CITY OF RICHMOND
DEPARTMENT OF PUBLIC WORKS
WINTER MAINTENANCE PLAN 2026-2027







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November 12, 2026

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EXECUTIVE SUMMARY

Richmond's Department of Public Works is a key partner in shaping a thriving community that is safe, attractive, and accessible. As strategic business units of Public Works, the Operations & Engineering Divisions mission are to jointly maintain a sound transportation network for the City of Richmond. All of our efforts lend themselves to enhance the safety, accessibility, and mobility of people, goods, and services through the provision of a safe and accessible transportation infrastructure for the flow of traffic which allows people, goods, and services to move safely and efficiently. An inherent responsibility of these respective divisions is winter maintenance and the City's **first** response to natural events and emergencies involving snow and ice.

During the winter weather season, Public Works' staff ramps up to a high level of readiness. Severe winter storms can immobilize a region and cripple a city; stranding commuters, stopping the flow of commerce, and disrupting emergency and medical services. Accumulations of snow and ice can damage and even collapse buildings and knock down trees and power lines. The cost of snow removal, repairing damages and loss of business can have significant economic impact on the region and the City.

The key to an effective response to winter storms is in one word, **Preparedness**. Accordingly, the Department maintains a working plan to direct winter Operation and maintenance.

The revised Plan specifically addresses the following information:

- Level of response to be provided during the forthcoming winter
- Order in which the response will be provided
- Resources required to provide the response based upon forecasted usage

This executive summary and the introduction summarize the information to be presented annually to the Mayor. Essentially, the Winter Maintenance Plan can be summarized by four key elements:

- Off-season preparation
- Weather forecast monitoring
- Winter storm response procedures
- Communication procedures

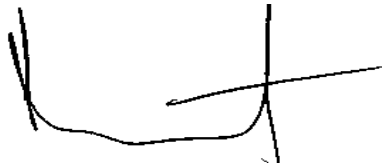
Richmond has been generally effective in its efforts to deal with natural events and emergencies including winter storms. This year's Plan enables City forces to deal effectively with most of our predictable situations. However, responding to winter weather is everyone's responsibility and we have expanded cooperative efforts City wide. Public and private property owners and occupants are also key partners in this effort; each playing important roles in the overall response. City Code Sec. 24-34 places responsibility on property owners and occupants for the timely removal of snow from paved sidewalks.

Winter storms that occur while commuters are travelling throughout the City can cause disruption and delays. Some storms, because of their timing and severity, may exceed the City's capabilities to meet the expectations of citizens. In these cases, execution of the plan and response will be executed to the fullest but may sometimes only minimize the inevitable disruption.

This year's plan incorporates anti-icing in key areas to enhance the department's responsiveness by providing advance treatment to major thoroughfares and hilly areas. This approach not only reduces the overall cost associated with snow and ice fighting capabilities, most importantly it acts as a deterrent to the 'icing over' of roadways thereby retarding the likelihood of roadways freezing in temperatures conducive to such conditions. And this procedure gives the city's forces the time to provide adequate treatment to these roadways to maintain safe travel conditions. However, it must be emphasized that outcomes depend on both – the event and the response. Clearly, certain weather events are beyond anyone's control.

The ongoing challenge is to maintain a constant state of readiness and to continually improve the City's ability to respond to natural events and emergencies such as snow and ice storms. To "Build the Best Richmond," the City must maintain vigil to effectively restore safe passage on all bridges, culverts, overpasses, posted emergency, priority 1, 2 and residential routes as efficiently as resources and winter weather conditions allow.

At Your Service,



Bobby Vincent, Jr.
Director of Public Works

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INTRODUCTION

Winter Maintenance Goals

Planning begins with choosing goals and then deciding on the most effective and efficient manner in which to achieve them. The goals of the Winter Maintenance Plan are:

- To maintain a network of key, pre-selected routes that provide the best possible access for emergency vehicles (i.e., police, fire, EMS) to most areas of the city during and immediately following a winter storm event
- To maintain street conditions in support of Schools efforts to re-open within 24 hours after the cessation of snowfall
- To make all city streets accessible as quickly as possible

Obviously, changing temperature and moisture conditions, events beyond anyone's control, greatly influence the City's ability to achieve these goals.

Specific Objectives for Winter Maintenance

The plan includes the following specific objectives:

- Anti-ice, salt, sand or plow pre-selected snow routes to maintain safe access by motorists, emergency vehicles and transit
- Prioritize operational activities as needed to respond effectively to a wide variety of moisture and temperature conditions
- Take prescribed special measures in response to storms threatening travel during peak commute hours
- Coordinate winter storm response with the City's Disaster Preparedness and Response Plan
- Assist emergency service providers to the degree practicable that allows them to carry out critical services
- Include Richmond schools, hospitals and city authorities in the decision-making and communications processes
- Standardize a source of weather forecasting to assure the best assessment of real time weather conditions to obtain the most reliable weather predictions possible
- Provide information, before, during and immediately after a storm to advise and inform the public to promote better emergency preparation and travel decisions

Council Resolution No. 2004-R143-154

Council formally requested a citywide plan be prepared and submitted for their consideration and adoption including service levels and budget requirements. The request also provided for the establishment of a Special Fund recommended by the Department to earmark funds to pay the costs of the response. Table 1 below lists the budget and actual cost history and the recommended annual budget.

Americans with Disabilities Act (ADA)

To improve downtown pedestrian accessibility and better comply with the Americans with Disability Act (ADA), the Department will deploy a task force to clean crosswalks in certain high pedestrian corridors in the downtown area.

Budget

A summary of the Department's budgeted and actual expenditures for the past eight years and request for the next budget (2023-2024) is included in the table below:

Fiscal Year Ending June 30	Budget (Adopted unless shown otherwise)	Actual Cost
2025	$1,000,000	$3,408,399
2024	$1,148,923	$772,458.38
2023	$1,148,923	$431,893.99
2022	$1,000,000	$1,669,393.80
2021	$1,000,000	$619,993.14
2020	$1,000,000	$412,917.15
2019	$1,000,000	$1,440,250.89
2018	$1,000,000	$1,919,657

Table 1

Level of Response

Snow clearing and ice control on public roads, streets and bridges is the highest priority for the Department. Key segments of these roads and streets comprise 47 designated snow routes, each selected for their criticality. In addition, emphasis is given to critical hospital, school, and transit facility access. To service these key routes and critical accesses requires the deployment of an in-house workforce of over 200 employees and 50 truck units with plows and spreaders working 24 hours or around the clock. Other agencies provide support in areas on or adjacent to their plants and facilities within the City.

During moderately severe winter storms, contract resources will be needed. National disaster recovery firms and local construction firms are under contract to supplement city forces, providing additional capacity as needed. Snow storms encountered in past seasons have demonstrated that an extreme winter storm season can be equivalent to a natural disaster.

Response Priorities

As mentioned above, snow removal and ice control on public roads, streets and bridges is the highest priority for the Department. This priority is further subdivided as follows:

First Priority – posted emergency routes, major thoroughfares (arterials), major bridges, and critical accesses

Second Priority – minor thoroughfares (collectors) and designated transit routes

Third Priority - residential and other local streets

Key Plan Elements

The Winter Maintenance Plan can be summarized by four key elements:

1. Preparation

- Check, calibrate and maintain equipment (maintenance is especially critical during the off-season)
- Review criteria for the selection of snow routes to ensure City priorities are met
- Training to improve employee performance

2. Weather Forecast Monitoring

- Monitor weather reports
- Consult with weather experts

3. Communications and Coordination

- Update the Winter Maintenance Plan annually.
- Formalize communication and reporting procedures throughout Public Works and other city departments.
- Coordinate communication with outside agencies (VDOT, VMS, Richmond Public Schools, VCU, RRHA, etc.).

4. Operational Procedures and Resources

- Mobilize and deploy resources according to Plan
- Work the planned response
- Close down the response as conditions warrant

Performance Targets

Performance targets for snow routes and ancillary areas are defined as follows:

1. Primary Snow Routes – initial anti-icing treatment completed up to 24 hours prior to the forecast event for those routes identified, and within 4 hours for all others with sustained attention; as close to bare pavement as possible on all travel lanes; chains unnecessary and bare pavement on travel lanes

as soon as possible after cessation of the snowfall.

2. Secondary Snow Routes - initial treatment completed within 4 hours with chemicals to serve as bond breaker and attention following first priority snow routes; bare pavement within 24 hours after cessation of snowfall.

3. Residential Streets - treatment **only** after first and second priority streets are completed; bare pavement not intended; treat with chemicals or abrasives or plow as required to improve traction within 24 to 72 hours after cessation of snowfall. Some local streets of more significance to the transportation system are singled out for more attention. These are called first priority local streets.

Individual requests for attention prior to coverage of all residential streets will not be processed except in cases of extreme emergency.

4. Ancillary Areas - The performance targets for other elements of the system are as follows:

Parking, Peak Hour Lanes and Bus Stops - When snow in excess of 6 inches is expected to be followed by cold weather or other conditions are expected to prevent quick melt of plowed snow; snow windrows from designated areas will be removed, beginning after travel lanes are substantially cleared.

Crosswalks and Drainage Inlets - clearance of snow and treatment of ice within 24 hours after cessation of snowfall in designated high priority pedestrian corridors in downtown.

Sidewalks and ADA Ramps - clearance of snow within 6 hours after cessation of snow or ice or 11:00 the following morning after cessation, whichever comes later. (City Code Sec. 24-34) Public Works forces will inspect sidewalks and report violations to the property owner.

Parking Lots, Driveways and Entrances - City Code Sec. 24-34 also requires that snow and ice from adjoining sidewalks, driveways, entrances, lots, etc., be removed in such manner as not to obstruct the passage of water in street gutters. Bus drivers will report violations through their communication network, which will relay this to Emergency Communications. Public Works supervisors or operators will also report violations through Emergency Communications. If necessary, violations will be reported to Code Enforcement and Police.

Service Area and Exclusions

The Department of Public Works responsibilities for snow clearing and ice control are necessarily limited to critical facilities and infrastructure:

Facilities and Infrastructure Included in Plan

- Public roads, streets and bridges under control of the Department of Public Works
- City buildings and grounds under control of the Department of Public Works

Facilities and Infrastructure Excluded from Plan

- Sidewalks and ADA ramps along frontages of public or private property not under control of Public Works
- Parking lots not under control of Public Works
- School parking lots, sidewalks and driveways
- Cemetery and park roads and parking lots - Parks, Recreation, and Community Facilities
- Public highways and bridges not under control of Public Works (examples include the Interstates I-95/I-64 and Downtown Expressway
- Private Driveways, Roads, Streets and Bridges

I. GENERAL INFORMATION

Using This Plan

The Winter Maintenance Plan was written to provide the reader information necessary to manage routine winter maintenance tasks and winter storm emergencies. The material in the manual follows a chronological sequence. That is, it begins with the procedural steps required to prepare for the winter season and details each subsequent step, including, but not limited to, preparation for winter storms, monitoring forecasted weather, communication, and coordination and deploying an effective response.

The Plan is divided into five sections and an Appendix. This section features general information. The next four sections describe the key elements. The Appendix of the plan contains information that may change from year to year. This includes employee and equipment lists, policies, and procedures. Generally, only the third section needs to be updated each year. The fourth part lists the route summaries, some of which may occasionally, change.

Among other things, this plan explains in detail the following:

- Department's plan for deploying a winter storm response
- Relationship with other agencies
- Off-season equipment preparation and winter storm response planning
- How to obtain weather reports
- Winter storm levels of response
- Snow routes and priorities
- Contractor support
- Cleanup and haul-out operation
- When and how to implement a winter storm response
- Records to keep during a snowstorm
- How to close down a winter storm response
- Winter Maintenance personnel, backups, and contact information
- Winter Maintenance equipment and maintenance
- After-winter season tasks
- Employee responsibilities at each step of the response
- How and where to obtain supplies

All sections found in the Table of Contents are named by each function and are in the proper sequence. The titles of each section describe each step in the response activity. Each step in sequence is listed with a short description of the task or step to aid the reader in determining exactly which step or section is needed. The reader should be able to understand the full activity, its goals, how the activity works, and the steps of the activity in the proper order, which is responsible for each step and how to carry out each step.

Winter Emergency Authorities

The authority for winter emergencies is:

- Mayor and Chief Administrative Officer
- Director of Public Works (Primary department responsible for winter storm response)
- Public Works Deputy Director of Operations
- Public Works Roadway Operation Manager
- Superintendents, supervisors, and employees who actually carry out the winter storm response

A listing of the personnel assigned to the key storm emergency response positions noted above, along with contact numbers, can be found in the Primary Contacts section of the manual. Additionally, a listing of key personnel assigned in an emergency management/incident command framework can be found in the appendix.

The Roadway Operation Manager is responsible for all planning, personnel, equipment, weather reports, and recommendations for response implementation or termination. He or she oversees all the daily tasks of the winter storm response. He/she is responsible for updating the Winter Maintenance Plan annually. He/she advises the Deputy Director of Operations of weather and street conditions, the potential need for implementation of a response, and the level of response anticipated.

The Deputy Director of Operations evaluates, approves or modifies the planned response and advises the Director of Public Works. The Director of Public Works is responsible for advising and consulting with the Chief Administrative Officer. Any recommended changes in a planned winter response are transmitted back down the chain of command to the City Engineer and Roadway Operation Manager, who implement the response plan as directed by the Deputy Director of Operations.

Months of Readiness

Operation and maintenance staff is in a state of constant readiness and alert from November 15 to April 1 of the following year.

Winter Maintenance Operation Center (WMOC)

The center of Operations is in the Hopkins Road Complex at Hopkins Road. The telephone numbers are 646-1794 and 646-1777. The public service announcement will come from Radio Communications.

Plan Implementation

The City Engineer and Roadway Operation Manager monitor weather reports for conditions that cause ice, snow, sleet, or other conditions that may cause slick or hazardous conditions on any of the City's streets and bridges.

When weather reports confirm that there is a 25% or better chance of a winter storm or hazardous conditions, a graduated response is planned. The weather report and planned level of response is transmitted up the chain of command. The planned response is generally implemented when there is greater than a 50% probability of a winter storm.

Level of Readiness and Response Based on Forecasted Weather

There are six (6) levels of response based on the expected conditions, as underlined below. This information is also included in the appendix in tabulated form.

Level 1 – Isolated Slick Surfaces and Freezing Temperatures Expected

Roadway Maintenance - ***Service trucks respond to random slick conditions on bridge decks and roadways.*** Communications notifies the service truck operators, when such a need arises. (2 personnel, but more may be called if necessary)

Urban Forestry - One tree crew is on-call in the event that tree failures occur in City right-of-ways. (4 personnel)

Level 2 – Slick Bridge Surfaces and Freezing Temperatures Expected

Roadway Maintenance – ***This level of response is implemented when there is little or no accumulation of snow or ice predicted, but it is anticipated that freezing on the bridge decks or other identified critical locations will occur.*** A Bridge Task Force of fourteen (14) trucks with mounted spreaders loaded with sodium chloride, sand and/or salt; treat all City bridges and main arterials as needed. The objective is to keep bridges clear of ice or slick spots. (21 personnel - may be adjusted as conditions warrant). When Level 3 is anticipated, pre-treatment of bridges and critical areas with liquid anti-icing chemicals will occur up to 24 hours before the forecast event.

