

Winter Maintenance Program 2017-18 Review

Transportation and Agriculture Services

September 18, 2018

Winter maintenance review

Presentation includes:

Overview of Strathcona County winter maintenance policies, bylaws, procedures and activities.

Highlights from 2017-18 winter maintenance season.

Challenges and considerations for 2018-19 winter maintenance season.



Key policies and bylaws

Winter Maintenance Policy SER-009-026

- Defines priority system for snow clearing on roads, sidewalks and parking lots - includes minimum snow depths and timeframes

Sidewalk Clearing Bylaw 36-2013

- Gives residents eight days from the start of a snowfall to clear the area adjacent to their property

Traffic Bylaw 16-2015

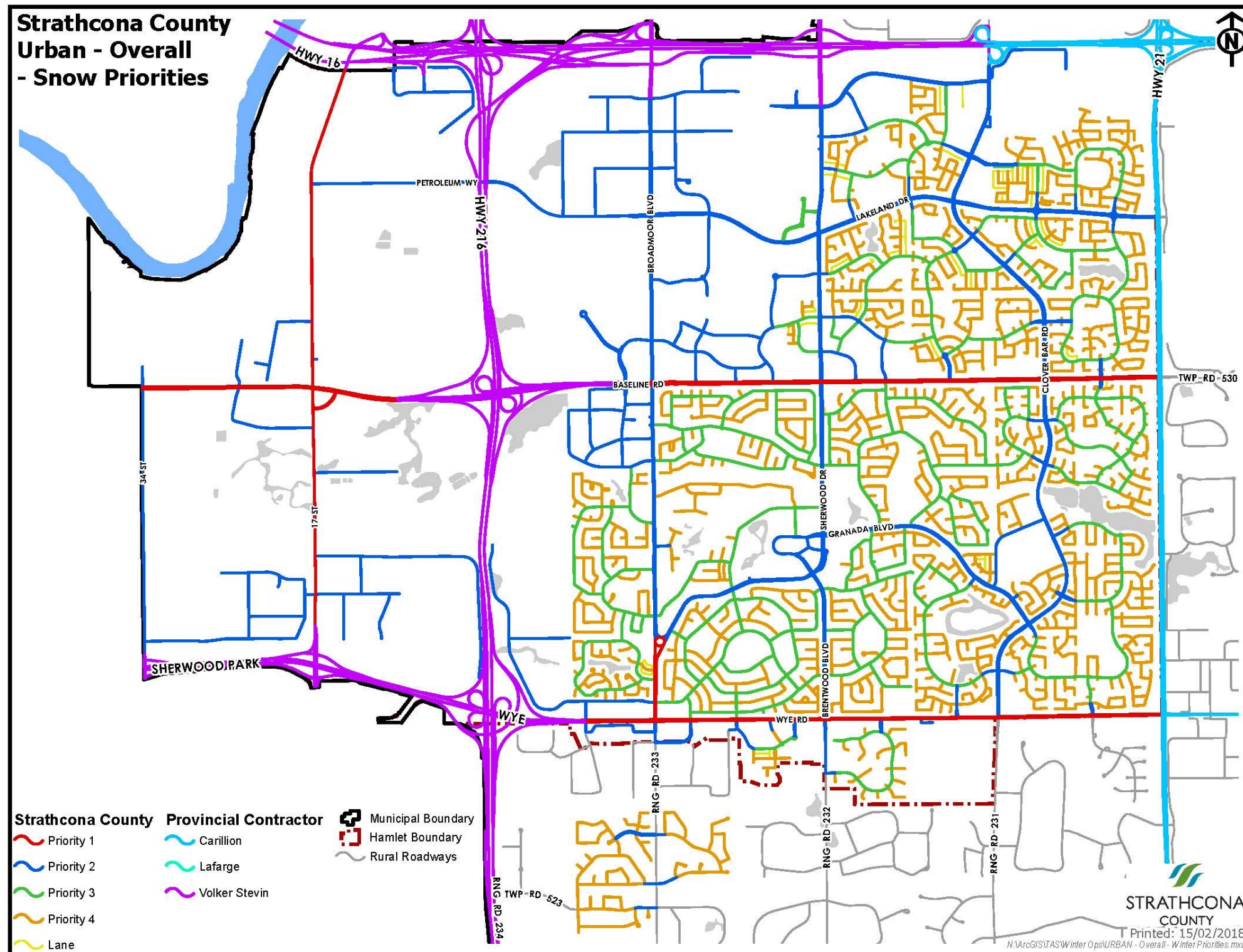
- After declaration of a snow route parking ban, residents have 24 hours to remove vehicles from affected streets
- Indicates curb ramps must be removed from the roadway between November 1 – April 15
- Notes that residents are not permitted to shovel snow from driveways and sidewalks onto the roadway

