

CITY OF AMARILLO  
SNOW & ICE CONTROL  
POLICY/PLAN

This policy is to supercede all other policies regarding this subject and shall be predominately in effect during late fall, winter, and early spring seasons. The purpose of this document is to set in order a uniform plan or level of service to be followed during emergency snow and ice storms. Implementation of plan shall be directed by the Street Department, a division of Public Works.

**General Oversight of Snow/Ice Control Plan:**

This program will be implemented at the department head level, monitored through the Public Works Division. When conditions warrant, the Street Superintendent will initiate 24 hour emergency operations, by dividing the Street Department personnel into two 12 hour shifts (day/night). Specific responsibilities for each supervisor in charge are as follows:

The Street Superintendent will be responsible for supervising/monitoring all call-outs and detail of personnel on **day** shift assignments during major ice or snow storms.

The Superintendent will coordinate all day shift emergency operations and will determine when these functions need activating.

Two Street Supervisors will be assigned to the day shift emergency operations, and will oversee the salt/sand spreading and snow plowing operations.

The Assistant Street Superintendent will be responsible for supervising/monitoring all call-outs and detail of personnel on **night** shift assignments during major ice or snow storms. The Assistant Superintendent will coordinate all night shift emergency operations and will determine when these functions need activating.

Two Street Supervisors will be assigned to the night shift emergency operations, and will oversee the salt/sand spreading and snow plowing operations.

When conditions warrant, other departments and/or divisions may provide personnel and/or equipment to augment Street Department resources, or perform specific snow and ice control operations outlined in this plan. Each department and/or division will assign a representative to each appropriate shift to provide coordination with the Street Superintendent or Asst. Superintendent, and supervision of their personnel or assigned operations.

## **Activation/Call-Out Procedure:**

Generally, the Street Department supervisory personnel will monitor weather reports, VEOCI, and the current conditions to determine when the activation/call-out procedure is to be activated. VEOCI (Virtual EOC Internet) is an online tool the City of Amarillo utilizes to track emergency operations. Weather conditions, traffic problems, resource needs, etc. will be posted and routinely updated in VEOCI throughout the winter storm event.

After normal working hours, the Police Department will call the Street Department pager/cell phone and this individual will contact the Assistant Street Superintendent for the condition at hand. In addition, the night Service Center watch guard will notify the Assistant Street Superintendent when weather conditions warrant. If any of the preceding methods have failed to alert emergency personnel, the Police Department will refer to the regular departmental call-out list in the order listed.

## **Preparation of Equipment and Training:**

All equipment should be inspected in early fall (October) for various trouble points. Sand spreaders should be checked for pumps, hoses, fittings, spinners, augers, controls, and all attachments should be carefully observed. Plow units should be checked for cutting edges, power hoist, air and hydraulic systems, and other operational components. All vehicles should be checked for proper wiring, lighting, signals, and defrosting/heating elements. In addition, a check on inventories of spreader and plow parts, automotive supplies, and de-icing materials is a necessity.

All plows and spinner units will be made ready for operation (loaded, attached, and stored) in anticipation of need based upon the latest Weather Bureau forecast - the day the forecast is received.

All supervisory personnel and operators, including fill-in operators, must successfully complete the Winter Weather Operations Training course, presented by the Street Department, prior to performing any of the snow and ice control operations outlined in this plan. The training course is designed to instruct operations personnel on how to safely and effectively respond to winter storms. The course will consist of a classroom presentation and a hands-on learning exercise to provide personnel with the following:

1. Each employee will be given an overview of the City of Amarillo's Snow & Ice Control Policy/Plan.
2. Each employee will develop a thorough understanding of the proposed snow & ice control procedures and levels of service established for varying storm conditions.
3. Each employee will understand how to operate and maintain snow plows, spreaders, loaders, or motor-graders.

4. Each employee will understand how chemicals and abrasives (salt and sand) work to combat ice so they know how and when it should be applied.
5. Each employee will become thoroughly familiar with their responsibilities, and will be trained on the equipment that they will be required to operate during emergency conditions.
6. Each employee will be given a dry run over areas (routes) to be covered during actual snow or ice control operations.
7. Each employee will be educated on the potential hazards and safety procedures identified in the Job Safety Analysis (JSA) for each emergency operation.
8. Each employee will receive hands-on training from a tenured, more experienced employee.