Urban Forestry – Same as Level 1

Level 3 – Light to Moderate Snow Accumulation and/or Freezing Rain Expected

Roadway Maintenance - ***This level of response is implemented when less than four inches of snow or any overall freezing rain is anticipated.*** An anti-icing taskforce of fourteen (14) trucks with mounted spreaders loaded with anti-icing agent will treat designated Chemical Task Force consisting of forty-seven (47) trucks have spreader boxes equipped with anti-icing agent containers mounted and loaded. Four (4) backup trucks are also mounted. Each truck operator has an assigned prescribed route for which the operator is responsible for disbursing anti-icing agent or spreading sand, as directed. As a precautionary measure, trucks are mounted with plows. When conditions warrant, salt will be treated with anti-icing agent for all bridge routes and other critical locations will be treated as well. 12 supervisors on each shift are equipped with 4 WD pickups mounted with spreaders and plows.

Urban Forestry – All personnel are put on call in the event that ice and/or wet snow accumulation caused tree failures in City right-of-ways.

Level 4 – Moderate Snow Accumulation and Freezing Temperatures Expected

Roadway Maintenance - ***This level of response is implemented when snow accumulation is predicted to be four (4) inches or more.*** A Chemical and Plowing Task Force consisting of forty-seven (47) trucks with plows having spreader boxes mounted and loaded with sand and/or salt, together with 12-4X4 supervisor pickups. Areas where plowing is ineffective on packed ice will be treated with anti-icing agent or additives. Fifteen (15) additional trucks are mounted with plows and supplemental drivers are called in, which make up the supplemental plowing task. Four (4) of these trucks are also mounted with spreaders to backup route spreader trucks as needed.

Urban Forestry – Same as Level 3

Level 5 – Moderate to Heavy Snow Accumulation and Prolonged Freezing Temperatures Expected

Roadway Maintenance - ***occurs when the accumulation is predicted to be six (6) inches or more, and/or when streets have been cleared, but freezing temperatures continue which prevents the melting of snow.*** Piled snow is removed from selected streets by front end loaders and dump trucks to designated sites by DPU contractors working under the direction of the Department of Public Works. Persistent critical locations with packed ice will be treated with liquid deicing chemicals or additives in order to soften them to facilitate clearing or removal. (Personnel requirement varies, including DPU and Public Works engineering personnel and will include contractor support at levels proportional to condition.)

Urban Forestry - All Urban Forestry personnel are on call in the event that ice and/or wet snow accumulation caused tree failures in City right-of-ways. If the weather forecast indicates that travel may be limited, all personnel will be retained at 800 Forest Lawn in advance of storm.

Level 6 – Heavy Snow Accumulation and Prolonged Freezing Temperatures Expected

Roadway Maintenance - ***Occurs when the accumulation is ten (10) inches or more to be followed by below 25-degree days or an exceptional depth of snow***. Contract graders and front-end loaders are used to widen thoroughfares and clear intersections. Extensive use is made of liquid deicers and pre-wetted salt to soften packed snow on priority streets. Rubber plow blades are removed and steel installed. Attention to non-priority streets is delayed and when done, is likely to be left with packed smooth snow surface and/or sanded. Additional personnel support from Public Works Engineering is required beyond Condition 5.

Urban Forestry - All Urban Forestry personnel will be retained at 800 Forest Lawn in advance of the storm. Facilities at the shop allow for personnel to be quartered for multiple days if necessary. If there are no tree emergencies associated with the storm event, Urban Forestry personnel with Commercial Drivers' Licenses (CDL) may replace regularly assigned snowplow unit operators or perform other duties as assigned. Non-CDL personnel will assist with downtown ADA crosswalks/sidewalk ramps and storm sewer inlet cleaning or perform other duties as assigned.

Any response level can be altered as is necessitated by changing weather conditions. A response level change is recommended by the Deputy Director of Operations and approved by the Director of Public

Works.

After designated snow routes are clear a reduced number of personnel (generally less than for Level 4), are used to address residential streets and selectively treat problem areas. When schools are closed, school bus drivers can be used to relieve regular operators that are unable to report to work.

II. PREPARATION

Pre-Season Preparation

Off-season employee training, equipment repairs, maintenance, and planning are the keys to ensuring the City of Richmond's Winter Maintenance Plan is successful. The off-season goals are the training of all employees, updating the Plan, ordering/storing sand and salt; inspection, replacement, repair of equipment, route assignment and liaison/coordination with other City departments.

Annual Revision of the Plan

- An online copy of the Winter Maintenance Plan will be maintained on Public Works G:\Drive.
- Annual revision of the Plan consists of updating the names, addresses, and telephone numbers of all employees. Checking and confirming equipment, condition, and location.
- The Roadway Operation Manager is responsible for completing the plan revision by November 15th each year.
- The revised Plan shall be distributed by November 30th each year.
- The Deputy Director of Operations reviews and approves the updated plan.
- After approval, the Roadway Operations Manager is responsible for printing and distributing the revised Plan.
- Unless otherwise approved, the City print shop will be used to print the Plan.
- Design of the Plan allows for changing and distributing only the appropriate appendix.
- Field copies will be designed to be kept in a three-ring binder so annual appendix changes can be easily changed without having to reprint the entire manual.
- Assigned employees need not be issued a complete Plan. Assigned employees generally are issued only those sections determined to be essential for their use, such as the employee directory, policies and snow routes.
- Besides organizing the new season's employees, the Roadway Operation Manager is responsible for revising the Plan. Generally, only Section 5 and the Appendix need to be revised.

Equipment Maintenance, Repair and Replacement

All winter maintenance vehicles and equipment will be inspected and the proper repairs, preventive maintenance, etc. shall be performed. **This annual maintenance inspection must be performed and all snow fighting equipment shall be operational by November 15th of each year.**

Since normal operation trucks are used in the response, it is expected that all trucks will be properly maintained and repaired before use. Operation Managers are responsible for having all trucks maintained.

Spreaders and plows are used only in the response, so they do not receive the daily use and attention that trucks do. For this reason, all spreaders and plows shall be inspected before, during, and after a winter storm response. Any needed repairs or maintenance shall be scheduled as soon as possible. Since there may be only a very short break between storms, it is imperative that all equipment be maintained in a constant state of readiness.

A record of equipment failures during the winter season shall be constantly maintained and updated so equipment needing replacement or major repairs can be identified and appropriate actions taken. The Deputy Director of Operations and Roadway Operation Manager are responsible for ensuring that all assigned equipment is in working order before the season begins.

Identification and Notification of Assigned Employees

Since training must be accomplished before each snow season, assigned employees should be identified during the summer. DPW superintendents shall provide a complete list of DPW employees who possess a valid driver's license. A CDL is required to operate the winter maintenance trucks. The procedure for identification and notification is as follows:

- All employees in the Department of Public Works are designated winter emergency employees. Superintendents will select employees from DPW, other personnel, and volunteers from other departments.

- The Deputy Director of Operations or his/her designees shall identify Public Works employees for each task, and inform the employees of their selection for the winter storm response and when they are scheduled for training.

- Winter Storm employees shall provide addresses and telephone numbers to their assigned supervisor as listed in the Plan. This information shall be added to the Plan.

- Employees from other departments can volunteer for the winter storm response effort.

- A list of potential and past employees from other departments who have participated shall be maintained.

- The Roadway Operations Manager is responsible for contacting other departments to solicit volunteers.

- Training for employees from other departments shall be done with regularly scheduled training.

Training

Winter maintenance employees typically feel a strong obligation to the public. This strong sense of obligation and an esprit de corps comes only with proper training and experience. The leadership task of supervisors and others responsible for winter maintenance is to reinforce, and instill the esprit de corps of participating employees. This should be a part of the normal training effort.

Proper training for assigned employees is vital. It provides the know-how to get the job done and the encouragement to perform in a way that brings praise rather than discredit to the Department of Public Works.

Training is conducted in the summer and fall, which ensures that:

- Equipment operators fully understand how to operate and maintain spreaders, plows, loaders, dump trucks, and other equipment used during winter storms.
- Office personnel fully understand record keeping requirements, reporting, and how to handle public relations.
- All employees are thoroughly aware of their assigned responsibilities.
- All employees receive a full review of snow removal schedules, routes, personnel and equipment assignments.
- Dry runs are made over an employee's assigned route.
- All employees understand the different responses to winter conditions. That is, why and when sand or salt is used, when plowing is necessary, the importance of the accomplishment of their job to the citizens, and traveling public in the City of Richmond.
- Training also demonstrates and explains the proper storage and cover for all equipment and materials, proper maintenance of equipment, proper spreader calibration, and proper salt and sand application, the importance of proper application, plowing procedures, and storage on our environment and the public safety.

Responsibility for Providing Training

The Roadway Operation Manager, Shift Superintendents and Supervisors are responsible for conducting training. Training consists of classroom, hands-on off-season training for all participating employees and on-the-job training for new and inexperienced employees.

Training Curriculum

Redundancies in the training outline are intentional and reflect the importance of repetition in the learning process.

A. Coordination and Control (classroom)
    - Familiarization with assigned routes
    - Radio communication
    - Storm working procedures
    - Employee notification procedures and responsibilities
    - Coordination with other departments (schools, police, fire, ambulance service)
    - General and specific responsibilities
    - Record keeping required of office and field employees
    - Reporting procedures
    - Shift assignments and reporting times
    - Response chain-of-command
    - Response level and conditions
        - Safety inspections and equipment inspections

B. Equipment Operation and Maintenance (field)

- Mounting/un-mounting plows and spreaders
- Spreaders and controls, including calibration
- Materials, loading, and location of materials
- How and when sand and salt are used
- When to plow
- How to plow
- Snow removal and hauling
- Getting repairs during a winter storm response
- Safety and equipment inspections
- Fueling locations
- Preventive maintenance
- Drive the routes
- Practice proper radio communications
- Special-deicing problems: bridges, curves, hills, ramps, and intersections

C. Proper Application of Salt, Sand, and Liquid Chlorides (classroom and field)

- How salt, sand, and liquid chlorides work
- How and when to apply sand and/or salt, and liquid chloride
- Application rates (calibration)
- Winter storm conditions and responses
- When to do second (or additional) applications of salt and/or sand

D. Winter Storm Policies (classroom)

- Reporting for work
- Overtime pay policies
- Drugs and alcohol policy
- Meal money
- Vacation and sick leave
- Critical employees
- Shift assignment
- Shift chain-of-command
- Snow routes
- Route inspections by City Engineer, Roadway Operation Manager, Superintendents and Supervisors
- Parking ordinances
- Procedures for helping motorists
- Dealing with the media
- Individual employee responsibilities for public relations

E. On-the-Job Safety (field and classroom)

- Safety equipment
- Safety procedures
- Safe operation of equipment
- Safety officers
- Individual responsibility for safety

F. Response Improvement and Critique

- Managers and superintendents encourage ideas for improving the response effort
- Include participating employees in early planning sessions
- Solicit ideas and criticisms from citizens and other departments

Budget Development

During the annual budget preparation process, the Deputy Director of Operations shall be responsible for the preparation of the activity budget and service inventory, and submit to the Director of Public Works for approval.

Post-Season Tasks

At the end of each winter season, after April 1 of each year, there are four tasks that will insure safe commuting and the continued high level of performance of assigned employees:

1. **Infrastructure Cleaning and Flushing**

   The first post-season task is a **complete mechanical cleaning and flushing of our infrastructure**, combined with whatever hand cleaning or other Operation are necessary, to remove as much residual sand and salt as possible. This prevents deterioration of concrete and steel, jamming of expansion joints, and an unclean environment. The mechanical cleaning and flushing should be done on major bridges, minor bridges, major streets, and other streets, in that order. The Division of Surface Cleaning does this work. The Bridge Division does bridge joints and bridge pedestrian walks.

2. **Preventive Equipment Maintenance**

   The second is preventative maintenance of equipment. Beginning immediately after April 1 of each year, all equipment shall be scheduled for routine preventative maintenance at Fleet Services. Personnel shall also clean thoroughly and apply the appropriate lubricants so chemical damage to the metal parts of equipment is minimized.

3 **Performance Evaluations**

   The third post-season task is employee performance evaluations for participation in winter maintenance. The evaluation process can be individually for employees who may require additional training or removal from the effort, or as a group to evaluate techniques, new ideas and a review of the season's performance. At this time, it is important to identify employees whose performance was superior. Letters of commendation should be sent to superior employees.

4. **Pothole Repair**

   The fourth post-season task is a citywide pothole repair task. Every winter the freeze-thaw cycle damages asphalt pavement, causing general pavement failure and potholes. Beginning immediately after the season, the Division of Roadway Maintenance is responsible for filling all potholes that developed during the winter. Two (2) employees with trucks are assigned to patrol streets and fill all potholes located. Superintendents are responsible for scheduling and inspecting the streets as the pothole crews finish their assigned streets. Employees and trucks from other divisions in DPW may be added to the crews filling potholes, if needed. This task may begin prior to April 1st. As the Roadway Maintenance supervisors inspect the streets for pothole repairs, they shall record the condition of all the City streets. From this record of general condition, the superintendents shall provide a prioritized list of streets for resurfacing.

III. WEATHER FORECAST MONITORING

A. Weather reports are necessary if the activity managers are to have the ability to accurately predict when a winter storm might occur. There are three circumstances that would require confirming the weather forecast:

1) When local media reports the chance of a winter storm (other sources for weather reports shall be checked).

2) Prior to weekends and holidays

3) When the City's Emergency Communications notifies activity employees of the chance of a winter storm

B. Only designated employees can obtain confirmation of the weather forecast. Contact with contract weather reporting services by DPW is restricted to:

1) Director of Public Works

2) Deputy Director of Operations

3) Public Works City Engineer or Roadway Operations Manager

4) Assigned public works' employee designated to act in the absence of either of the three listed above

C. There are two sources for weather reports other than local media. Those services are:

ACCU Weather, Inc.	National Weather Service
Snow Warning Service	800-737-8624 (Wakefield)
385 Science Park Road	757-899-4200
State College, Pennsylvania 16801	757-899-5730
Telephone: (814) 237-5803	757-899-6401

D. Whenever the National Weather Service predicts a change in weather or a chance of a winter storm they notify the City Emergency Management Department, who then notifies the various City agencies with the report. When the Director of Public Works receives notification, the Roadway Operations Manager is instructed to notify those employees designated by the Deputy Director of Operations.

E. The list for notification is updated each year when the snow manual is revised. Emergency Communications will telephone all those on the list whenever there is a winter storm report. Notification can and will occur 24 hours a day. Revision of the new notification list is the responsibility of the Roadway Operations Manager with the approval of the Deputy Director of Operations.

F. The City Engineer has the operational responsibility to confirm winter storm predictions. He or she will then notify the Deputy Director of Operations to analyze the possibility of a winter storm, and to plan the response, if necessary.

IV. COMMUNICATION AND COORDINATION

Winter Maintenance Plan Copy Distribution

A copy of the complete plan shall be provided to:

Interagency Distribution	No. of Copies
Mayor's and Chief Administrative Office	6
City Council	9
Police and Emergency Communications	2
Fire and Emergency Services	2
Parks and Recreation	2
Social Services	1
Public Utilities	4
RPS Transportation Manager	1
GRTC Transportation Manager	1
Subtotal	28

Public Works Interdepartmental Distribution	
Public Works Executive Team	10
Operation Managers	9
Communications	2
Supervisors	28
Subtotal	49
Grand Total	**77**

Table 2

Assigned employees will receive those portions of this manual as determined by the City Engineer and/or Roadway Operation Manager. This can include sections on procedures, shifts, and routes.

Closing City Offices and Notification of Employees and Citizens

The Deputy Director of Operations will contact the Director of Public Works at 5:30 a.m. in the morning following night of inclement conditions to ascertain whether to recommend closing City offices. Immediately thereafter, the Director of Public Works shall contact the CAO to advise and recommend a response for the City as a whole.

The Director of Public Works will then consult with the Chief Administrative Officer to reach a

decision.