Snow clearing priorities

Urban and Rural service areas

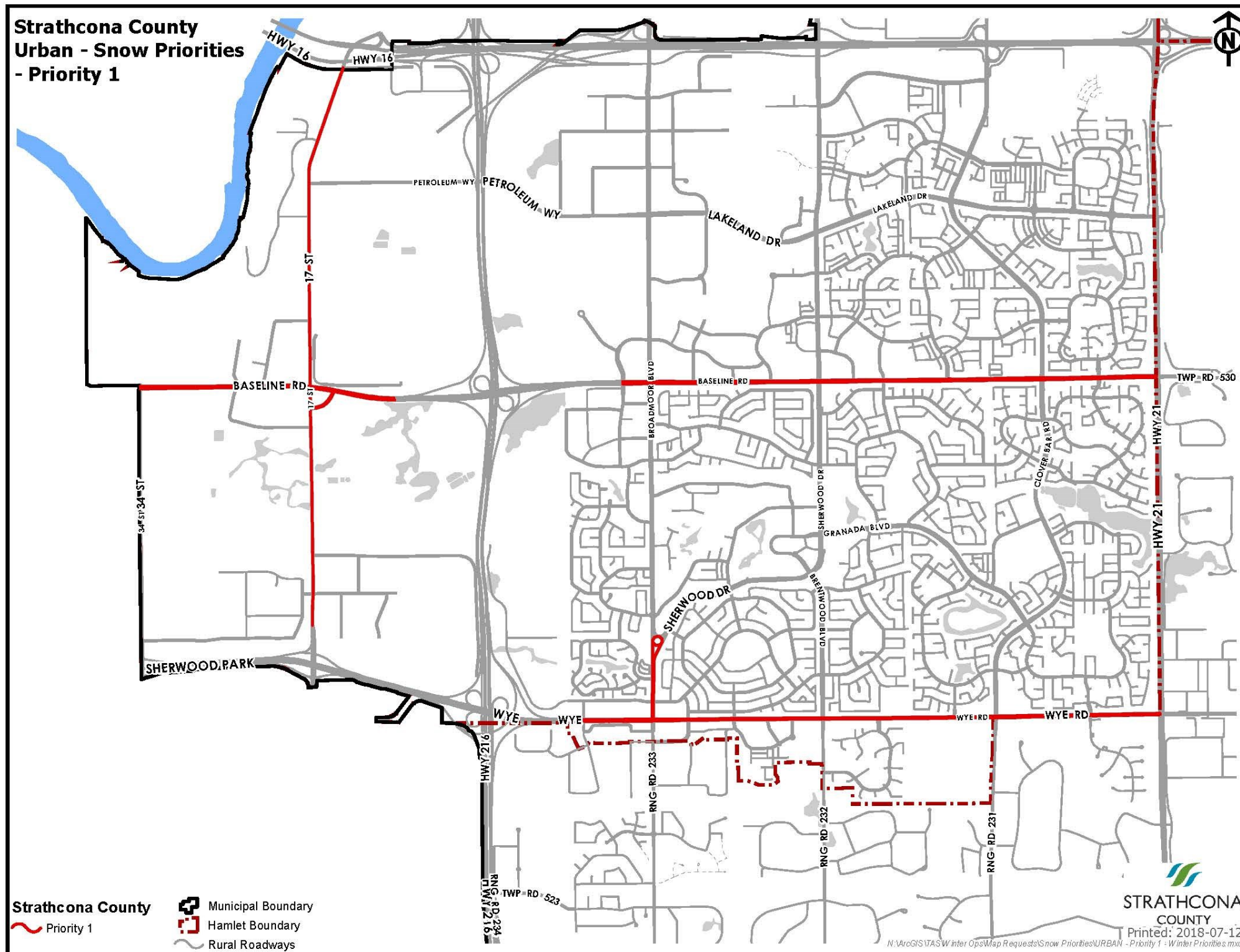
Winter maintenance service levels are established based on their priority ranking, and address both the urban service area and the rural service area.





