



SNOW & ICE PLAN

Street and Drainage Department
of the
City of Benton

305 West Hazel St.

Benton, Arkansas 72015

(501) 776-5990

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SAFETY NOTICE

1. Situational Awareness. Snow and ice operations demand a high-level of situational awareness. The operator must multi-task communications and the operation of equipment while driving heavy loads around the most challenging areas of town (narrow, residential, car-lined streets, steep hills, sharp curves, dangerous intersections, and/or while surrounded by inexperienced drivers and unpredictable traffic) in adverse conditions (slippery, uneven surfaces – often at night or during heavy snow or thick, freezing fog).
2. Equipment Pre-Checks. Thoroughly complete vehicle and equipment pre-checks in the yard prior to field operations. Ensure full visibility of road from cab. Install chains as conditions require. Turn / break sand if frozen. Check emergency kit for flares and windshield deicer.
3. Overhead Lights. Use overhead lights during snow and ice operations.
4. PPE. Bring a change of warm, dry gear (e.g., for when assisting other vehicles, dealing with equipment, or just replacing cold/damp clothing).
5. Traffic. Using best judgment, pause sanding and de-icing or slow plowing operations as oncoming traffic passes or if other vehicles are too close.
6. Assistance. Request a partner if uncomfortable with a solo assignment.

RESPONSIBILITIES

The Streets and Drainage Department- Road Maintenance Division is responsible for ice and snow control on City streets. The Streets AD or designee will be responsible for coordinating response operations and organizing personnel. When conditions warrant more personnel than can be supplied by the Road Maintenance Division, Streets AD, or his designee will request assistance from other divisions/departments within the City. Others may be asked to help place signs in problem areas. The Police Department will assist in providing 24-hour monitoring of street conditions.

BEFORE THE EVENT

Monitoring. Before cold weather events, the Street Maintenance Division will closely follow weather reports and, along with the Police Department, will provide 24-hour monitoring of street conditions.

Signage. Verify/secure the availability of signs that may be needed, such as: “No Parking on Hill,” “Local Access Only,” “Watch for Ice,” and/or “Ice: Proceed at your own risk” for dangerous hills (e.g., Ferguson Hill, Gattin Hill, Hill Street, etc.).

Equipment. Install the plows and sanders on the dump trucks. Ensure adequate stock of sand; load the dump truck(s) with sand. Check with the Mechanic regarding the availability and readiness of chains. Install,¹ fill, and test the deicer unit. Coordinate with the County’s Roads Department if needed.

Manpower. The Streets AD shall ask for volunteers and/or provide ample notice of shift modification/overtime. It is desirable to do shift modifications as early as possible before/during major events.

Pre-treatment. When frozen moisture, freezing rain, and/or snow accumulation are imminent / anticipated, as determined by the Streets AD, roadway surfaces will be pretreated with a brine mixture.² Pretreatment will be applied to priority intersections, hills, bridges, sharp roadway curves, and critical emergency access/egress points. When at all possible, this shall occur during rain-free conditions on the last regular workday before the freezing precipitation event.

¹ Install deicer unit on the four-wheel drive, half-ton pick-up, or heavier truck.

² Brine is a solution of salt (usually sodium chloride, NaCl) in water. An ideal brine is one that is approximately 23% NaCl (3.5% is typical of seawater). Target application rates are roughly 25 gal / mile and for pre-treatment and about 50 gal / mile for de-icing. Future updates of this plan should evaluate application rates for optimal control snow and ice control without undo cost and environmental impact.

DURING THE EVENT

Throughout the event, until conditions are safe and stable, the Street Maintenance Division will fully deploy its snow and ice control tools (discussed below), as conditions warrant, during regular working hours. Additionally, the city may hand-apply salt, limit access to a street, and/or post caution signage. To ensure safe roadway conditions, the Streets AD, or his / her designee, may authorize overtime; however, multiple or consecutive days of overtime require approval of the Streets and Drainage Director, or his designee.

Traction Sanding. Apply sand during all snow and ice conditions to priority areas, including critical emergency areas, intersections, sharp curves, and steep hills. This should be a two-person operation, given the size and weight of the (two-wheel drive) dump truck on residential streets in adverse conditions – especially if the sand is prone to freezing / lumping and/or if the sander is delivering uneven or inconsistent applications. A few tips are captured below:

- Conserve grit with applications ≥ 100 -feet before intersections and hill sections.
- Work in tandem with another rig to knock out ruts before gritting.
- Use the chains to beat up or roughen the hardened snow/ice surface layer.

Plowing. Plow priority streets when snow depths reach a plowable amount (2 - inches or more). This is a two-person operation when combined with sanding.

Chemical Control (De-Icing). Apply brine to priority streets – especially over bridges. This can be a one-person operation, depending on experience and conditions.

Signage. Deploy signs, as needed, particularly on dangerous hills – with or without direction from BPD. Coordinate with Communications for assistance. Notify Communications and Streets of any closures or partial closures.

Rock Salt. Hand-apply salt on sidewalks – particularly if school remains in session. Should de-icing not be effective, hand-apply salt at major intersections.