After a decision is made, the Director of Public Works informs the Mayor's Office of the Press Secretary, who contacts the media to broadcast the closure information. The Information Officer then contacts Information Technology staff that is responsible for placing on the city telephone system a broadcast announcement to all employees

Coordination with Other City Agencies and Institutions

In addition to some other City departments, cooperation may be required with Virginia Power, Virginia Department of Transportation (VDOT), Virginia Maintenance Services (VMS), the Federal Emergency Management Agency (FEMA), the Virginia Department of Emergency Services, Chesterfield and Henrico counties and local service providers.

Relationships with some of these entities are discussed in the General Information section in the first part of the manual. Telephone contacts for both City and outside agencies can be found in the appendix.

Relationship with Richmond Public Schools

A close relationship must exist between DPW Winter Maintenance Management and Schools Transportation staff. Information is shared during pre-season planning so particular problem spots may be better handled. Since school bus routes can be on almost any residential street in the city, the Plan cannot prioritize school bus routes in most cases. All public and private schools are assigned to at least a second priority street. The Procedures section of this manual addresses the procedures for cooperation and sharing information during snowstorms that affect schools closing and reopening. **Contact: Floyd Miles (674-1234)**

Relationship with Other City Departments

Parks, Recreation & Community Facilities - Coordinates with the City Engineer and Roadway Operation Manager related to downtown and other scheduled events that are significant and unlikely to be canceled. Some special attention if possible will be given to help access along normal snow route streets. Parks, Recreation & Community Facilities is responsible for setting up relief stations when snow is deep and downtown removal is put into effect. **Michael Burton (804) 201-5914, and Shamar Young (Deputy Director) (804) 335-8341**

Public Utilities - Provides winter maintenance services to access streets to water and wastewater plants and to neighborhoods adjacent to plants. Utilities' supervisors and inspection personnel are assigned under Public Works' direction in snow hauling and disposal Operation downtown and elsewhere. **Contact: Eric Whitehurst (804) 240-8725**

Police - The Deputy Director of Operations and Roadway Operation Manager will coordinate with the Police Department in the enforcement of the emergency snow route parking restriction, enforcement after placement of temporary "No Parking" signs for snow removal on other streets as needed, and make the Police Department aware of other major efforts in cleanup and haul-out Operation.

The Police Department will coordinate towing contracts so sufficient towing vehicles and lot spaces are available. Coordination is with the Watch Commander on duty. **Contact: Through Emergency Communications**

Fire - The Fire Department will coordinate with the proper Shift Superintendent for emergency assistance in providing treatment to streets accessing active fire locations. Sand may need to be provided at times to provide traction to streets where ice has formed from runoff as a result of firefighting activities. IMMEDIATE RESPONSE REQUIRED. Fire station personnel will keep their areas open. DPW route supervisors and operators will keep windows from fire station entrances as accessible as possible given weather conditions. Contact is with the ranking Fire officer on site. **Contact: Emergency Communications.**

Ambulance - The ambulance authority or volunteer rescue squads serving the City will coordinate with the proper Shift Superintendent for emergency assistance in providing access to or from a pickup of a life threatening emergency; IMMEDIATE RESPONSE REQUIRED. Also, as a part of normal route activities, entrances to volunteer rescue squads and access to ambulances stations will receive treatment by route trucks. Coordination is with Chip Decker. **Contact: Emergency Communications.**

Human Services/Social Services - These departments are responsible for emergency housing/sheltering. On a case-by-case basis these departments will work with both internal and external partners if arranging for coordinating delivery of emergency medical supplies to shut-ins is required. The social services department should be contacted regarding their plan. **Contact: Paul Hundley 646-3629**

Relationship with the Public and Media - The DPW Public Information Officer (PIO), in conjunction with the Mayor's Press Secretary, will prepare a pre-season winter maintenance release that will alert the public regarding what they may expect, what is expected of them, and of changes to the Plan and other significant information concerning winter maintenance. It is important that the public is as well informed as is possible.

Official press releases during a snow event will be prepared by the Public Works Information Officer from information provided by Deputy Director of Operations or Roadway Operation Manager for distribution through the Mayor's Press Secretary to the media. Only information related to City Operation and facilities should be disseminated.

Other organizations will be responsible for announcing their own snow information; unless overriding decisions under this authority have an effect on this information.

Access to winter maintenance employees by the media shall be approved by the Deputy Director of Operations or Roadway Operation Manager, and should relate to firsthand observations.

The public should not be given misleading information, but should be told of relevant snow priorities when requesting service. Specific requests not related to emergencies will not be accepted

until all priorities are substantially completed. Reports of problem areas on thoroughfares will be promptly investigated if the street is defined as being completed. Citizens should be given the best information possible in general terms when estimating times for treatment and street conditions in residential areas. A Public Works telephone line will be designated and advertised as a 24 hour "Winter Storm Update" number.

The public will be treated with courtesy at all times, but it must be stressed that unless the winter maintenance employees are allowed to proceed in a planned and orderly sequence, ineffectiveness will result.

Relationship with Other Institutions

VDOT - In addition to using State contracts to purchase snow plows, various other coordination's with VDOT, including the coordination of routes and the transfer of salt supplies should one or the other department run short. Coordination of salt supplies is by the DPW Finance and Administration Coordinator.

VCU/MCV Campus - VCU must make the decisions whether to suspend classes and/or other activities due to snow conditions. The primary issue is access to their emergency room from Clay Street. VCU will contact and coordinate with the Maintenance to assess conditions on the Academic and MCV campuses, after which VCU will decide what actions to take.

VCU Health - Contact: **Britt Dixon (804) 828-7269**

State of Virginia - In addition to the declaration of emergency and providing emergency assistance of various types either during or after severe storms, the State has a large concentration of employees' downtown. The State must sometimes decide whether to close offices or alter hours of work due to snow related conditions. The State will contact and discuss conditions with the Operation Manager. They may further wish to coordinate their decision with the office.

Emergency Meetings

When it is considered necessary, due to a prediction of severe snow storms generally more than 6 inches, particularly with freezing days and nights expecting to follow the storm, the Director of Public Works, in conjunction with the Chief Administrative Office, will call an emergency snow meeting. Representatives from the following agencies will be invited:

- Chief Administrative Officer and Mayor's Press Secretary
- Department of Fire and Emergency Services
- Department of Police
- Department of Public Works
- Department of Social Services
- Department of Public Utilities
- Department of Parks, Recreation and Community Facilities
- Division of Emergency Communications
- Richmond Public Schools

- Greater Richmond Transit Company
- Richmond Ambulance Authority

A list of key contacts for the above agencies, and other key contacts, is provided in the Appendix.

Notification of Winter Maintenance Staff

In notification of a snow event, the following personnel should be contacted in the following order:

1. Torrence Robinson –Deputy Director (Winter Storm Incident Co-Commander)
2. M. Khara – Deputy Director/City Engineer (Winter Storm Incident Co-Commander)
3. Lamont Benjamin – Capital Projects Administrator (Contract Administrator)
4. Anthony Harding – Operation Manager (Winter Storm Incident Operation Chief)
5. DeWayne Winston – Shift Superintendent, Roadway Maintenance - South/Day
6. Vassar Sumpter - Shift Superintendent, Roadway Maintenance - North/Day
7. Roland Harris - Shift Superintendent, Roadway Maintenance - North/Night
8. James Williams - Shift Superintendent, Roadway Maintenance - South/Night works for DPU
9. Bobby Vincent – Director, Department of Public Works
10. Scott Morris –Director, Department of Public Utilities

Notification of Equipment Management

As soon as level of response and starting time are decided, the Deputy Director of Operations or his designee will contact the Fleet Maintenance Auto Shop and convey this information to them. They will then decide the appropriate complement of shop personnel needed to match the situation. Immediately upon any change in the response effort or hours, the Deputy Director of Operations or his designees shall notify the shop Shift Superintendent. When the decision is made to terminate the response, the Deputy Director of Operations or his designee shall notify the shop Shift Superintendent. Should excessive equipment be down at the time of termination or reduction of the response, that information shall also be communicated.

Notification of the Radio Shop

As soon as the response is decided to be Level 3 and above, the Deputy Director of Operations or his designee shall notify the Radio Shop at 646-1020 during normal business hours or page the Shop Supervisor after normal business hours, and give the level of the response to be put into effect and the starting time. The Radio Shop can also be contacted through Emergency Communications at 646-5123 or 646-5100. Whenever the response is reduced below Level 3 or terminated, the Deputy Director of Operations or his designee shall immediately notify the Radio Shop directly or through the Emergency Communications' number. Employees must report the status of working radio units as soon as possible.

V. OPERATIONAL PROCEDURES AND RESOURCES

Weekday Nights and Weekend Preparation

Each night during the snow season a bridge unit shall be mounted if predicted conditions allow for any possibility of a snow or ice event. One of these trucks shall be loaded each night with sand and/or sand and salt to handle random ice spots.

Each weekend the entire Chemical Task Force shall be readied, with the exception of Leaf Activity vehicles if predicted conditions allow for any possibility of a snow or ice event. The City Engineer and the Roadway Operation Manager shall ascertain the weekend forecast each Friday afternoon prior to 3:00 p.m. to see if further preparation is warranted. If there is a reasonable chance for snow or ice, he shall contact the Leaf Activity Manager to coordinate weekend Operation. If there is any possibility of snow or ice after Saturday afternoon, spreaders shall be mounted on the Leaf Activity vehicles.

Selecting the Appropriate Response

Based on the weather report, whenever there is a 25% or greater possibility of any storm activity, the Operation Manager shall recommend a planned response to the Deputy Director of Operations. The Deputy Director shall approve the level of the response to the anticipated storm. There are five levels of response depending upon the severity of the expected storm as defined in the Introduction/Executive Summary. Any of these response conditions may be modified as is determined to be appropriate. For instance, a half-level 2 or 3 response could be called.

All winter maintenance employees shall be on a heightened state of readiness when any level of response is in effect. Every effort will be made to assign storm shift reporting times prior to the employee leaving his existing work shift. Employees may be asked to call in at a specific later time when the storm response will be more certain and be given their next shift assignment at that time. Only employees with pagers should be specifically assigned official standby duty. Shift Superintendents should have some productive work in reserve when employees have reported for duty and the storm is delayed.

Implementing the Response

When it is determined that there is a 50% or greater chance of a winter storm, the City Engineer, after consulting with the Deputy Director of Operations as needed, shall modify the preplanned response and implement a revised response.

Based on the strength, probability, time and forecasted duration the storm is predicted to ensue, the following decisions are made:

- Composition of shift that is to report ("A" or "B")
- Time the designated shift is to report
- Response level (see Level of Response in the introduction)

When the level of response and time of the response are decided, the Roadway Operations Manager notifies the two Superintendents of the condition and time of the response. He will immediately notify Emergency Communications with this information. The Auto Shop and the Radio Shop Shift Supervisors will be notified as specified.

The Superintendents are then responsible for contacting the Shift Superintendent and Shift Supervisor from the shop. The Shift Superintendent will notify each of their Route Supervisors and employees as well as notify them of when and where they are to report.

All personnel will be called in a predetermined order, depending on the response level to be put into action as subsequently defined.

After all personnel have been assigned duties, route supervisors are to patrol routes and report conditions to the field offices. As conditions warrant, all routes will be treated with chemicals and checked by the field supervisors to see that each route is properly treated with the sufficient amount of chemicals. All drivers are to report to their supervisor and the log keeper the ongoing progress of their route and any problems they may experience.

Notification of Other Departments

After deciding the level of response to be implemented, the departments of Public Utilities and Police shall be notified as needed so they can fulfill their roles, as noted in the Introduction/Executive Summary. Contacts' telephone numbers are in the appendix of this manual.

Notification of other departments is not necessary until the storm or prediction of the storm is severe. Contacts shall be in accordance with the Introduction/Executive Summary.

Coordination with Schools

A representative from the Roadway Operation Manager shall be at headquarters at 5:00 a.m. during the night shift for condition 3 (full Chemical Task Force) or above. Schools transportation representative will contact the City Engineer at that time to receive the latest and best report on the conditions of the streets and expected weather conditions. The decision to close or alter hours of school shall be done by Schools personnel.

Procedures for Notifying Assigned Employees

After the decision has been made to implement a response, the City Engineer and Roadway Operation Manager are responsible for notifying the appropriate employees. The Roadway Operation Manager will notify the superintendents. The superintendents will contact their shift employees, notifying them of their reporting time and place.

During Level 1 and 2 events, Urban Forestry on call personnel are notified of emergency tree maintenance needs via pager by the Emergency Communications Center. Upon receiving a page, the on call supervisor calls Emergency Communications and investigates the reported incident. If

the on call supervisor determines there is a need to call in additional personnel, he will notify the remainder of the on call crew.

During Level 3 and 4 events, Emergency Communications will notify the Urban Forestry Manager or his designee if tree-related storm damage occurs. The manager will then call in personnel as needed to respond to the incident.

During Level 5 and 6 events, Urban Forestry management will notify all field personnel in advance of the storm that they are being retained at 800 Forest Lawn Road. Emergency Communications will notify management about tree-related storm damage via telephone or the 800 MHz system.

Reporting Locations

All assigned employees shall report to their assigned workstation at the time they are directed to report. All employees are defined as essential. The winter storm response is an emergency service, which requires that all employees conform exactly to reporting orders. Failure to do so may result in a lowered performance evaluation and/or disciplinary actions.

The Roadway Operation Manager and Superintendents should emphasize the employee's duty to the public during an emergency, rather than coerce the employees into expected behavior. Employees who are self-motivated due to a personal sense of duty to the public will perform at a much higher level than those who are coerced or threatened.

Hours of Operation

The response is divided into two 12-hour shifts. "A" Shift is from 7:00 AM to 7:00 PM. "B" Shift is from 7:00 PM to 7:00 AM, with clerical staff and log keepers. Each shift is managed by a Public Works superintendent or alternate. Deputy Director of Operations or Roadway Operation Manager may modify these hours as needed. Employees shall not work longer than sixteen (16) hours straight without a break. The Deputy Director of Operations or his alternate shall adjust his presence to critical times during each shift to provide administrative management for the full response.

Sick and Vacation Leave During Response

Because of the emergency nature of winter storms, leave requirements will be more stringent. Since winter storms are treated as emergencies, all vacation leave may be canceled. Approval for vacation leave already approved must be confirmed. If an employee cannot be replaced and his or her job is considered essential, leave may be deferred until the response is closed.

Sick leave will be approved, but an employee may be required to submit an approved doctor's statement verifying the date of sickness, nature of the illness and when the employee can return to work.

Other than above, failure to report to work will result in disciplinary action as appropriate. Failure to report if specifically assigned ahead of time will be considered AWOL. Assigned employees observing heavy and/or sustained snowfall will be expected to call their assigned reporting locations if they have not been contacted when they would normally expect it, or if they are away from their

regular telephone.

Adjustments in Shift Hours of Operation

There may be circumstances that require changes in the normal shift hours. For instance, the weather report may call for a winter storm to begin at 6:00 a.m. and stop by noon. Under these circumstances, it is acceptable to change shift-reporting hours.

In this example, it is not efficient to have "B" shift report in for three hours and then go off duty during the beginning of the storm. Since "A" shift is the expected time that most of the storm will occur, it is proper to have "A" shift report in prior to the normal "A" shift reporting time. In this way, there is no lost time due to changing shifts. In this example, it is even more important that the streets are treated before and during rush hour. No shift should exceed sixteen (16) hours and no employee should work more than sixteen (16) hours in a 24-hour period.

Overtime Pay for Participation

According to City policy, an employee must be at work forty (40) hours during the weekly pay period before any time can be paid as overtime at time and a half rate.

