designates as a drop-off point. This would be a street that has been cleared of snow. For car owners to find their vehicle, please call (802) 540-2380.

AFTER STORM RESPONSIBILITIES

It is expected that 12 hours after a snow storm that every City street will have been plowed. The Street Maintenance Foreman will inspect every City street to ensure that the streets are cleared and passable. The department will continue to patrol the streets and maintain them to be safe and passible. It is possible that the downtown and some narrow streets may have to have the snow removed. If this service is needed, it will happen approximately 2-3 days after the storm using City owned equipment. Snow removal downtown usually happens in the early morning hours. For the narrow streets, dead end streets, and bike lanes we will post the streets for "no parking" and remove the snow during the day.

SNOW RELATED CITY ORDINANCES

27-84 Throwing snow into street prohibited.

No person shall throw or put, or cause to be thrown or put, snow or ice in the part of the street known as the travel portion nor on a sidewalk of a street.

(Rev. Ords. 1962, § 4303; 1969 Cum. Supp., § 4303)

27-2 Enclosing highway; erecting fence or encroachment; nuisance.

No person shall enclose a part of the highway or street, or erect a fence, building or other encroachment, or make obstructions, or create a nuisance on a highway or street, or continue such enclosure, fence, building, encroachment or nuisance on a highway or street.

(Rev. Ords. 1962, § 4209)

Appendix A Bike Lanes

Bike Lanes / Buffered Bike Lanes	Start / End	Bike Lane/Facility Width
Austin Dr north/east	Queen City Park Rd to Red Rocks	5'
Austin Dr south/west	Queen City Park Rd to Red Rocks	5'
Colchester Ave westbound	Mill St to Prospect St	5'/6'
Colchester Ave eastbound	Prospect St to East Ave	
Colchester Ave eastbound	Greenmount Cemetery to Mill St	5'/6'
College St eastbound	Union St to S. Prospect St	4'
East Ave southbound	Colchester Ave to Carrigan Dr	4'
Ethan Allen Parkway eastbound	North Ave to Farrington Pkwy	6.5' with buffer
Flynn Ave westbound	Pine St to Briggs St	6'
Flynn Ave eastbound	Briggs St to Shelburne St	5'/6'
Riverside Ave eastbound	N. Prospect St to Salmon Hole	
Riverside Ave westbound	Salmon Hole to N. Prospect St	
Main St eastbound	University Heights to Spear St	4'
Main St westbound	Spear St to University Heights	4'
Winooski Ave southbound	Decatur St to Pearl St	7'
Winooski Ave southbound	Maple St to Howard St	
Winooski Ave northbound	Howard St to Maple St	
North Ave northbound	Sherman St to Plattsburg Ave	6'
North Ave southbound	Plattsburg Ave to Berry St	
Park St southbound	North St to Sherman St	5'
Park St northbound	Pearl St to Sherman St	5'
North Champlain St northbound	Pearl St to Manhattan Dr	5'
Pine St southbound	Main St to Home Ave	5'

Pine St northbound	Home Ave to Locust St	5'
Willard St northbound	Cliff St to Maple St	
Willard St southbound	North St to Maple St	5'
Pearl St eastbound	Battery St to Prospect St	5'
Pearl St westbound	Winooski Ave to Battery St	5'
Mansfield Ave northbound	Colchester Ave to North St	
Sherman St eastbound	Park St to N Champlain St	5'

QB Separated Bike Lanes		
Union St northbound	Main St to Winooski Ave	6'
Elmwood Ave northbound & southbound	Grant St to Peru St	5'
North Champlain 2-way on east side	Sherman St to Peru St	8'
North Ave northbound	south of Rt 127 intersection	5'
Sherman St	Park St to North Ave	6'
Neighborhood Greenways		
ONE Greenway	Mansfield Ave to Sherman St	N/A
Advisory Lanes		
Flynn Ave westbound	Lake Forest Dr to Oakledge Park	5'
Flynn Ave eastbound	Oakledge Park to Lake Forest Dr	5'
Shared Lanes		
Colchester Ave both directions		N/A
Flynn Ave westbound	Shelburne Rd to Pine St	N/A
Pine St northbound	Locust St to Maple St(?)	N/A
Mansfield Ave southbound	North St to Colchester Ave	N/A
Winooski Ave northbound	Decatur St to Riverside Ave	N/A
Winooski Ave southbound	Riversie Ave to Decatur St	N/A
College St westbound	Prospect St to Union St	N/A
Pearl St westbound	Prospect St to S Winooski Ave	N/A
Shared Use Paths		
Riverside Ave	Winooski Ave to Mill St	8'
Colchester Ave	Mansfield Ave to East Ave	8'
Main St		12'
Parkway		9'

Appendix B – Narrow and Dead End Street List

DEAD END AND NARROW STREETS

MAIN ST AND SOUTH END	**CROSS ROAD AND SPECIAL DIRECTIONS**
ADAMS CT	SHELBURNE RD, **AT LEFT TURN, CLEAN RIGHT SIDE DRIVEWAY ENTRANCE**
LUDWIG CT	HOOVER ST, **BACKDRAG AND PLOW ACROSS HOOVER ST**
REDSTONE TERR	HOOVER ST
ALFRED ST	SHELBURNE RD
PEROTTA PL	HOOVER ST
GOVE CT	SHELBURNE RD
GOLDEN PL	HOWARD ST
SPRUCE CT	SPRUCE ST
ELM TERR	S. WINOOSKI AVE
BROWNS CT	KING ST
BEECH ST	WILLARD AND SOUTH UNION
KINGSLAND TERR	SOUTH UNION
UNIVERSITY TERR	MAIN ST, **BACKDRAG AND PLOW OUT**
PINE PLACE	PINE ST, **NO SIDEWALK, SALT AND CLEAN WELL**
LEDGEMERE ST	MARIAN ST
CATHERINE ST	LOCUST AND ST. PAUL

MAIN ST TO MANHATTEN DR

THIBAULT PKWY	COLCHESTER AVE
NASH PLACE	COLCHESTER AVE
LATHAM COURT	COLCHESTER AVE
CALARCO CT	COLCHESTER AVE
COLCHESTER CT	COLCHESTER AVE
CHASE LANE	CHASE ST
RUMSEY LANE	CHASE ST
CHASE ST	BARRETT ST, **BACK DRAG END OF ST**.
VERMONT PARK	HILLSIDE TERR, RIVERSIDE AVE
HYDE ST	ARCHIBALD ST
GERMAIN ST	ARCHIBALD ST
CHARLES ST	NORTH WILLARD
RUSSELL ST	NORTH WILLARD

CONVERSE COURT	HICKOK PL
LAFAYETTE PL	PEARL ST
ORCHARD TERR	BUELL ST
CLOAREC CT	INTRVALE AVE
ALLEN ST	ELMWOOD AVE
MYTRLE ST	PARK ST
POPLAR ST	NORTH CHAMPLAIN ST
CROWLEY ST	NORTH AVE
SUNSET CT	NORTH AVE
VOLTZ ST	MANHATTEN DR

OVER →

NEW NORTH END	**CROSS ROADS AND SPECIAL INSTRUCTIONS**
POIRIER PL	NORTH AVE, **BACK DRAG END OF STREET AND PLOW OUT**
PLATTSBURG AVE EXT (GRIT PIT RD)	PLATTSBURG AVE, **PLOW PAST THE LAST HOUSE**
RIVERVIEW DR (CAMP DAISY RD)	NOTHVIEW DR
NORTH COVE ROADS (2)	NORTH AVE EXTENSION, **RIGHT BRANCH OF ROAD NEEDS TO PLOWED OUT**
APPLETREE PT ROAD	**DIRT ROAD, PLOW TO THE END**
SUNSET CLIFF RD	**DIRT ROAD, PLOW TO END**
LORI LANE	**ONLY PLOW ROTARY ON LEFT SIDE**
WEST ST	NORTH AVE

ALL STREETS ON THIS LIST WILL BE INSPECTED BY THE STREET MAINTENCE FORMAN AFTER THE STORM.

Plow Route #1

Areas to pay close attention to

Ledge Rd

Fern Hill (N Prospect)

Maple St

Cliff St

GMT Routes

Maple St

Cliff St

Prospect St

Bike Lanes

N/S Willard St

Plow Route #2

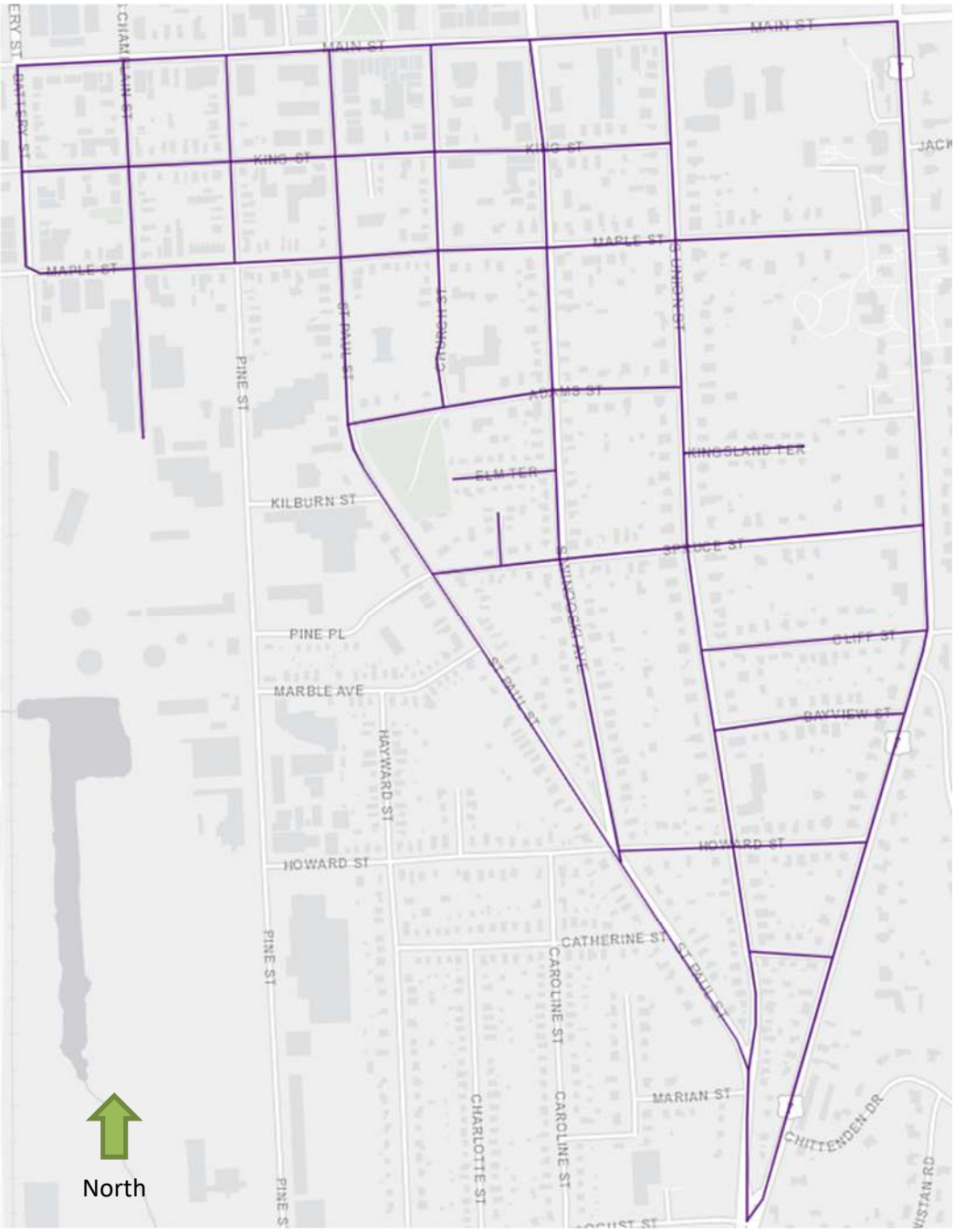
GMT Routes
Cherry St
Pearl St
Main St
North St
Colchester Ave
Battery St
Elmwood Ave
Grant St
N Winooski Ave
Bike Lanes
S Winooski Ave
N Union St
N Winooski Ave
N Willard St
Mansfield Ave
Pearl St
Colchester Ave
East Ave
College St

Plow Route #3

GMT Routes
Pine St
Shelburne St
Industrial Pkwy
Howard St
Bike Lanes
Pine St Main – Home
Flynn Ave
Austin Dr

Plow Route #4

GMT Routes
Main St
Maple St
Cliff St
Kilburn St
S Union St
St Paul St
Howard St
Bike Lanes
S Winooski Ave
S Union St
S Willard St

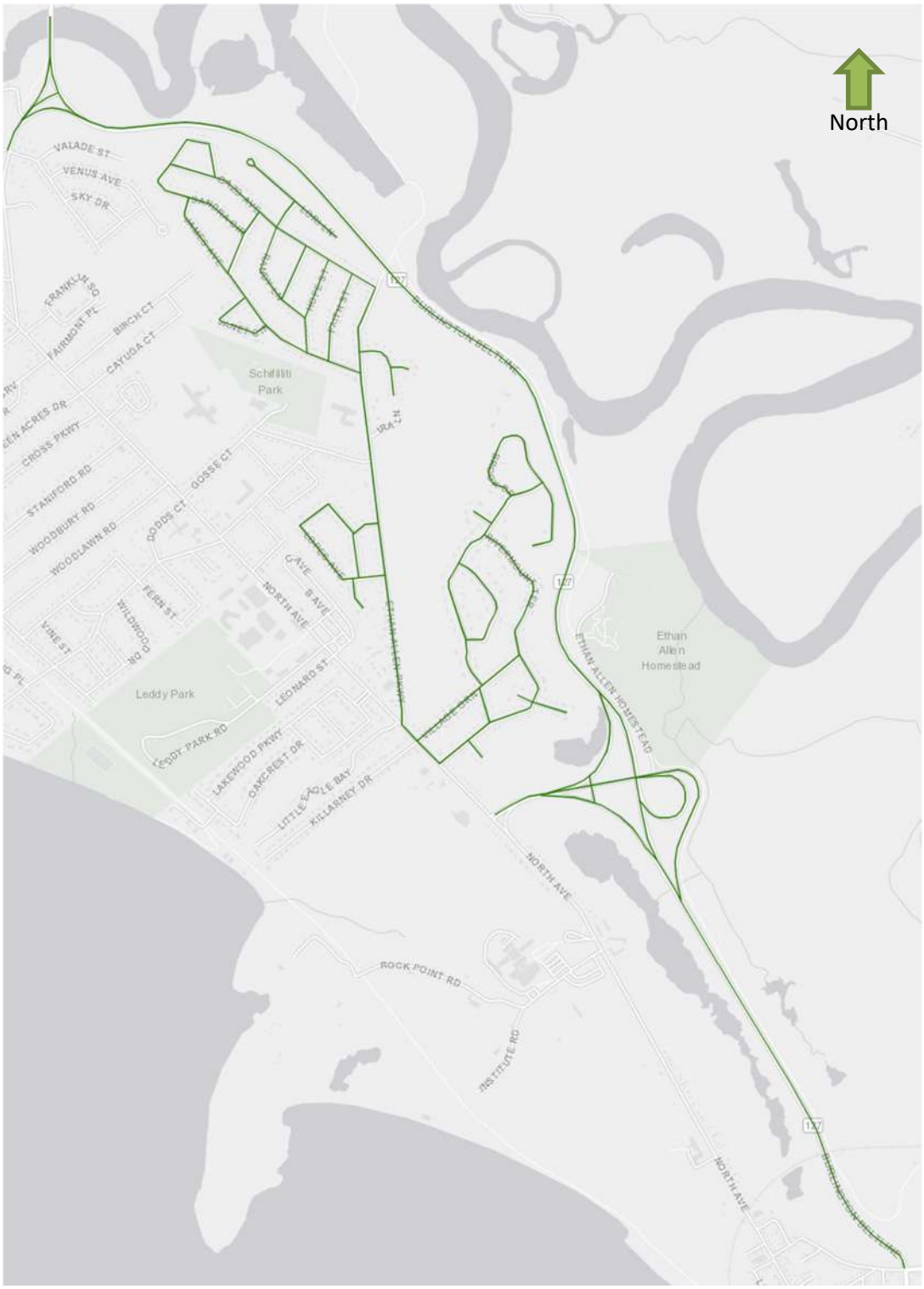


Plow Route #5

GMT Routes
North Ave
Riverside Ave
Colchester Ave
Bike Lanes
North Willard St
Colchester Ave
Riverside Ave