Snow clearing priorities

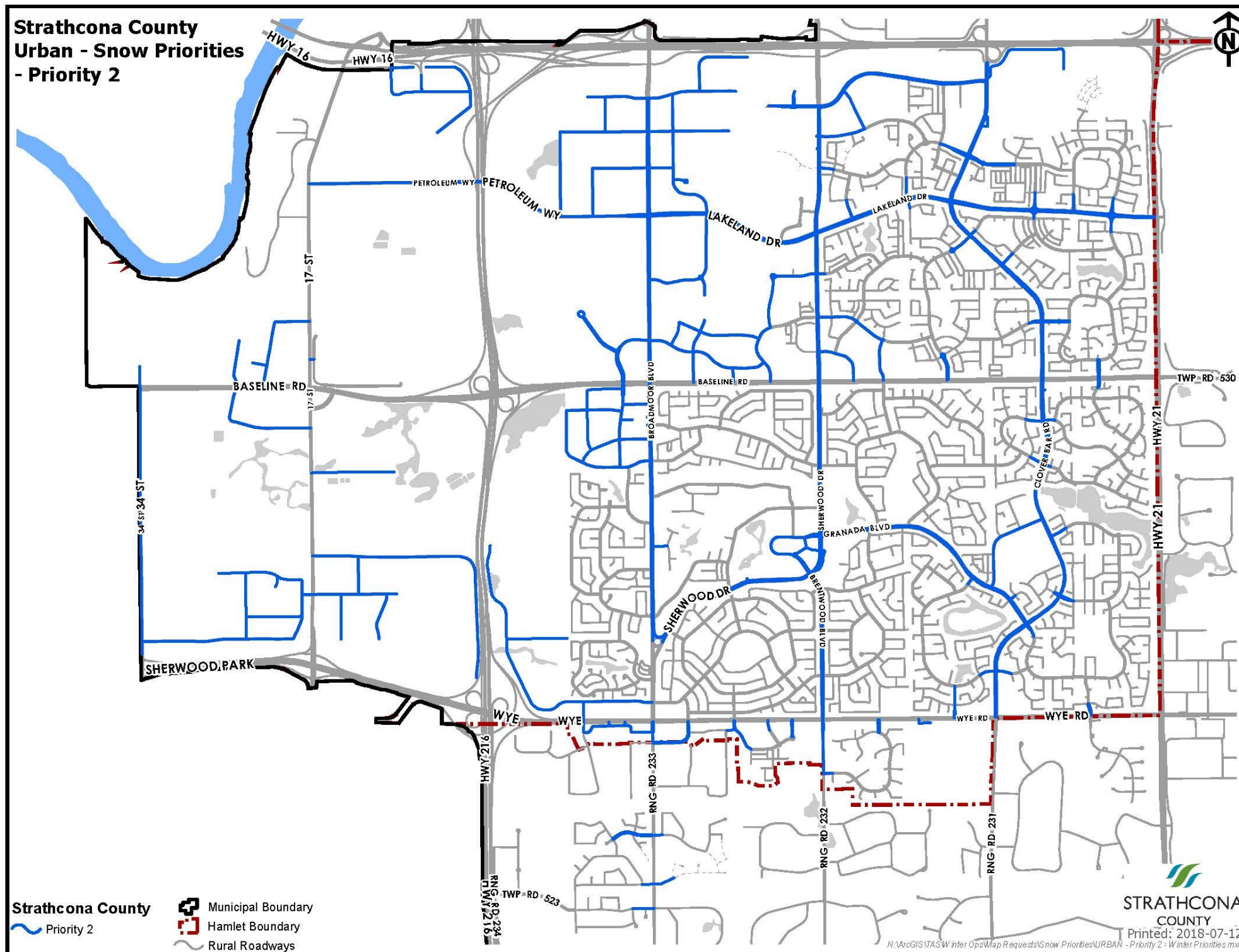
Urban service area



Urban service area

Priority 1

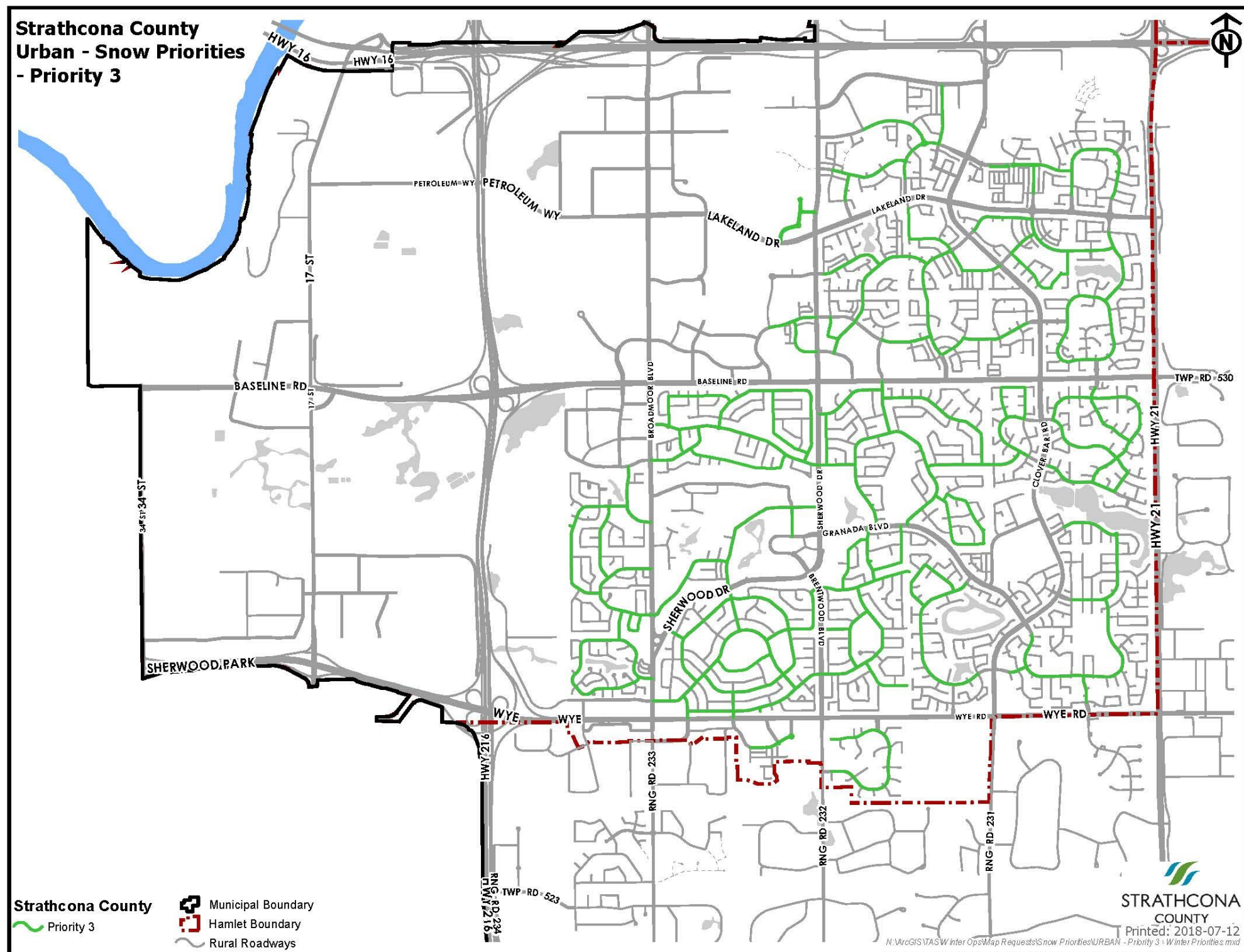
- Major arterial roadways
- Major industrial roadways