Meal Reimbursement

Meal money shall be paid to winter maintenance employees when they have worked a minimum of a twelve (12) hour shift. The rationale for meal money normally is that employees are responsible for their mid-shift meal. However, when an employee has been required to work beyond normal duty hours without being allowed to go home, the employee does not have the opportunity to provide for his or her meal. The meal money policy is as follows:

An employee will be provided with supplemental funds to cover the purchase of a meal when an unplanned extension of the workday occurs requiring emergency work or when emergency 12-hour work shifts are employed. The following conditions shall govern the payment of meal allowances:

- The work must be unplanned and of an "emergency" nature, an employee must work at least two hours beyond the normal shift without interruption.
- When emergency 12-hour shifts are employed, a meal allowance will be provided for one meal break during the lengthened shift.
- **"Employee" is referencing City employees. Temporary labors hired through agencies are not eligible for meal money or reimbursement of meal money.**

The DPW Deputy Director of Finance and Administration has the authority to approve and disburse meal money. The Deputy Director of Finance and Administration or his/her designee will secure the meal money and transfer the funds to the designated recipients from the Northside and Southside headquarters after the proper forms have been properly submitted and approved. The route supervisors are responsible for approving an employee for meal money.

Record Keeping and Reporting Responsibilities

When the full plan is implemented, Level 3 or above, the Winter Operations Center at Hopkins Road will be staffed with 2 clerical personnel and will serve as central command for the winter storm response. The two field offices will each be staffed with a clerk and an Equipment Coordinator. The roles and responsibilities are delineated as follows:

Field Clerk

- Keeps a record of materials used on each route, the number of times a route is covered and other information deemed necessary to measure the effectiveness and performance on a route, with information provided by the route supervisors by radio, and provide this information to the Winter Maintenance Operation Center (WMOC) at the end of the shift.
- Fills out time sheets, monitor the radio, take care of other general administrative duties, meal money records and monitor the telephone, promptly transferring or referring all outside calls to the WMOC.
- Keeps the portion of the log related to the equipment used, personnel used, materials used and problems with equipment or personnel to report at the end of the shift to the WMOC.

Equipment Coordinator

- Keeps a record of equipment as it goes in or comes out of the shop, see that route coverage is maximized or supplemented as needed in conjunction with the Route Supervisors, Shift Superintendent and the field office.
- Coordinates with the shop to see that equipment repairs are prioritized and expedited as needed.

Route Supervisors

- Monitors the radio for reports from their route operators and instruct route operators by radio.
- Provides information as needed or specified to the field office and to report route conditions and information as specified to the WMOC by radio.
- Compiles a record of materials used on each route, number of coverage's, and other information to provide to the Field Clerk at the end of each shift, also, employee time and equipment reports.

Route Operators

- Proceeds on their designated routes as assigned, monitor their coverage and use of materials for abnormalities, report any problems immediately to their route supervisor by radio, report on the condition of their assigned routes at key milestones or as requested to their route supervisor by radio or in person, and keep track of materials used in a prescribed manner.

Winter Maintenance Operation Center Support Staff:

- Handles and record all outside telephone calls.
- Records all routes on a computer or manually on a map or board designed for that purpose, to show what condition and stage of completion each route is in, the number of times a route has been covered, time a route unit was out of service, and routes in need of assistance. Communication should be between the route supervisors and the WMOC by radio and the Field Clerk and the WMOC by telephone.

- Keeps the portion of the log that includes weather reports and conditions, implementation times and levels, times of suspended routes treatment, and general overall conditions of routes at designated times.
- Forwards a report of estimated costs from the completed shift to the Maintenance & Claims Examiner by e-mail. This report should be based upon the "Report of Estimated Cost" form and contain the total personnel hours, meal money amount, and material used by category. This report should be sent by e-mail as soon as possible upon completion of the shift.

Maintenance Claims Examiner

- Upon receipt of data (Report of Estimated Costs) from WMOC, the Maintenance & Claims Examiner will prepare and maintain a storm response event report containing reported personnel costs and material usage. This report will be posted and maintained on G:\Share\Pubworks\Snow for easy access.
- In addition, a summary report of estimated costs for the previous winter's storm response will be maintained at that site.
- See Appendix for sample log forms.

Personal Property Damage

Such instances of property damage are handled within the normal accident reporting and claims handling procedures.

Example: A City snowplow strikes a mailbox, or parked car while plowing snow.

1) The operator reports incident to route supervisor.
2) The supervisor responds to view site and photograph the damage, notifies police for a report if applicable, and completes form "Supervisor's First Report of Accident".
3) Report is forwarded, with copies to the departmental Maintenance & Claims Examiner and the Risk Management-Safety Officer for the Public Works Department.

The final disposition and resolution of the matter is an operating procedure of the Department of Finance-Risk Management.

News Releases

All information to newspapers, radio, and television will be handled as specified in the Introduction/Executive Summary. It will be the responsibility of the Winter Operation Manager to provide information for a news release. The release will generally contain the following information:

1) Condition of streets
2) Tasks involved
3) Personnel and equipment working
4) Other pertinent data

The Public Works Information Officer will prepare releases, when warranted by conditions or when directed by the Deputy Director of Operations.

Take Home of City Vehicles

The City Engineer, Roadway Operation Manager, and Shift Superintendents may be permitted take home privileges of city vehicles during the snow season. In addition, the Deputy Director of Operations has the authority to allow take-home vehicles for others, such as, on-call supervisors, etc. A permission form must be on file for every employee who uses a take-home vehicle. During a snow event or when snow has been predicted, four-wheel drive pickup trucks equipped for plows and spreaders shall not be taken home.

Fuel for Equipment

All equipment shall be fueled at the vendor's prescribed sites as noted in the appendix. Refueling may also be done if necessary in North side, at Fire Station Central #5, and in Southside at Fire Stations #13 and #24, located as indicated on the list found in the appendix of this manual (see Table of Contents).

In case of emergency and where field equipment cannot reach regular facilities, fuel facilities are available at other firehouses as located in the appendix of the manual (see Table of Contents).

Bridge Task Force

All personnel assigned to bridge routes, when alerted by the supervisor, will report to the Commerce Road and Hopkins Road complexes. The supervisor will dispatch personnel, equipment, and materials for the bridge operation from both Commerce Road and Hopkins Road. All Bridge Task Force personnel shall assume their normal assignments when a full response is instituted. All bridges will be plowed to prevent an accumulation of two (2) inches. Bridge Task Force personnel will generally be assigned to stand by their bridge so prompt application of sand and/or salt can be made as needed. At the direction of the City Engineer, anti-icing/deicing chemicals shall be added. The Bridge Task Force Supervisor shall consult with the City Engineer to determine what treatment to use.

The Boulevard Bridge will be treated with chemicals as part of chemical Route 30. The Richmond Metropolitan Transportation Authority (RMTA) will reimburse the City for this service. The RMTA will generally handle frost situations on the bridge with their own resources.

The City handles snow removal over the entire length of the Huguenot Bridge to the River Road intersection. The state, in turn, handles the snow removal on Chippenham Parkway from the city limits to Forest Hill Avenue.

Chemical Task Force

When snow is predicted, spreaders will be mounted and equipment loaded with sand, anti-icing agent or chemicals. The decision as to how much equipment is to be prepared will be made by the Deputy

Director of Operations or Roadway Operation Manager.

As soon as it becomes apparent that sufficient snow or sleet will fall to cause slickness on the streets, chemical and sand treatment will be put into effect.

Chemical and sand may be obtained at the 802 Forest Lawn Drive and the Hopkins Road complex.

When the chemical and sand response is put into effect, the shift superintendents will dispatch a front-end loader immediately to each of the above locations.

All spreading equipment used in this effort will leave the maintenance yard fully loaded and proceed to the designated routes.

After the initial load is used, all trucks will reload at the nearest stockpile. All radio-equipped trucks and cars will report in and out of service, giving their locations at all times.

Assigned routes are to be completed first, after which contact must be made with the route supervisor for further instructions. If the supervisor cannot be reached, the appropriate headquarters should be contacted: 646-1794 (North side); 646-1777 (South side), or radio units 298 (South side) or 299 (North side).

The operator of the truck, when spreading chemical agent, shall drive with the lever in a position that will give the maximum spreading capacity of 500 lbs. per 2-lane mile. He shall adjust his speed in order to get an even distribution of chemicals. Flaps must be checked to assure a proper spread pattern. Spreader operators will be thoroughly trained in the proper use of this equipment. Any change in amounts applied will be the supervisor's responsibility.

Other divisions and bureaus will supply supervision, personnel, and equipment as needed. No spreader truck will be taken out of service except with the permission of the Shift Supervisor or the equipment coordinator.

After completion of treatment and clearance of Priority I and II routes, Priority I residential streets will receive plowing and/or sanding. Following completion of these streets, all residential streets will receive attention. Streets which are too narrow to safely treat with regular spreader trucks will receive treatment with supervisors' 4 X 4 pickups equipped with plows and spreaders.

Anti-icing Treatment

When predictions warrant, anti-icing treatments will be applied to selected bridges and streets prior to the onset of a storm. The decision to pre-treat will be that of the City Engineer after consultation with the Deputy Director of Operations. General guidelines for liquid chemical treatment applications are found in the appendix.

Deicing Treatment

When snow conditions are heavy or include large amounts of sleet or when routes are not pre-treated

and packed ice forms, deicing chemicals shall be used to loosen packed ice. Extensive areas of packed ice shall be treated with liquid chloride mixtures, and followed by salt, if thick. Scattered areas shall be treated with pre-treated salt.

Additionally, while most storms will be treated before, during and immediately after with anti-icing agent and straight rock salt, when the temperature is below 25 degrees or when little moisture is present, some use of liquid deicer is indicated as a part of the regular Chemical Task Force. This will be with pretreated salt on routes with spreaders so equipped and with a combination of liquid deicing chemicals from spray trucks and normally spread salt on other routes. This treatment will be at the discretion of the Winter Operation Manager. Liquid deicing chemicals are stored at the Hopkins Road. General guidelines for liquid chemical treatment are found in the Appendix.

Plowing

The decision to mount snowplows and start the response will be made by the Deputy Director of Operations and/or his designee. Plowing will be performed on all designated routes by discretion, which generally will be at a snow depth of 3 to 4 inches and accompanied, by a prediction of 4 or more inches. Normally, plowing Operations will not take place from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. on weekdays unless weather conditions warrant. The Division of Street Cleaning will generally provide supplemental plow trucks, a list of them is provided in the Winter Maintenance Equipment Inventory.

Ballast for plow trucks, where needed, will be sand and will be loaded from the stockpiles at 802 Forest Lawn Drive and Hopkins Road complex. Chains will be installed at the discretion of the supervisor of the snowplowing task, in conjunction with the superintendent of the Auto Shop.

Generally, the snow will be plowed to the curb line except where plowing to the median or centerline is deemed advantageous. Bus stops and basin areas must not be buried under snow. Intersections must be kept reasonably clear. Intersections along major streets will be cleared of windrows by route trucks using their reversible snowplows. Supervisors in 4X4 pickups will also follow-up on critical intersections.

Safety-Health Building

As directed by the Winter Operation Manager of the chemical and sand tasks, the ramps to Marshall Street and Leigh Street at the Safety-Health Building will be chemically treated. A supervisor will accompany the crew during this operation.

Resources

Labor and Equipment

A. Personnel needed for a Chemical Treatment in North side

The following listed personnel are required for a **Bridge Task Force**:

One (1) supervisor (standby supervisor for "A" or "B" shift)

One (1) working supervisor (to assist supervisor)
Six (6) truck operators
One (1) pay loader operator
Total personnel needed: 9

The following listed personnel are required for a **Chemical Task Force**:
One (1) superintendent in charge
One (1) office personnel
Six (6) supervisors
Twenty (20) truck operators
Two (2) tandem operators
Two (2) pay loader operators
One (1) assistant
One (1) service truck
One (1) equipment coordinator
Five (5) bench personnel
Total personnel needed: 40 (includes Bridge Task Force personnel)

The following listed additional personnel are required for the **supplemental plowing**:
Seven (7) truck operators
Total personnel needed: 7

Grand total personnel needed: 47 (for Northside per shift)

Six (6) supervisors will be working in the field to look after twenty-two (22) routes. Six (6) supervisors are necessary due to the way our routes are spread throughout the city and due to the top priority and attention these routes need. Working supervisors and other personnel in this capacity from other divisions/departments may be needed as the conditions warrant.

B. Personnel Needed for a Chemical Task Force in Southside

The following listed personnel are required for a **Bridge Task Force**:
One (1) supervisor (standby supervisor for "A" or "B" shift)
One (1) working supervisor (to assist supervisor)
Eight (8) truck operators
One (1) pay loader operator

Total personnel needed: 11

The following listed personnel are required for **Chemical Task Force**:
One (1) superintendent in charge
One (1) office personnel
Six (6) supervisors

Eighteen (18) truck operators
Seven (7) tandem operators
Five (5) assistants on dump trucks (night only in hills)
Four (4) pay loader operators
One (1) assistant at 7160 Forest Hill ave.
One (1) service truck
One (1) equipment coordinator
Five (5) bench personnel
Total personnel needed: 48 (includes Bridge Task Force personnel)

The following listed additional personnel are required for **supplemental plowing**:

Eight (8) truck operators
Total personnel needed: 8

Grand total personnel needed: 56 (for Southside per shift)

Six (6) supervisors will be working in the field to look after twenty-five (31) routes. Six (6) supervisors are necessary due to the way our routes are spread throughout the city and due to the top priority and attention these routes need. Working supervisors and other personnel from other divisions/departments may be needed in this capacity as the conditions warrant.

In addition, the City Engineer or his alternate and two (2) Operation center staffers will be present whenever there is a full Chemical Task Force response or above in effect. Total staff required is therefore 106 personnel per shift for a full Chemical Task Force/Plowing response (Level 4).

Materials
A. Ordering and Storing Winter Maintenance Materials

Salt and sand are used in responding to winter storms. Liquid and flake calcium chloride or Magnesium chloride (or Ice Ban) is also used.

- Materials are stored at two (2) locations, as noted below.

    1) 800 Forest Lawn Dr. - DPW Complex

    2) Hopkins Road - DPW Complex (also sodium chloride)

- Materials are under the control of Materials Management staff.

- Employees filling spreaders or tanks with materials must conform to the requirements of Materials Management, which may include:

    1) Personnel approved by Materials Management will load all sand and salt.

2) DPW employees or personnel from other approved organizations receiving materials will be required to sign an invoice or other record.

- The Roadway Operations Manager will consult the Materials Supervisor after each event response to estimate the quantity of materials to be reordered.

- The Roadway Operations Manager is responsible for ordering, receiving, and storing salt and sand.

- The Roadway Operations Manager is responsible for assuring that a full stock of sand and salt is on-hand at the beginning of each season.

If, in the opinion of the Winter Operation Manager, the utilization of motor graders and/or other equipment is necessary, he should first supplement the response with city-owned equipment to assist the plow trucks. If this additional equipment is not sufficient, the Deputy Director of Operations may authorize the rental of equipment from local contractors, which will be under the supervision of the Hired Equipment Controller. The Contract Administrator may be found in the secondary contact list. The sources of hired equipment are listed in this manual (see Table of Contents).

Contract Resources

Hired equipment should be authorized when available City equipment is insufficient to meet plan objectives.

Hired equipment at maximum strength will consist of seven (7) teams of one (1) large motor grader (except the Fan District Team) and one (1) articulated front-end loader. These teams would run in 12-hour shifts around the clock, from 7:00 a.m. to 7:00 p.m., and would be under the supervision of a City Inspector from either DPU or DPW or contractors supervisors as needed to supplement city personnel as directed by the Winter Operation Manager.

Hired equipment teams will be used to open and widen travel lanes, shoulders, median lanes, turn lanes, etc., on thoroughfares, arterials, connectors, and ramps. Teams may then be assigned first priority residential streets as needed.

In addition to the 14 DPW/DPU Inspectors/Engineers designated to supervise and record time on the hired equipment operation, one (1) DPW staff member shall be the Hired Equipment Supervisor.

