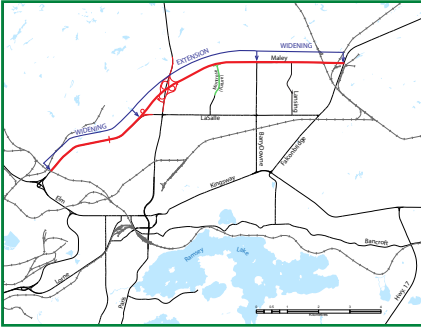


Maley Drive Extension

Building Today for a Better Tomorrow



The Maley Drive Extension remains eligible for three-way cost sharing with federal and provincial partners. The Province of Ontario has already committed its one-third share, contingent on a federal announcement.

The Maley Drive Extension is a solid investment in the social, economic and environmental future of the City of Greater Sudbury that will deliver short-term, medium-term and long-term benefits to residents, business and industry in an affordable and fiscally responsible manner, made possible by a three- way cost sharing partnership.

The Maley Drive Extension will be built in two phases. Phase One will connect LaSalle Boulevard West with Falconbridge Highway.

- A new four-lane road will be constructed from LaSalle Boulevard West, near Collège Boréal, to Barry Downe Road.
- Traffic will access the new four-lane road via a new interchange to be constructed north of LaSalle Boulevard on Notre Dame Avenue (Municipal Road 80).
- To accommodate the new interchange, Notre Dame Avenue will be widened from four lanes to six lanes , north of the improvements that have already been made to the LaSalle-Notre Dame intersection and approaching lanes.
- Traffic control at new intersections created by the construction of the four-lane Maley Drive Extension will be achieved with roundabouts at Collège Boréal and Barry Downe Road.
- An existing section of Maley Drive, between Barry Downe Road and Falconbridge Highway, will be rehabilitated to complete Phase One of this project.

The total construction cost of Phase One of the Maley Drive Extension is \$80.1 million.

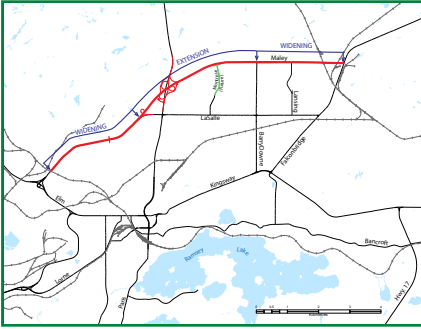
Phase Two will extend the Maley Drive Extension to Elm Street West (Municipal Road 35).

- The existing LaSalle Extension will be widened from two to four lanes between Collège Boréal and Municipal Road 35 (Elm Street West), connecting with the new four lane Maley Drive for improved traffic flow and safety.
- The rehabilitated section of Maley Drive will be widened from two to four lanes between Barry Downe Road and Falconbridge Highway.
- An existing railway crossing on Maley Drive, west of Falconbridge Highway, will be reconstructed as an overhead crossing for the safety and convenience of motorists.
- Roundabouts will be constructed for traffic control on Maley Drive at the intersection of Lansing Avenue and at the intersection of Montrose Avenue. The Montrose Avenue roundabout will connect with a road design through a private subdivision that will eventually extend Montrose north to intersect with Maley.

The total construction cost of Phase Two of the Maley Drive Extension is currently estimated at \$70 million.

Maley Drive Extension

Building Today for a Better Tomorrow



The only two east-west arterial routes in the City are already overcapacity. The need for a third east-west access route will continue to grow as each year passes.

Phase One of the Maley Drive Extension is a solid investment in the social future of the City of Greater Sudbury.

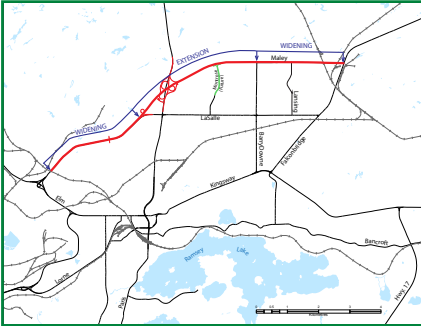
Currently, Greater Sudbury has two east-west arterial routes which are overcapacity today and destined to become more so each year. The Kingsway carries up to 45,000 and LaSalle Boulevard carries up to 35,000 daily trips on average. Put into context, portions of major highways in our region carry an average of 6,000 to 8,000 daily trips.