Urban service area

Priority 2

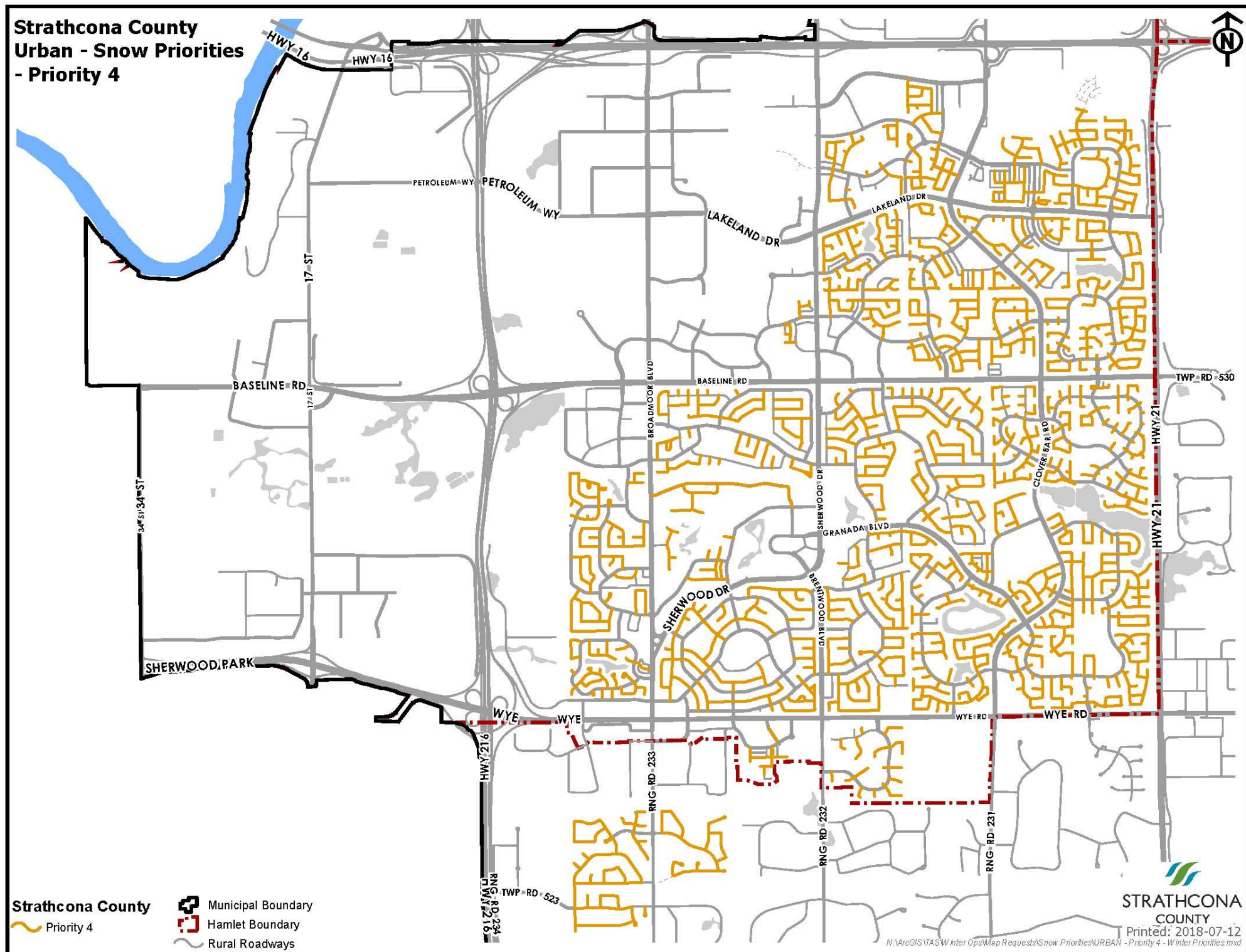
- Minor arterial roadways
- Minor industrial roadways
- School drop-off zones
- Transit drop zones



Urban service area

Priority 3

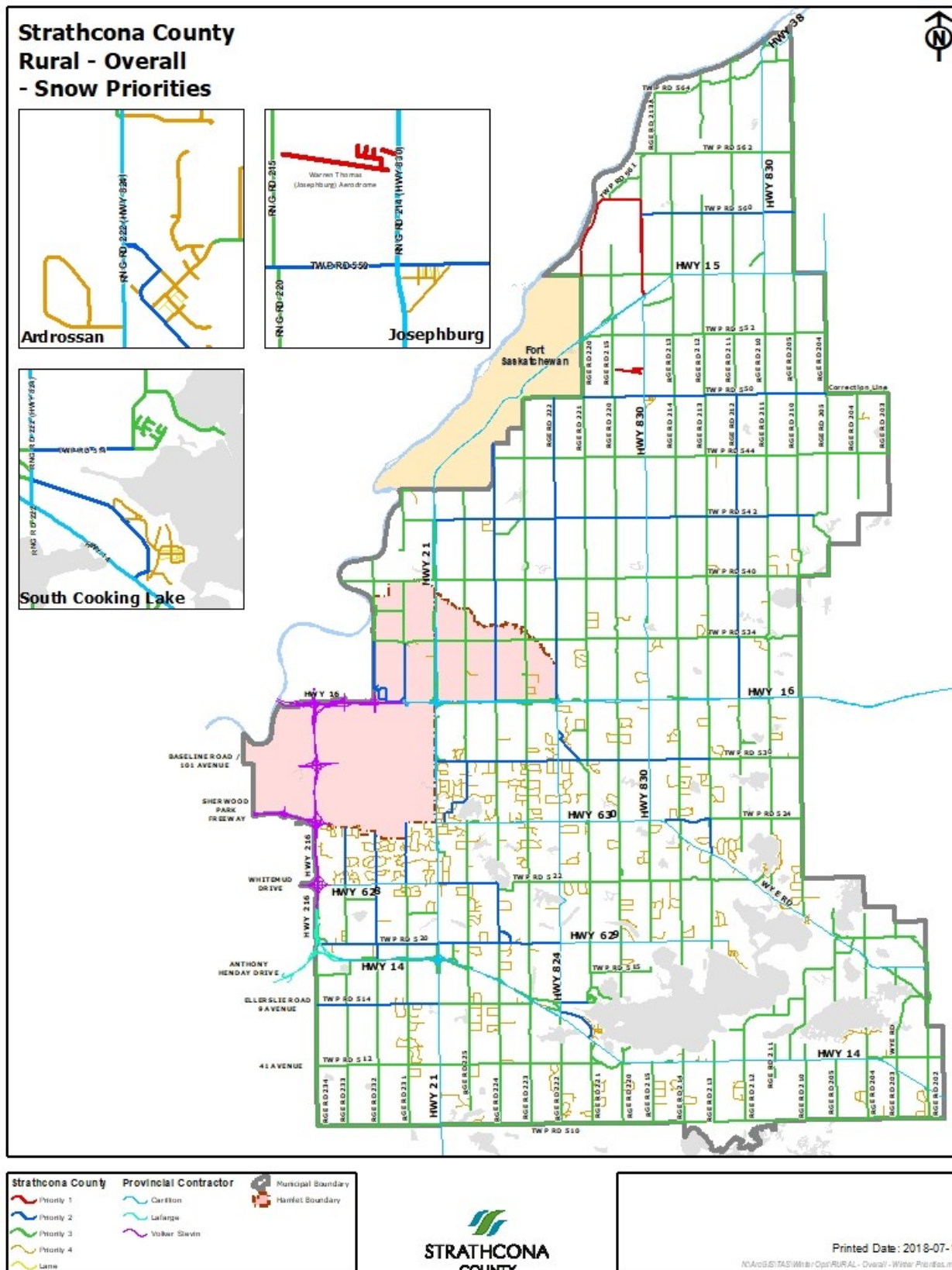
- Collector roadways
- Public transit roadways