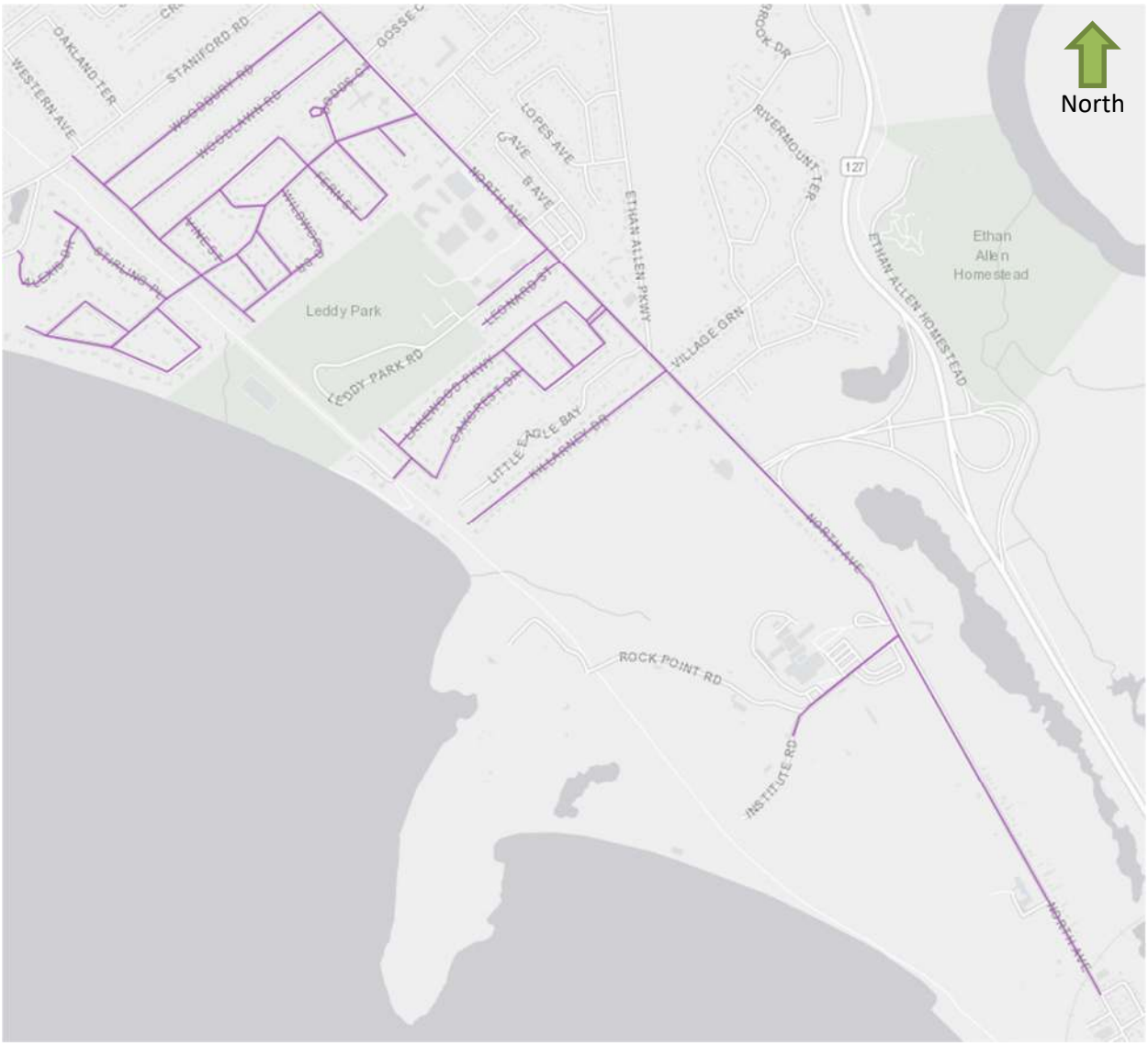
Plow Route #6

GMT Routes
North Ave
Bike Lanes
North Ave



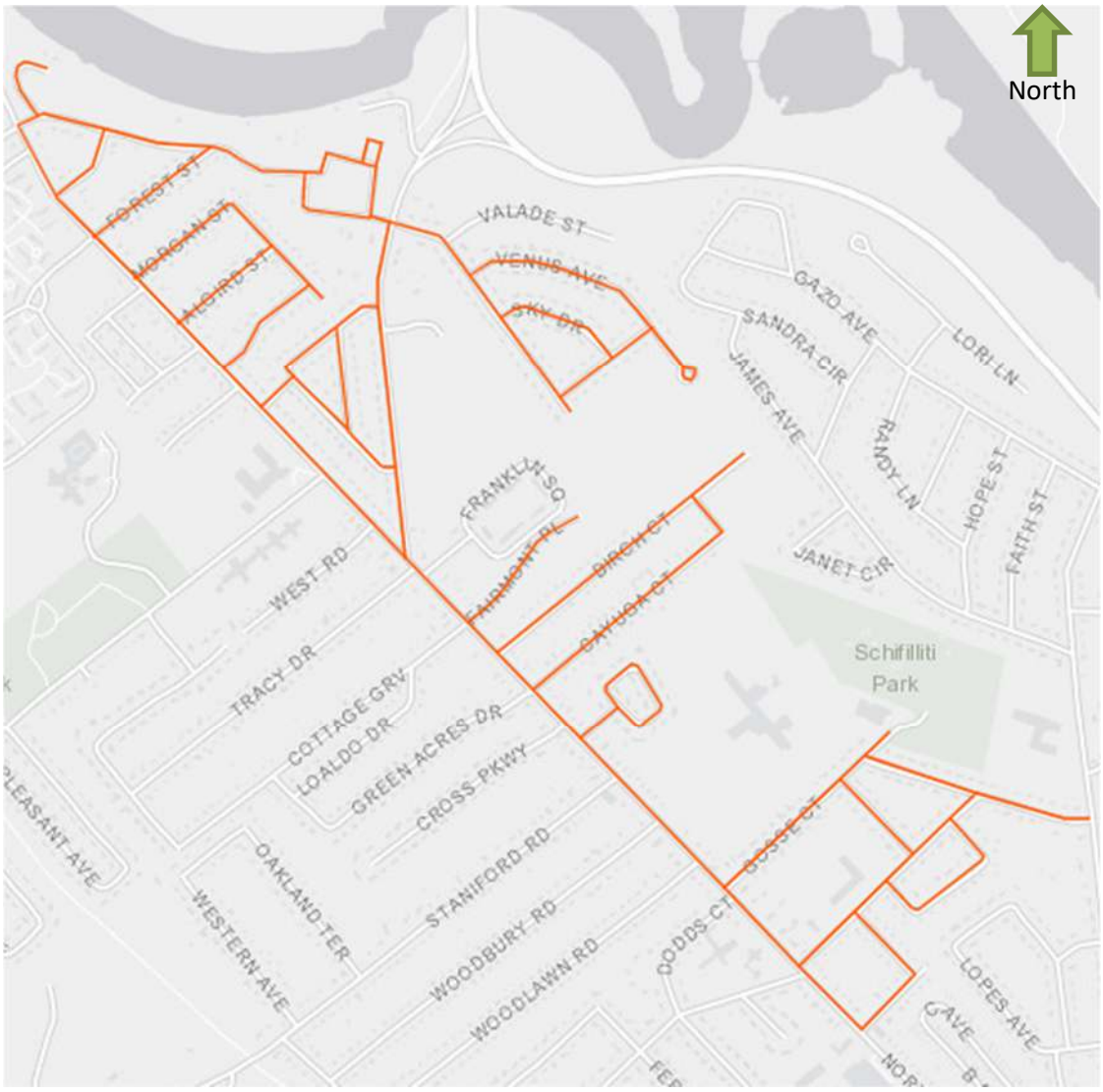
Plow Route #7

GMT Routes
North Ave
Bike Lanes
North Ave



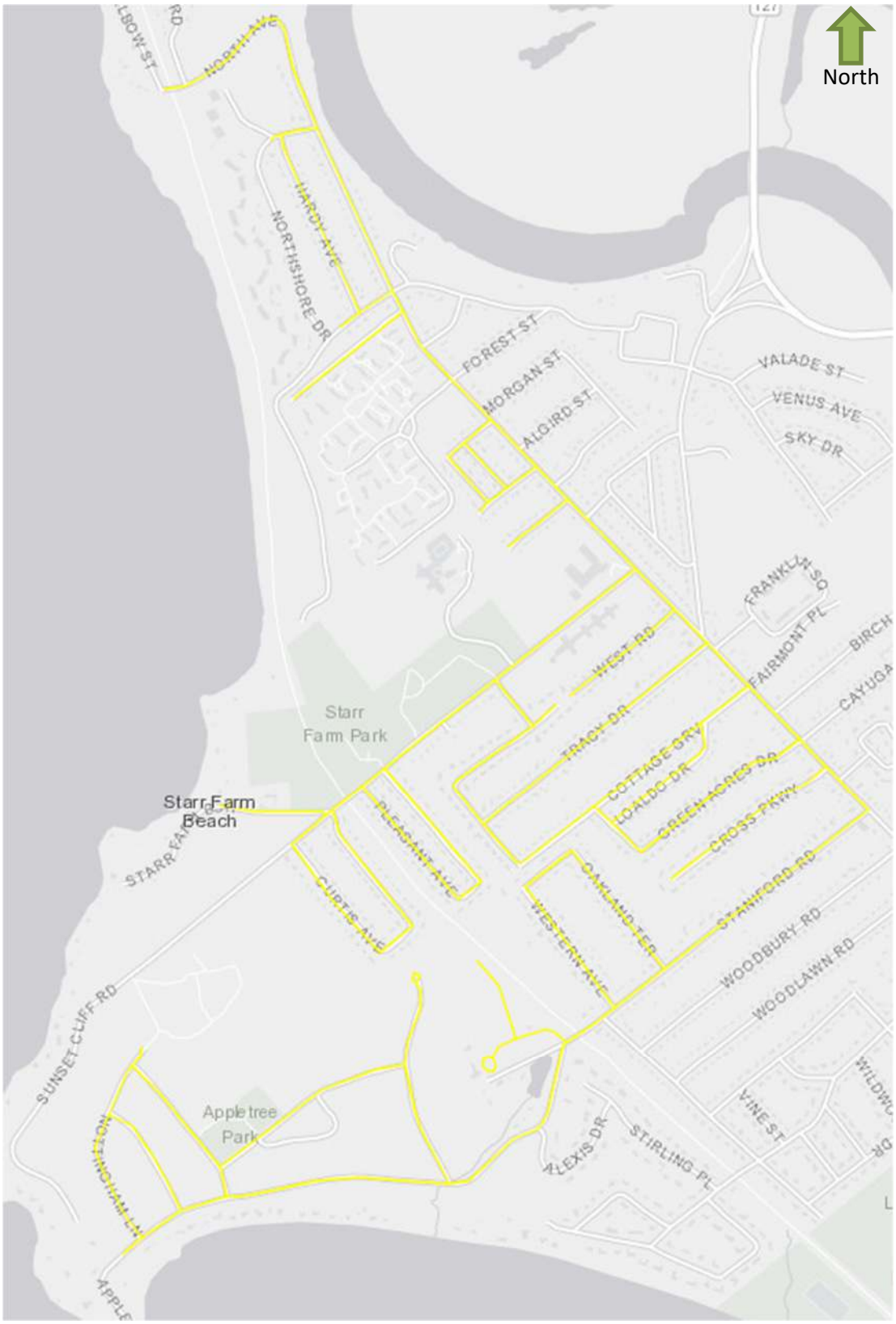
Plow Route #8

GMT Routes
North Ave



Plow Route #9

GMT Routes
North Ave
Bike Lanes
North Ave



BURLINGTON PUBLIC WORKS

SNOW AND ICE CONTROL PLAN

SNOW AND ICE CONTROL PLAN

The purpose of this plan is to define the operational procedures and best management practices (BMP's) for storing and utilizing snow and ice control materials, and for performing winter maintenance activities. It defines the level of service that Burlington Public Works will strive to provide on our 95 miles of streets, 130 miles of sidewalks, and 20.85 combined miles of bike lanes.

Since storms vary dramatically and occur during a variety of traffic conditions, this Snow and Ice Control Plan is intended to be flexible. It is a guide structured to fit average conditions, but able to accommodate the wide variety of conditions that will be encountered by maintenance crews who are working to maintain safe roads and conditions.

STORM WARNING NOTIFICATION

The Department of Public Works Right of Way uses multiple weather services available online, such as National Oceanic and Atmospheric Administration (NOAA) and the Weather Channel. DPW will issue storm related public service announcements via the local media, Facebook, Twitter, and any City website **http://www.burlingtonvt.gov/**

Text messages:
GovDelivery https://public.govdelivery.com/accounts/VTBURLINGTON/subscriber/new

Facebook: https://www.facebook.com/BTVDPW

Twitter: @btvdpw

Phone: 802-658-SNOW

Burlington Public Works has also invested in (4) traffic message boards stationed along key arterial roadways that will warn residents of any winter parking bans.

PERSONNEL SCHEDULING

Our Right of Way crew of (17) full time Street Maintenance Workers and approximately (2) seasonal employees, which may vary due to budgetary constraints, or availability of applicants, maintain the streets and sidewalks. Large storms may require around the clock coverage. This will require help from outside work groups and departments. The Street Maintenance Manager will secure volunteers during the normal workday and create a plan based on the available manpower and weather conditions. The plan will be reviewed by the Assistant Director - Maintenance Division before implementing.

MOBILIZATION

When the decision has been made to react to a storm, the Street Maintenance Manager will mobilize the crew. Since all trucks, tractors and routes are assigned, all the employees need is the call to deploy. If a storm event is predicted after normal business hours, the personnel will be put "on-call" per the union contract and the on-call employees will make themselves available by telephone. The department is aware that employees may have personal needs that may arise and may not be able to be "on call" at all times. If an employee has a personal issue, they may address it with their direct supervisor.

While DPW Street Maintenance is tasked specifically with the staffing for snow and ice control operations, the employees of the Fleet Maintenance group have a responsibility to assist with equipment repairs. Once the decision has been made to respond to a storm event, during normal working hours the street Maintenance Manager will notify the Fleet Manager. The Fleet Manager will then schedule his employees to provide maintenance assistance. After normal working hours, if the foreman in charge determines that the streets and sidewalks need to be plowed he will call the "on-call" maintenance team.