Phase One will:

- create a third option for regular north-south commuters from a residential area of about 34,400 in Valley East, Capreol, Garson and Falconbridge, as well as for east-west commuters travelling to major educational, commercial, industrial and residential destinations in a population area of over 24,000 in New Sudbury;
- remove an estimated 3,000 vehicles per day from LaSalle Boulevard near Falconbridge Highway, up to 10,000 per day from LaSalle Boulevard east of Notre Dame Avenue, and 2,000 to 4,000 vehicles per day from the Kingsway.
- reduce traffic at the LaSalle-Notre Dame intersection, one of the busiest in our city with an average of more than 50,250 daily trips;
- reroute an estimated 1,000 to 1,500 heavy mining trucks per day away from the Kingsway, LaSalle Boulevard and M.R. 80/M.R. 15 corridors for improved traffic safety, less congestion and longer road life;
- improve public transit service for approximately 43 per cent of all transit riders by reducing traffic congestion on LaSalle and the Kingsway;
- deliver more direct access from northern and eastern regions of the City of Greater Sudbury to provincial highways leading north to Timmins, east to North Bay, west to Sault Ste. Marie and south to Toronto;
- modify heavy truck traffic and overall traffic volume to stimulate a long-term redevelopment of LaSalle Boulevard and the Kingsway from auto-oriented, low-density commercial uses to pedestrian-oriented, mixed-use buildings.

Maley Drive Extension

Building Today for a Better Tomorrow



Greater Sudbury remains one of the world's richest deposits of nickel, copper and platinum group metals. Please see Page 9 of this report for a map illustrating ore and slurry haul routes in this area.

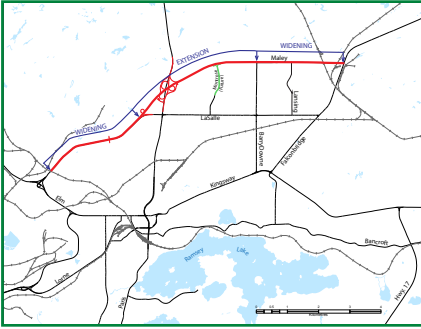
Phase One of the Maley Drive Extension is a solid investment in the economic future of the City of Greater Sudbury.

More than 50 per cent of the ore mined in Ontario is trucked across Greater Sudbury on LaSalle Boulevard, Municipal Road 15 in Blezard Valley, Municipal Road 80 in Val Caron, Val Thérèse and Hanmer, and Municipal Road 84 to Capreol.

- Ore and slurry trucks generate a lot of wear and tear on pavement and roadbeds. An empty truck weighs about 26,000 pounds; loaded it's about 106,000 pounds. By comparison, the maximum weight of a light vehicle is about 9,900 pounds (*Canadian Vehicle Survey*).
- Shifting heavy truck traffic from the city's main commuter routes, including LaSalle Boulevard and the Kingsway, will extend the life of the city's arterial roads and ultimately reduce maintenance costs.
- Provision of a dedicated truck route will create improved efficiencies for companies with less time spent in stop-and-go traffic.
- Phase One will move industrial traffic from one of Sudbury's largest mining operations, Glencore's Nickel Rim South Mine near Skead, off LaSalle Boulevard during the night and M.R. 80 and M.R. 15 during the day. Trucks will use the Maley Drive Extension to access the LaSalle Extension and Highway 144 north to the Strathcona Mill in Onaping.
- Vale's Garson Mine and its future Victor-Capre Mine near Skead will also be served by the Maley Drive Extension which will bypass LaSalle Boulevard to connect with Elm Street West and Big Nickel Road to Vale's Copper Cliff complex.
- Improved efficiencies offered by the Maley Drive Extension will help build stronger business cases for future development options, including Wallbridge Mining Company's proposed Parkin Properties north of Capreol.

Maley Drive Extension

Building Today for a Better Tomorrow



The City has more than \$12.2 million in a designated account to permit an immediate start to construction, once the Government of Canada announces its one-third share of costs.

Phase One of the Maley Drive Extension is a solid investment in the environmental future of the City of Greater Sudbury.