Communications. Consider forwarding relevant calls to the Streets and Drainage front desk as needed. Debriefing at shift change is important to ensure (efficient, effective) continuity of operations.

Routes. Pretreatment, sanding, plowing, and de-icing routes will be established based on the following priorities (see also the table on the following page):

- a. Emergency access/egress points (e.g., Hospital, Police, Fire).
- b. Hills and curves
- c. Principal Arterials (Major routes and Bridges)
- d. Minor Arterials
- e. Collectors
- f. Residential streets- Snow or ice will not be removed from residential streets at any time.
- g. Alleys - Snow or ice will not be removed from alleys at any time.

PRETREATMENT ZONES

MARKET @ WILLOW ST (BRIDGE)	CITY HALL PARKING LOT
SECOND STREET OVERPASS	N MARKET @ HOSPITAL HILL
HILL STREET (OFF STEWART, UPHILL ONLY)	FERGUSON-WALMART HILL
SILICA HEIGHTS (OFF 35 UPHILL)	SUNSET @ ALCOA
PARKWAY BRIDGE	SMITHERS @ ALCOA
GATTIN (OFF PARKWAY UPHILL ONLY)	NORTH & HILAND
CYNAMIDE BRIDGE	LYLEDALE BRIDGE (UP AND DOWN HILL TOWARD RIVER)
ALCOA ROUNDABOUTS	RIVER OAKS (UP AND DOWN HILLS)
NORTHSHORE HILL @ JASMINE	SHENANDOAH BRIDGE, HILL @ MT LANE, BRIDGEWATER
HURRICANE LAKE BRIDGES	
CONGO	VALLEY VISTA (HILL)
CONGO ROUNDABOUT	HARTFORD HILLS
MILITARY	BROWNWOOD BRIDGE

SNOWPLOW ROUTES

MAIN (A)	HAZEL (C)	MILITARY (C)	S MARKET (C)
MARKET (A, B)	WILLOW (C)	NORTHSHORE (B, C)	SOUTH (C)
CONGO (C)	EAST (C)	ALCOA (C)	AIRLANE (C)
SHENANDOAH (A, B)	JOHNSON (C)	PARKWAY (C)	MARY KAY (C)
SALT CREEK (C)	REED (C)	GATTIN (B, C)	RIVER (C)
LONGHILLS (C)	SECOND ST (B, C)	AARONFIELD (C)	SEVIER (C)
N OLIVE (C)	STEWART (C)	SMITHERS (B, C)	NORTH (C)
KENWOOD (C)	S NEELEY (C)		BORDER (C)

AFTER THE EVENT

- Sweep the streets.
- Recover any deployed signage, cones, or barricades.
- Wash vehicles and equipment to remove any residual brine.
- Replenish sand.
- Replenish brine as necessary, or clean and winterize de-icing unit and properly stow away.
- Clean the sanders and plow, as necessary, and properly stow away.
- Discuss operations and revise the plan as necessary.
 - After larger events, the Streets AD will coordinate with the Streets and Drainage Director to host a formal debriefing meeting with representatives from the affected departments and/or external groups.

Arkansas Department of Transportation Maintained Roads:

Interstate 30 and all I-30 service roads, overpasses, and approaches.

Highway 5: both South and North, aka Old Stagecoach Rd and the Old Saline River Bridge Rd

Highway 88: Military from Carpenter at East St to Alcoa, then Alcoa to the Railroad tracks

Highway 35: Carpenter St, East St. from Military to Edison to Parkway, thence south

Highway 183: From the intersection of Edison and Parkway, thence east

Highway 229: aka Old 67 South

Notice to Residents:

Emergency access and emergency requests from Fire, Police, and EMS are always the first and immediate priority of the Road Maintenance Division. Work crews will be reallocated from lower priority areas to respond to emergency calls as needed.

When encountering Road Maintenance Division work crews, for your safety and ours please slow down, maintain a minimum of 100 feet of distance, and do not attempt to pass.

CITY OF BENTON EMERGENCY PHONE NUMBERS

General Emergency	911
Communications	501-776-5958
City Hall	501-776-5900
Fire Department	501-776-5960
Police Department	501-776-5948
Utilities	501-776-5923
Utility Outage Hotline	501-776-5930
Streets and Drainage	501-776-5990
Streets/Drainage After Hours Emergency Hotline	501-249-1374
Parks Department	501-776-5970
Animal Control	501-776-5972

STATE AND COUNTY EMERGENCY PHONE NUMBERS

County Road Maintenance	501-303-5690
State Highway District 6, Saline County Local Office	501-315-8390
State Highway After Hours Emergency Hotline	501-569-2266
Arkansas State Police	501-618-8000
Saline County State Patrol Captain	501-618-8282
Sheriff's Department	501-303-5609

EMERGENCY PHONE NUMBERS

STREETS/ STORMWATER

<u>Name</u>	<u>Work Cell</u>
John Richey	501-317-8083
Doyle Stroud	501-249-1374

OTHER CITY EMPLOYEES

	<u>WORK</u>
John Parton	501-303-7951
Bruce Thomas	501-722-8378