SNOW AND ICE CONTROL MATERIALS

Road salt (NaCl) is the primary snow and ice control material. The salt is normally purchased under the State of Vermont contract. FY20 the contract was awarded to Cargill; the local distributor is Barrett's Trucking in Burlington @ 863-1311. DPW uses approximately 4000tons of road salt per year. The Street Maintenance Manager is responsible for the ordering and inventory of the salt. The entire salt inventory is stored at 645 Pine Street. Liquids like magnesium chloride (MgCl2) and Promelt Magic Minus Zero are being used to reduce the amounts of salt needed to clear the roads. Safety Data Sheets (SDS) are available in a binder in every truck and in the SDS binder located in the Street Maintenance area. As a courtesy, Burlington property owners are permitted to take (1) 5-gallon bucket of salt per winter from the salt shed at 645 Pine St. when it does not interrupt the City's operations.

EQUIPMENT INSPECTION

WEEKLY VEHICLE CHECK SHEET

UNIT#:			UNIT HOURS:		UNIT MILES:			
DATE:			OPERATOR:					
		Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
Registration,ins card,vsi								
Engine oil level								
Coolant level								
Power steering fluid								
Washer fluid								
Brake fluid								
Trans fluid level								
Hyd oil level								
DOT pre trip inspection								

* VISUAL WALK AROUND OF VEHICLE FOR ANY DAMAGE SUCH AS DENTS, DINGS, BROKEN OR CRACKED GLASS

* NOTE ANY DAMAGE ON THIS SHEET AND ALSO REPORT TO MANAGER

*TIRE CONDITION AND AIR PRESSURE

*INSPECT RADIATOR FOR DEBRIS BLOCKING AIR FLOW. SEE EQM IF CLEANING NEEDED

*GREASE ALL APPLICABLE LUBE FITTINGS, DAILY IF REQUIRED.

*TOP OFF FUEL TANK AT END OF SHIFT. CHECK FUEL LEVEL BEFORE SHIFT

*CLEAN INTERIOR OF VEHICLE OF DEBRIS AND CLEAN . WASH EXTERIOR IF NEEDED.

*DRAIN AIR TANKS DAILY AT END OF SHIFT.

RECYCLING TRUCKS, EMPTY PACKER CLEAN OUTS DAILY AT END OF SHIFT

*TANKER TRUCKS, EMPTY AND WASHE DEBRIS BODY, PROP OPEN TO DRY OVERNIGHT

* SWEEPERS CHECK AND CLEAN AIR FILTERS DAILY. REPLACE IF NEEDED

*SWEEPERS CLEAN AND WASH DEBRIS BODY AND PROP OPEN TO DRY

* NOTIFY EQM OF ANY UNSAFE CONDITION AND REMOVE UNIT FROM SERVICE AND TAG OUT OF SERVICE.

All City equipment; to include all plow trucks, loaders, and sidewalk tractors will be operator level inspected before any snow operations. Immediately following a

storm on the next regular business day, all equipment will be cleaned, greased, fluids levels checked, and a proper preventive maintenance check per the manufactures operator manual. All deficiencies will be reported immediately to DPW Fleet Services.

EQUIPMENT CALIBRATION

Every November, all truck spreaders and computerized spreader controls will be calibrated with salt (NaCl) per the manufactures operation manual. After every storm event, each truck will have the mileage and pounds per lane mile recorded. This task will be assigned to a working foreman and one other street maintenance worker.

TRAINING OF PERSONNEL

Training is a key part to our snow plans success. All operators are properly trained before using any equipment utilizing operator manuals, manufacturers trainers, our in house trained employees, and on the job training. All employees will be able to properly operate, and maintain the equipment before actually plowing snow. Before the first snow storm, all operators will drive their route, getting familiar with obstacles such as high manholes, trees, narrow roads, mailboxes, etc. Any reported obstructions will be reported to the Right of Way Inspector for further action. Every truck has a binder with all route maps, bike routes, CCTA emergency routes, and the list of dead end roads.

SNOW ROUTE ASSIGNMENT

All operators will be assigned a route, whether it is in a truck or a sidewalk tractor. Continuity is important in assigning routes and equipment. Operators will learn the best way to battle snow and ice if they are doing the same streets every storm and will know areas that need special attention such as bridges, on and off ramps,

hills, curves, school zones, and bike lanes. The same with the equipment, the operators in the same truck or tractor will know how it handles and what the vehicles limits are.

The sizes of the routes are designed for the City's fleet of trucks and tractors. There are 10 large trucks, 1 small truck for dead ends and narrow streets, and 11 tractors. Of the 10 large trucks, 1 is a spare in case of a break down. With the 11 tractors, 2 are spares. Depending on the accumulation of snow, it could take an operator with a large truck approximately 5-7 hours to plow their route once. An operator on a sidewalk route will take approximately 6-7 hours to plow their route, if they are salting at the same time it will take 8-9 hours to complete once.

LOADING PROCEDURES

The loading of salt in all trucks will be by the oldest available loader in the fleet. The operation will be conducted by qualified City employees only. The trucks will be loaded to their max GVWR and not overloaded. The loader will have operator level preventive maintenance after every storm event and all loading procedures will be supervised by an assigned working foreman.

SALTING AND PLOWING PROCEDURES

Salting Operations

Streets will be salted during light storms where minor accumulations of snow are expected. This requires the use of 6 large trucks that will salt the primary streets with priorities going to the routes coming into and exiting

the City, primary roads leading into neighborhoods, school zones, downtown, intersections, and bike lanes. Not every street is salted unless there is a prediction of ice.

Plowing Operations

Plowing of the streets is the same regardless of the amount of snow predicted. The City owns (10) large plow trucks with (1) being used as a spare in case of break down and (1) small truck for dead ends and narrow streets. We can add plows to (1) front end loader for additional help in major storms.

The (9) large plow trucks are assigned a route and each route starts with its primary street, leading to its secondary main, and then into the neighborhood streets. (Truck route maps appendix B.) The (1) small plow truck is assigned a list of narrow and dead end streets. (Narrow and dead street list appendix B.)

Sidewalk Plowing and salting

There are (9) sidewalk routes and are plowed during the day concurrently with street, and bike lane plowing. Extra attention is given to the downtown, Old North End, areas around schools and school crossing guard locations.

During a night time snow push back or any night time plowing operation, sidewalk plowing usually starts around 3 a.m. so that the sidewalks are open when school begins. This time could vary depending on the size of the storm.

If the storm exceeds 12” of snow and there are snow banks along the sidewalk, we will have to snow blow every sidewalk. This will take considerable time and manpower. This operation could take up to 24 hours or more. Again the priorities are downtown, Old North End, and school zones. We normally have many equipment failures while snow blowing, so having fleet services available is key.

We routinely plow, scrape, and sometimes salt the sidewalks during the day to maintain a safe environment.

Accessibility (Handicapped) Parking Spaces

Burlington has a large amount of handicapped parking spaces that must be cleared of snow. This will take place once the streets and sidewalks have been cleared. After the storm, the department will start clearing the spaces starting from the downtown, working their way to the outskirts of the city. With the limited amount of manpower available it may take many days before all spaces can be cleared of snow. If a resident has a particular handicap parking space that needs immediate attention, please call DPW Customer Service @ 863-9094.

Bike lanes

Burlington currently has 18 miles of bike lanes (curbside, defined by paint only), .85 miles of protected bike lanes, and 2 miles of shared use paths.. They are located on residential, and main arterial roads, and the bike lane

will be plowed to the curb. DPW will dispatch a sidewalk tractor to clean the protected bike lanes of snow and salt. All unprotected bike lanes will be plowed utilizing city plow trucks in the corresponding plow route, and when plowing is complete a sidewalk tractor will clean and salt the bike lane as needed. When accumulated snow reaches levels that impact the City's ability to keep the bike lanes properly cleared, we will post the street for no parking in that area if needed, and perform snow removal operations. (Appendix A)

GMT Bus Routes

Burlington is a major hub for public transportation. Many of the priority routes are also major routes for the GMT public transportation system. The operators are familiar with their routes and understand the importance of the public transportation system. We routinely review the routes with the DPW Drivers. GMT passenger facilities (bus stops and shelters) are maintained by GMT and not the City of Burlington.

Performance Capabilities

As stated earlier, Burlington has 95 miles of roads, 130 miles of sidewalks, and 20.85 combined miles of bike lanes. During the average year we receive 80 inches of snow. Of course this is only an average and what really matters is when it falls, and how many snow events we have to deal with. Generally speaking, the length of the storm rather than the amount of snow determines how we deal with it. Our plans are built around these capabilities.

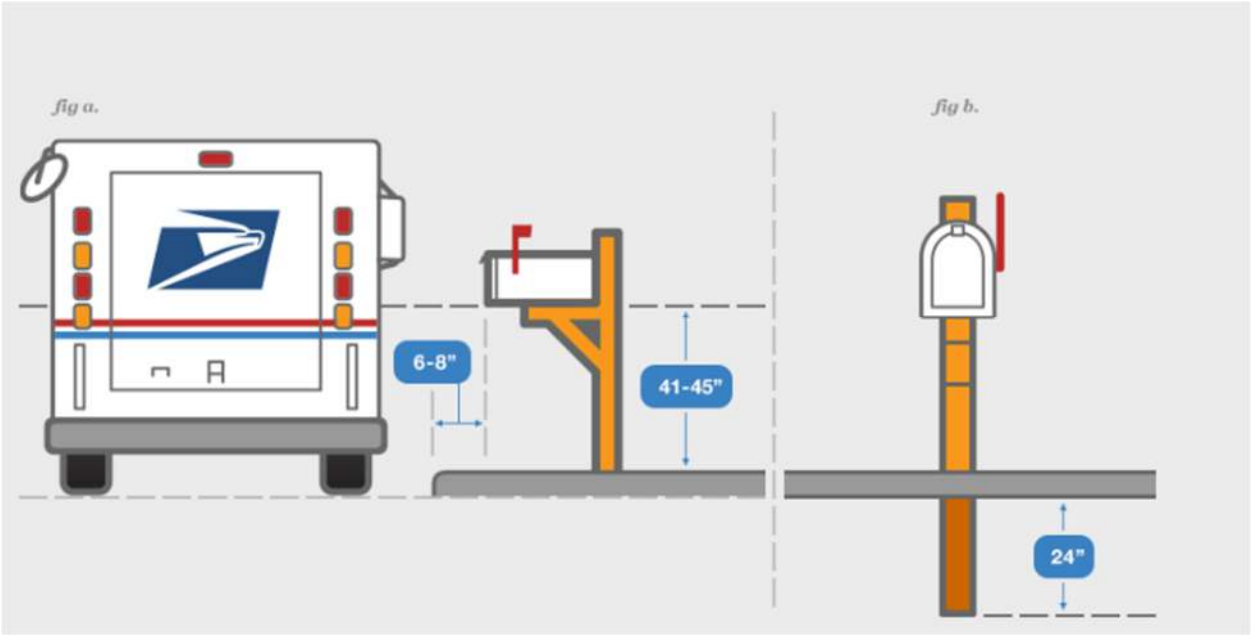
Street plowing routes	**10**
Hours to plow every street once	**5 to 7**
Hours to salt all streets @ 500 lbs. mile	**4**
Sidewalk plow routes	**9**
Hours to plow every sidewalk once	**8**
Hours to snow blow every sidewalk once (depending on depth and weight of snow)	**24 - 30**
Hours to salt every sidewalk	**12**

SNOW STORAGE

Snow removed from the City streets, greenbelts, parking lots, and parking meter spaces will be stored at 702 Lake Street in Burlington. This area is for the storage of City removed snow and not for any private contractor, unless contracted by a City department. This site is a former oil tank farm near the waterfront and has been an ideal storage area as the berm keeps contaminants from reaching the lake. This storage area will be cleaned of any trash and debris every spring.

SNOW OPERATION DAMAGES

1. **Mailboxes and other structures within the Right-of-Way**
   Occasionally mailboxes and other property may be damaged by snow plowing operations due to poor visibility, the mailbox being buried in a snow bank or the weight /volume of snow being plowed. The damage is not deliberate and in most cases unavoidable. Burlington Public Works is not responsible for damage and does not repair, replace or re-erect mailboxes that are located within the right-of-way unless physically struck by a DPW plow truck. In these cases, the property owner shall submit a claim to the City for reimbursement. All mailboxes must be installed to the USPS standards.



Many residents have basketball nets in the right of way, these not only interfere with plowing to the curb, but during inclement weather the plow operator may not see the basketball net and damage the basketball net and City equipment. The City will not be responsible for any damages to basketball nets within the right of way. If any basketball nets are found in the right of way, the DPW Excavation Inspector will be notified and will have it removed.

While removing the snow from the sidewalks we find many fences, borders and decorative landscaping close to the sidewalk. This presents quite a challenge for the department to operate the tractors safely. We ask that all landscaping be built at least 12” from the sidewalk in order to minimize damage to private and city property. Burlington Public Works will not be responsible for any damages to landscaping or fences that are within 12” of the sidewalk. All reported damage will be inspected by our Right of Way Inspector, and if the inspection finds the City responsible, an insurance claim will be made with our agent.

2. **Plantings in the right of way**

   Snow removal from the streets and sidewalks are a challenging task and there are many obstacles that the operators have to maneuver around, and the major items being trees and shrubs. While great care is taken not to damage the tree or shrubbery, the property owner must maintain the vegetation so it does not impede the right of way. While the City equipment may damage the vegetation, the trees and shrubbery may also damage the equipment. **The department will not be responsible for any damage to any plantings encroaching on the right of way.**

3. **Accident Protocol**

   Plowing snow in a large truck with a wing plow takes a special skill. Public Works employees are highly skilled and properly trained before they operate any commercial vehicle. Vehicle accidents will happen, and when they do, the following must happen:

   a. Stop vehicle in a safe area.
   b. Check all people involved for injuries. Call 911 if needed.
   c. The DPW employee will call their supervisor either by cell phone or by 2-way radio and inform him of the situation.
   d. Supervisor will call the Burlington Police Department. A police report will be taken, the DPW employee will receive a copy of the report, if the report is not available, you are required to obtain the incident number.
   e. If the vehicle is able to be driven, it must report to DPW Fleet Services for an evaluation before continuing on with snow plow operations.
   f. All accidents must be reported to the Assistant Director – Maintenance Division and the insurance company. The Assistant Director will report all the proper information on the Travelers Insurance Portal.

PARKING LIMITATIONS

Burlington does not have a seasonal parking ban like most towns in our region. It is the responsibility of the Public Works Director to declare a winter parking ban. Parking bans are declared on a case by case basis. Criteria for a parking ban include length of storm, amount of snow during the storm and how much snow is already on the streets and has not been plowed to the curb. By City ordinance **20-56** the ban must be declared by 3p.m. in order to be in effect by 10 p.m. that evening until 8 a.m. the following morning, except in Zone F (downtown zone) where the ban is in effect from midnight until 6 a.m. In other cases, where snow needs to be removed from the City right of way, the City will do so by posting the street for no parking either with signage or by bagging meters. During this time there will be no parking in accordance to the date and times stated on the sign, or meter bag.

Parking Ban Notification

Parking bans are warned in the following manner:

1. Using the City parking ban light system

2. Sending a press release to local radio and television stations, and print outlets

3. Posting alerts on social media, including Facebook & Twitter

4. Sending out text messages and e-mails via GovDelivery. BPD currently also uses the VT Alert system to send text, auto-call and email notifications.