- A cost-benefit analysis of the Maley Drive Extension provides the following conservative estimates of potential environmental impacts during peak traffic hours:
- The first step to an overall reduction of more than 2,459 tonnes per year of gas emissions, by reducing stop-and-go traffic on LaSalle and the Kingsway.
- The first step to reduce traffic congestion and travel times on LaSalle and the Kingsway, saving motorists over 457,000 hours and an estimated 1.13 million litres in fuel consumption each year.

The Maley Drive Extension is shovel-ready should the City of Greater Sudbury receive a formal announcement of funding through the Government of Canada.

- Environmental assessments, geotechnical, engineering and design work are complete for Phase One.
- Design and engineering of Phase Two of the Maley Drive Extension are complete.
- The Province of Ontario has committed \$26.7 million to Phase One contingent on a one-third cost sharing partnership with the Government of Canada and the City of Greater Sudbury.
- Once a formal announcement has been received from the Government of Canada, the City will seek approval from Greater Sudbury Council to commit \$14.5 million to achieve the city's one-third share of construction costs.
- Tenders can be issued promptly following a federal announcement and multiple contracts will overlap during an expected three to four year construction period, dependent on whether construction starts in the spring or the fall.
- Where construction will start is dependent on the time of year that federal funding is announced, as work must be scheduled based on weather conditions and requirements of environmental approvals.

The Maley Drive Extension addresses the future needs of the City of Greater Sudbury.

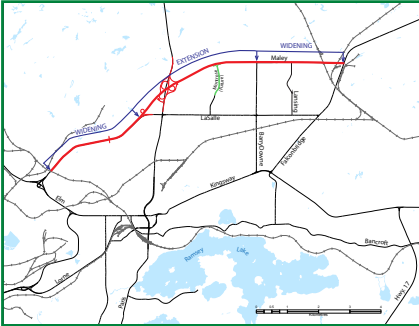
The City of Greater Sudbury Official Plan has identified the Maley Drive Extension as the number one priority for municipal infrastructure development. The Plan envisions a perimeter highway-arterial road system around the City of Greater Sudbury for efficient routing of traffic through this part of the region and province.

- Phases One and Two of the Maley Drive Extension are the first steps to a perimeter highway that will extend Maley Drive east of its current end at Falconbridge Highway, southeast to connect to Highway 17 East to North Bay and Ottawa and an existing by-pass leading to Highway 69 South to Toronto and Highway 17 West to Sault Ste. Marie.

Maley Drive Extension

Building Today for a Better Tomorrow

The Maley Drive Extension is an affordable investment that will be managed in a fiscally responsible manner.



The Maley Drive Extension is affordable and achievable. Barring other options, continuing a practice of allocating \$2.3 million annually to a designated account could repay the City's current \$14.5 million share in less than seven years.

