THE CORPORATION OF THE TOWNSHIP OF MANITOUWADGE

BY-LAW NO. 95-12

Being a By-law to establish a policy regarding snow and ice control

WHEREAS it is deemed advisable to establish a policy regarding snow and ice control on roadways and sidewalks within the Municipality;

NOW THEREFORE the Council of the Corporation of the Township of Manitouwadge enacts as follows that:

1. the report titled "Snow and Ice Control Policy" prepared by the Public Works Superintendent attached hereto as Schedule "A" to this By-Law be adopted;

2. this By-law comes into force and takes effect upon the date of its passing.

READ A 1ST AND 2ND TIME the 9th day of November, 1994 and READ A THIRD TIME AND FINALLY ENACTED as amended this 8th day of March, 1995.

Reeve

Clerk

SNOW AND ICE CONTROL POLICY

QUALITY STANDARDS FOR MANITOUWADGE PUBLIC WORKS DEPARTMENT

ROADWAY CLEARING:

The maximum allowable snow accumulation for commencing snow clearing operations on arterial streets (Station, Manitou East, Manitou West, Ohsweken Roads, and Adjala Avenue) is 5 cm. (2 in.). On residential streets it is 10 cm. (4 in.). Arterial streets known as Class One are brought up to satisfactory standards before work will begin on residential streets. All plowing is to be completed about 8 hours after the end of the average storm.

SIDEWALK CLEARING:

Sidewalk clearing operations normally begin at the end (or near the end) of each storm after there has been a minimum accumulation in excess of 5 cm. This operation is usually delayed to allow road clearing to be well underway to prevent the blocking of sidewalks where sidewalks intersect streets. After an average storm, sidewalk clearing should be completed by the end of the shift on the day following the storm (32 hours after the end of the average storm). Sidewalks in the downtown commercial areas will be cleared prior to snow removal operations.

SPECIAL PROVISION:

FOR the downtown sidewalk on the north side of Shebandowan Ave. - Barker Walk, from Mississauga Drive easterly for 275 m. (900 ft.) to Lakeview Terrace ONLY

When a snow storm has ended prior to 5:00 am the duty patrol person will (arrange to) plow all snow from the sidewalk prior to 6:00 am. This snow will be cleared to the south edge of the travelled lane for future removal.

SNOW REMOVAL:

Streets in the downtown commercial area with angle-parking have no room for storage of snow banks. This snow is to be removed during the first convenient graveyard shift after the end of the storm. Other snow removal is done as required. In some cases it is either casted or blown onto abutting Township property if there is sufficient unencumbered land to accommodate the windrow. If not, it is loaded and trucked to the snow dump.

FIRE HYDRANT CLEARING:

The clearing of hydrants snowed in by the storm, or covered by snow plowing operations, or where access to the hydrant is hampered by snow, will begin on the day following the storm. After the average storm all hydrants should be cleared within three days.

TRACTION IMPROVEMENT:

Class One streets shall receive priority treatment. The level of service on Class One streets will usually be bare pavement when temperatures permit the effective use of salt; generally during the early winter and late winter. Under conditions of extremely low temperatures in mid-winter and when salt would be ineffective, abrasives will be applied in lieu of salt.
The level of service for Class Two streets will generally be such that vehicular traffic has sufficient traction to operate.

Particular attention will be paid to intersections and inclines.

Sand is applied to sidewalk surfaces whenever icy conditions exist.

LEVEL OF SERVICE

SANDING AND SALTING:

For the purpose of planning the winter spreading operation, the objectives that apply to the township streets are as follows:

Class One:

When temperatures are above -18°C and rising, the objective of treatment is to achieve bare pavement by applying salt at a rate of .14 cubic metres or less per road km. within 2 hours after the start of operations. The time lapse between successive treatments, if required, should not exceed 6 hours.

When temperatures are below -18°C the objective of treatment is to provide a sanded surface by applying sand at an average of .35 cubic metres per road km. within a maximum of 2 hours from the start of operations. The time lapse between successive treatments, if required, should not exceed 6 hours.

CLASS TWO:

The objective of treatment is to provide a sanded surface by applying sand at an average rate of .35 cubic meters per road km. within a maximum of 6 hours from the start of operations. The time lapse between successive treatments, if required, should not exceed 10 hours.

Asphalt paved streets in this category should only receive salt whenever a build-up occurs or when in a sleet storm. Salt must never be applied to gravel roads.

PLOWING:

For the purpose of planning the winter plowing operations, the objectives that apply to the Township Streets are as follows:

CLASS ONE:

The objective of plowing should be to complete coverage of the streets in both direction in an average time not to exceed 3 hours from the start of operations. The time lapse between successive treatments (if required during longer storms) should not exceed 6 hours.