5. An up to date recording on 658-SNOW

Once the Director calls a ban, the street maintenance foreman will notify the parking enforcement supervisor, who is responsible for the enforcement of the winter parking ban. Second, he will activate up to 90 plus flashing parking ban lights. These lights are located at the entrances of the City, important intersections, and throughout the City's neighborhoods. They are a visual warning to the residents that a parking ban is in effect.

The DPW Foreman in charge of the plowing crew will meet with the parking enforcement crew at 9:30 p.m. at the police department to review and cover any last details.

Vehicles must be off of the streets during these hours if a ban is declared or they will be towed. While parking bans make it easier to plow snow, it is difficult for some people to find alternative parking. DPW does offer free parking in the City owned parking garages as an option. Parking is available in the Marketplace and the Cherry St Parking Garages on the lower decks only. Vehicles must be removed by 7:30 am or they will be charged the full day's rate**.** Additional information can be found at http://www.burlingtonvt.gov/.

While a winter parking ban is not called for every storm, if residents have access to off street parking, we urge them to use it. Additional information can be found at http://www.burlingtonvt.gov/dpw/parking/winter-parking

The City currently has 3 designated tow areas.

Lake St. Extension: Vehicles towed from the Old North End and west of Willard St. from Pearl St. to Maple St.

Gosse Court, North Ave to the end: Vehicles towed from the New North End.

Oakledge Park parking lot: Vehicles towed from the south end and west of Willard St. from Maple St. south.

When the lots are full, vehicles found on the street could also be towed to the nearest street the Public Works Department designates as a drop-off point. This would be a street that has been cleared of snow. For car owners to find their vehicle, please call (802) 540-2380.

AFTER STORM RESPONSIBILITIES

It is expected that 12 hours after a snow storm that every City street will have been plowed. The Street Maintenance Foreman will inspect every City street to ensure that the streets are cleared and passable. The department will continue to patrol the streets and maintain them to be safe and passible. It is possible that the downtown and some narrow streets may have to have the snow removed. If this service is needed, it will happen approximately 2-3 days after the storm using City owned equipment. Snow removal downtown usually happens in the early morning hours. For the narrow streets, dead end streets, and bike lanes we will post the streets for "no parking" and remove the snow during the day.

SNOW RELATED CITY ORDINANCES

27-84 Throwing snow into street prohibited.

No person shall throw or put, or cause to be thrown or put, snow or ice in the part of the street known as the travel portion nor on a sidewalk of a street.

(Rev. Ords. 1962, § 4303; 1969 Cum. Supp., § 4303)

27-2 Enclosing highway; erecting fence or encroachment; nuisance.

No person shall enclose a part of the highway or street, or erect a fence, building or other encroachment, or make obstructions, or create a nuisance on a highway or street, or continue such enclosure, fence, building, encroachment or nuisance on a highway or street.

(Rev. Ords. 1962, § 4209)

Appendix A Bike Lanes

Bike Lanes / Buffered Bike Lanes	Start / End	Bike Lane/Facility Width
Austin Dr north/east	Queen City Park Rd to Red Rocks	5'
Austin Dr south/west	Queen City Park Rd to Red Rocks	5'
Colchester Ave westbound	Mill St to Prospect St	5'/6'
Colchester Ave eastbound	Prospect St to East Ave	
Colchester Ave eastbound	Greenmount Cemetery to Mill St	5'/6'
College St eastbound	Union St to S. Prospect St	4'
East Ave southbound	Colchester Ave to Carrigan Dr	4'
Ethan Allen Parkway eastbound	North Ave to Farrington Pkwy	6.5' with buffer
Flynn Ave westbound	Pine St to Briggs St	6'
Flynn Ave eastbound	Briggs St to Shelburne St	5'/6'
Riverside Ave eastbound	N. Prospect St to Salmon Hole	
Riverside Ave westbound	Salmon Hole to N. Prospect St	
Main St eastbound	University Heights to Spear St	4'
Main St westbound	Spear St to University Heights	4'
Winooski Ave southbound	Decatur St to Pearl St	7'
Winooski Ave southbound	Maple St to Howard St	
Winooski Ave northbound	Howard St to Maple St	
North Ave northbound	Sherman St to Plattsburg Ave	6'
North Ave southbound	Plattsburg Ave to Berry St	
Park St southbound	North St to Sherman St	5'
Park St northbound	Pearl St to Sherman St	5'
North Champlain St northbound	Pearl St to Manhattan Dr	5'
Pine St southbound	Main St to Home Ave	5'

Pine St northbound	Home Ave to Locust St	5'
Willard St northbound	Cliff St to Maple St	
Willard St southbound	North St to Maple St	5'
Pearl St eastbound	Battery St to Prospect St	5'
Pearl St westbound	Winooski Ave to Battery St	5'
Mansfield Ave northbound	Colchester Ave to North St	
Sherman St eastbound	Park St to N Champlain St	5'

QB Separated Bike Lanes		
Union St northbound	Main St to Winooski Ave	6'
Elmwood Ave northbound & southbound	Grant St to Peru St	5'
North Champlain 2-way on east side	Sherman St to Peru St	8'
North Ave northbound	south of Rt 127 intersection	5'
Sherman St	Park St to North Ave	6'
Neighborhood Greenways		
ONE Greenway	Mansfield Ave to Sherman St	N/A
Advisory Lanes		
Flynn Ave westbound	Lake Forest Dr to Oakledge Park	5'
Flynn Ave eastbound	Oakledge Park to Lake Forest Dr	5'
Shared Lanes		
Colchester Ave both directions		N/A
Flynn Ave westbound	Shelburne Rd to Pine St	N/A
Pine St northbound	Locust St to Maple St(?)	N/A
Mansfield Ave southbound	North St to Colchester Ave	N/A
Winooski Ave northbound	Decatur St to Riverside Ave	N/A
Winooski Ave southbound	Riversie Ave to Decatur St	N/A
College St westbound	Prospect St to Union St	N/A
Pearl St westbound	Prospect St to S Winooski Ave	N/A
Shared Use Paths		
Riverside Ave	Winooski Ave to Mill St	8'
Colchester Ave	Mansfield Ave to East Ave	8'
Main St		12'
Parkway		9'

Appendix B – Narrow and Dead End Street List

DEAD END AND NARROW STREETS

MAIN ST AND SOUTH END	**CROSS ROAD AND SPECIAL DIRECTIONS**
ADAMS CT	SHELBURNE RD, **AT LEFT TURN, CLEAN RIGHT SIDE DRIVEWAY ENTRANCE**
LUDWIG CT	HOOVER ST, **BACKDRAG AND PLOW ACROSS HOOVER ST**
REDSTONE TERR	HOOVER ST
ALFRED ST	SHELBURNE RD
PEROTTA PL	HOOVER ST
GOVE CT	SHELBURNE RD
GOLDEN PL	HOWARD ST
SPRUCE CT	SPRUCE ST
ELM TERR	S. WINOOSKI AVE
BROWNS CT	KING ST
BEECH ST	WILLARD AND SOUTH UNION
KINGSLAND TERR	SOUTH UNION
UNIVERSITY TERR	MAIN ST, **BACKDRAG AND PLOW OUT**
PINE PLACE	PINE ST, **NO SIDEWALK, SALT AND CLEAN WELL**
LEDGEMERE ST	MARIAN ST
CATHERINE ST	LOCUST AND ST. PAUL

MAIN ST TO MANHATTEN DR

THIBAULT PKWY	COLCHESTER AVE
NASH PLACE	COLCHESTER AVE
LATHAM COURT	COLCHESTER AVE
CALARCO CT	COLCHESTER AVE
COLCHESTER CT	COLCHESTER AVE
CHASE LANE	CHASE ST
RUMSEY LANE	CHASE ST
CHASE ST	BARRETT ST, **BACK DRAG END OF ST**.
VERMONT PARK	HILLSIDE TERR, RIVERSIDE AVE
HYDE ST	ARCHIBALD ST
GERMAIN ST	ARCHIBALD ST
CHARLES ST	NORTH WILLARD
RUSSELL ST	NORTH WILLARD

CONVERSE COURT	HICKOK PL
LAFAYETTE PL	PEARL ST
ORCHARD TERR	BUELL ST
CLOAREC CT	INTRVALE AVE
ALLEN ST	ELMWOOD AVE
MYTRLE ST	PARK ST
POPLAR ST	NORTH CHAMPLAIN ST
CROWLEY ST	NORTH AVE
SUNSET CT	NORTH AVE
VOLTZ ST	MANHATTEN DR

OVER →

NEW NORTH END	**CROSS ROADS AND SPECIAL INSTRUCTIONS**
POIRIER PL	NORTH AVE, **BACK DRAG END OF STREET AND PLOW OUT**
PLATTSBURG AVE EXT (GRIT PIT RD)	PLATTSBURG AVE, **PLOW PAST THE LAST HOUSE**
RIVERVIEW DR (CAMP DAISY RD)	NOTHVIEW DR
NORTH COVE ROADS (2)	NORTH AVE EXTENSION, **RIGHT BRANCH OF ROAD NEEDS TO PLOWED OUT**
APPLETREE PT ROAD	**DIRT ROAD, PLOW TO THE END**
SUNSET CLIFF RD	**DIRT ROAD, PLOW TO END**
LORI LANE	**ONLY PLOW ROTARY ON LEFT SIDE**
WEST ST	NORTH AVE

ALL STREETS ON THIS LIST WILL BE INSPECTED BY THE STREET MAINTENCE FORMAN AFTER THE STORM.

Plow Route #1

Areas to pay close attention to

Ledge Rd

Fern Hill (N Prospect)

Maple St

Cliff St

GMT Routes

Maple St

Cliff St

Prospect St

Bike Lanes

N/S Willard St

Plow Route #2

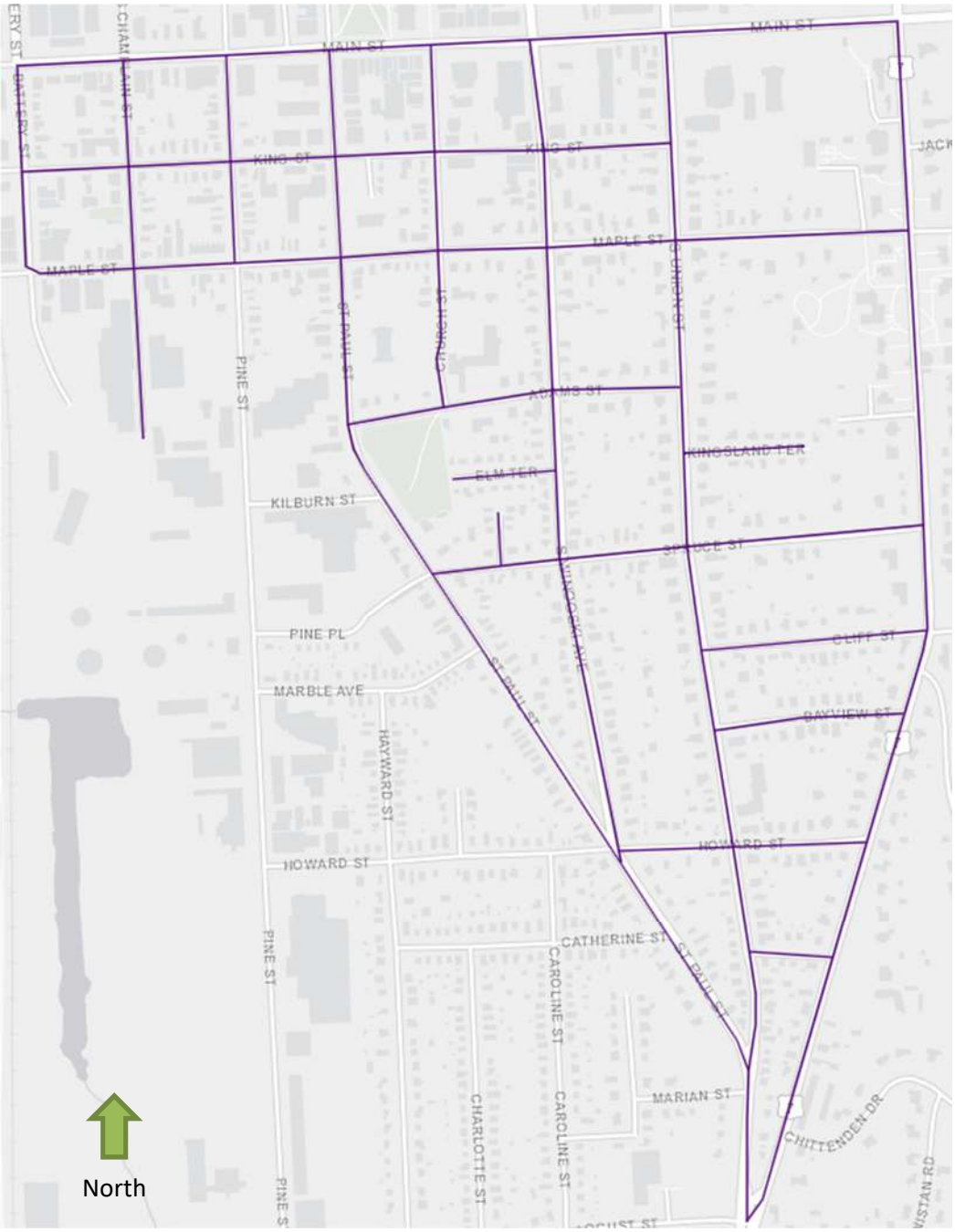
GMT Routes
Cherry St
Pearl St
Main St
North St
Colchester Ave
Battery St
Elmwood Ave
Grant St
N Winooski Ave
Bike Lanes
S Winooski Ave
N Union St
N Winooski Ave
N Willard St
Mansfield Ave
Pearl St
Colchester Ave
East Ave
College St

Plow Route #3

GMT Routes
Pine St
Shelburne St
Industrial Pkwy
Howard St
Bike Lanes
Pine St Main – Home
Flynn Ave
Austin Dr

Plow Route #4

GMT Routes
Main St
Maple St
Cliff St
Kilburn St
S Union St
St Paul St
Howard St
Bike Lanes
S Winooski Ave
S Union St
S Willard St