**Emergency Operations Implemented Based on Storm Conditions:**

<u>Condition No. 1</u>	<u>Equipment/Materials Necessary</u>
Temperature near 30 degrees, roads and overpasses <u>wet</u> with falling precipitation.	Apply light application of granular chemical de-icer to all overpasses.
 <u>Condition No. 2</u>	
Temperature below 30 degrees or falling with precipitation, overpasses beginning to freeze and pavement <u>wet</u> or sticky.	Apply granular chemical de-icer to all overpasses (medium application) at 4-6 hr. intervals and run <u>all</u> salt routes with light application of salt/sand mixture.
 <u>Condition No. 3</u>	
Temperature below or near 20 degrees, streets and overpasses covered with glaze, slick ice. Precipitation still falling.	Same procedure as No. 2, but heavy application of granular de-icers and salt/sand mix.
 <u>Condition No. 4</u>	
Temperature below or near 20 degrees and falling, precipitation-dry snow, pavement and overpasses dry, very windy.	Check conditions periodically for drifts and remove before blockage occurs, no granular de-icer applications, salt any hard, icy accumulations found.

Condition No. 5

Temperature below or near 20 degrees with lower readings at night, medium snow falling with good chance of wind, pavement wet and snow accumulating

Equipment/Materials  
Necessary

Activate motorgraders and/or truck-mounted snow plows with emphasis on preventing drift accumulation on arterial streets around hospitals, outlying Fire Department units, and open areas. All sanding units should also be dispatched to cover their routes, applying medium to heavy doses of sand/salt mix so long as snow is not covering up what has previously been applied. (Most sanding operations to cease when it becomes necessary to clear arterials of accumulated snowfall)

Condition No. 6

Temperature in 20 degree range or lower, snow is continuing to fall hard and has reached 3-6 inches, with forecast of additional amounts. Pavement is covered and traffic has begun to turn snow into ice packs.

All available snow removal equipment should be activated and on assigned routes. Motorgraders should pair with truck-mounted plows or like units pair to form working teams. All de-icer and salt applications should be applied heavily and at regular intervals, monitored closely for results. Arterials would normally be salted/sanded after snow removal is complete or as otherwise appropriate.

**Overpass Procedure:**

The overpass procedure will be overseen by the Street Supervisors on duty. A total of nine overpasses (See Attachment #1) are maintained under this plan. Two Drainage Utility Department 1-ton trucks, equipped with 1 ½ yard spreader boxes, will be utilized to spread the de-icing materials. As stated in Condition 1, 2, and 3, overpass decks shall be treated in one of two manners:

1. Light application of granular chemical de-icer when temperatures are borderline (30 degrees) and expected to rise or remain constant during precipitation.
2. Medium to heavy chemical treatment if conditions worsen and deck becomes ice covered. Application every 4-6 hours. May combine with salt/sand material and/or plowing of the overpasses due to buildup of snow or ice. The use of salt/sand material on overpasses should be used only if granular de-icer is not keeping overpasses clear of freezing snow and ice. This will minimize the corrosive effects to the concrete overpasses.

Under Condition #6, the Drainage Utility Department will administer the overpass procedure to enable Street Department resources to concentrate directly on the snow plowing procedure.

**Salt/Sand Spreading Procedure:**

The salt/sand spreading procedure will be overseen by the Street Supervisors on duty. Eight salt/sand routes have been organized to enable the salt/sand mixture to be spread at every signalized intersection located on the City’s primary arterial and collector streets. Each salt/sand truck operator will begin salting 300 ft. in advance of traffic signals to provide ample stopping distance for traffic approaching the red light. The salt/sand mixture is an even (50/50) blend to provide an ice melting capability as well as traction for vehicles.