CLASS TWO:

The objective of plowing should be to complete plowing within 5 hours of the start of Class Two plowing. Successive treatments would not be carried out unless Class One streets have been provided the stated level of service.

GENERAL

When storms occur during the night, the objective will be to open all Class One streets by 8:00 am the next morning.

PLOWING ROUTES:

Plowing will always begin with the Class One roads.

Shop → via Station Road
→ via Manitou Rd. East → Geco Bridge
→ via Manitou Rd. East → Traffic Circle
→ via Ohsweken Rd. → Intersection Ohsweken & Sandpiper
→ via Ohsweken Rd.
→ via Adjala Avenue
→ via Manitou Rd. West → Intersection Manitou & McDonald
→ via Manitou Rd. West → Traffic Circle
→ via Manitou Rd. West
→ via Adjala Avenue
→ via Ohsweken Rd. → Traffic Circle
→ via Downtown (including ambulance base and hospital routes).
→ via pass thru Recreation Centre
→ Class Two residential areas.

PATROL:

1.) NIGHT TIME:

A one person patrol will begin a shift at 5:00 am to provide road condition inspections plus spot plowing and spreading services throughout the week. This person has authority to call out additional employees and equipment when required. The shift will continue from approximately mid-November to mid-April. Timing may be varied by the Public Works Superintendent depending on weather conditions.

2.) WEEKENDS:

A road conditions inspection will be conducted starting at 5:00 am by the employee carrying out the water and sewage station checks. This employee will be responsible to call out plow and sand equipment. The practice will continue for the same period as the 5:00 am shift.

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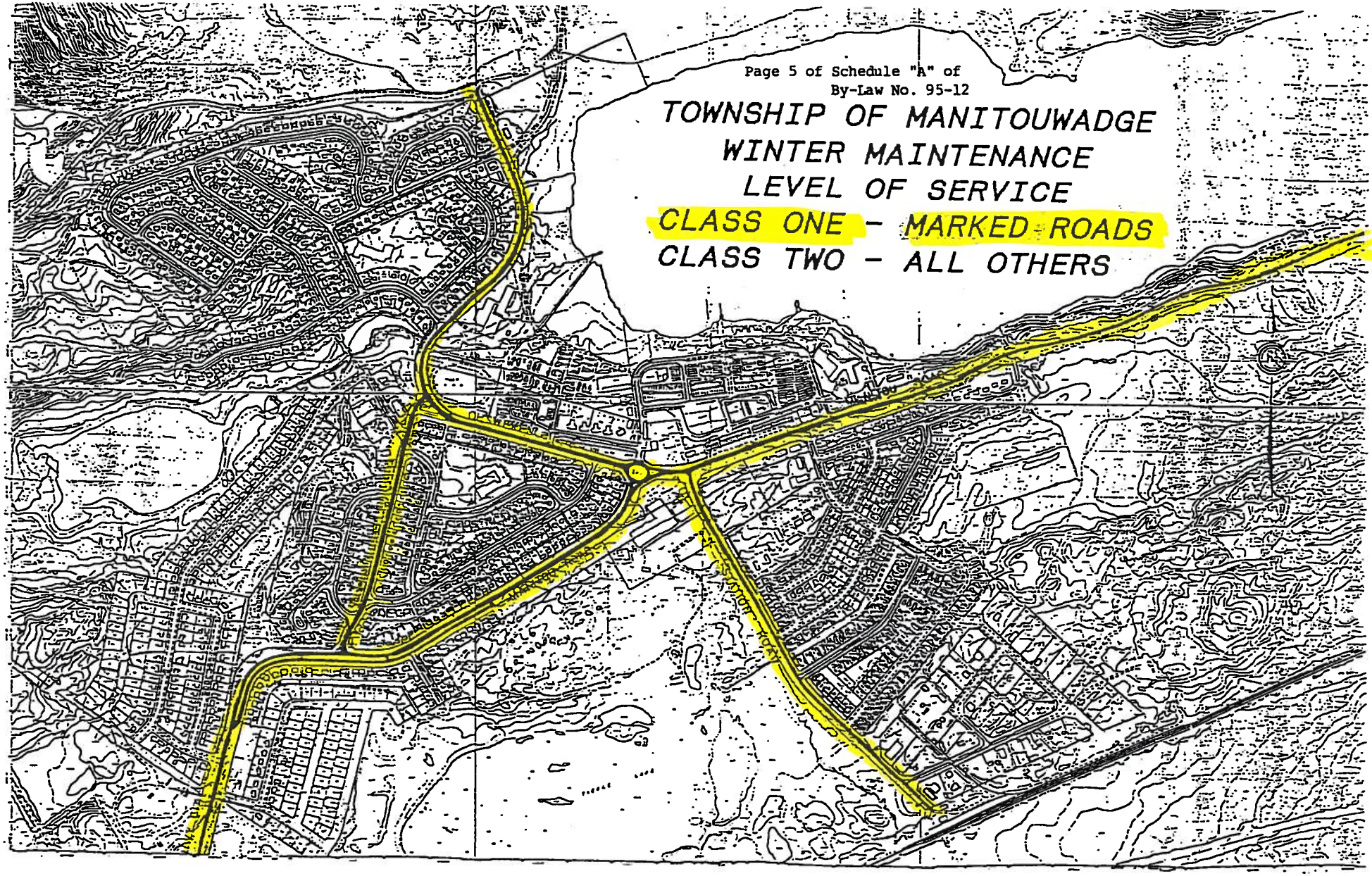
TOWNSHIP OF MANITOUWADGE
WINTER MAINTENANCE
LEVEL OF SERVICE