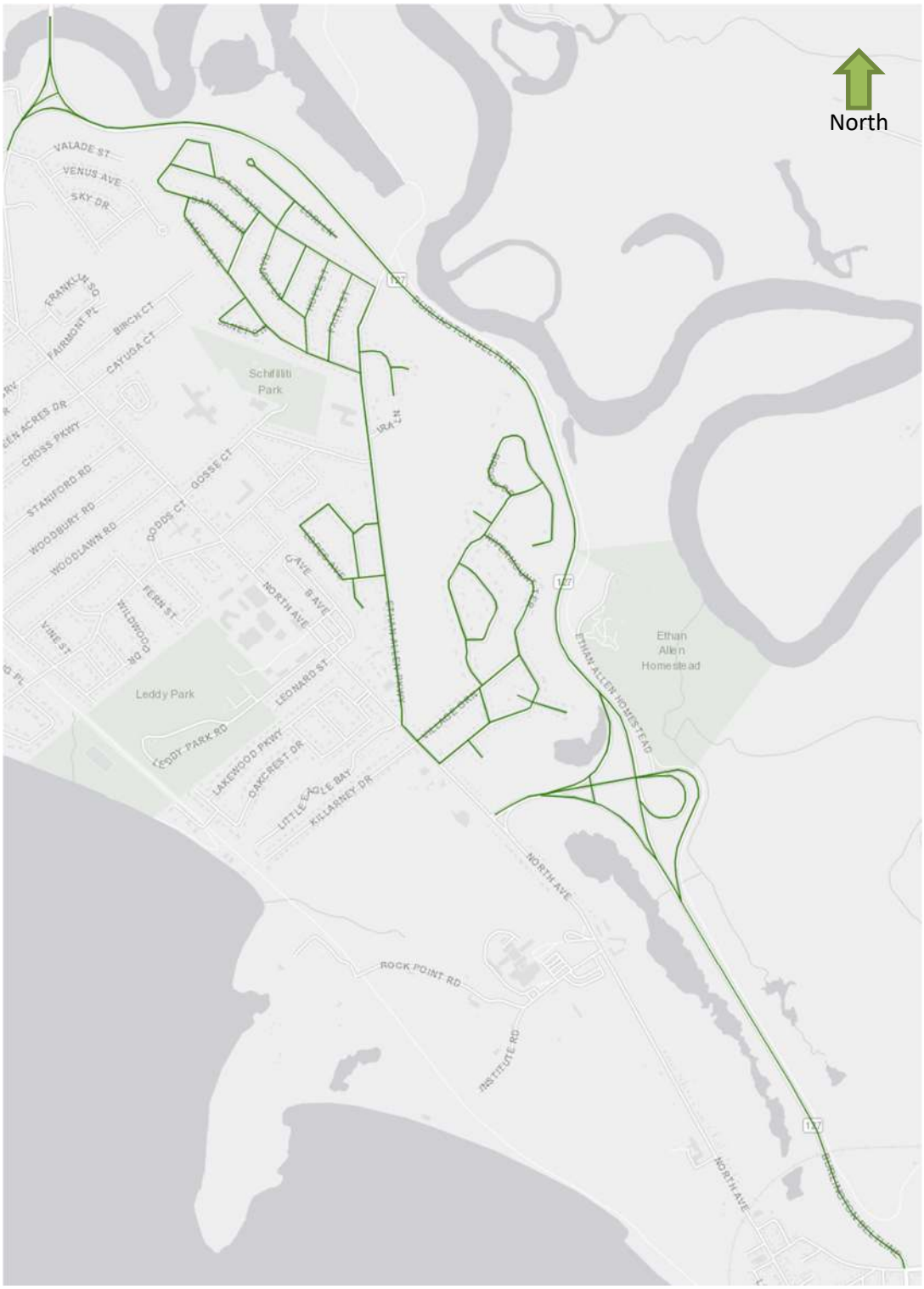


Plow Route #5

GMT Routes
North Ave
Riverside Ave
Colchester Ave
Bike Lanes
North Willard St
Colchester Ave
Riverside Ave

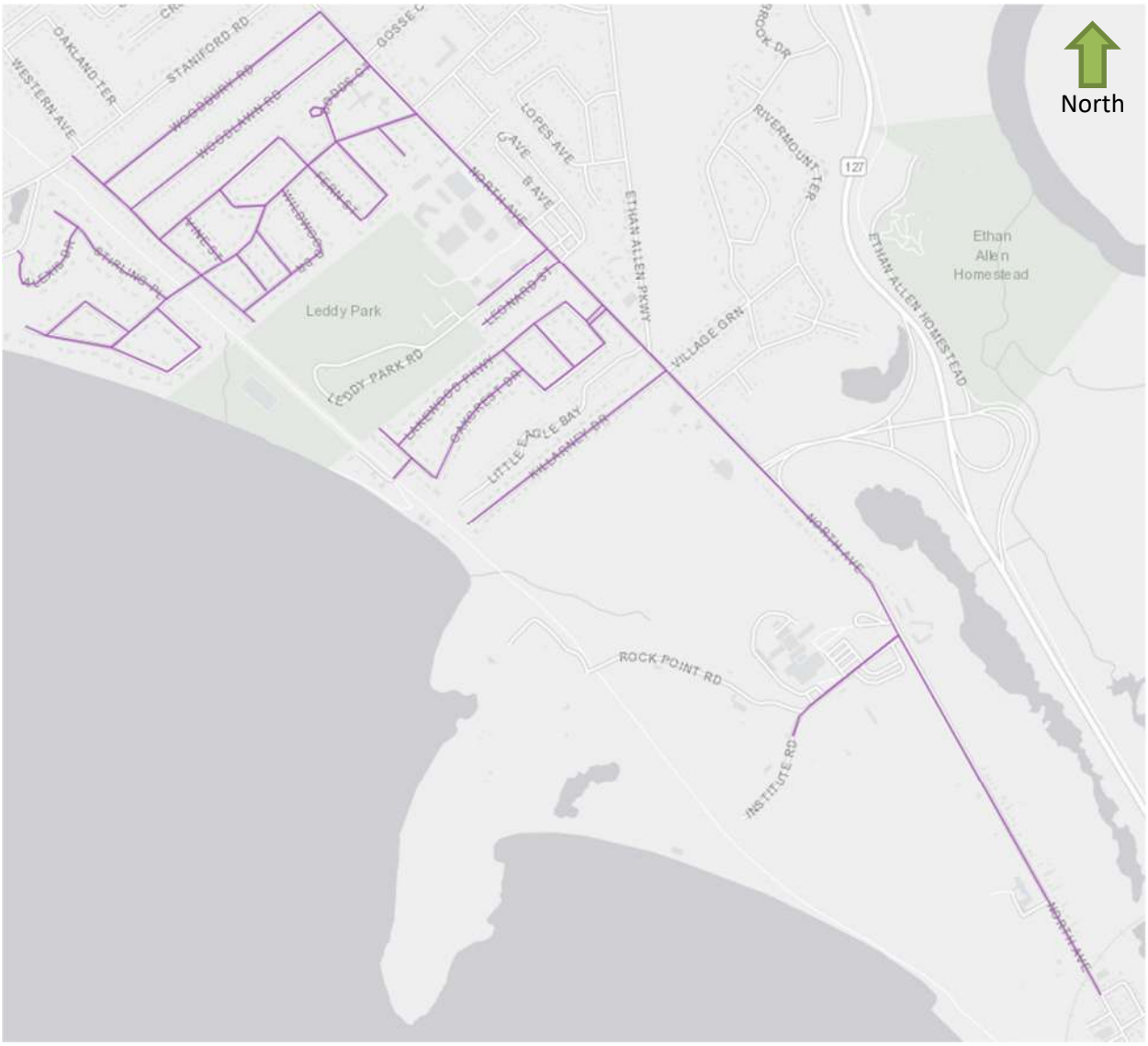
Plow Route #6

GMT Routes
North Ave
Bike Lanes
North Ave



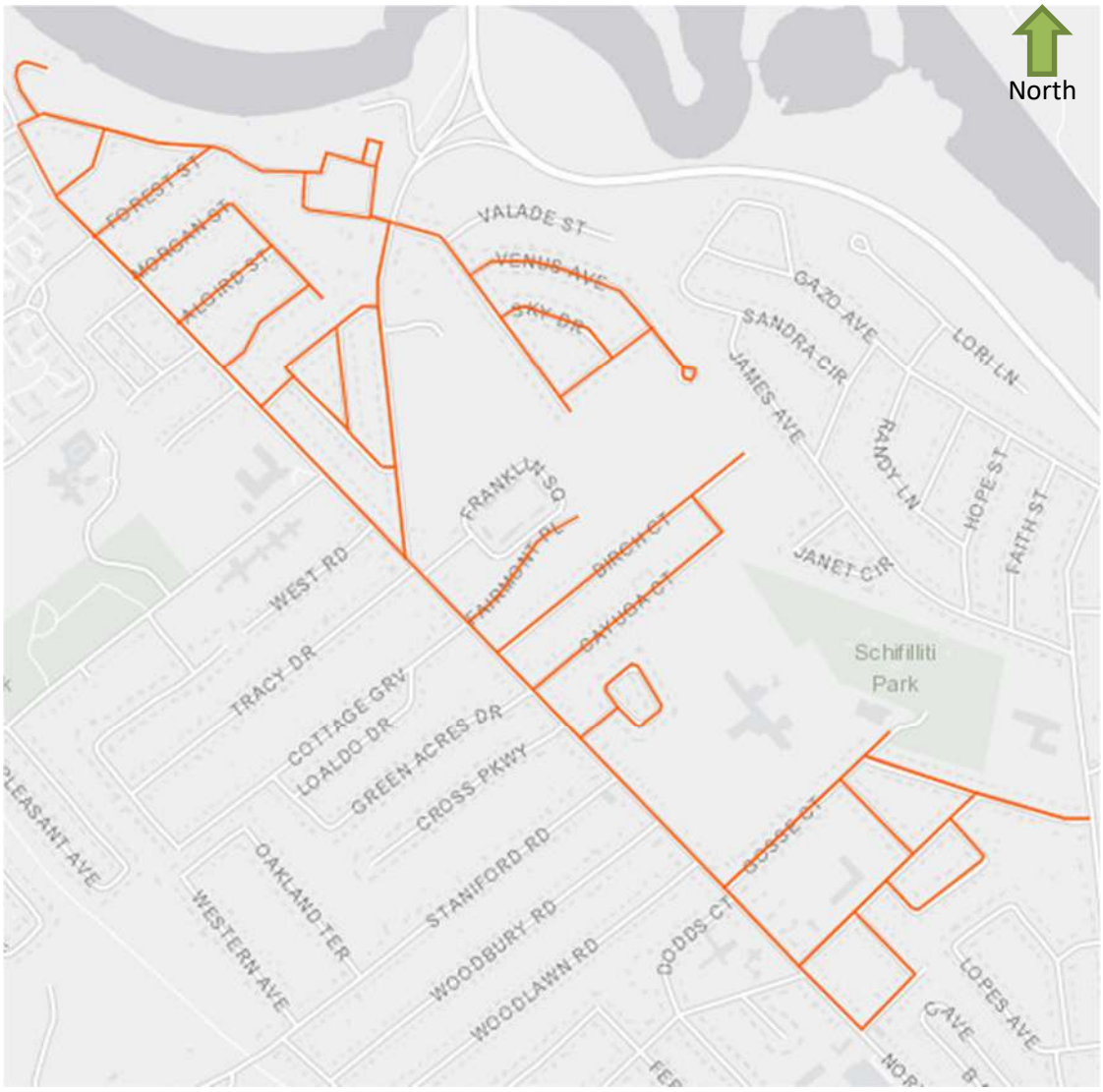
Plow Route #7

GMT Routes
North Ave
Bike Lanes
North Ave



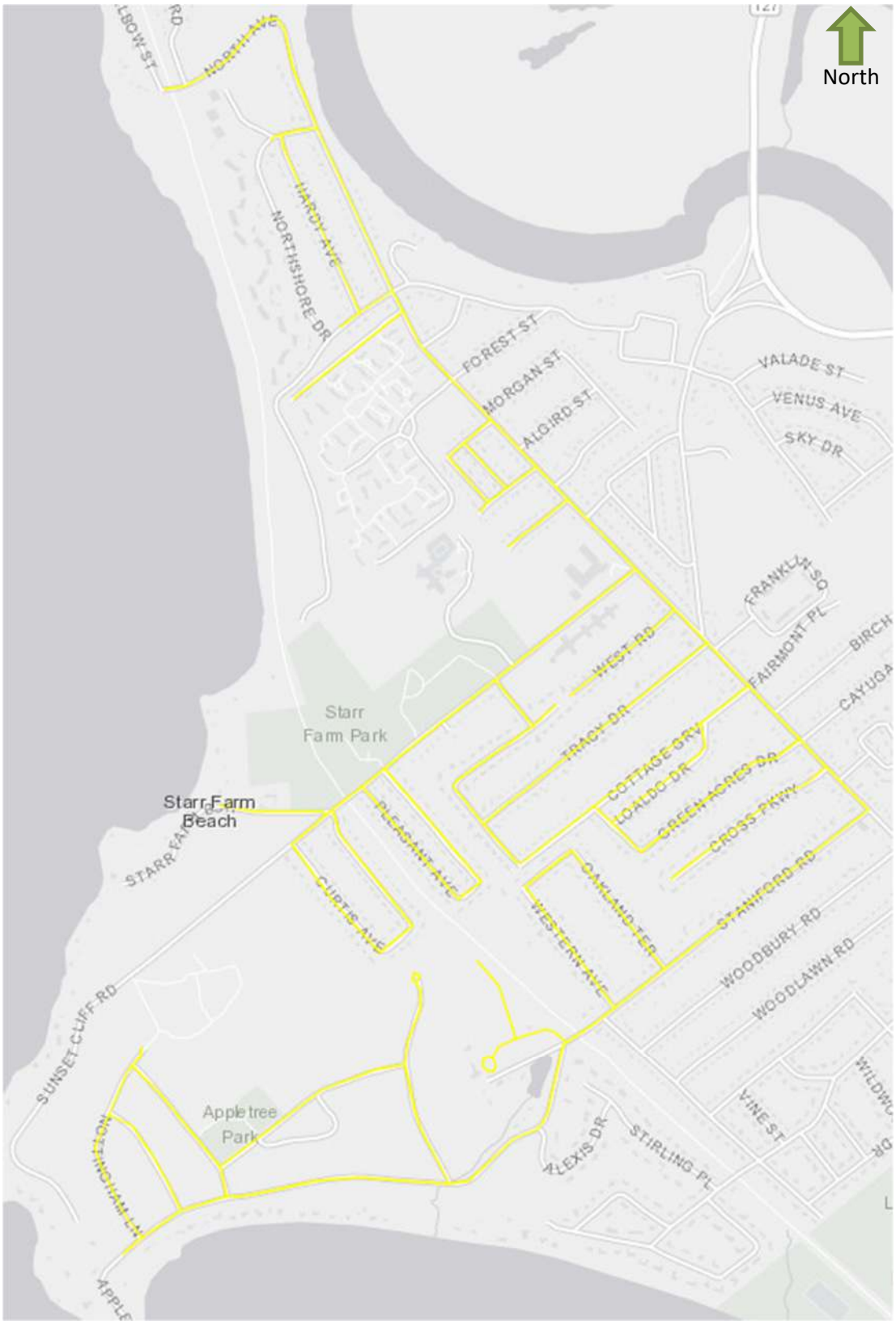
Plow Route #8

GMT Routes
North Ave



Plow Route #9

GMT Routes
North Ave
Bike Lanes
North Ave



BURLINGTON PUBLIC WORKS

SNOW AND ICE CONTROL PLAN

SNOW AND ICE CONTROL PLAN

The purpose of this plan is to define the operational procedures and best management practices (BMP's) for storing and utilizing snow and ice control materials, and for performing winter maintenance activities. It defines the level of service that Burlington Public Works will strive to provide on our 95 miles of streets, 130 miles of sidewalks, and 20.85 combined miles of bike lanes.

Since storms vary dramatically and occur during a variety of traffic conditions, this Snow and Ice Control Plan is intended to be flexible. It is a guide structured to fit average conditions, but able to accommodate the wide variety of conditions that will be encountered by maintenance crews who are working to maintain safe roads and conditions.

STORM WARNING NOTIFICATION

The Department of Public Works Right of Way uses multiple weather services available online, such as National Oceanic and Atmospheric Administration (NOAA) and the Weather Channel. DPW will issue storm related public service announcements via the local media, Facebook, Twitter, and any City website **http://www.burlingtonvt.gov/**

Text messages:
GovDelivery https://public.govdelivery.com/accounts/VTBURLINGTON/subscriber/new

Facebook: https://www.facebook.com/BTVDPW

Twitter: @btvdpw

Phone: 802-658-SNOW

Burlington Public Works has also invested in (4) traffic message boards stationed along key arterial roadways that will warn residents of any winter parking bans.