Controller-(M.S. Khara) as assigned and will collect time and prepare pay estimates for the Supervisor of Hired Equipment.

One (1) DPW Inspector/Engineer shall be designated Shift Supervisor for Hired Equipment for each shift. This Inspector is responsible for assessing accomplishments and conditions in each area and reporting these to the Winter Operation Manager by 6:30 a.m. or p.m. before shift change.

The route/territory assignments are as follows:

Northside
East - Dock Street to I-64, 17th to East City Limits
North - I-64 to I-95, Leigh to North City Limits
West - Boulevard to West City Limits, James River to I-95
Fan - Boulevard to Belvidere, James River to Leigh (small grader)

Southside
Area 1 - Jefferson Davis, Commerce, Bellmeade, Bells, Belt, Walmsley, Belmont
Area 2 - Hull, Midlothian, Broad Rock, Carnation, Hioaks, Jahnke
Area 3 - Forest Hill, Semmes, Roanoke, Westover Hills, Huguenot, Chippenham Pkwy and Ramps

Contractors under Control of other Departments
Contractors from other departments also work with the Department of Public Works on streets under DPW management. Cleanup/haul-out of downtown and selected streets will be performed by DPW contractors under the oversight of the Department of Public Utilities supervisory personnel, under direction of the Department of Public Works.

Residential Street Treatment

After the primary operation is completed, residential areas will be plowed and or treated as resources become available. In storms of 4 or more inches, the clearing of residential streets will start before completion of the primary operations as contract resources are available. Additional contract resources will consist of trucks with plows and some spreaders that are under contract with DPW. The Winter Operation Manager will effect this operation with approval of the Deputy Director of Operations.

Downtown Snow and Ice Operation

Snow Removal and Disposal
The decision to remove and/or dispose of snow will be made by the Deputy Director of Operations. Once this decision has been made and the streets to be cleared have been designated, the responsibility for the task shall be that of the Roadway Operations Manager.

The goal is to remove snow from downtown streets to allow for optimal traffic and pedestrian access. The downtown area is defined as area bounded by Belvidere, 17th Street, James River and I-95. The plan is to remove snow in a two-phase operation as necessary.

- PHASE I - ensure optimal accessibility for the movement of people and vehicles in and around the downtown area. The action would include ensuring open traffic lanes, crosswalks, and turning lanes.

- PHASE II - ensure optimal accessibility for the business. The action would include opening roadside (curb) parking and sidewalks.

The operation is focused or concentrated on specified streets depending upon shift:

Daytime Shift (7:00 a.m. to 7:00 p.m.)
Broad Street - 17th Street to Belvidere to West City Limits
Cary Street - (Belvidere) 5th to 14th Street
Main Street - 18th Street to 5th (Belvidere)
Franklin Street - 9th to 2nd (Belvidere)
7th Street - Byrd to I-95

Evaluate restrictions and traffic needs on all other streets in downtown.

Night Shift (7:00 p.m. to 7:00 a.m.)

Marshall Street - Belvidere to MCV Hospital, including areas around hospital, emergency room, access to City Hall, Safety-Health Building, Social Services, and John Marshall Courts Building.

9th Street - Leigh Street to Byrd
Byrd Street - 7th Street to 12th Street
Canal Street - 14th Street to 7th Street
14th Street - Byrd Street to Broad
8th Street - Leigh to Byrd
Cary Street - Thompson to Boulevard

Evaluate restrictions and traffic needs on all other downtown streets and other congested business areas.

The snow removal effort will consist of four (4) front-end loaders, one (1) backhoe, and twelve (12) tandem trucks. This equipment is provided through specific contracts with the Department of Public Works. This equipment will be supervised and accounted for by DPU inspection personnel under direction of the DPW Supervisor of Snow Removal listed under "Key Contacts". The DPW Supervisor of Snow Removal is responsible for accessing and reporting conditions relating to cleanup at 6:30 AM or PM. to the Winter Operation Manager prior to shift changes.

All clearing should be done with the flow of traffic. The object of clearing the snow is to aid the movement of vehicles and to permit parking. For this reason, it may be neither necessary nor desirable to leave the street perfectly clean of snow. The quality of clearance should be a matter of the supervisor's judgment. Stockpile locations will be at the Maury Street brush lot, East Richmond Road rubble fill, and the Valley Road storage lot.

Parking Restrictions

Permanent emergency snow route signs have been placed on a number of critical streets. The list of streets is in an appendix of this manual. The Roadway Maintenance/Traffic Signs and Markings will put out temporary "No Parking" signs and/or meter bags on other streets to be cleared. Contact the supervisor of the Sign Shop for this work. As the clearing progresses, the signs and/or meter bags

will be picked up by the supervisor in charge of each crew and turned in to headquarters. The Police Department coordinator shall provide police officers to work with each crew for the control of traffic as needed in the judgment of the Public Works Superintendent of snow removal.

ADA Crosswalks and Storm Water Inlets

After cessation of the snowfall, labor and small equipment will be mobilized:

- The cleaning crew for crosswalks and storm water inlets will consist of 27 employees from various divisions from within the Department of Public Works and be managed by the Operation Manager of Grounds Management.

- Crews will remove accumulated snow and snowplow windrows at street corners to provide access to crosswalks and sidewalk ramps. Removal of snow from sidewalks is the responsibility of the adjacent property owner/occupant according to City Code Sec. 24-34.

The primary areas from which snow will be cleared from crosswalk and storm sewer inlets will be generally as follows:

Area #1
- Broad Street on the south to Duval Street/I-95 on the north.
- 8th Street on the west to 14th Street/I-95 on the east.

Area #2
- Broad Street on the north to Cary Street on the south.
- 8th Street on the west to 14th Street/I-95 on the east.

Area #3
- Broad Street on the north to Cary Street on the south.
- Adams Street on the west to 8th Street on the east.

Area #4
- Broad Street on the south to Duval Street/I-95 on the north
- Adams Street on the west to 8th Street on the east.

Secondary areas:
- West Cary Street - sections of the business area as needed
- Grove Avenue - Granite Avenue to Maple Avenue

- Patterson Avenue - Granite Avenue to Maple Avenue
- Brookland Park Boulevard - sections of the business areas as needed
- Bellevue Avenue - Lamont Avenue to Brook Road
- Forest Hill Avenue - 47th Street to Dorchester Road
- Pedestrian overpass over expressway at Addison Street
- Other business areas as designated

Public Facility Assignment

Department of General Services, Facility Maintenance

City Hall	Contact: Jeff Simon
Social Services and Health buildings	
All Police stations and precincts	
Courts buildings sidewalks	
9th & Clay Lot sidewalks	
Branch libraries	
Main Library parking lot	
Main Street Station	

Department of General Services, Custodians

John Marshall Courts steps & entrances	Contact: Jeff Simon
Hopkins Road Courts steps & entrances	
Main Library	

Department of Public Works, Traffic

Safety Building Lot (contract)	Contact: Chris Hayes
9th & Clay Lot (contract)	
3rd & Jackson Lot (contract)	

Department of Parks, Recreation & Community Facilities	Contact: Tariq Waajid 646-0476 Christopher Frelke 646-1128

Coliseum (Handicap circle & tunnel)
Festival Park (Parking to steps)
Altria Theater (Deck only)
Libraries (Steps & walkway – front entrance)
Community recreation centers
Cemeteries

Department of Public Utilities	Contact: Howard Glenn

Water purification plant access and vicinity (Douglasdale Road)
Wastewater treatment plant access and vicinity (Brander, Maury & 4th, Gordon)
600 Building (600 East Broad)

Department of Fire
Fire stations

Contact: Chief Jeffrey Segal
Deputy Chief Rodney Epps

Responsibility for Enforcing Snow Ordinances

As mentioned earlier in the Plan, by City Ordinance property owners/occupants are responsible for removing snow and ice from paved public sidewalks abutting their property. In addition, City Code also prohibits the piling of snow from a sidewalk or a parking lot into the roadway. If either of these situations presents a safety hazard, please notify Police.

Responsibilities of Other Public Works Operating Units

Urban Forestry

In the event that tree-related storm damage is minimal, Urban Forestry personnel will be deployed to the Chemical and Plowing Task Forces and/or the Crosswalk and Storm Sewer Inlet cleaning crews.

Right of Way Management - Survey

Staff not having a regular assignment will monitor downtown sidewalks and investigate complaints about safety hazards caused by non-compliance with City Ordinance Sec. 24-34 Duty to remove snow from paved sidewalks or Sec. 24-34 Obstruction of Drainage. If necessary, violations will be reported to Police.

Surface Cleaning

This division shall be activated as soon as it becomes apparent to the supervisor that obstruction of storm water inlets results from either snow or sleet or from the use of flushers. The supervisor of this operation will follow these procedures:

A. Obtain available, unassigned permanent employees that do not possess a commercial driver's license from all Divisions within the department and temporary employees from leaf crews.

B. Clear snow from front of inlets located in underpasses, in various pockets in street grades, and those located on bus routes.

C. Furnish personnel to follow street flushers and open choked inlets. Every effort will be made to flush sand and salt from bridges and streets as soon as possible on instructions from the supervisor of flushing after consultation with the Roadway Operation Manager. Operators of flushers will be given a route to cover continuously until further instructions. Each operator is to proceed over his route at a moderate speed and wash toward gutters with a sufficient volume and pressure to ensure flow to storm sewer inlets. Do not flush unless temperature reads 28° and is rising. All bridges treated with chemicals will be thoroughly flushed as soon as temperatures permit.

E. DPU Stormwater will answer drainage complaints as received.

Solid Waste

Refuse truck drivers are available on non-collection days and when snow is too deep for them to perform their normal collection (4" or more). These drivers may be used to supplement the chemical and plow task personnel or used in the snow removal and cleanup efforts.

Capital Projects and Right of Way Inspections

Personnel from Capital Projects and Right of Way inspections will assist the Contract Resource Administrator in acquiring hired equipment for the removal of snow from designated city streets to be determined.

Terminating a Winter Storm Response

A winter storm response shall be terminated when the Deputy Director of Operations and City Engineer or Roadway Operation Manager have agreed that weather reports and street conditions will allow termination of the response.

When it has been decided that a winter storm response is to be terminated, the Deputy Director of Operations, City Engineer or Roadway Operation Manager are responsible for notifying the winter maintenance superintendents and Shift Supervisors when the response will be terminated.

When a response is terminated, the Deputy Director of Operations is responsible for notifying Emergency Communications, the Auto Shop, and the Radio Shop.

When a winter storm response has been terminated, there are several things that must be done before responsible employees can close their own part of the response:

1) All equipment must be inspected.

2) All needed repairs and maintenance must be scheduled during normal duty hours, unless another storm is expected soon.

3) Employee time reports must be completed and submitted.

4) A task report must be completed and submitted, including all costs.

5) The Materials Supervisor shall inventory all materials and prepare a report of the status of on-hand materials, such as sand and salt.

6) The Materials Supervisor shall consult with the Deputy Director of Operations to reorder materials to replace those used in the terminated response.

Taking these six steps shall constitute termination of a winter storm response.

Post-Storm Tasks

Following the termination of a winter storm event, and depending on temperature and other factors, as soon as streets are sufficiently cleared of snow and ice, major bridges and roadways shall be mechanically swept and/or flushed by the Division of Surface Cleaning. Minor bridges and streets shall be swept if possible.

Follow through must be done to see that all equipment defects that have been noted are repaired as scheduled and a list of down equipment shall be maintained.

Any problems with employees performing during the prior snowstorm shall be dealt with in such a way to insure adequate performance during future snow activities.

The supply of materials shall be monitored closely and additional efforts made to secure supplies if restocking is not taking place as quickly as necessary.

Any defects in the streets causing problems with operation of the winter maintenance shall be promptly corrected or noted on the official route sheets used; so that problems in future snow activities can be avoided.

NOTES

APPENDIX

2026-2027 WINTER MAINTENANCE PLAN

LEGAL AND ADMINISTRATIVE REQUIREMENTS

Sec. 24-34. Duty to remove snow from paved sidewalks.

(a) It shall be the duty of every occupant of any land or premises abutting upon any paved sidewalk and the duty of the owner of any unoccupied land or premises abutting upon any paved sidewalk to remove and clear away or cause to be removed and cleared away the snow from the paved sidewalk abutting such land or premises, in such manner as not to obstruct the passage of water in the gutters, within six hours after the snow ceases to fall. If snow ceases to fall during the night, removal of snow from the sidewalk before 11:00 a.m. the following morning shall be deemed compliance with this section.

(b) Any person violating this section shall be guilty of a class 4 misdemeanor and, in addition thereto, shall be responsible for the cost of abating the violation. Any abatement costs incurred by the city may be assessed against the owner or other responsible party and collected in the same manner as city taxes.

(c) The criminal penalties provided by this section shall not apply to any person who is physically disabled or who is age 65 years or older.

Administrative Regulations
Office of the Mayor
Title: EMERGENCIES AND CLOSINGS
A. R. Number 1.5 Effective Date: 7/1/2023 Page 1 of 7
Supersedes: EMERGENCIES AND CLOSINGS A. R. 1.5 Dated: 1/5/2016

I. PURPOSE

The City of Richmond shall ensure that all employees are properly notified and compensated when weather or other emergency circumstances force the closing of most city offices.

II. POLICY

This policy provides the Chief Administrative Officer (CAO) or designee, the flexibility needed to take swift and appropriate action in emergency circumstances. This policy does not prohibit city administration or agencies from establishing other hours of operation that are necessary to carry out the business of the city government, establishing emergency practices consistent with operating needs and city policy, or determining which employees are essential or nonessential.

III. PROCEDURE

A. General

1. Emergencies

In the event of an emergency or inclement weather, the city administration will make every effort to open facilities to the public and employees should assume they must report as normal. However, if roads are too dangerous for travel or there is structural damage to a building, the administration may decide to delay opening or close city facilities until conditions improve. Staff should seek current information by:

a. Calling your voicemail from an outside phone. A message left on your office voicemail will announce any closures or delayed openings. Call the designated voicemail access number (646-1500) and follow the instructions for those with a mailbox on the system by pressing the star key and entering your extension and password when prompted.

b. Listening to area broadcast news outlets, city website, or city email for closings and delayed opening notices.

c. Watching your email for an early closing announcement when dangerous weather or other dangerous conditions occur during working hours.

d. Visit www.richmondgov.com and follow the city on Twitter@CityRichmondVA for updates of city events.

e. Contacting your immediate supervisor if you have any questions.

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2. Employee notification

The CAO shall ensure that all employees are properly notified and compensated in accordance with the appropriate administrative regulation(s). Unless otherwise notified by sources identified in this administrative regulation, all personnel are to assume that the City of Richmond will be open for business regardless of any weather or other emergency condition that may develop. Employees must report to work and should expect that all offices will be fully operational unless notified by a media broadcast. If a media broadcast indicates that offices are in any status other than fully operational, the status (i.e.: late opening or early closing) will be broadcast via one or all of the following:

a. Broadcast voicemail
b. Broadcast email
c. Television broadcast: WTVR-TV 6; WRIC-TV 8; WWBT-TV 12
d. Radio broadcast: WRVA 1140 AM

It is the employee's responsibility, prior to reporting for duty, to monitor the above listed broadcast media or call 804-646-1500 for a recorded message pertaining to the status of offices for that day.

If a nonessential employee elects not to report to work due to emergency or adverse weather conditions when offices are open, the employee will be charged annual leave for the time period in which offices are open. If the employee does not have annual leave, then the hours will be treated as "leave without pay."

3. Continuity of critical operations

The continuity of critical operations/services during adverse weather or other emergency conditions is essential. Departments may be required to maintain the minimum level of staff needed to provide services. Under conditions of emergencies and/or closings, essential employees may be required to report to work when other city employees are not required to do so.