The City equipment and personnel necessary to properly perform the salt/sand spreading procedure are as follows:

<u>Route</u>	<u>Salt/Sand Truck</u>	<u>Shift #1 (8am-8pm)</u>	<u>Shift #2 (8pm-8am)</u>
1	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
2	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
3	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
4	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
5	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
6	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator I
7	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator II
8	Tandem Truck w/ 10 yd Spreader	Equipment Operator I	Equipment Operator II
Downtown (As Needed)	Single-Axle Trk w/ 5 yd Spreader	Equipment Operator II	Utility Worker
	Single-Axle Trk w/ 5 yd Spreader	Equipment Operator II	Utility Worker
Loading @ Lot	Loader	Equipment Operator II	Equipment Operator II

**Snow Plowing Procedure:**

The snow plowing procedure will be overseen by the Street Supervisors on duty. When it becomes necessary to clear arterials of accumulated snowfall, the personnel and equipment utilized during the salt/sand spreading procedure will transition to the snow plowing procedure.

In general, the following priorities will be observed when clearing snow:

1. Arterials adjacent and leading routes to hospitals, any outlying Fire Department stations subject to drift closure, main arterials adjacent to open fields and subject to drift.
2. Other primary arterials (W. 34<sup>th</sup>, Coulter, Grand, etc.).
3. Collector streets (Avondale, Line Ave., Quarter Horse Dr, etc.)
4. Downtown business district.

5. Residential streets adjacent to public school facilities and collector streets leading to public schools.
6. Unusual drifting in alleys with rear-entry garages.

Note: No clearing of residential streets, except to or around schools, is planned under this policy.

The City's primary arterial streets have been organized into 6 plow routes (See Attachment #2), which include a Hospital Route and a Contractor Route. The Hospital Route is structured to clean the Medical Complex first, with other adjacent arterials to follow. Due to limited resources, the Street Department must utilize a local contractor to maintain one of the plow routes. Early in the Fall, the Street Department will obtain a commitment from a local contractor for the rental of two motor-graders and a loader (with operators) to enable the contractor to maintain the designated Contractor Route upon request from the City. In the event of blizzard conditions, other contractors would be contacted to provide additional equipment and personnel if available. The streets in the downtown business district will be worked the first night or weekend after all the arterials are open. Schools will be worked as listed in the priority schedule, immediately following the downtown business district.

Plowing will begin very early during snowfall (2-3 inches), using motorgrader or truck-mounted plow units first to control drifting or excess accumulation in certain trouble areas (Coulter @ W. 9<sup>th</sup>, Soncy Road Fire Station, N.E. 24<sup>th</sup>, and E. 34<sup>th</sup> & Osage). Plowing of these critical areas will be a continuous, non-stop preventative operation so long as snow is falling and there is potential of drifting accumulation; plowing is to be from the outside lane first (gutter) with additional lanes toward the middle of street if time allows. Heavy emphasis should be placed on controlling accumulations in these areas before they become unmanageable.

If conditions worsen and snowfall reaches 3-6 inches with additional amounts likely, all motor-graders and snow plow units will be put into service to form working teams. These teams will work an assigned route, the motor-grader first opening up the gutter or outside lane on each arterial to facilitate drainage and prevent ice accumulation, with the faster, more mobile truck unit to later open additional lanes toward the center of the street. The motor-grader should always, when possible, work well in advance of the truck to allow for the additional mobility of the faster unit. Under this arrangement, truck-mounted units should also be able to pull away from the route for short periods to check or re-plow trouble spots previously bladed but subject to quick drifting, and then later join with his team member.

Working teams consisting of like or homogeneous units (blade to blade and plow with plow) can also be assembled to best address the situation at hand. It is recommended that like units will be paired before snow becomes compacted to make optimum use of snow plow capabilities.

All plowing should be thorough and as complete as time will permit with emphasis not to block or obstruct any driveways, intersections, turn-outs, or parked cars. Parked or stranded cars needing removal will be handled through the Police Department.