PERSONNEL SCHEDULING

Our Right of Way crew of (17) full time Street Maintenance Workers and approximately (2) seasonal employees, which may vary due to budgetary constraints, or availability of applicants, maintain the streets and sidewalks. Large storms may require around the clock coverage. This will require help from outside work groups and departments. The Street Maintenance Manager will secure volunteers during the normal workday and create a plan based on the available manpower and weather conditions. The plan will be reviewed by the Assistant Director - Maintenance Division before implementing.

MOBILIZATION

When the decision has been made to react to a storm, the Street Maintenance Manager will mobilize the crew. Since all trucks, tractors and routes are assigned, all the employees need is the call to deploy. If a storm event is predicted after normal business hours, the personnel will be put "on-call" per the union contract and the on-call employees will make themselves available by telephone. The department is aware that employees may have personal needs that may arise and may not be able to be "on call" at all times. If an employee has a personal issue, they may address it with their direct supervisor.

While DPW Street Maintenance is tasked specifically with the staffing for snow and ice control operations, the employees of the Fleet Maintenance group have a responsibility to assist with equipment repairs. Once the decision has been made to respond to a storm event, during normal working hours the street Maintenance Manager will notify the Fleet Manager. The Fleet Manager will then schedule his employees to provide maintenance assistance. After normal working hours, if the foreman in charge determines that the streets and sidewalks need to be plowed he will call the "on-call" maintenance team.

SNOW AND ICE CONTROL MATERIALS

Road salt (NaCl) is the primary snow and ice control material. The salt is normally purchased under the State of Vermont contract. FY20 the contract was awarded to Cargill; the local distributor is Barrett's Trucking in Burlington @ 863-1311. DPW uses approximately 4000tons of road salt per year. The Street Maintenance Manager is responsible for the ordering and inventory of the salt. The entire salt inventory is stored at 645 Pine Street. Liquids like magnesium chloride (MgCl2) and Promelt Magic Minus Zero are being used to reduce the amounts of salt needed to clear the roads. Safety Data Sheets (SDS) are available in a binder in every truck and in the SDS binder located in the Street Maintenance area. As a courtesy, Burlington property owners are permitted to take (1) 5-gallon bucket of salt per winter from the salt shed at 645 Pine St. when it does not interrupt the City's operations.

EQUIPMENT INSPECTION

WEEKLY VEHICLE CHECK SHEET

UNIT#:			UNIT HOURS:		UNIT MILES:			
DATE:			OPERATOR:					
		Monday	Tuesday	Wed	Thursday	Friday	Saturday	Sunday
Registration,ins card,vsi								
Engine oil level								
Coolant level								
Power steering fluid								
Washer fluid								
Brake fluid								
Trans fluid level								
Hyd oil level								
DOT pre trip inspection								

* VISUAL WALK AROUND OF VEHICLE FOR ANY DAMAGE SUCH AS DENTS, DINGS, BROKEN OR CRACKED GLASS

* NOTE ANY DAMAGE ON THIS SHEET AND ALSO REPORT TO MANAGER

*TIRE CONDITION AND AIR PRESSURE

*INSPECT RADIATOR FOR DEBRIS BLOCKING AIR FLOW. SEE EQM IF CLEANING NEEDED

*GREASE ALL APPLICABLE LUBE FITTINGS, DAILY IF REQUIRED.

*TOP OFF FUEL TANK AT END OF SHIFT. CHECK FUEL LEVEL BEFORE SHIFT

*CLEAN INTERIOR OF VEHICLE OF DEBRIS AND CLEAN . WASH EXTERIOR IF NEEDED.

*DRAIN AIR TANKS DAILY AT END OF SHIFT.

RECYCLING TRUCKS, EMPTY PACKER CLEAN OUTS DAILY AT END OF SHIFT

*TANKER TRUCKS, EMPTY AND WASHE DEBRIS BODY, PROP OPEN TO DRY OVERNIGHT

* SWEEPERS CHECK AND CLEAN AIR FILTERS DAILY. REPLACE IF NEEDED

*SWEEPERS CLEAN AND WASH DEBRIS BODY AND PROP OPEN TO DRY

* NOTIFY EQM OF ANY UNSAFE CONDITION AND REMOVE UNIT FROM SERVICE AND TAG OUT OF SERVICE.

All City equipment; to include all plow trucks, loaders, and sidewalk tractors will be operator level inspected before any snow operations. Immediately following a

storm on the next regular business day, all equipment will be cleaned, greased, fluids levels checked, and a proper preventive maintenance check per the manufactures operator manual. All deficiencies will be reported immediately to DPW Fleet Services.

EQUIPMENT CALIBRATION

Every November, all truck spreaders and computerized spreader controls will be calibrated with salt (NaCl) per the manufactures operation manual. After every storm event, each truck will have the mileage and pounds per lane mile recorded. This task will be assigned to a working foreman and one other street maintenance worker.

TRAINING OF PERSONNEL

Training is a key part to our snow plans success. All operators are properly trained before using any equipment utilizing operator manuals, manufacturers trainers, our in house trained employees, and on the job training. All employees will be able to properly operate, and maintain the equipment before actually plowing snow. Before the first snow storm, all operators will drive their route, getting familiar with obstacles such as high manholes, trees, narrow roads, mailboxes, etc. Any reported obstructions will be reported to the Right of Way Inspector for further action. Every truck has a binder with all route maps, bike routes, CCTA emergency routes, and the list of dead end roads.

SNOW ROUTE ASSIGNMENT

All operators will be assigned a route, whether it is in a truck or a sidewalk tractor. Continuity is important in assigning routes and equipment. Operators will learn the best way to battle snow and ice if they are doing the same streets every storm and will know areas that need special attention such as bridges, on and off ramps,

hills, curves, school zones, and bike lanes. The same with the equipment, the operators in the same truck or tractor will know how it handles and what the vehicles limits are.

The sizes of the routes are designed for the City's fleet of trucks and tractors. There are 10 large trucks, 1 small truck for dead ends and narrow streets, and 11 tractors. Of the 10 large trucks, 1 is a spare in case of a break down. With the 11 tractors, 2 are spares. Depending on the accumulation of snow, it could take an operator with a large truck approximately 5-7 hours to plow their route once. An operator on a sidewalk route will take approximately 6-7 hours to plow their route, if they are salting at the same time it will take 8-9 hours to complete once.

LOADING PROCEDURES

The loading of salt in all trucks will be by the oldest available loader in the fleet. The operation will be conducted by qualified City employees only. The trucks will be loaded to their max GVWR and not overloaded. The loader will have operator level preventive maintenance after every storm event and all loading procedures will be supervised by an assigned working foreman.

SALTING AND PLOWING PROCEDURES

Salting Operations

Streets will be salted during light storms where minor accumulations of snow are expected. This requires the use of 6 large trucks that will salt the primary streets with priorities going to the routes coming into and exiting

the City, primary roads leading into neighborhoods, school zones, downtown, intersections, and bike lanes. Not every street is salted unless there is a prediction of ice.

Plowing Operations

Plowing of the streets is the same regardless of the amount of snow predicted. The City owns (10) large plow trucks with (1) being used as a spare in case of break down and (1) small truck for dead ends and narrow streets. We can add plows to (1) front end loader for additional help in major storms.

The (9) large plow trucks are assigned a route and each route starts with its primary street, leading to its secondary main, and then into the neighborhood streets. (Truck route maps appendix B.) The (1) small plow truck is assigned a list of narrow and dead end streets. (Narrow and dead street list appendix B.)

Sidewalk Plowing and salting

There are (9) sidewalk routes and are plowed during the day concurrently with street, and bike lane plowing. Extra attention is given to the downtown, Old North End, areas around schools and school crossing guard locations.

During a night time snow push back or any night time plowing operation, sidewalk plowing usually starts around 3 a.m. so that the sidewalks are open when school begins. This time could vary depending on the size of the storm.

If the storm exceeds 12” of snow and there are snow banks along the sidewalk, we will have to snow blow every sidewalk. This will take considerable time and manpower. This operation could take up to 24 hours or more. Again the priorities are downtown, Old North End, and school zones. We normally have many equipment failures while snow blowing, so having fleet services available is key.

We routinely plow, scrape, and sometimes salt the sidewalks during the day to maintain a safe environment.

Accessibility (Handicapped) Parking Spaces

Burlington has a large amount of handicapped parking spaces that must be cleared of snow. This will take place once the streets and sidewalks have been cleared. After the storm, the department will start clearing the spaces starting from the downtown, working their way to the outskirts of the city. With the limited amount of manpower available it may take many days before all spaces can be cleared of snow. If a resident has a particular handicap parking space that needs immediate attention, please call DPW Customer Service @ 863-9094.

Bike lanes

Burlington currently has 18 miles of bike lanes (curbside, defined by paint only), .85 miles of protected bike lanes, and 2 miles of shared use paths.. They are located on residential, and main arterial roads, and the bike lane

will be plowed to the curb. DPW will dispatch a sidewalk tractor to clean the protected bike lanes of snow and salt. All unprotected bike lanes will be plowed utilizing city plow trucks in the corresponding plow route, and when plowing is complete a sidewalk tractor will clean and salt the bike lane as needed. When accumulated snow reaches levels that impact the City's ability to keep the bike lanes properly cleared, we will post the street for no parking in that area if needed, and perform snow removal operations. (Appendix A)

GMT Bus Routes

Burlington is a major hub for public transportation. Many of the priority routes are also major routes for the GMT public transportation system. The operators are familiar with their routes and understand the importance of the public transportation system. We routinely review the routes with the DPW Drivers. GMT passenger facilities (bus stops and shelters) are maintained by GMT and not the City of Burlington.

Performance Capabilities

As stated earlier, Burlington has 95 miles of roads, 130 miles of sidewalks, and 20.85 combined miles of bike lanes. During the average year we receive 80 inches of snow. Of course this is only an average and what really matters is when it falls, and how many snow events we have to deal with. Generally speaking, the length of the storm rather than the amount of snow determines how we deal with it. Our plans are built around these capabilities.

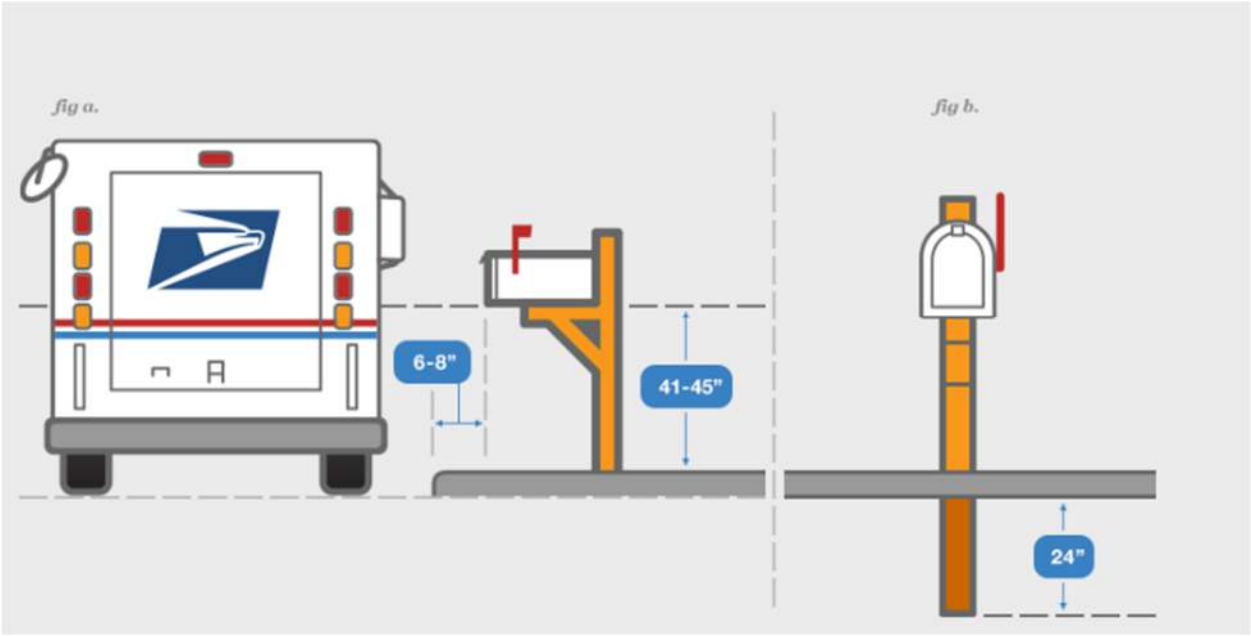
Street plowing routes	**10**
Hours to plow every street once	**5 to 7**
Hours to salt all streets @ 500 lbs. mile	**4**
Sidewalk plow routes	**9**
Hours to plow every sidewalk once	**8**
Hours to snow blow every sidewalk once (depending on depth and weight of snow)	**24 - 30**
Hours to salt every sidewalk	**12**

SNOW STORAGE

Snow removed from the City streets, greenbelts, parking lots, and parking meter spaces will be stored at 702 Lake Street in Burlington. This area is for the storage of City removed snow and not for any private contractor, unless contracted by a City department. This site is a former oil tank farm near the waterfront and has been an ideal storage area as the berm keeps contaminants from reaching the lake. This storage area will be cleaned of any trash and debris every spring.

SNOW OPERATION DAMAGES

1. **Mailboxes and other structures within the Right-of-Way**
   Occasionally mailboxes and other property may be damaged by snow plowing operations due to poor visibility, the mailbox being buried in a snow bank or the weight /volume of snow being plowed. The damage is not deliberate and in most cases unavoidable. Burlington Public Works is not responsible for damage and does not repair, replace or re-erect mailboxes that are located within the right-of-way unless physically struck by a DPW plow truck. In these cases, the property owner shall submit a claim to the City for reimbursement. All mailboxes must be installed to the USPS standards.



Many residents have basketball nets in the right of way, these not only interfere with plowing to the curb, but during inclement weather the plow operator may not see the basketball net and damage the basketball net and City equipment. The City will not be responsible for any damages to basketball nets within the right of way. If any basketball nets are found in the right of way, the DPW Excavation Inspector will be notified and will have it removed.

While removing the snow from the sidewalks we find many fences, borders and decorative landscaping close to the sidewalk. This presents quite a challenge for the department to operate the tractors safely. We ask that all landscaping be built at least 12” from the sidewalk in order to minimize damage to private and city property. Burlington Public Works will not be responsible for any damages to landscaping or fences that are within 12” of the sidewalk. All reported damage will be inspected by our Right of Way Inspector, and if the inspection finds the City responsible, an insurance claim will be made with our agent.

2. **Plantings in the right of way**

   Snow removal from the streets and sidewalks are a challenging task and there are many obstacles that the operators have to maneuver around, and the major items being trees and shrubs. While great care is taken not to damage the tree or shrubbery, the property owner must maintain the vegetation so it does not impede the right of way. While the City equipment may damage the vegetation, the trees and shrubbery may also damage the equipment. **The department will not be responsible for any damage to any plantings encroaching on the right of way.**

3. **Accident Protocol**

   Plowing snow in a large truck with a wing plow takes a special skill. Public Works employees are highly skilled and properly trained before they operate any commercial vehicle. Vehicle accidents will happen, and when they do, the following must happen:

   a. Stop vehicle in a safe area.
   b. Check all people involved for injuries. Call 911 if needed.
   c. The DPW employee will call their supervisor either by cell phone or by 2-way radio and inform him of the situation.
   d. Supervisor will call the Burlington Police Department. A police report will be taken, the DPW employee will receive a copy of the report, if the report is not available, you are required to obtain the incident number.
   e. If the vehicle is able to be driven, it must report to DPW Fleet Services for an evaluation before continuing on with snow plow operations.
   f. All accidents must be reported to the Assistant Director – Maintenance Division and the insurance company. The Assistant Director will report all the proper information on the Travelers Insurance Portal.