Departments are responsible for notifying their respective employees and maintaining and posting a list of essential employees. During an emergency and/or closing, an employee

who is not listed on the essential personnel staffing list may still be designated as essential and must report to work.

B. Compensation for declared emergency

1. Non-exempt employees, as defined by FLSA, either essential or nonessential, who are required to work during an emergency will receive one and one-half (1.5) times regular pay for the day or shift worked plus any additional hours worked. Employees may also be granted additional time, on an hour-for-hour basis for all hours worked during the emergency. The CAO or designee will determine the hours to which this provision applies. The CAO or designee has the discretion to apply this provision to selected groups of employees. The additional time or compensation discussed above is in addition to any required overtime payment in compliance with the FLSA.

2. FLSA Exempt employees who are required to work due to the emergency are not eligible for overtime payment. However, due to the situation and in recognition of their service, exempt employees may be eligible for paid administrative leave consistent with Administrative Leave Policy. Administrative leave is awarded by the appointing authority/department head and should be taken at the earliest possible time. Administrative leave must be used as leave and is not compensable. Administrative leave earned and not used within 26 pay periods will be forfeited.

3. All employees who were not required to work their regular day or shift due to the emergency will receive regular pay for that day or shift.

4. For essential employees, the appointing authority/department head or designee is authorized to cancel previously approved leave to ensure these employees are available for workduring the emergency period.

5. Employee compensation for declared emergencies lasting more than 48 hours is at the discretion of the CAO.

C. Closings and delayed openings

1. Full closing

If city offices are fully closed, employees who are not designated as essential will be excused from work. Essential employees may be required to report to work. Essential employees who do not report to work during closed status when required to do so will be

placed on leave without pay and may be disciplined, up to and including termination. The CAO or designee has the discretion to provide the emergency pay provisions outlined in Section B. Nonessential employees who are on pre-approved leave will not have leave time charged for the designated time in which the city is officially closed.

2. Early closing

If city offices are closed early, employees who are not designated as essential will be excused from work. Essential employees may be required to remain at work. Essential employees who do not remain at work when required to do so during closed status will be placed on unauthorized leave without pay and may be disciplined, up to and including termination. Employees who work their full shift or workday will receive no additional compensation. Nonessential employees who are on pre-approved leave will have leave time charged forthe entire period for which the leave was approved.

3. Delayed openings

If the opening of offices is delayed, essential employees may be required to report for normal working hours. All nonessential personnel are expected to report at the broadcasted time. If an employee reports later than the broadcasted opening time, the employee will be charged leave time for the period of absence between the late opening time and the time the employee actually reports for duty.

In the event that the opening of offices is delayed, nonessential employees that work flexible schedules will revert back to the standard work schedule of 8:00 a.m. to 5:00 p.m. For example, if the employee's flexible schedule is from 7:00 a.m. to 4:00 p.m. and the offices open at 10:00 a.m., the employee would report for work from 10:00 a.m. until 5:00 p.m. If the employee leaves earlier than 5:00 p.m., the difference in hours will be charged to annual leave. Employees who work their full shift or workday will receive no additional compensation. Nonessential employees who are on preapproved leave will have leave time charged for the designated time in which the city is officially closed.

4. Partial closings/locations

If the emergency or other circumstance is limited to a portion of city offices (as determined by the CAO or designee), employees may be relocated to an unaffected designated area of the city. Employees who fail to report to the designated location may be placed on leave

without pay, and may be disciplined, up to and including termination. Employees who work their full shift or workday will receive no additional compensation. Nonessential employees who are on preapproved leave will have leave time charged for the designated time in which the city offices are officially closed.

D. Liberal leave determinations

Under certain emergency conditions, the CAO or designee may declare liberal leave for nonessential employees. Such determinations are reported to the media and are posted in accordance with section III.A.2.

The following conditions apply when liberal leave is in effect:

1. Nonessential employees are allowed to be absent for a portion of a workday or the entire workday and are charged paid leave (i.e.: vacation or compensatory) or leave without pay, as appropriate, for the period of absence. Employees must notify their supervisors if they intend to take leave.

2. Nonessential employees arriving late under a liberal leave determination will not be penalized for tardiness but will be charged paid leave or leave without pay, as appropriate, for the period between the regular starting time and their arrival.

3. If liberal leave is announced during the workday, nonessential employees will be permitted to leave the work site at their discretion, after apprising their supervisors. Employees will be charged paid leave or leave without pay, as appropriate, for the period between their departure and the end of their regular workday.

4. Liberal leave determinations do not apply to essential employees. Essential employees are required to report for work when liberal leave is declared unless they are specifically excused by their supervisors.

Employees may not use sick leave for a liberal leave absence unless the absence meets the criteria for sick leave (please see the city's sick leave policy for detailed requirements regarding sick leave).

IV. DEFINITIONS

Delayed openings – The opening of offices is delayed due to adverse weather conditions or other emergency circumstances.

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Early closing – The closing time of offices is adjusted to an earlier time due to adverse weather conditions or other emergency circumstances.

Essential personnel – Personnel designated by each appointing authority/department head that are essential to the effective operations of the city because of their responsibilities to protect and serve the citizens of Richmond. An individual may be determined as essential in one given situation (i.e.: snowstorms/snow removal) and nonessential in another situation (i.e.: sewer maintenance). The decision to designate an individual as essential is determined by the appointing authority/department head.

Exempt employee – A classification for which overtime compensation (payment or compensatory time) is not required under the Fair Labor Standards Act. Positions classified as exempt are so noted in the city's Compensation Plan.

Full closing – City offices are fully closed for the entire workday due to adverse weather conditions or other emergency circumstances.

Liberal leave – Leave/time-off requested by employees and granted by supervisors without delay in the time of an emergency. This is at the discretion of the CAO, Mayor, or City Council and only for nonessential employees.

Nonessential personnel – Personnel who are not designated as essential for the emergency or closing.

Non-exempt – A classification for which overtime compensation (payment or compensatory time) is required by the Fair Labor Standards Act. Positions classified as non-exempt are so noted in the
city's Compensation Plan.

Partial closings/locations – If the emergency or other circumstance is limited to a portion of the city.

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Supersedes: EMERGENCIES AND CLOSINGS A. R. 1.5 Dated: 1/5/2016

V. REGULATION UPDATE

Modifications to this policy shall be the responsibility of the Department of Human Resources under the advisement of the Chief Administrative Officer.

Approval

CHIEF ADMINISTRATIVE OFFICER

MAYOR

Levar M. Stoney

Digitally signed by Levar M. Stoney
Date: 2023.05.15 14:52:20 -04'00'

PUBLIC WORKS OFFICE OF THE DIRECTOR	ADMINISTRATIVE DIRECTIVE
CHAPTER TITLE: Emergency Management	PARAGRAPH NUMBER: 7.1 PAGE 1 OF 4
PARAGRAPH TITLE: Emergency Personnel Policies & Procedures/Employee Contact Information DIRECTIVE TITLE: Working Under Emergency Conditions	
SUPERSEDES A.D. NUMBER: 7.1 DATED: May 2016	EFFECTIVE DATE: July 2020

PURPOSE

The purpose of this directive is to establish policy, procedures and responsibilities for employees and the requirement that they be available for work under emergency conditions.

POLICY

It is the Department's policy to designate **all employees** as indispensable during emergency events. These employees are defined as "**essential employees**." In addition, adequate protection of public health and safety during emergency events requires essential employees to be available to render service in the Department's emergency operations programs on an as-needed or on-call basis. See definitions section below.

PROCEDURES

A. The Department shall regularly update policies and procedures for emergency operations programs to include, but not be limited to, changes to employee contact information, reporting locations and work shift assignments.

B. Whenever the City or Department announces the deployment of program resources in response to an emergency, managers shall notify supervisors of the level of anticipated response effort and the work shifts established for the duration of the response and recovery effort.

C. Supervisors shall contact employees as soon as possible, notifying them of their designated reporting times, locations, and equipment and work shift assignments during the emergency event.

D. The Director of Public Works may cancel approved leaves for essential employees during emergency events.

E. Emergency program managers may change the reporting locations and work shifts of supervisors and employees on an as-needed basis depending on the nature and extent of the emergency event.

PUBLIC WORKS OFFICE OF THE DIRECTOR	ADMINISTRATIVE DIRECTIVE
CHAPTER TITLE: Emergency Management	PARAGRAPH NUMBER: 7.1 PAGE 2 OF 4
PARAGRAPH TITLE: Emergency Personnel Policies & Procedures/Employee Contact Information DIRECTIVE TITLE: Working Under Emergency Conditions	
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F. Employees shall report to their designated reporting locations at their designated reporting times unless otherwise directed by the emergency program manager or their supervisor.

G. Employees shall continue their participation in emergency operations until released by program managers.

RESPONSIBILITIES

A. The Department's emergency program managers, with assistance from the DPW HR Project Management Analyst, shall maintain lists of contact information (primary residence address and telephone number(s)) for all employees in their work units. In the event the employee does not have a phone, the employee will provide a number where they can be reached.

B. Employees shall provide updated contact information to the DPW HR Project Management Analyst and their supervisor within 24 hours of any change.

C. Employees on approved leave during emergency events shall contact their supervisors to confirm whether or not they should report back to work.

D. Employees who cannot participate because of sickness or other justified causes shall contact their supervisors before the scheduled work shift begins. Supervisors may require employees to provide documentation to excuse their absence, for example, from a medical doctor.

E. When unanticipated emergency events occur, essential employees are expected to call in to their designated office telephone number as soon as possible to obtain their emergency work assignments and reporting locations.

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DEFINITIONS

A. Emergency Event – For the purposes of this directive, emergency events are events that require mobilization of Department forces to protect public health and safety, safeguard and maintain infrastructure or avoid public inconvenience. Emergency events are precipitated by potential and real hazards, natural and man-made, anticipated and unanticipated. The Mayor, Chief Administrative Officer, or the Department may call for a response to emergency events.

B. Department's Emergency Operations Programs - include primary responsibilities for snow, ice, flood and other inclement weather events including but not limited to support provided to other departments having primary responsibilities for hurricanes, hazmat and other emergency events, natural or man-made.

C. Essential Employee - An "essential employee" is one who is indispensable and vital to the provision of public services to protect public health and safety during emergency events. Essential employees are expected to work during emergency events including, but not limited to when City offices are closed by direction of the Mayor.

For Public Works, **all employees are hereby designated essential**.

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AUTHORITY

City of Richmond Administrative Regulation 1.5 – Emergencies and Closings

Director of Public Works

REGULATION UPDATE NOTIFICATION

All Administrative Directive Updates should be e-mailed to the Deputy Director for processing and submission to the Director's Office for approval and implementation.

APPROVED _____ July 1, 2020

Department of Public Works, Director **Date**

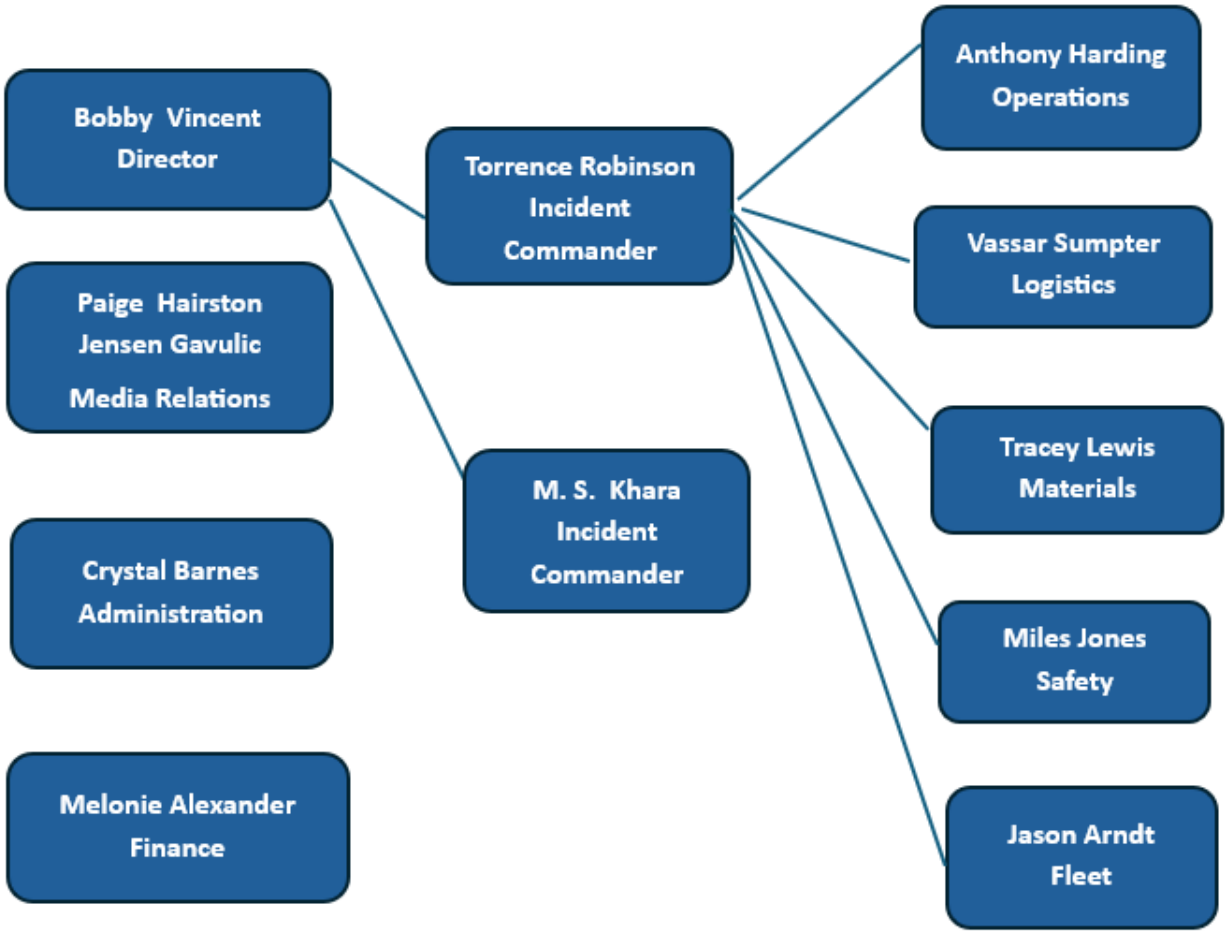
Winter Maintenance Reporting Locations

Hopkins Rd	Commerce Rd
646-1777	646-1794
646-1560	646-1921

In notification of a snow event, the following personnel should be contacted in the following order:

1. Torrence Robinson – Deputy Director (Winter Storm Incident Co-Commander)
2. M. Khara –Deputy Director/City Engineer (Winter Storm Incident Co-Commander)
3. Lamont Benjamin – Capital Projects Administrator (Contract Administrator)
4. Anthony Harding – Operation Manager (Winter Storm Incident Operation Chief)
5. James Williams – Shift Superintendent, Roadway Maintenance - South/Day
6. Vassar Sumpter - Shift Superintendent, Street Cleaning - North/Day
7. Roland Harris - Shift Superintendent, Right of Way - North/Night
8. DeWayne Winston - Shift Superintendent, CIP Paving - South/Night
9. Bobby Vincent – Director, Department of Public Works
10. Scott Morris - Director, Department of Public Utilities