The City equipment and personnel necessary to properly perform the snow plowing procedure are as follows:

<u>Route</u>	<u>Type of Equipment</u>	<u>Shift #1 (8am-8pm)</u>	<u>Shift #2 (8pm-8am)</u>
Hospital	Motor-grader Tandem Plow Truck Single-Axle Plow Truck Loader	Equipment Operator IV Equipment Operator I Equipment Operator II Equipment Operator II	Equipment Operator IV Equipment Operator I Utility Worker Equipment Operator II
1	Motor-grader Tandem Plow Truck Tandem Plow Truck Loader	Equipment Operator III Equipment Operator I Utility Worker Utility Operator	Foreperson I Equipment Operator I Utility Worker Equipment Operator II
2	Motor-grader Tandem Plow Truck Tandem Plow Truck Loader	Equipment Operator III Equipment Operator I Utility Worker Equipment Operator II	Equipment Operator III Equipment Operator II Utility Worker Equipment Operator II
3	Motor-grader Tandem Plow Truck Tandem Plow Truck Loader	Equipment Operator III Equipment Operator I Equipment Operator I Equipment Operator II	Equipment Operator III Equipment Operator I Utility Worker Utility Operator
4	Motor-grader Tandem Plow Truck Single-Axle Plow Truck Loader	Equipment Operator III Equipment Operator I Equipment Operator II Utility Operator	Equipment Operator II Equipment Operator I Utility Worker Utility Operator
Loading	Loader	Equipment Operator II	Equipment Operator II

This plan allows for full coverage as described in condition #6 where all emergency snow and subsequent or follow-up ice equipment is activated (motor-graders, plow trucks, and loaders). In situations where all of these forces may not be necessary, such as ice storms where no snow removal is required, the supervisor shall have the responsibility of altering the base plan in order to select the most qualified and experienced personnel for the situation at hand.

In situations where fill-in or additional operators are needed, qualified operators from the Drainage Utility Department will be utilized first, followed by operators from other City departments if available. All operators utilized from the Drainage Utility Department will be organized and grouped together within the emergency operations, and supervised by the Drainage Utility Supervisor on duty.

## **Downtown Snow Removal:**

During the downtown business district snow plowing operations, the snow is plowed from the gutter and placed in a windrow in the center of the street. A majority of the streets in the downtown business district are constantly shaded from the tall buildings, which prevents the windrows of snow from melting. Therefore, the windrows of snow must be loaded and hauled off of the downtown business district streets to designated areas (See Attachment #3), where the snow can be stockpiled until it melts. Once each of the snow plowing priorities listed in the snow plowing procedure has been thoroughly addressed, the Street Department will utilize all available 2 ½ ton dump trucks, 12 yard dump trucks, and front-end loaders to load/haul the snow off the downtown streets to the designated stockpile areas. Traffic control and flagger personnel will be required to direct traffic while each street is being cleared.

## **Inaccessible Alleyways Preventing Solid Waste Collection:**

During heavy snow or drifting conditions, some alleyways may become inaccessible preventing solid waste collection in a timely manner. Upon notification by the Solid Waste Superintendent, any available backhoes and/or loaders from the Street Department and/or other Public Works Departments will be utilized to open any inaccessible alleyways. Solid Waste Supervisors will be responsible for identifying any inaccessible alleyways and prioritizing which alleyways need to be opened first. Emphasis will be placed on leveling the snow in the alley to a depth of approximately 6 inches, making the alley passable for Solid Waste vehicles.

## **Safety:**

The main purpose of the snow & ice control operations is to provide safe travel for motorists. In doing so, City employees must never overlook their own safety. Safety is paramount during any winter weather emergency.

Employees must follow all safety procedures identified for each emergency operation, and obey all traffic laws.

Safety briefings will be provided to all employees at the beginning of each shift to inform employees of new safety concerns, changing weather conditions, hazardous road conditions, etc.

When extreme weather conditions, such as a “white-out blizzard”, pose an imminent danger to operations personnel and motorists, all snow & ice control operations will be suspended until the weather conditions improve and it is safe to continue. The Emergency Operations Center (EOC) will be responsible for monitoring the weather conditions and determining when operations will be suspended or resumed. In the event the EOC is not operational, the Street Superintendent or Asst. Superintendent on duty will assume this responsibility.