PARKING LIMITATIONS

Burlington does not have a seasonal parking ban like most towns in our region. It is the responsibility of the Public Works Director to declare a winter parking ban. Parking bans are declared on a case by case basis. Criteria for a parking ban include length of storm, amount of snow during the storm and how much snow is already on the streets and has not been plowed to the curb. By City ordinance **20-56** the ban must be declared by 3p.m. in order to be in effect by 10 p.m. that evening until 8 a.m. the following morning, except in Zone F (downtown zone) where the ban is in effect from midnight until 6 a.m. In other cases, where snow needs to be removed from the City right of way, the City will do so by posting the street for no parking either with signage or by bagging meters. During this time there will be no parking in accordance to the date and times stated on the sign, or meter bag.

Parking Ban Notification

Parking bans are warned in the following manner:

1. Using the City parking ban light system

2. Sending a press release to local radio and television stations, and print outlets

3. Posting alerts on social media, including Facebook & Twitter

4. Sending out text messages and e-mails via GovDelivery. BPD currently also uses the VT Alert system to send text, auto-call and email notifications.

5. An up to date recording on 658-SNOW

Once the Director calls a ban, the street maintenance foreman will notify the parking enforcement supervisor, who is responsible for the enforcement of the winter parking ban. Second, he will activate up to 90 plus flashing parking ban lights. These lights are located at the entrances of the City, important intersections, and throughout the City's neighborhoods. They are a visual warning to the residents that a parking ban is in effect.

The DPW Foreman in charge of the plowing crew will meet with the parking enforcement crew at 9:30 p.m. at the police department to review and cover any last details.

Vehicles must be off of the streets during these hours if a ban is declared or they will be towed. While parking bans make it easier to plow snow, it is difficult for some people to find alternative parking. DPW does offer free parking in the City owned parking garages as an option. Parking is available in the Marketplace and the Cherry St Parking Garages on the lower decks only. Vehicles must be removed by 7:30 am or they will be charged the full day's rate**.** Additional information can be found at http://www.burlingtonvt.gov/.

While a winter parking ban is not called for every storm, if residents have access to off street parking, we urge them to use it. Additional information can be found at http://www.burlingtonvt.gov/dpw/parking/winter-parking

The City currently has 3 designated tow areas.

Lake St. Extension: Vehicles towed from the Old North End and west of Willard St. from Pearl St. to Maple St.

Gosse Court, North Ave to the end: Vehicles towed from the New North End.

Oakledge Park parking lot: Vehicles towed from the south end and west of Willard St. from Maple St. south.

When the lots are full, vehicles found on the street could also be towed to the nearest street the Public Works Department designates as a drop-off point. This would be a street that has been cleared of snow. For car owners to find their vehicle, please call (802) 540-2380.

AFTER STORM RESPONSIBILITIES

It is expected that 12 hours after a snow storm that every City street will have been plowed. The Street Maintenance Foreman will inspect every City street to ensure that the streets are cleared and passable. The department will continue to patrol the streets and maintain them to be safe and passible. It is possible that the downtown and some narrow streets may have to have the snow removed. If this service is needed, it will happen approximately 2-3 days after the storm using City owned equipment. Snow removal downtown usually happens in the early morning hours. For the narrow streets, dead end streets, and bike lanes we will post the streets for "no parking" and remove the snow during the day.

SNOW RELATED CITY ORDINANCES

27-84 Throwing snow into street prohibited.

No person shall throw or put, or cause to be thrown or put, snow or ice in the part of the street known as the travel portion nor on a sidewalk of a street.

(Rev. Ords. 1962, § 4303; 1969 Cum. Supp., § 4303)

27-2 Enclosing highway; erecting fence or encroachment; nuisance.

No person shall enclose a part of the highway or street, or erect a fence, building or other encroachment, or make obstructions, or create a nuisance on a highway or street, or continue such enclosure, fence, building, encroachment or nuisance on a highway or street.

(Rev. Ords. 1962, § 4209)

Appendix A Bike Lanes

Bike Lanes / Buffered Bike Lanes	Start / End	Bike Lane/Facility Width
Austin Dr north/east	Queen City Park Rd to Red Rocks	5'
Austin Dr south/west	Queen City Park Rd to Red Rocks	5'
Colchester Ave westbound	Mill St to Prospect St	5'/6'
Colchester Ave eastbound	Prospect St to East Ave	
Colchester Ave eastbound	Greenmount Cemetery to Mill St	5'/6'
College St eastbound	Union St to S. Prospect St	4'
East Ave southbound	Colchester Ave to Carrigan Dr	4'
Ethan Allen Parkway eastbound	North Ave to Farrington Pkwy	6.5' with buffer
Flynn Ave westbound	Pine St to Briggs St	6'
Flynn Ave eastbound	Briggs St to Shelburne St	5'/6'
Riverside Ave eastbound	N. Prospect St to Salmon Hole	
Riverside Ave westbound	Salmon Hole to N. Prospect St	
Main St eastbound	University Heights to Spear St	4'
Main St westbound	Spear St to University Heights	4'
Winooski Ave southbound	Decatur St to Pearl St	7'
Winooski Ave southbound	Maple St to Howard St	
Winooski Ave northbound	Howard St to Maple St	
North Ave northbound	Sherman St to Plattsburg Ave	6'
North Ave southbound	Plattsburg Ave to Berry St	
Park St southbound	North St to Sherman St	5'
Park St northbound	Pearl St to Sherman St	5'
North Champlain St northbound	Pearl St to Manhattan Dr	5'
Pine St southbound	Main St to Home Ave	5'

Pine St northbound	Home Ave to Locust St	5'
Willard St northbound	Cliff St to Maple St	
Willard St southbound	North St to Maple St	5'
Pearl St eastbound	Battery St to Prospect St	5'
Pearl St westbound	Winooski Ave to Battery St	5'
Mansfield Ave northbound	Colchester Ave to North St	
Sherman St eastbound	Park St to N Champlain St	5'

QB Separated Bike Lanes		
Union St northbound	Main St to Winooski Ave	6'
Elmwood Ave northbound & southbound	Grant St to Peru St	5'
North Champlain 2-way on east side	Sherman St to Peru St	8'
North Ave northbound	south of Rt 127 intersection	5'
Sherman St	Park St to North Ave	6'
Neighborhood Greenways		
ONE Greenway	Mansfield Ave to Sherman St	N/A
Advisory Lanes		
Flynn Ave westbound	Lake Forest Dr to Oakledge Park	5'
Flynn Ave eastbound	Oakledge Park to Lake Forest Dr	5'
Shared Lanes		
Colchester Ave both directions		N/A
Flynn Ave westbound	Shelburne Rd to Pine St	N/A
Pine St northbound	Locust St to Maple St(?)	N/A
Mansfield Ave southbound	North St to Colchester Ave	N/A
Winooski Ave northbound	Decatur St to Riverside Ave	N/A
Winooski Ave southbound	Riversie Ave to Decatur St	N/A
College St westbound	Prospect St to Union St	N/A
Pearl St westbound	Prospect St to S Winooski Ave	N/A
Shared Use Paths		
Riverside Ave	Winooski Ave to Mill St	8'
Colchester Ave	Mansfield Ave to East Ave	8'
Main St		12'
Parkway		9'

Appendix B – Narrow and Dead End Street List

DEAD END AND NARROW STREETS

MAIN ST AND SOUTH END	**CROSS ROAD AND SPECIAL DIRECTIONS**
ADAMS CT	SHELBURNE RD, **AT LEFT TURN, CLEAN RIGHT SIDE DRIVEWAY ENTRANCE**
LUDWIG CT	HOOVER ST, **BACKDRAG AND PLOW ACROSS HOOVER ST**
REDSTONE TERR	HOOVER ST
ALFRED ST	SHELBURNE RD
PEROTTA PL	HOOVER ST
GOVE CT	SHELBURNE RD
GOLDEN PL	HOWARD ST
SPRUCE CT	SPRUCE ST
ELM TERR	S. WINOOSKI AVE
BROWNS CT	KING ST
BEECH ST	WILLARD AND SOUTH UNION
KINGSLAND TERR	SOUTH UNION
UNIVERSITY TERR	MAIN ST, **BACKDRAG AND PLOW OUT**
PINE PLACE	PINE ST, **NO SIDEWALK, SALT AND CLEAN WELL**
LEDGEMERE ST	MARIAN ST
CATHERINE ST	LOCUST AND ST. PAUL

MAIN ST TO MANHATTEN DR

THIBAULT PKWY	COLCHESTER AVE
NASH PLACE	COLCHESTER AVE
LATHAM COURT	COLCHESTER AVE
CALARCO CT	COLCHESTER AVE
COLCHESTER CT	COLCHESTER AVE
CHASE LANE	CHASE ST
RUMSEY LANE	CHASE ST
CHASE ST	BARRETT ST, **BACK DRAG END OF ST**.
VERMONT PARK	HILLSIDE TERR, RIVERSIDE AVE
HYDE ST	ARCHIBALD ST
GERMAIN ST	ARCHIBALD ST
CHARLES ST	NORTH WILLARD
RUSSELL ST	NORTH WILLARD

CONVERSE COURT	HICKOK PL
LAFAYETTE PL	PEARL ST
ORCHARD TERR	BUELL ST
CLOAREC CT	INTRVALE AVE
ALLEN ST	ELMWOOD AVE
MYTRLE ST	PARK ST
POPLAR ST	NORTH CHAMPLAIN ST
CROWLEY ST	NORTH AVE
SUNSET CT	NORTH AVE
VOLTZ ST	MANHATTEN DR

OVER →

NEW NORTH END	**CROSS ROADS AND SPECIAL INSTRUCTIONS**
POIRIER PL	NORTH AVE, **BACK DRAG END OF STREET AND PLOW OUT**
PLATTSBURG AVE EXT (GRIT PIT RD)	PLATTSBURG AVE, **PLOW PAST THE LAST HOUSE**
RIVERVIEW DR (CAMP DAISY RD)	NOTHVIEW DR
NORTH COVE ROADS (2)	NORTH AVE EXTENSION, **RIGHT BRANCH OF ROAD NEEDS TO PLOWED OUT**
APPLETREE PT ROAD	**DIRT ROAD, PLOW TO THE END**
SUNSET CLIFF RD	**DIRT ROAD, PLOW TO END**
LORI LANE	**ONLY PLOW ROTARY ON LEFT SIDE**
WEST ST	NORTH AVE

ALL STREETS ON THIS LIST WILL BE INSPECTED BY THE STREET MAINTENCE FORMAN AFTER THE STORM.

Plow Route #1

Areas to pay close attention to

Ledge Rd

Fern Hill (N Prospect)

Maple St

Cliff St

GMT Routes

Maple St

Cliff St

Prospect St

Bike Lanes

N/S Willard St

Plow Route #2

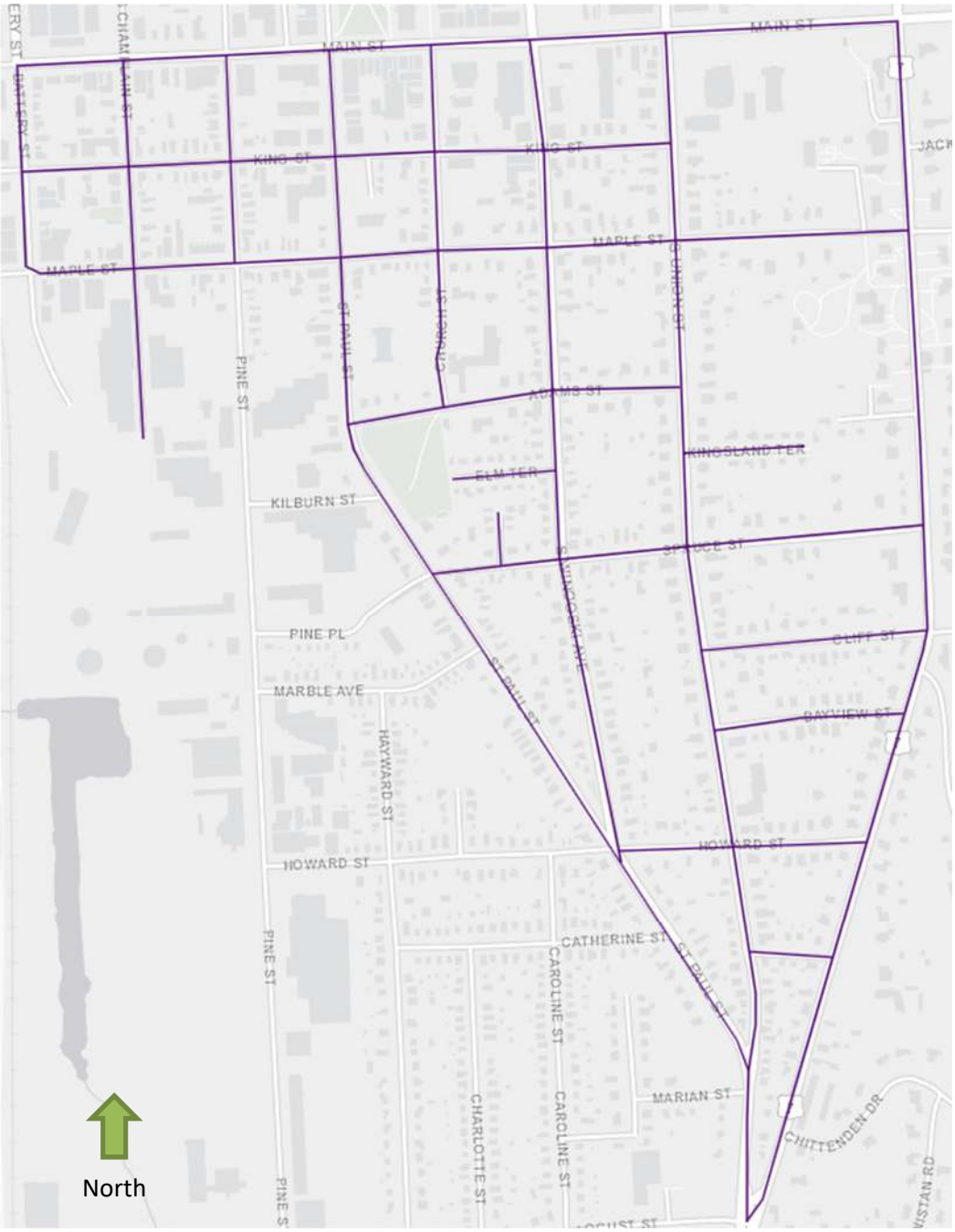
GMT Routes
Cherry St
Pearl St
Main St
North St
Colchester Ave
Battery St
Elmwood Ave
Grant St
N Winooski Ave
Bike Lanes
S Winooski Ave
N Union St
N Winooski Ave
N Willard St
Mansfield Ave
Pearl St
Colchester Ave
East Ave
College St

Plow Route #3

GMT Routes
Pine St
Shelburne St
Industrial Pkwy
Howard St
Bike Lanes
Pine St Main – Home
Flynn Ave
Austin Dr

Plow Route #4

GMT Routes
Main St
Maple St
Cliff St
Kilburn St
S Union St
St Paul St
Howard St
Bike Lanes
S Winooski Ave
S Union St
S Willard St