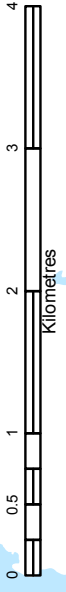
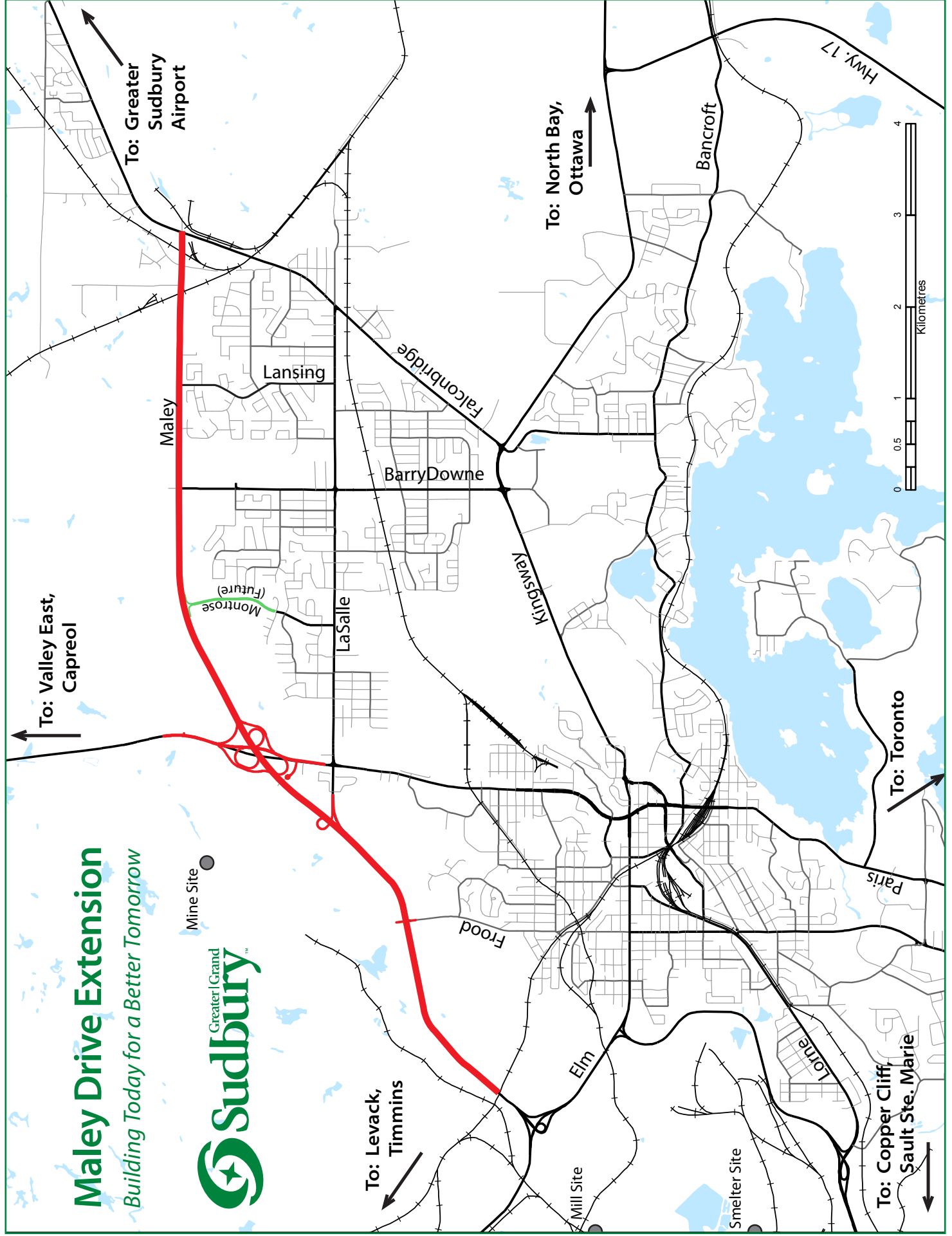
- Construction of Phase One is expected to create 780 jobs and generate an economic stimulus of \$88.8 million.
- The City of Greater Sudbury has been budgeting since 2008 to leverage two-thirds funding from Federal and Provincial partners for construction of this project.
- A designated municipal account has already absorbed approximately \$5 million in engineering and in design costs for Phase One.
- More than \$12.2 million currently remains in the account to permit an immediate start to construction and the City is continuing a practice of allocating \$2.3 million annually from the existing roads capital budget to this account.
- The City is prepared to present options for financing the outstanding municipal share of construction, upon the direction of Council.
- Funding from citywide development charges can be applied to the new four-lane road portion of the Maley Drive Extension, from LaSalle Boulevard West to Barry Downe Road, and to the new interchange and associated road widening on Notre Dame Avenue.
- The roads capital budget has been planned and adjusted to 2019, leaving the City with between \$34.5 million and \$35.9 million annually for additional road construction over the next four years.
- The increase to operating budgets to maintain the new Maley Drive Extension will be partially offset by fewer potholes and other damage to the roadbeds on LaSalle and the Kingsway.
- Property acquisition, estimated at less than one per cent of the total construction cost, is not eligible under the three-way cost sharing partnership and can be absorbed within existing capital reserves.
- The Maley Drive Extension will be built in two phases to expedite available funding at the federal and provincial levels, to reduce the initial municipal capital outlay and to realize immediate benefits of an alternate east-west access route across the City.
- Disadvantages associated with a phased approach to construction are loss of economies of scale, devaluation of the dollar to inflation, some duplication of work, and inability to achieve full benefits of the Extension until completion of the last phase.
- The combined estimate of \$150 million for construction of Phase One (\$80.1 million) and Phase Two (\$70 million) of Maley Drive is higher than an original estimate contained in an April 2014 Development Charges Background Study, prepared by Hemson Consulting Ltd.
- Figures quoted in the Development Charges Study are based on an estimated total project cost of \$125 million of which two-thirds funding was estimated from federal and provincial sources, leaving the city with a net municipal cost of \$41 million.