Urban service area

Priority 4

- Local residential roadways



Snow clearing priorities

Rural service area

Strathcona County

Rural - Snow Priorities

- Priority 1

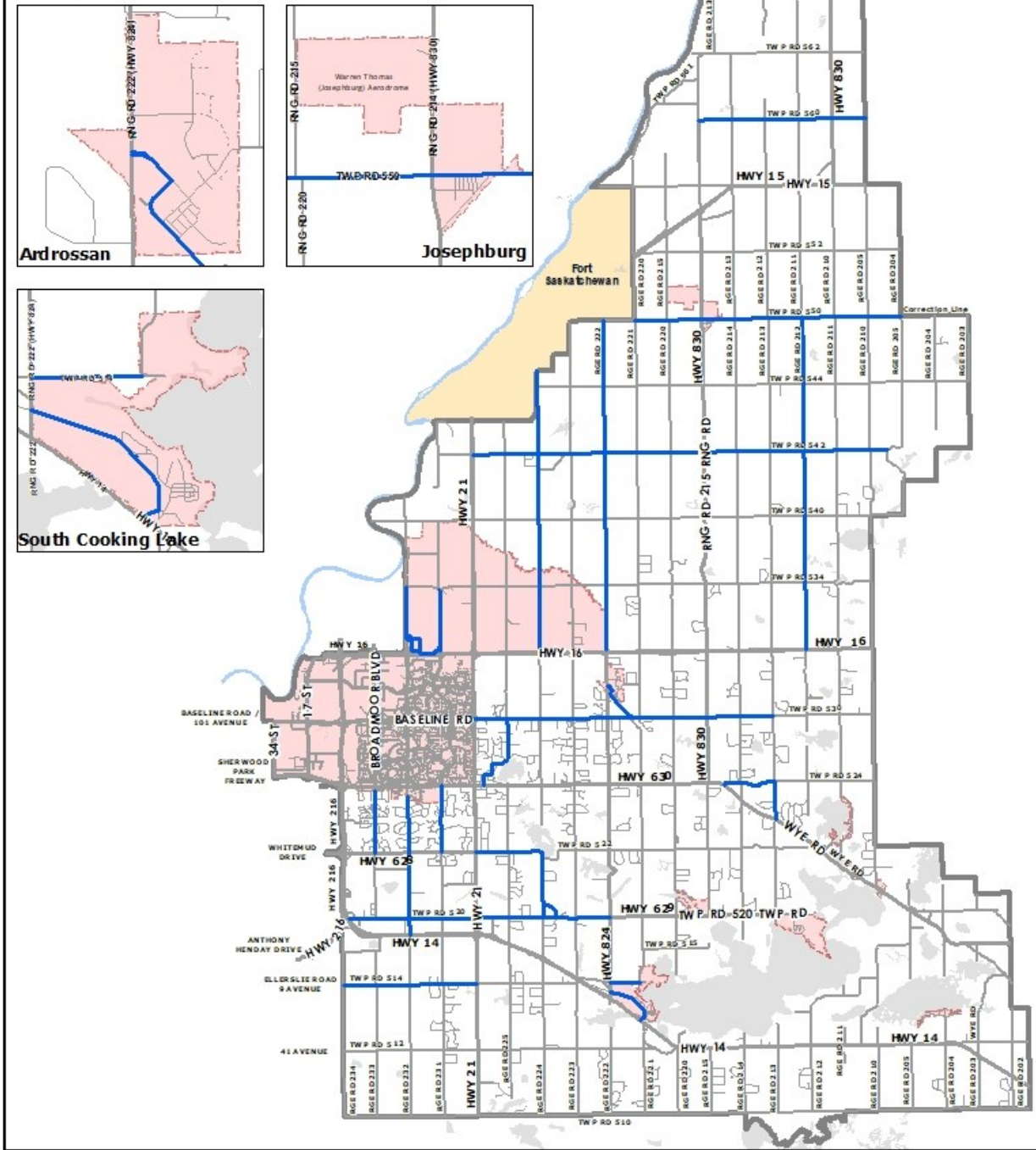
The map displays the rural areas of Strathcona County, Alberta, with a focus on snow clearing priorities. The main map shows a grid of roads, including major highways and local roads. Key locations and roads are labeled:

- Locations:** Ardrossan, Josephburg, Fort Saskatchewan, South Cooking Lake.
- Highways:** HWY 15, HWY 16, HWY 21, HWY 28, HWY 630, HWY 830, HWY 824, HWY 14.
- Roads:** RGE RD 2015, RGE RD 2014, RGE RD 220, RGE RD 215, RGE RD 214, RGE RD 213, RGE RD 212, RGE RD 211, RGE RD 210, RGE RD 209, RGE RD 208, RGE RD 207, RGE RD 206, RGE RD 205, RGE RD 204, RGE RD 203, RGE RD 202, RGE RD 201, RGE RD 200, RGE RD 199, RGE RD 198, RGE RD 197, RGE RD 196, RGE RD 195, RGE RD 194, RGE RD 193, RGE RD 192, RGE RD 191, RGE RD 190, RGE RD 189, RGE RD 188, RGE RD 187, RGE RD 186, RGE RD 185, RGE RD 184, RGE RD 183, RGE RD 182, RGE RD 181, RGE RD 180, RGE RD 179, RGE RD 178, RGE RD 177, RGE RD 176, RGE RD 175, RGE RD 174, RGE RD 173, RGE RD 172, RGE RD 171, RGE RD 170, RGE RD 169, RGE RD 168, RGE RD 167, RGE RD 166, RGE RD 165, RGE RD 164, RGE RD 163, RGE RD 162, RGE RD 161, RGE RD 160, RGE RD 159, RGE RD 158, RGE RD 157, RGE RD 156, RGE RD 155, RGE RD 154, RGE RD 153, RGE RD 152, RGE RD 151, RGE RD 150, RGE RD 149, RGE RD 148, RGE RD 147, RGE RD 146, RGE RD 145, RGE RD 144, RGE RD 143, RGE RD 142, RGE RD 141, RGE RD 140, RGE RD 139, RGE RD 138, RGE RD 137, RGE RD 136, RGE RD 135, RGE RD 134, RGE RD 133, RGE RD 132, RGE RD 131, RGE RD 130, RGE RD 129, RGE RD 128, RGE RD 127, RGE RD 126, RGE RD 125, RGE RD 124, RGE RD 123, RGE RD 122, RGE RD 121, RGE RD 120, RGE RD 119, RGE RD 118, RGE RD 117, RGE RD 116, RGE RD 115, RGE RD 114, RGE RD 113, RGE RD 112, RGE RD 111, RGE RD 110, RGE RD 109, RGE RD 108, RGE RD 107, RGE RD 106, RGE RD 105, RGE RD 104, RGE RD 103, RGE RD 102, RGE RD 101, RGE RD 100, RGE RD 99, RGE RD 98, RGE RD 97, RGE RD 96, RGE RD 95, RGE RD 94, RGE RD 93, RGE RD 92, RGE RD 91, RGE RD 90, RGE RD 89, RGE RD 88, RGE RD 87, RGE RD 86, RGE RD 85, RGE RD 84, RGE RD 83, RGE RD 82, RGE RD 81, RGE RD 80, RGE RD 79, RGE RD 78, RGE RD 77, RGE RD 76, RGE RD 75, RGE RD 74, RGE RD 73, RGE RD 72, RGE RD 71, RGE RD 70, RGE RD 69, RGE RD 68, RGE RD 67, RGE RD 66, RGE RD 65, RGE RD 64, RGE RD 63, RGE RD 62, RGE RD 61, RGE RD 60, RGE RD 59, RGE RD 58, RGE RD 57, RGE RD 56, RGE RD 55, RGE RD 54, RGE RD 53, RGE RD 52, RGE RD 51, RGE RD 50, RGE RD 49, RGE RD 48, RGE RD 47, RGE RD 46, RGE RD 45, RGE RD 44, RGE RD 43, RGE RD 42, RGE RD 41, RGE RD 40, RGE RD 39, RGE RD 38, RGE RD 37, RGE RD 36, RGE RD 35, RGE RD 34, RGE RD 33, RGE RD 32, RGE RD 31, RGE RD 30, RGE RD 29, RGE RD 28, RGE RD 27, RGE RD 26, RGE RD 25, RGE RD 24, RGE RD 23, RGE RD 22, RGE RD 21, RGE RD 20, RGE RD 19, RGE RD 18, RGE RD 17, RGE RD 16, RGE RD 15, RGE RD 14, RGE RD 13, RGE RD 12, RGE RD 11, RGE RD 10, RGE RD 9, RGE RD 8, RGE RD 7, RGE RD 6, RGE RD 5, RGE RD 4, RGE RD 3, RGE RD 2, RGE RD 1, RGE RD 0.

Priority 1

- Roadways with a posted speed limit of 100 km/hr
- Major industrial roadways
- Warren Thomas (Josephburg) Aerodrome

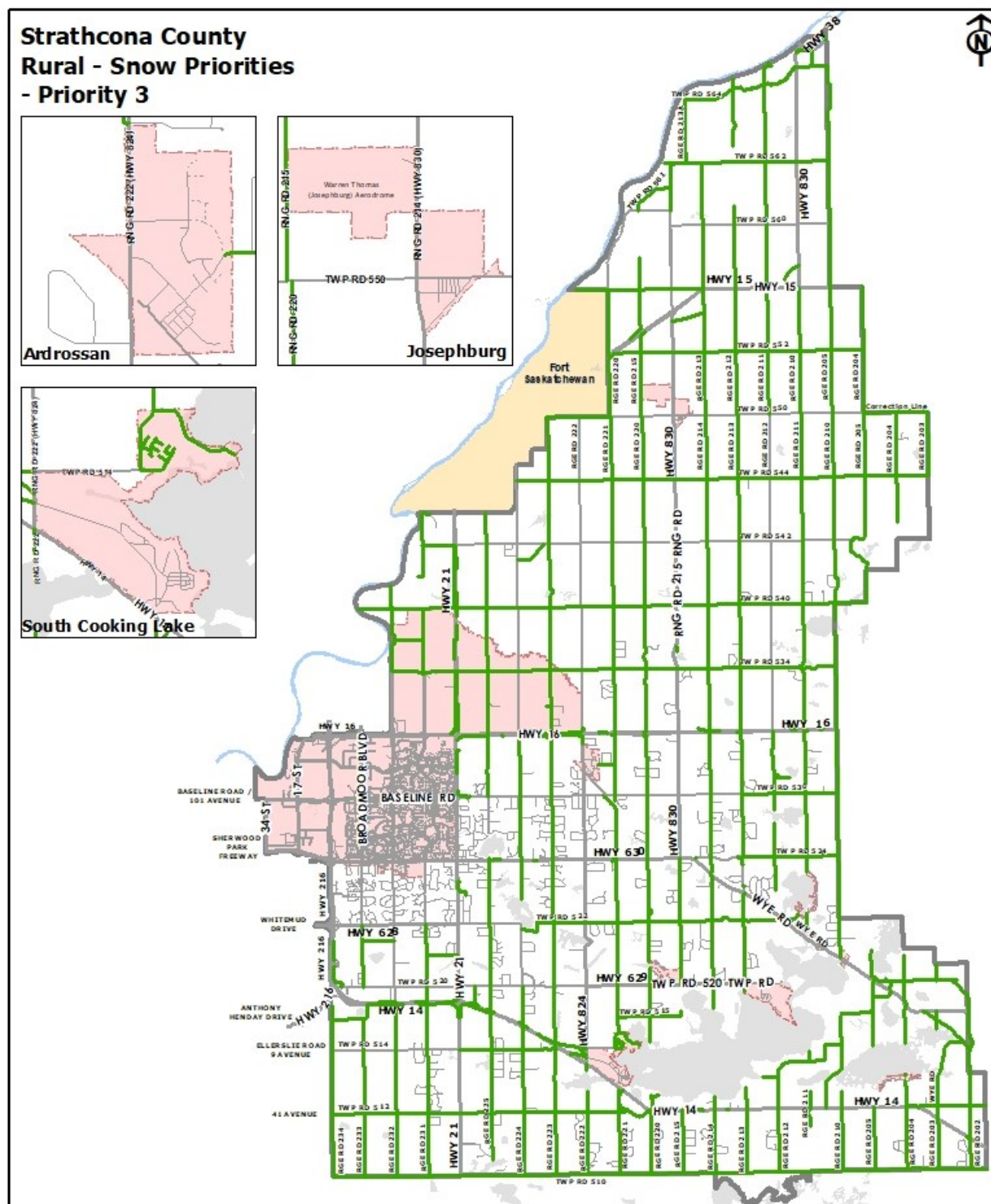
**Strathcona County
Rural - Snow Priorities
- Priority 2**