CLASS ONE - MARKED ROADS

CLASS TWO - ALL OTHERS



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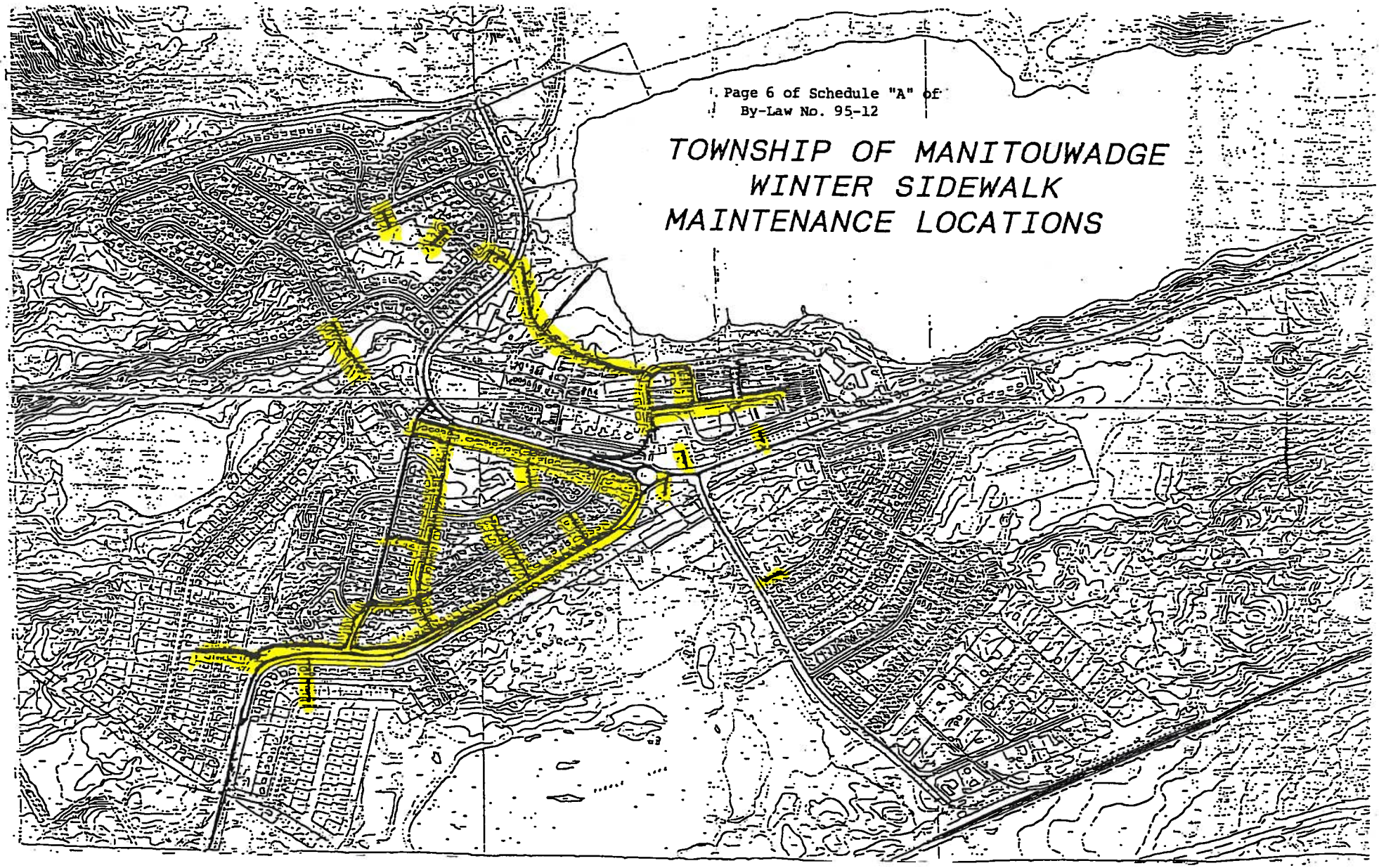
TOWNSHIP OF MANITOUWADGE
WINTER SIDEWALK
MAINTENANCE LOCATIONS