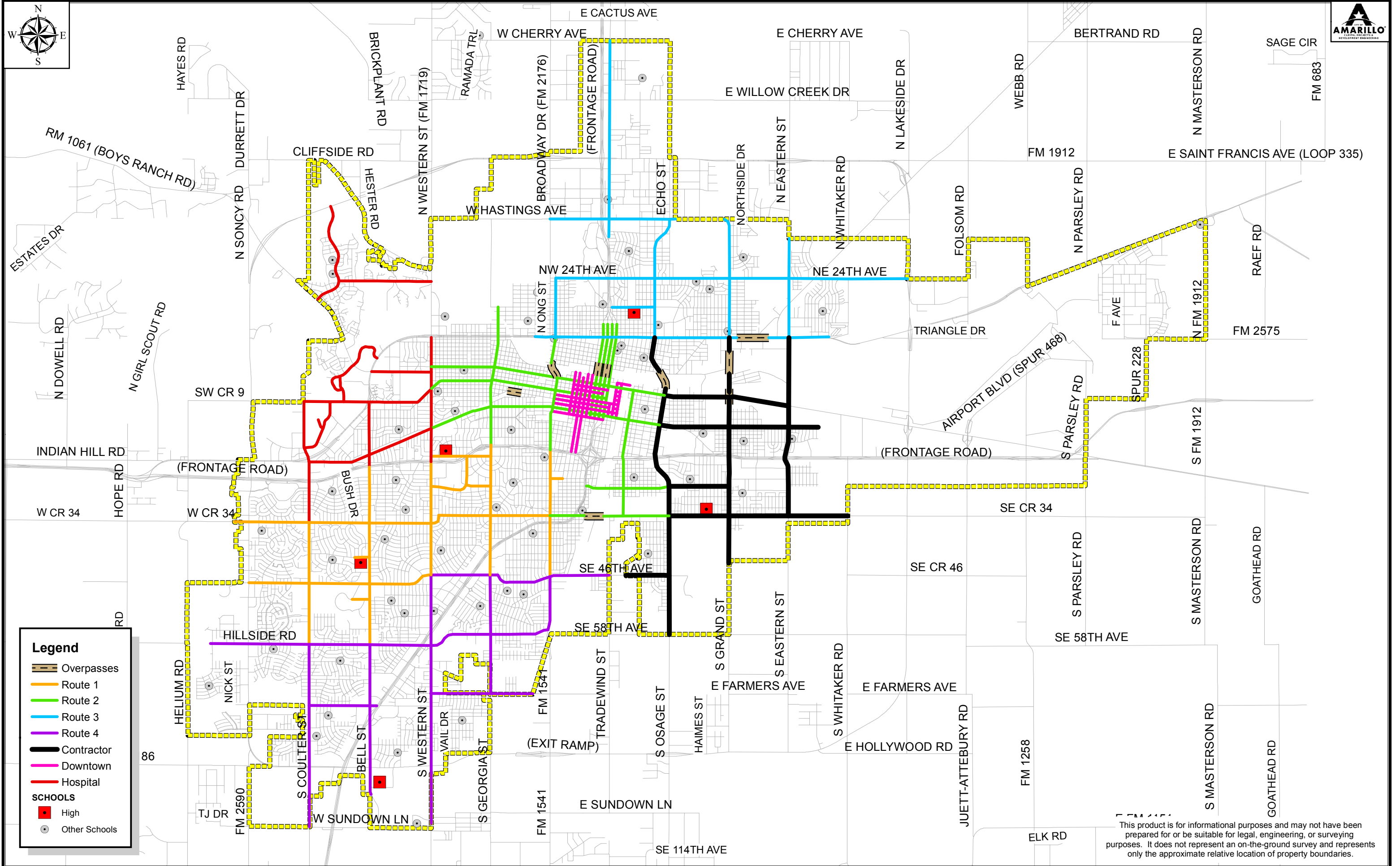
**Service Request Procedure:**

It is the operator's primary duty to service the route to which he is assigned when plowing snow, salting intersections, or working school routes. Any service request that would require a major deviation in emergency service scheduling should be forwarded to the immediate first-line supervisor in control for further consideration. As a general rule, exceptions should be rare and justifiably warranted.