Rural service area

Priority 2

- Major thoroughfares not included in Priority 1, including roads that service schools or major recreational facilities

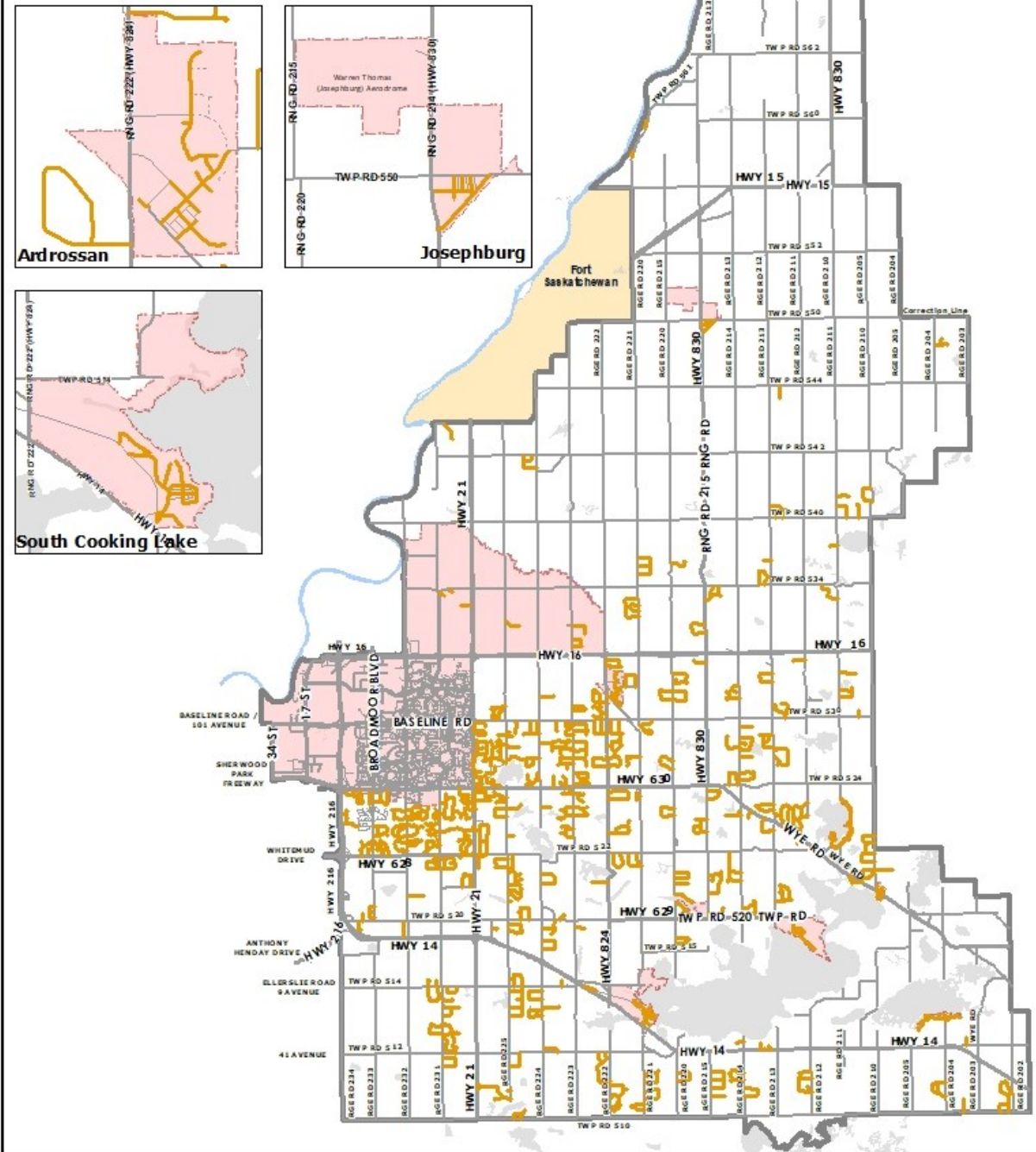


Rural service area

Priority 3

- Remaining grid roads

**Strathcona County
Rural - Snow Priorities
- Priority 4**



Rural service area

Priority 4

- Country residential and hamlet roads

Priority service levels

Priority level	Urban service area		Rural service area	
	Snow accumulation	Maximum time for completion	Snow accumulation	Maximum time for completion
Priority 1	2-5 cm	12 hrs	2-5 cm	12 hrs
Priority 2	5-7 cm	12 hrs after P1	5-7 cm	12 hrs after P1
School drop zones	5-7 cm	72 hrs	5-7 cm	72 hrs
Priority 3	15-21 cm	8 days after snowfall – after P2	5-7 cm	72 hrs after P2
Priority 4	10 cm* (compact)	12 days after criteria met	5-7 cm	48 hrs after P3
Parking lots and trails	Clearing commences immediately following Priority 2; completed within 8 days		Clearing commences immediately following Priority 2; completed within 8 days	