INCIDENT COMMAND STRUCTURE FOR WINTER EMERGENCIES



Primary Contacts

Title	Name	Office	Home	Cellular	Pager
Director of Public Works	Bobby Vincent	646-6444	218-2899	339-0850	
Deputy Director	Torrence Robinson	646-6333		314-2771	
Deputy Director	M. Khara	646-5413	527-5225	370-3934	
City Engineer	M. Khara	646-5413	527-5225	370-3934	
Operation Manager	Anthony Harding	646-1560	929-7719	400-3759	
Northside Shift Superintendent-Day	Vassar Sumpter	646-1921	232-7440	221-6954	
Northside Shift Superintendent-Night	Roland Harris	646-1682	337-2801	337-4479	
Southside Shift Superintendent-Day	Anthony Harding	646-1560	929-7719	400-3759	
Southside Shift Superintendent-Night	James Williams	646-1643	922-9504	658-9339	
Maintenance Superintendents					
Solid Waste	Theodore Tyler	646-0440		921-3948	
Clearing of Crosswalks & Inlets	Kenneth Hill	646-2787		363-7714	
Grounds Management	Arthur Brown	646-1215		922-0174	
Grounds	Arthur Brown	646-1215		922-0174	
Occupation Safety and Health Specialist/Safety Officer	Miles Jones	646-1335		495-6201	
Records/Claims	Marcellus Heflin	646-1594		314-4822	
Police Emergency Communications	Dispatcher	646-5123			
Police Emergency Communications	Main Number	646-5100			
Police Emergency Communications		646-5141			
Police Emergency Communications	Police Department Coordinator				
Police Emergency Communications		646-			
Fire and Emergency Services	**Chief Jeffrey Segal**	646-5450			
Auto Shop	1650 Commerce Rd	646-1754			
Auto Shop	Jason Arndt	646-1264			

Title	Name	Office	Home	Cellular	Pager
Auto Shop	Jerry Angius	646-1751			
Radio Shop	Technician on Duty	646-1020			
Radio Shop	Chris Armstrong	646-1501			
Schools	Floyd Miles	674-1234			
Public Information	Paige Hairston	646-3659		385-0409	
Greater Richmond Transit Company	Timothy Martin			474-9311	
Department of Public Utilities	Howard Glenn	646-1920		338-2779	

Table 3

NOTES

Secondary Contacts

Title	Name	Office	Home	Cellular	Pager
Flushing and sidewalk snow removal compliance	Vassar Sumpter	646-1921	221-6954	543-2947	
Bridges	Anthony Riccio	646-8531	590-2803	347-5682	
Basin Maintenance	Angelo Riccio	646-8078		240-7436	
Basin Maintenance	Louis Evans	646-8079		332-4928	
Southside Shift Superintendent-Night	James Williams	646-1643	922-9504	658-9339	
Department Support Services	Crystal Barnes	646-0525		987-6911	
Materials Management	Tracey Lewis	646-1777			
Materials Management	Anthony Harding	646-1560	929-7719	400-3759	
Chemical Stock Pile Locations	800 Forest Lawn Dr.	646-1777			
Chemical Stock Pile Locations	Hopkins Road	646-1777			
Chemical Stock Pile Locations	7410 Forest Hill ave.	646-1777			
GIS	Chad Phillips	646-6565			
GIS	Brad Duplantis	646-5603			
Materials-Purchasing	Tracey Lewis	646-1777			
Traffic Signals	Enrique Burgos	646-6337			
Department of Public Utilities	Rodney Munford	646-8618			
Department of Public Utilities	TeDarryl Hite	646-8327	305-1308	339-7180	
Richmond Metropolitan Authority	Theresa Simmons	523-3320			
Urban Forestry	Michael Webb	646-0480		801-9954	
Parks Department	Chris Frelke	646-3399		929-7647	
Parks Department	Richard Bruce	646-4328			

Title	Name	Office	Home	Cellular	Pager
Parks Department	Glenn Lewis	646-3211			
Snow Disposal Areas	East Richmond Road	646-4706			
State of Virginia Human Services and Social Services	Misty Grund	646-7457	840-8601		
RRHA	Main	780-4200			
RRHA	Charles Williams	780-8707			
RRHA	Carl Camp	780-8750			
Ambulance Authority	Dispatch	254-1115			
Ambulance Authority	Chip Decker	254-1181	539-9218		
Ambulance Authority	Ryan Martinette	254-1101	512-5510		
VCU and MVC Campus	Facilities Management	828-0518			
VCU and MVC Camp	Kevin Kreide	828-4955			
MCV Hospital	Shirley Gibson	828-8650		252-3187	
VCU Chief of Police	Clarence Hunter	828-1210			
VDOT		524-6000			
General Services Custodians	Kenneth Hill	646-2787		363-7714	
General Services Building Maintenance	Jeffrey Simon	646-6120		514-8472	
Traffic Engineering	Chris Hayes	646-1466		432-5897	
Contract Resources	TBA				
	Nick Georges - DPU	646-8321			
	Dupree Jackson – DPU	646-8337		297-5586	

Title	Name	Office	Home	Cellular	Pager
	Mike Wilson – DPU	646-8341			
	Mike Price-DPU	646-8367			

Routes by Priority -*

Route 1 **Priority I**

Cary St. - WCL to Belvidere St.
Main St. (Elwood) - Belvidere St. to Thompson St.
Thompson St. - Elwood to Cary St.

Route 2 **Priority I**

Grove Ave. - WCL to Linden St.
Three Chopt Rd. - WCL to Cary St.
Linden St. - Grove Ave. to Cary St.

Priority II

Towana/Campus - Three Chopt Rd. to Boatwright
Boatwright - from Campus to Three Chopt Rd.

Route 3 **Priority I**

Patterson Ave. - Boulevard to CL
Kensington Ave. - Boulevard to RMA
Libbie Ave. - Bromley La. to Cary St.

Priority II

Maple Ave. - Patterson Ave. to Cary St.

Route 4 **Priority I**

Monument Ave. - Franklin from Belvidere to CL
Lombardy - Monument to Chamberlayne Ave.

Priority II

Westmoreland - from CL to Cary St.
Commonwealth - Cary St. to Grove Ave.
Lombardy St. - Monument to Cary St.

Robinson/Hanover - Idlewood Ave. to Lombardy St.

Route 5 & 5A **Priority I**

Broad St. - 12th St west to CL
Staples Mill Rd. - CL to Monument Ave.
Grace St. - Boulevard to Belvidere St.

Priority II

Hanover/Marshall/Goshen - Broad to Broad

Route 6 **Priority I**

North Boulevard/Hermitage Rd. - Robin Hood Road to CL
Laburnum - RMA to CL

Priority II

Hill-Monument Pkwy. - Hermitage to entrance to Imperial Plaza
Corbin/Cheatwood/Moss Side - North to North
Bellevue - Hermitage to Brook
Fauquier/Newport - Bellevue to Laburnum

Route 7 **Priority I**

Robin Hood Rd. - Boulevard to Brookland Pkwy.
N. Boulevard - Robin Hood to Boulevard Bridge
Expressway bridges

Priority II

Douglasdale - N. Boulevard to McCloy (Rt. 161)
Pumphouse to dead end
Rugby to dead end

Route 8 & 8A **Priority I**

Azalea Ave. - Brook Road to ECL
Brook Road - CL to Chamberlayne Pkwy.
Brookland Park - Hermitage to Rady

Priority II

Fendall - Brookland Park to North Ave.

Route 9 **Priority I**

Meadowbridge Rd. - CL to Brookland Park Boulevard
2nd, 3rd, 4th, & 5th sts. - Hospital St. to Jackson St.

Priority II

Richmond-Henrico Trpk. - Brookland Park Boulevard to Valley Rd.
Valley Rd./2nd St./Hospital St./St. James - loop

Route 10 **Priority I**

Dill Rd. - CL to 2nd Ave.
Utah/Pollock - Dill to Dill
Magnolia - 2nd Ave. to Mechanicsville
Rady St. - Dill to Magnolia

Priority II

Dove St. - North Ave. to Willow St.

Route 11 **Priority I**

Mosby/Mechanicsville Trpk. - Jefferson to ECL
Fairmount Ave. - Mechanicsville to 25th St.
Cool Lane - Mechanicsville to nursing home
Fairfield - Mechanicsville to 17th St.

Priority II

Fairfield Ave. - CL to Mechanicsville
Whitcomb/Mechanicsville/Bowling Green - loop

Route 12 **Priority I**

Nine Mile Rd./25th St. - Broad St. to CL
17th, 18th, & 21st sts. - Broad St. to Hospital St.

Route 13 **Priority I**

Government Rd. - Chimborazo Boulevard to Williamsburg Rd.
Accomac/Jennie Scher Rd./Parker/Darbytown Rd. - loop

Priority II

Admiral Gravely Boulevard - Government Rd. to Williamsburg Rd.
Crestview - 38th St. to Government Rd.
Jennie Scher Rd. - Government Rd. to E. Richmond Rd.

Route 14 **Priority I**

Broad St. - 12th St. to Chimborazo Boulevard
Marshall St. - 25th St. to 21st St.

Priority II

Venable St. - 25th St. to 17th St.
Chimborazo Boulevard - Broad St. to Q St.
Stony Run - E. Richmond Rd. to CL
M St./23rd St./Tulip/22nd St - Broad to Fairfield Ave.

Route 15 **Priority I**

Williamsburg Rd. - Government Rd. to CL
Main St. - CL to 14th St.
Hatcher/Newton - loop

Route 16 **Priority I**

Martin Luther King Bridge - 19th St. to Mosby St.
Leigh St. - Boulevard to King Bridge
Hermitage/Meadow - Westwood to Idlewood Ave.

Priority II

Bowe St. - Moore St. to Broad St

Route 17 **Priority I**

Lee Bridge - Cary St. to Semmes Ave.
Cherry St. - bridge & Laurel St. Bridge

Priority II

Laurel St. - Broad to Idlewood
Harrison St./Colorado/Meadow St./Grayland Ave./Allen Ave. - loop

Route 18 **Priority I**

Franklin/Grace, Marshall/College, Jackson/Clay sts. - Belvidere St. to 8th

Route 19 **Priority I**

Adams St. to 12th St. - Broad St. to Leigh St. (inclusive)

Priority II

Jefferson/Madison/Monroe/Henry/Adams - Leigh St to Canal St.

Route 20 **Priority I**

Saunders/Westwood/Malvern - Laburnum to Cary St.
Hamilton - Westwood to Cary St.
Thompson St. - Cary to Broad St.

Route 30 **Priority I**

Midlothian & Belt Boulevard - ramps
Boulevard Bridge
New Kent - 42nd St. to Dorchester
West 42nd St - Riverside to Forest Hill
Riverside - 42nd to Lee Bridge

Priority II

Riverside/Pineway - 42nd to Forest Hill
41st/Dunston - Forest Hill to Roanoke

Route 31 **Priority I**

Commerce Rd. - Bainbridge to Walmsley

Priority II

Deepwater Terminal Rd. - upper bridge to port
Commerce Rd. - Walmsley to SCL
Ruffin Rd. - Jeff Davis Hwy. to Commerce

Route 32 **Priority I**

Bells Rd./Belt Boulevard - Commerce to Broad Rock
Bellemeade - Commerce to Jeff Davis Hwy.

Priority II

Terminal Ave. - Jeff Davis Hwy. to Belt Boulevard

Route 33 **Priority I**

Cherokee - Forest Hill to Huguenot
Old Westham/Hathaway - Hathaway to Cherokee

Priority II

Cherokee - Huguenot to WCL
Riverside/Scottview/Longview - Hathaway to Hickory
Hickory - Riverside to Cherokee
Hathaway - Forest Hill to Longview
Rockfalls - Riverside to Riverside

Route 34 **Priority I**

Forest Hill - Powhite to WCL
Jahnke Rd. - Forest Hill to WCL

Priority II

Boroughbridge/Covington - Jahnke to Midlothian

Route 35 **Priority I**

Walmsley Boulevard - CL to Jefferson Davis Hwy.
Belmont Rd. - CL to Walmsley Boulevard
Ironbridge - CL to Walmsley

Priority II

Old Belmont/Orcutt La/Bryce La./Hey Rd. - Broad Rock to Hull St.
Brookbury - Ironbridge to Bathgate

Route 36 **Priority I**

Broad Rock - Belt Boulevard to Forest Hill Ave.
Forest Hill - Broad Rock to Roanoke
Roanoke St. - Midlothian Trpk. to Forest Hill Ave.
Bainbridge - Broad Rock to 7th St.
7th St. - Hull to Semmes Ave.

Priority II

Crutchfield - Roanoke to Belt Boulevard

Route 37 **Priority I**

Elkhardt/Whitehead/German School Rd. - Hull St. to Jahnke Rd.
Blakemore/Bliley – Jahnke to Forest Hills

Route 37A **Priority I**

Hioaks/Carnation/Warwick – Jahnke to Bells

Route 38 **Priority I**

Hopkins Rd. - CL to Jefferson Davis Hwy.

Priority II

Cofer Rd. - Jefferson Davis Hwy. to Hopkins Rd.
Maury St. - Commerce Rd. to Holly Springs Rd.
Holly Springs - Hopkins to Maury
26th St./Clopton - Semmes to Maury

Route 39 **Priority I**

Huguenot Rd. - Powerline to Riverside Dr.

Priority II

Chippenham Rd., Sherbrook, Old Spring, Waxford

Route 40 **Priority I**

Hopkins Road Bridge - Main St. to Bainbridge

Route 41 **Priority I**

4th St./5th St./6th St./7th St./8th St./9th St./13th St./14 St. - Broad St. to Canal St. or Byrd

Priority II

Tredgar St. - 7th St to Lee Bridge
6th St. - Grace St. to Canal St.

Route 42 **Priority I**

Main St./Cary St./Canal St./Byrd St./12th St./Bank - Belvidere St. to 14th Cumberland/Idlewood - Belvidere to Harrison St.

Route 43 **Priority I**

Chippenham Pkwy - Huguenot Rd. to Forest Hill Ave.

Priority II

Custis/Stratford - Riverside to Forest Hill

Route 43A & 43B **Priority I**

Chippenham - Huguenot Rd to James River Bridge

Priority II

Stony Point Pkwy. & ramps

Route 44 **Priority I**

Stony Point/Evansway/Cedar Grove/Croatan - Huguenot Rd. to Cherokee Westgate - Huguenot to Evansway

Priority II

Oldfield, Duryea, Old Gun, Garfield, Traylor

Route 45 **Priority I**

Forest Hill Ave. - Semmes Ave. to Powhite Pkwy.
Semmes Ave. - 7th St. to Forest Hill Ave.

Route 46 **Priority I**

Jefferson Davis Hwy./Cowardin - CL to Semmes Ave.

Route 47 **Priority I**

Midlothian Trpk. - Chippenham Pkwy. to Hull St.

Route 48 **Priority I**

Hull St., - Dock St. to Chippenham Pkwy.
4th St. - Hull to Maury St.
2nd St. - Maury to Hull
Maury St. - Commerce Rd. to 2nd St.

Route 49 **Priority I**

Broad Rock - Belt Boulevard to Walmsley Boulevard
Belt/Westover Hills Boulevard - Broad Rock to Evelyn Byrd

Route 50 & 50A **Priority I**

Chamberlayne Ave, Belvidere St. - NCL to Lee Bridge
Westwood Ave. - Chamberlayne to Acca Bridge

Priority II

Westbrook - Chamberlayne to Hermitage
North/Poe/Monterior/1st - Chamberlayne to Duval
Crestwood - Westwood to Bellview

These major/primary arterials listed below will pre-treated with the chemical solution at least twenty-four hours prior to the arrival of a forecasted snow event with (2) or more inches of accumulation forecast.