SUMMARY TABLE I
RECOMMENDED TREATMENTS FOR
CLASS ONE BARE PAVEMENT LEVEL OF SERVICE

	TEMPERATURE RANGE °c	TYPE OF PRECIPITATION	ROAD CONDITION	ACTIVITY	RECOMMENDED TREATMENT 4/		
					BEGINNING OF STORM	DURING STORM /1	AFTER STORM /2
1	Below -18°	Dry Snow	No Packing	Plowing	After 5 cm of snow accumulation	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	If Slippery	Follow after plowing; if slippery.	Slippery sections only
				Salting	No	No	If temp. rising, to bare or assist in baring pvt.
2	-18° to -12°	Dry Snow	No Packing Dry Pavement	Plowing	After 5 cm of snow accumulation	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	If Slippery	No	Slippery sections only
				Salting	No	No	If temp. rising, to bare or assist in baring pvt.
3	-18° to -12°	Dry Snow	Packing	Plowing	If temp rising, after salting. If temp falling, after 5 cm acc.	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	If temp falling, if slippery.	If temp. falling, follow after plowing, if slippery.	If temp. falling, slippery sections.
				Salting	If temperature rising before 2 cm accumulation	If temp, rising before 2 cm accumulation	If temp. rising, to bare or assist in baring pvt.
4	-12° to -7°	Dry Snow	No Packing	Plowing	After 5 cm of snow accumulation	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	If temp falling, if slippery	Follow after plowing, if slippery	Slippery sections only
				Salting	No	No	If temp. rising, to bare of assist in baring pvt.
5	-12° to -7°	Dry Snow	Packing	Plowing	0.5h after salting	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	No	follow after plowing, if slippery	slippery sections only
				Salting	If temp. rising, before 2 cm of snow accumulates	As necessary after plowing, to assist plowing	If temp. rising, to bare or assist in baring pvt.
6	Above -7°	Wet Snow	Packing Wet Pavement	Plowing	.05h after salting	Continuously	Bare pvt/wing shlds/ cleanup
				Sanding	No	Follow after plowing, if slippery	Slippery sections only
				Salting	Before 2 cm os snow accumulates	As necessary after plowing	To bare or assist in baring pavement.
7	Above -7°	Sleet or freezing rain	Possible Icing Wet Pavement	Plowing	No	No	Remove any slush
				Sanding	No	Yes	Slippery sections only
				Salting	When icing starts	Yes	Slippery sections only

Notes:
1. During storm conditions plowing should be undertaken to ensure that the accumulation of snow on the road surface does not exceed 5 cm.
2. Plowing after the storm should be done to achieve baring of the centre 2.5 m of pavement within 24 hours, whenever possible, and then bared full width when favourable weather prevails.
3. Winging back shoulders should usually be done only once after the storm.
4. Recommended treatment for various conditions shown on this chart should be used in MOST cases. However, unusual circumstances may necessitate departure frdm the recommended treatment.
5. Temperature rising means temperature to remain in or rise above temperature range.
6. Temperature falling means temperature to remain in or fall below temperature range.

SUMMARY TABLE II
CLASS TWO SNOW PACKED LEVEL OF SERVICE

	TEMPERATURE RANGE	TYPE OF PRECIPITATION	ROAD CONDITION	ACTIVITY	RECOMMENDED TREATMENT 1/		
					BEGINNING OF STORM	DURING STORM 2/	AFTER STORM 3/
1	Any Temperature	Dry or Wet Snow	Road, Snow Packed	Plowing	Continuously (maintain snow pack)		Wing back shoulders/scarify slippery sections/cleanup
				Sanding	No	On hills, curves and other hazardous locations	
				Salting	No	No	No (gravel surface) Yes (paved surface if -12°c and rising
2	Any Temperature	Sleet or Freezing Rain	Possible Icing	Plowing	No	No	Scarify slippery sections
				Sanding	No	Slippery Sections	
				Salting	No	No	No (gravel surface) Yes (paved surface) if -12°c and rising
3	Any Temperatures After Storm	No Precipitation	Drifting	Plowing			Continuously (maintain snow pack)
				Sanding			Slippery Sections
				Salting			No

1.) Recommended treatment for various conditions shown on this chart should be used in most cases. However, unusual circumstances may necessitate departure from the recommended treatment.

2.) During storm conditions, plowing should be continuous to ensure that the accumulation of new snow does not exceed 20 cm.

3.) Wining back shoulders should usually be done only once after the storm.