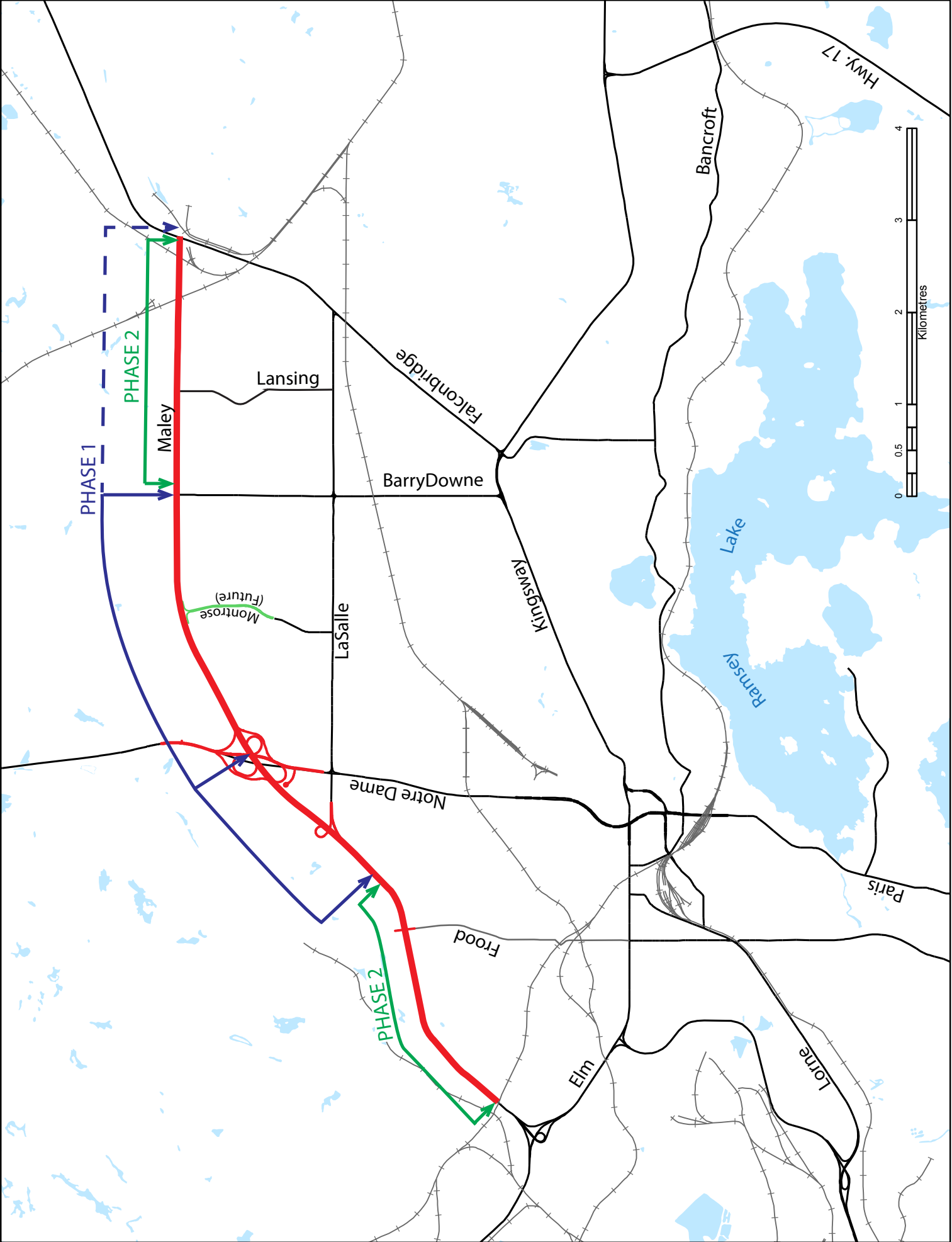
Maley Drive Extension

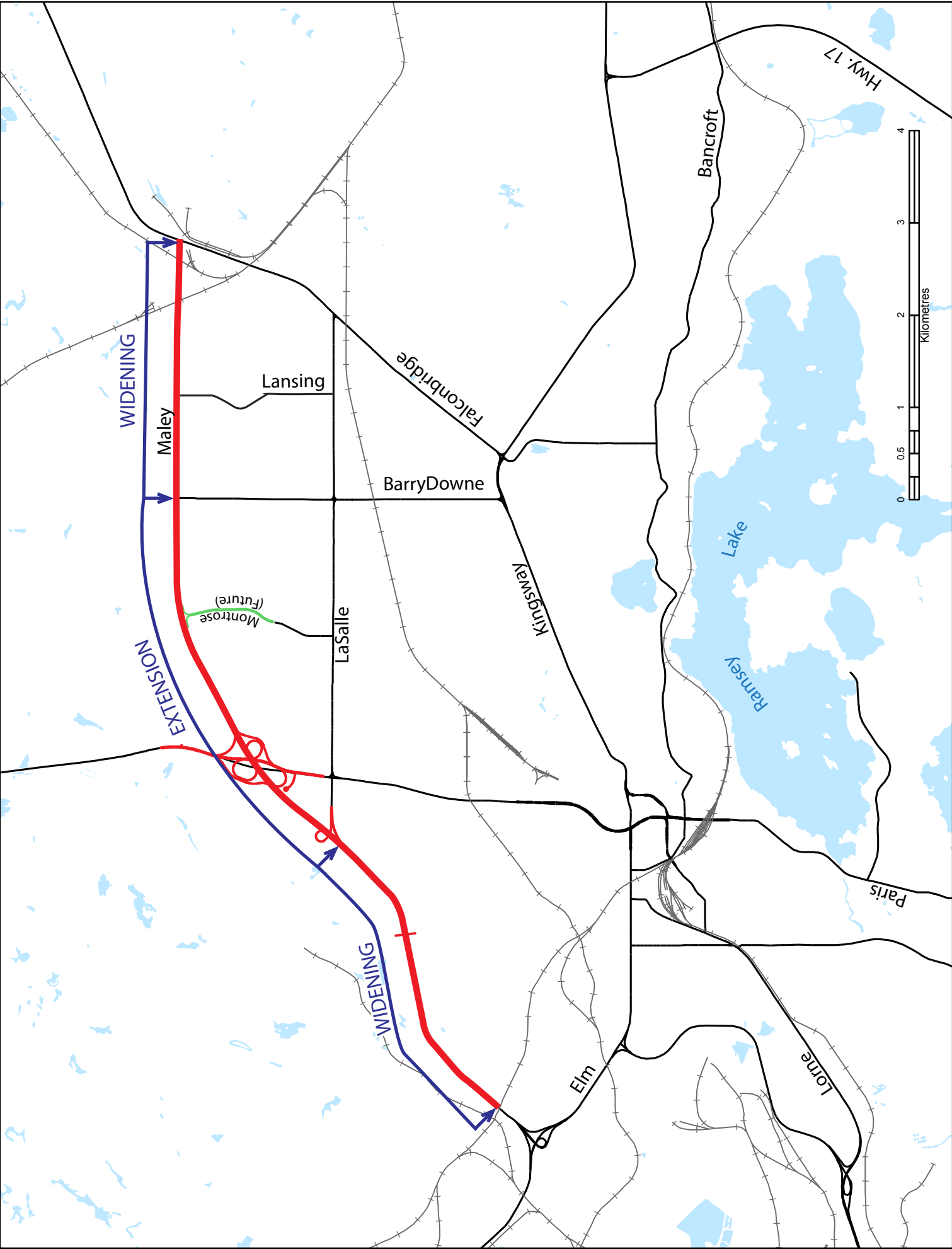
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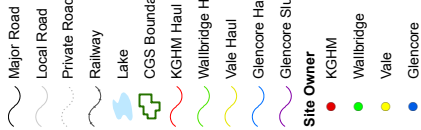
Mine Site







Ore and Slurry Haul Routes



* Trucks haul approx. 80,000 lbs. of ore / load.

* Trucks weigh empty approx.
26,000 lbs

* Total weight of loaded trucks - approx 106,000 lbs



David Greave

* All loads on internal - private roads

“NOTE: URSA Major Minerals’ Shakespeare Nickel Copper Project, Shakespeare Twp., located outside of map