PRE-WETTING/ANTI-ICING ROUTES-

1. Broad Street
2. Franklin Street
3. Hull Street
4. 14th Street (to include treatment of the bridge)
5. Belvidere (to include treatment of the bridge)
6. Forest Hill Avenue
7. Chamberlayne Avenue
8. Brook Road
9. Jefferson Davis Highway
10. Broad Rock Road
11. Cary Street
12. Patterson Avenue
13. Laburnum Avenue
14. Hermitage Avenue
15. Bells Road
16. Warwick Road
17. Walmsley Boulevard
18. 25th Street between Main and Broad
19. 2nd Street between Canal and Franklin

20. 7th Street between Canal and Broad
21. 9th Street between Canal and Broad
22. Byrd Street between Belvidere and 9th Street
23. 23rd Street between Grace and Franklin Street
24. Westover Hills between New Kent and the Boulevard Bridge

Sources of Additional Resources

City Personnel and Equipment

When necessary, in the opinion of the Deputy Director of Operations, additional City personnel and equipment may be obtained from the following sources:

A. Truck, supervisor, drivers, and front end loader, with operator (Division of Sewer Maintenance - DPU).

Percy Wyatt – 646-8463

B. Supervisors, trucks, and drivers (Division of Surface Cleaning).

Vassar Sumpter - 646-1921

C. Truck, supervisors, drivers, and front end loaders, with operators (Department of Parks, Recreation & Community Facilities).

Glenn Lewis 646-3211 (O)

D. Supervisors, trucks, drivers, and front end loaders, with operators (Gas & Water Distribution, Department of Public Utilities)

Daniel Rifenburgh - 646-8537

E. Supplemental plow truck drivers (Solid Waste) – holidays and on those days designated for no collection. Some supplemental plow truck operators may be reassigned to "B" Shift, and Solid Waste drivers assigned as "A" Shift supplemental plow truck operators.

Theodore Tyler – 646-0440

F. In a normal Chemical Task Force response every effort will be made to first utilize personnel in:

(a) Transportation Services and/or (b) Department of Public Works.

Hired Equipment

The Supervisor of Hired Equipment, will be contacted in all areas where it becomes necessary to hire equipment for use in a Winter Storm Response. Time for rental of this equipment will be kept on approved DPW forms. The construction equipment will be hired from the following sources:
Note Contracts are in the re-bid process.

Materials And Supplies

All regular supplies will be obtained from the warehouse. Personnel authorized to draw supplies will be of the position of supervisor or above.

Snow chemical and abrasive materials will be purchased through the Stores warehouse, which are in turn purchased through Business Services' contract.

Materials may be obtained by contacting the following:

Rock Salt

Supplier:	Morton Salt Suite 3000 444 West Lake St Chicago, IL 60606
Contact:	Meredith Kerr 1-312-807-2723
Stock Location:	Chesapeake, VA
Truck Load Lot:	$ 112.45 per ton (minimum tons to truck - 23 tons) (maximum tons to truck - 25 tons)

Sand

Supplier:	Luckstone ECO Systems - Caroline 19380 Richmond Tpk. Milford Va. 22514
Contact:	Candy Salyer 1-888-909-5825

	F.O.B. City Truck	F.O.B. Job Site
Sand, Grade A, concrete	$ 33 ton	$ 33 ton – 802 Forest Lawn
Sand, Grade B, asphalt mix	$ 33 ton	$ 33 ton - Hopkins Road

F.O.B. (any job site): 48 hours

Fuel Facilities

Primary Fuel Facilities

1625 N. Hamilton St
1802 Ellen Rd
1831 Commerce Rd
3800 E. Richmond Rd
6120 Warwick Rd

Auxiliary Fuel Facilities

East End No. 1 ..... 308 North 24th Street (diesel)
East End No. 8 ..... 1018 Williamsburg Road (gasoline)
Northside No. 15 ..... 3011 Meadowbridge Road (diesel)
West End No. 19 ..... 311 Maple Avenue (diesel)
Southside No. 20 ..... 4715 Forest Hill Avenue (diesel)
Southside No. 17 ..... 2901 Bainbridge Street (diesel)
Southside No. 13 ..... 11 Commerce Road (diesel & gasoline)
Central No. 5 324 West Leigh Street (diesel & gasoline)
Southside No 25 ..... 8800 Huguenot Road (diesel & gasoline)
Southside No 24 ..... 7410 Forest Hill Avenue (diesel & gasoline)
Southside No. 23 ..... 495 LaBrook Drive (diesel & gasoline)
Southside No. 22 ..... 2420 Broad Rock Boulevard (diesel & gas)
Central No. 6 ..... Canal and Jefferson (diesel & gasoline)
Northside No. 16 ..... Claremont and Chamberlayne (diesel)
West End No. 12 ..... Addison and Cary (diesel)
East End No. 11 ..... 1235 North 28th Street (diesel & gasoline)
Northside No. 14 ..... 2932 Hawthorne Avenue (diesel & gasoline)

Snow Fighting Instructions

Procedures For Preparing A Truck For Snow Fighting

Procedure A: Removing tailgate from dump truck.

1) Back dump truck up in alignment with tailgate chain fall.

2) Disengage tailgate latches.

3) Connect chain fall chain to chains on rear of tailgate and relieve pressure on tailgate.

4) Remove tailgate pins and store pins away properly.

5) Carefully lift tailgate away from dump truck and place tailgate in its proper bin.

Procedure B: Loading a dump body chemical spreader.

1) With a helper, back dump truck body under spreader three-quarters of the way. Make sure spreader is centered in the dump body.

2) Raise body so it will be on the same angle as the hanging spreader, back up until spreader is fully seated in the dump body.

3) Raise dump body and disconnect the front two chains of the spreader.

4) Lower dump body and disconnect the rear two chains of the spreader.

5) Connect all four of the spreaders' hold-down chains to the dump body.

6) Connect dump truck body chains to dump trucks' frame.

7) Connect spreader hydraulic lines to hydraulic lines on truck.

Procedure C: Connecting a snowplow to the dump truck.

1) With two helpers, drive the truck up so as to align the two mounting holes of the plow hitch with the two mounting holes in the plow frame.

2) Have helpers lift on side of the plow mounting arms with a wrecking bar to align mounting holes; install holding pin and cotter key to that side. Repeat this process for the other side.

3) Lower plow hitch hoist and connect hoist chain to snow plow chain. Raise plow to riding height. Adjust snowplow shoes and install moldboard pin if necessary.

Equipment Calibration

Different materials will spread at different rates at the same settings, so spreaders must be calibrated with the material that will be used.

Spreader Calibration Procedure

Calibration of spreaders is simply calculating the pounds per mile discharged at various spreader control settings and truck speeds by first counting the number of auger or conveyor shaft revolutions per minute, measuring the material discharged in one revolution, then multiplying the two and finally multiplying the discharge rate by the minutes it takes to travel one mile.

With hopper-type spreaders, specific gate openings must be calibrated. Measure from the floor of the conveyor to the bottom edge of the gate. Each spreader must be calibrated individually; even the same models can vary widely at the same setting.

Equipment Needed:

1. Scale for weighing
2. Canvas or bucket/collection device
3. Chalk, crayon or other marker
4. Watch with second hand

Calibration Steps:

1. Warm truck's hydraulic oil with spreader system running to normal operating temperature.
2. Put partial load of material on spreader.
3. Mark shaft end of conveyor/auger.
4. Rev truck engine to operating RPM, at least 2,000 RPM.
5. Count number of shaft revolutions per minute at each spreader control setting, and record.
6. Collect material for one revolution and weigh, deducting weight of container. For greater accuracy, collect material for several revolutions and divide by this number of turns to get the weight for one revolution. This can be accomplished at idle or very low engine RPM.
7. Multiply shaft RPM (column A) by discharge per revolution (column B) to get discharge rate in pounds per minute (column C), then multiply discharge rate by minutes to travel one (1) mile at various truck speeds to get pounds discharged per mile.

Example: At 20 MPH with 30 shaft RPM and 7-lbs. discharge – 30 X 7 = 210 X 3 =630 lbs. per mile.

Spreading Chemicals

- It is important to apply salt as quickly as possible after the start of a snowfall to all Priority I and Priority II routes.

- This prevents bonding to the pavement and keeps the snow mealy, allowing it to be more easily plowed later.

- If a truck or spreader is down or breaks down, preventing all or part of a route being covered, it is essential that the driver record the exact place in that route that he ceases to spread chemical and important that his supervisor seeks and obtains a replacement spreader as soon as one is available or when another unit has completely finished the first chemical cycle coverage of its route. The replacement unit can then pick up where the original unit ceased to function and complete spreading on the Priority I and Priority II portions of the route.

- Operators should make sure their truck is properly calibrated and that the spinner flaps are properly positioned. The operator should start in the lane closest to the median on a multi-lane facility and work down the crown toward the edge of the pavement on subsequent passes.

- Operators should note when their spreader is empty, and after reloading, returns to that point to continue the spreading cycle.

- After a spreading route has been completed, the operator should spread chemicals in crossover and turning lanes unless pulled to complete a down route, in which case the operator should then finish the crossovers and turning lanes on his original route unless given other instructions.

- At that point, the operator should report to his supervisor that the route has been completely covered. The supervisor will then instruct the operator as to plowing or further spreading.

- Adherence to these instructions is important so that extended hard and fatiguing work removing hard packed ice from travel lanes is avoided. Careful application of chemicals initially can make everyone's life easier.

Plowing Snow

- Plowing snow, particularly on multi-lane highways, is an important task that requires close teamwork and coordination by the route supervisor.

- When plowing snow initially, it is critical that the operator go as far as the center of the roadway or as close to the median as possible to avoid leaving snow in the middle that will harden and thaw and refreeze later.

- In order to do the above on multi-lane roadways, it is absolutely essential the route supervisor team up his trucks in staggered plowing trains of 2, 3, or 4 trucks, each pushing the snow further toward the edge of the pavement, covering the route completely and then moving to the next route, covering that, then moving on to the next route, etc., before returning to the original route. An individual truck cannot clear heavy snowfall. Depending on the snowfall, it may be necessary to suspend plowing at some point and spread another round of chemicals.

- Two-lane roads can be handled with one truck; making one or two passes in each direction. One-way streets can be done with one or more trucks and should normally have the snow pushed both to the left from the middle, then to the right from the middle. This means the plow will need to be reversed.

- When plowing during heavy snowstorms, chemical treatment and plowing on Priority II routes should be suspended after the initial chemical coverage until the Priority I routes are cleared by plowing. (The initial chemical application should prevent bonding to the pavement.) At that time, the Priority II routes can be plowed. (If accumulation is deep, an additional application of chemical may be necessary.)

- After initial clearing of the streets is completed, operators should then either pair up or individually touch-up their routes doing crossovers, intersections, and turn lanes as best is possible under directions of the route supervisor. Any areas that are too difficult to be handled by the plow trucks should be reported to the route supervisor and relayed to the shift superintendent.

- After the travel lanes are mostly cleared of snow, it is important that any snow remaining close to the median or in the center of the road is pushed back toward the left to the center or median and not dragged back across mostly clear pavement.

- Again, note that cooperation, coordination, and teamwork is essential in effectively and efficiently plowing snow from our streets.

Snow Route Information

Permanently Signed Snow Emergency Routes

The following is a list of major streets, which have permanently installed snow emergency route signing to restrict parking during snow removal tasks. These are considered the snow emergency routes, which will receive priority for snow clearance/hauling.

1) Broad Street (both sides), between Belvidere St. and 2nd St.
2) Broad Street (south side), between 8th St. and 14th St.
3) Broad Street (north side), between 12th St. and 8th St.
4) 8th Street (west side), between Leigh St. and Cary St.
5) 8th Street (east side), between Broad St. and Main St.
6) 7th Street (east side), between Canal St. and Marshall St.
7) 7th Street (west side), between Canal St. and Broad St.
8) Franklin Street (south side), between Stuart Circle and 9th St.
9) Franklin Street (north side), between Adams St. and 6th St.
10) Main Street (south side), between 25th St. and Belvidere St.
11) Main Street (north side), between 21st St. and Belvidere St.
12) Cary Street (south side), between Laurel St. and 10th St.
13) Cary Street (south side), between 13th St. and 14th St.
14) Cary Street (south side), between Thompson St. and Boulevard
15) Marshall Street (south side), between Belvidere St. and 5th St.
16) Semmes Avenue (both sides), between 19th St. and Forest Hill Ave.
17) Mechanicsville Turnpike (both sides), between Fairfield Ave. and Cool Lane
18) Chamberlayne Avenue (both sides), between Westminster Ave. and Azalea Ave.

Ambulance Stations

All ambulance stations shall be treated along with the priority one streets on the adjacent routes. This applies to the two volunteer rescue squads as well as the four Richmond Ambulance Authority sites. The sites are as follows:

- Hermitage Road at Overbrook Rd.
- Maury Street at Clopton St.
- 25th Street between R and Q
- Parkwood Avenue at Shields Ave.
- Forest Hill Avenue at the CSX overpass
- Chantilly Street south of Broad St.

Guideline For Chemical Use (Salt)

Observed Condition	Chemical Procedure Used
Temperature: Near 30° **Precipitation:** Snow, sleet or freezing rain **Road Surface:** Wet	• If snow or sleet, apply salt at 500 lbs. per two-lane mile • If snow or sleet continues and accumulates, plow and salt simultaneously • If freezing rain, apply salt at 200 lbs. per two-lane mile • Consider anti-icing procedures
Temperature: Below 30° or falling **Precipitation:** Snow, sleet or freezing rain **Road Surface:** Wet or sticky	• Apply salt at 300-800 lbs. per two-lane mile, depending on accumulation rate • As snowfall continues and accumulates, plow and repeat salt application • If freezing rain, apply salt at 200-400 lbs. per two-lane mile • Consider anti-icing and de-icing procedures as warranted
Temperature: Below 20° and falling **Precipitation:** Dry snow **Road Surface:** Dry	• Plow as soon as possible • Do not apply salt • Continue to plow and patrol to check for wet, packed or icy spots: treat them with heavy salt applications
Temperature: Below 20° **Precipitation:** Snow, sleet or freezing rain **Road Surface:** Wet	• Apply salt at 600-800 lbs. per two-lane mile, as required • If snow or sleet continues and accumulates, plow and salt simultaneously • If temperature starts to rise, apply salt at 500-600 lbs. per two-lane mile, wait for salt to react before plowing. • Continue until safe pavement is obtained
Temperature: Below 10° **Precipitation:** Snow or freezing rain **Road Surface:** Accumulation of packed snow or ice	• Apply salt at 800 lbs. per two-lane mile or salt treated abrasives (sand & salt) at 1500-2000 lbs. per two-lane mile. • When snow or ice becomes mealy or slushy, plow • Repeat application and plowing as necessary

Other Chemicals

Observed Condition	Chemical/Abrasive Used
Freezing rain/glazed ice	Sand and salt mix, pre-wetted on Priority I routes if necessary @ 400 lbs. per lane-mile
Packed snow on local streets	Pure sand, provides traction and helps eliminate ice potholes @ 500 lbs. per lane-mile
Packed snow and ice on bridges	Pre-wetted salt (calcium chloride or magnesium chloride) @ 400 lbs. per lane-mile
Packed snow on roadways	Pre-wetted salt @ 250 lbs. per lane-mile
Pretreatment of roadways	Calcium chloride or ice ban
Pretreatment of bridge decks	Magnesium chloride or ice ban
Dry, cold snow, cold surfaces	Pre-wetted salt @ 250 lbs. per lane-mile

Winter Storm Response Based On Observed Conditions

Observed Condition	**Response**	**Resources**
Random slick spots	Level 1	Service Trucks
General freezing on bridges and other critical locations	Level 2	Bridge Task Force (13 trucks)
One inch or more snow accumulation or freezing rain	Level 3	Full Chemical Task Force 47 trucks with spreaders and plows mounted for snow forecast
Four inches or more snow accumulation	Level 4	Same as above plus 15 additional plow trucks (4 with backup spreaders)
Six inches or more snow accumulation with slow melting	Level 5	Haul out of plowed snow
Ten inches or more snow accumulation	Level 6	• General deicing application • Use of contractors to plow packed snow • Delayed treatment on non-priority routes