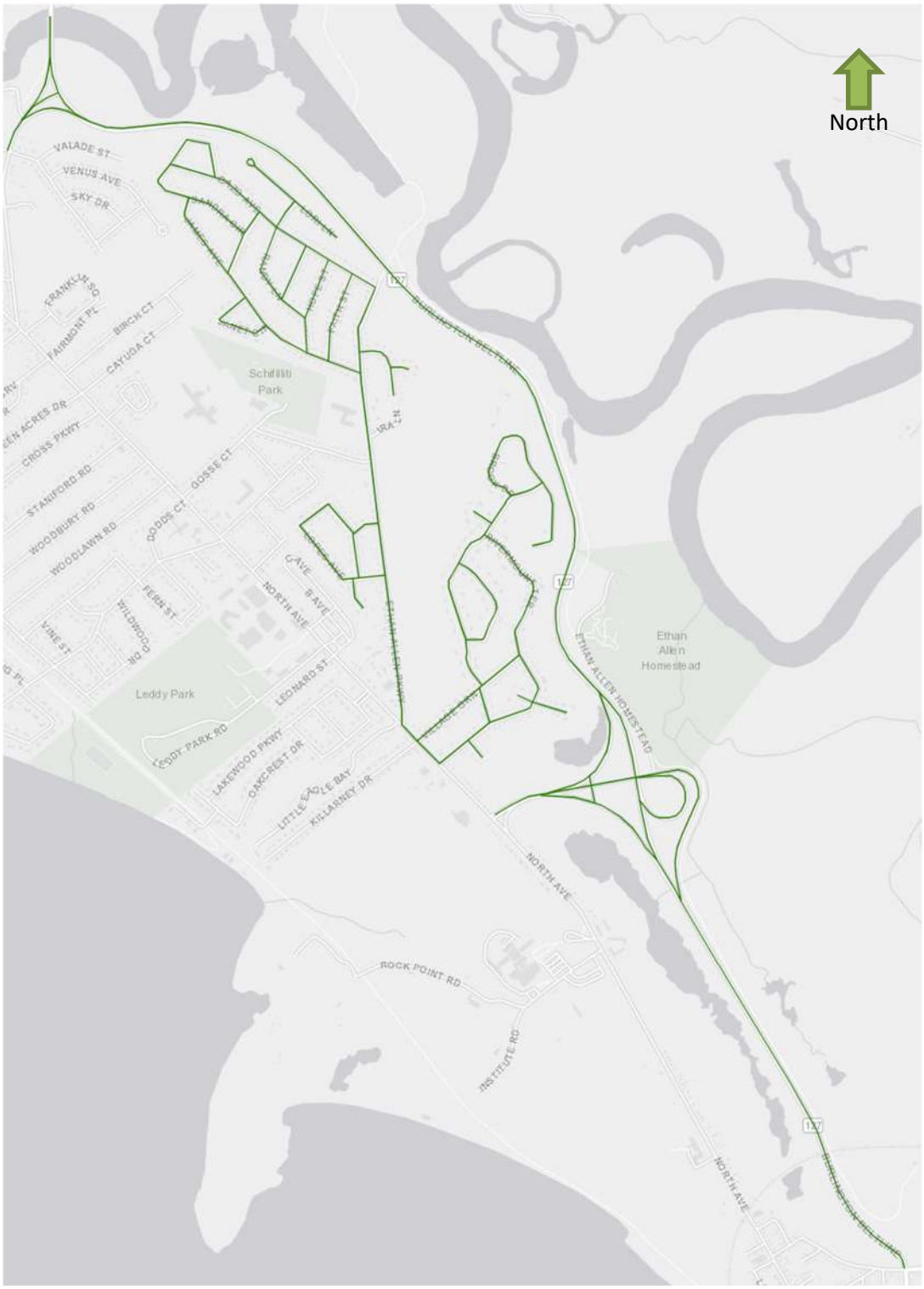


Plow Route #5

GMT Routes
North Ave
Riverside Ave
Colchester Ave
Bike Lanes
North Willard St
Colchester Ave
Riverside Ave

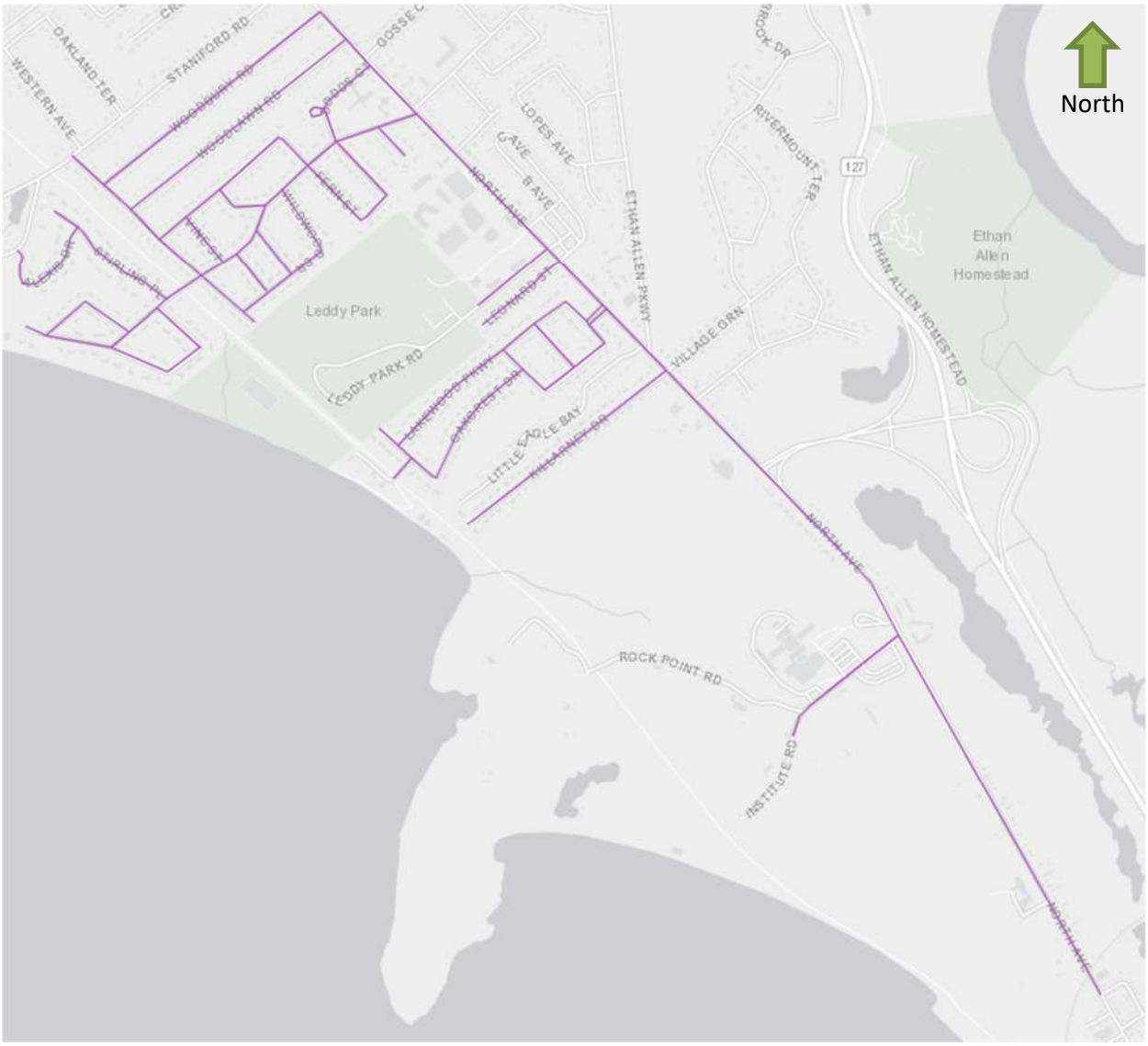
Plow Route #6

GMT Routes
North Ave
Bike Lanes
North Ave



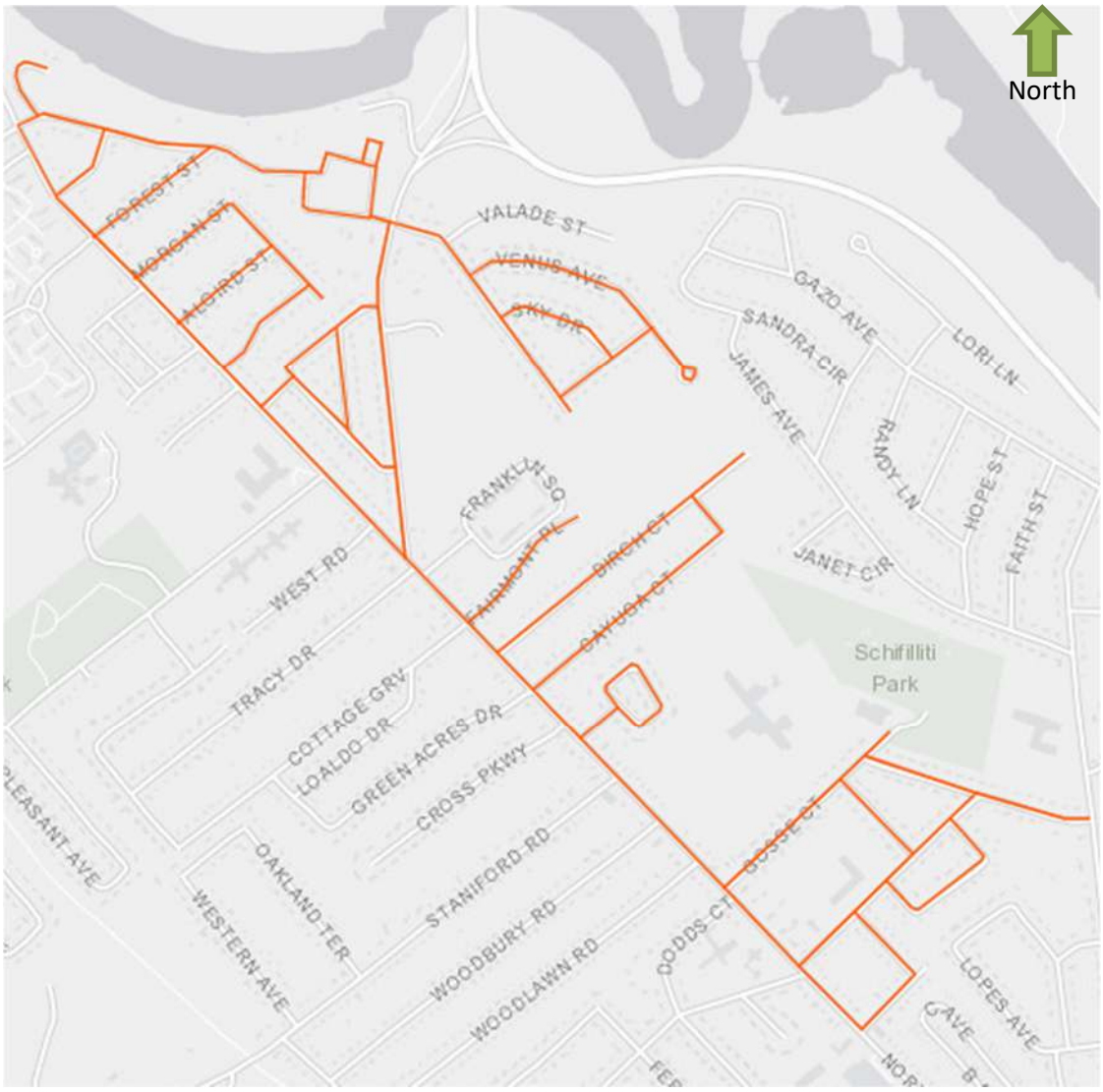
Plow Route #7

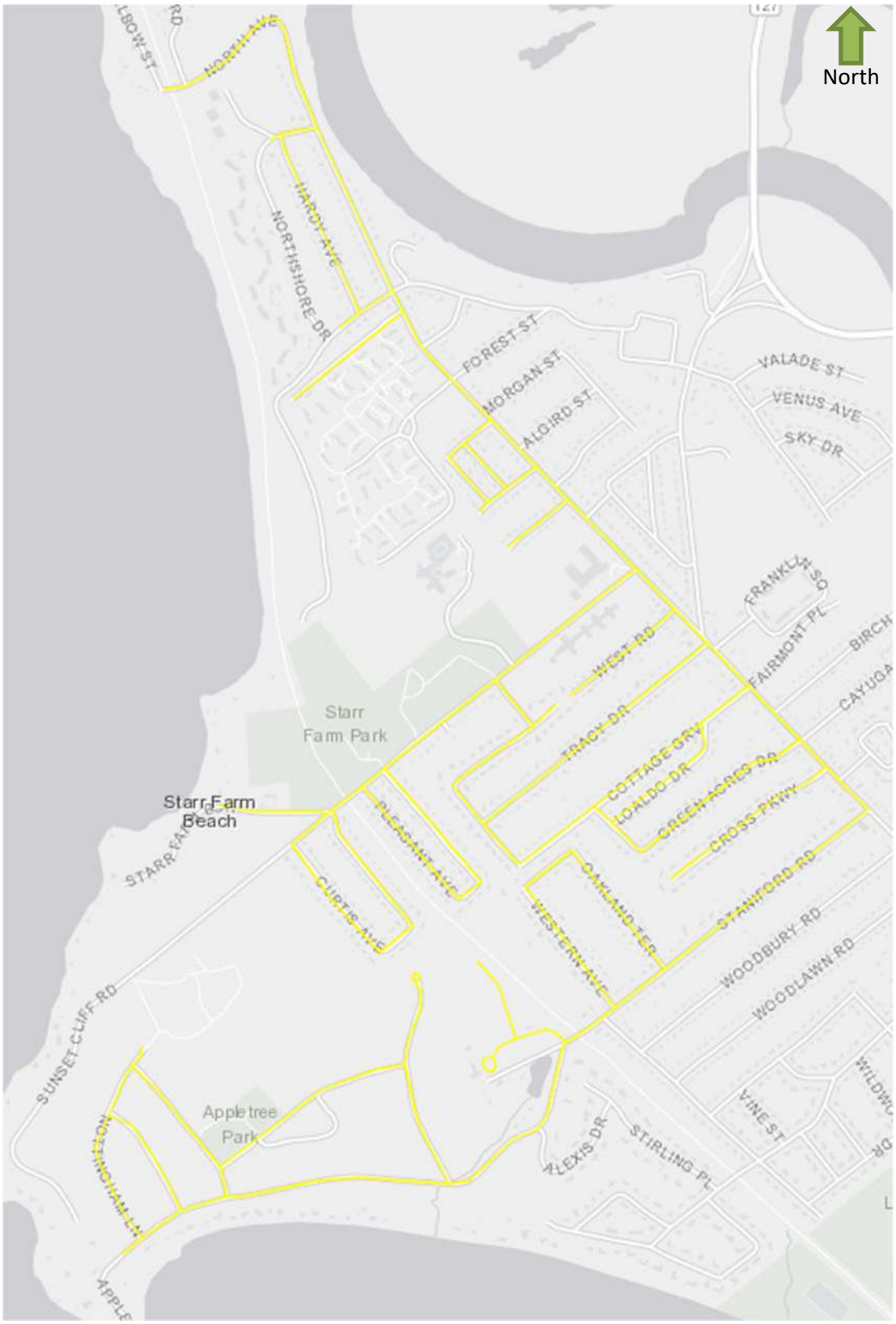
GMT Routes
North Ave
Bike Lanes
North Ave



Plow Route #8

GMT Routes
North Ave



Plow Route #9

GMT Routes
North Ave
Bike Lanes
North Ave