*7 cm after January 1

Snow clearing priority challenges

TAS conducts an annual review of all priority networks to ensure all roadways within their current status are correct.

Considerations include new development impacts and traffic volume changes on certain roadways in both rural and urban areas.



Priority 4 service level guidelines

Windrowing and removal of snow on Priority 4 residential roads may be initiated when the following conditions exist or are expected:

- 10 cm of compacted snow, *or*
- Snow pack is softened and vehicular mobility is becoming severely compromised, *or*
- 7 cm of compacted snow exists on or after January 1
- The County measures 26 residential locations throughout Sherwood Park to determine an average snow pack accumulation

Winter Maintenance Policy states:

“Weather forecast, snow pack condition and temperature may be taken into account when deciding to initiate a residential program.”

Priority 4 service level changes

Snow Removal	2006-07	2007-08	2008-09	2009-10 To Present
Initiated when compacted snow is	15-20 cm	12-15 cm	10-13 cm	10 cm
OR when there is	---	10 cm by Feb 1	7.5 cm by Feb 1	7 cm by Jan 1
Completion within	18 days - cul-de-sacs + 14 days	18 days - cul-de-sacs as resources are available	12 days - includes cul-de-sacs	12 days - includes cul-de-sacs

*Council approved changes through SER-009-026 Winter Maintenance Policy

Priority 4 residential clearing 2017-18 highlights

Overview

- 4,727 truckloads of snow removed
- 11 day shifts and 12 night shifts to complete Priority 4 snow removal

Expenses

- \$1.63 million for contracted equipment services
- \$716,000 contracted trucking costs
- \$123,000 towing costs

Total: \$2.47 million

Priority 4 clearing challenges

If snow events occur during a Priority 4 clearing, we require additional contracted services to meet policy levels for both rural and urban areas

Mature neighbourhoods

- Wider roads have higher snow capacity



Newer neighbourhoods

- Narrower roads and increased lot density create icing and mobility issues for crews



Snowmelt Facility



The Snowmelt Facility is staffed around the clock throughout the winter maintenance season to ensure permit adherence and to minimize effects to area residents.

During snow removal events, the Snowmelt Facility is open to permit holders 24/7.



Ice control overview

Depending on the weather and road conditions, Strathcona County uses a combination of salt, sand and anti-icing solution to maintain safe road conditions

Temperature	Material used
-7°C or warmer	Sand and salt mixture (best suited to this temperature)
-9°C to -29°C	Anti-icing solution * prior to a snowfall on select intersections and roadways
-15°C or warmer	Sand and salt mixture (contains less salt than above)
-15°C and colder	Sand only (salt is not effective below -18°C)

Ice control



Challenges and considerations:

- Increased requests for de-icing sidewalks and trails
- Potentially expanding use of anti-icing solution on roadways

Parking bans

When snow clearing is required in Sherwood Park neighbourhoods, temporary parking bans will occur. There are two types of parking bans:

- **Snow route parking bans** – these routes are marked with year-round signage stating “Snow route when declared”. A parking ban on these streets will be declared a minimum of 24 hours before parking restrictions are enforced. SC Alerts is used to notify residents.
- **Residential street parking bans** – when these routes are scheduled for snow removal, they will be marked with temporary orange signs stating “Residential Street Snow Removal in Progress” with the clearing dates for your neighbourhood. SC Alerts cannot be used, as it is not emergent.



Parking restrictions are enforced by Strathcona County Enforcement Services to help ensure safe and efficient snow removal. The fine for parking on the street during a parking ban is \$250.

What we heard from residents:

- Confusion about Priority 3 and Priority 4 clearings
- Complaints about nighttime work and noise
- Priority 4 was too late; should have been done earlier
- Priority 4 clearing shouldn't have been done at all
- No list of when roads will be done
- Parking restrictions are too long
- Lag between moving parked vehicle and equipment arrival
- Priority 4 signs were at neighbourhood entrances, not on each street



Communication to residents

TAS uses a variety of media to communicate with residents about winter maintenance.

Examples:

- Website – specific pages for [Winter Roads](#)
- Social media
- Roadside billboards
- Electronic message boards
- News articles
- Info releases
- SC Alerts – for snow route parking bans



Resident inquiries

Resident requests, inquiries and concerns can be directed to Transportation and Agriculture Services by phone or through County Connect.

County Connect winter maintenance-related links include:

- [Make a sanding request](#)
- [Report snow and ice on sidewalks and trails](#)
- [Curb ramp inquiry](#)
- [Parking ban inquiry](#)
- [Snowmelt facility inquiry](#)
- [Snow removal at bus stops inquiry](#)

Winter communication survey

Starting September 24, TAS is conducting a resident survey to learn more about:

- Resident understanding of winter maintenance policy and activities, e.g., priority service levels
- Satisfaction with how the County communicates with residents about winter maintenance activities, e.g., parking bans
- Resident communication preferences, e.g., social media, website, etc.



Considerations for 2018-19

- Reconciliation of roadway priorities
- Use of anti-icing material
- De-icing of trails
- Communication channels and process to residents
- Continued monitoring of policy levels



Questions?