**Exceptions to General Policy:**

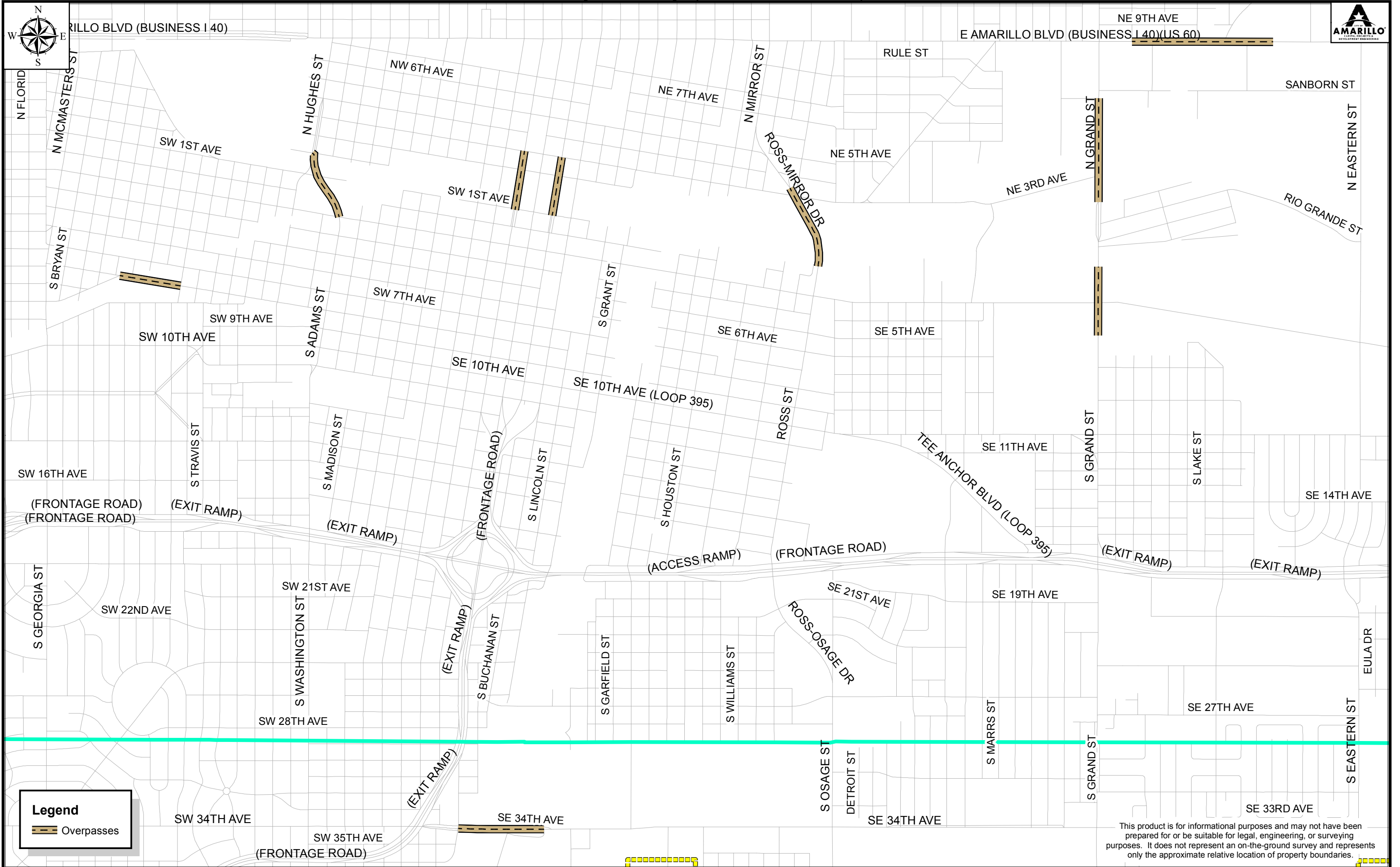
This policy is to remain in effect unless pre-empted by the City Manager through request for assistance from the Texas National Guard or other governmental agency to assist in extreme, immobilizing blizzard or similar weather conditions.

# Snow Route Plow Map (Attachment #2)



This product is for informational purposes and may not have been prepared for or be suitable for legal, engineering, or surveying purposes. It does not represent an on-the-ground survey and represents only the approximate relative location of property boundaries.

# Overpass Map (Attachment #1)



**Legend**

Overpasses

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