

1 EXECUTIVE SUMMARY

1.1 Project Overview

McElhanney Consulting Services Ltd. was retained by Alberta Transportation to conduct a functional planning study and recommend the long-term regional highway network directly east of Calgary, namely along the corridors of Highway 1, between Highway 797/9 and Highway 842, and Highway 22X, between Highway 797 to just east of Old Highway 24 near Range Road 261. This long range plan has been developed largely through a “Recommended Highway Network” plan (**Exhibit 1-1**), initially presented during Open House #3, which ultimately allows Alberta Transportation to protect the corridor right-of-way for ultimate infrastructure upgrades and enable local municipalities to respond to resultant adjacent development pressures.

1.2 Study Purpose

Long term growth in the Calgary region, particularly the City of Calgary and the Town of Strathmore, is forecast to continue, resulting in increasing the traffic volumes along the east-west Highway 1, Highway 1A and Highway 22X routes, ultimately creating the need for additional capacity in the provincial network through the study area. It has become increasingly important to identify the long-term network plan to enable Wheatland County, Rocky View County and the Town of Strathmore to effectively plan for their future growth and to protect long-term highway requirements.

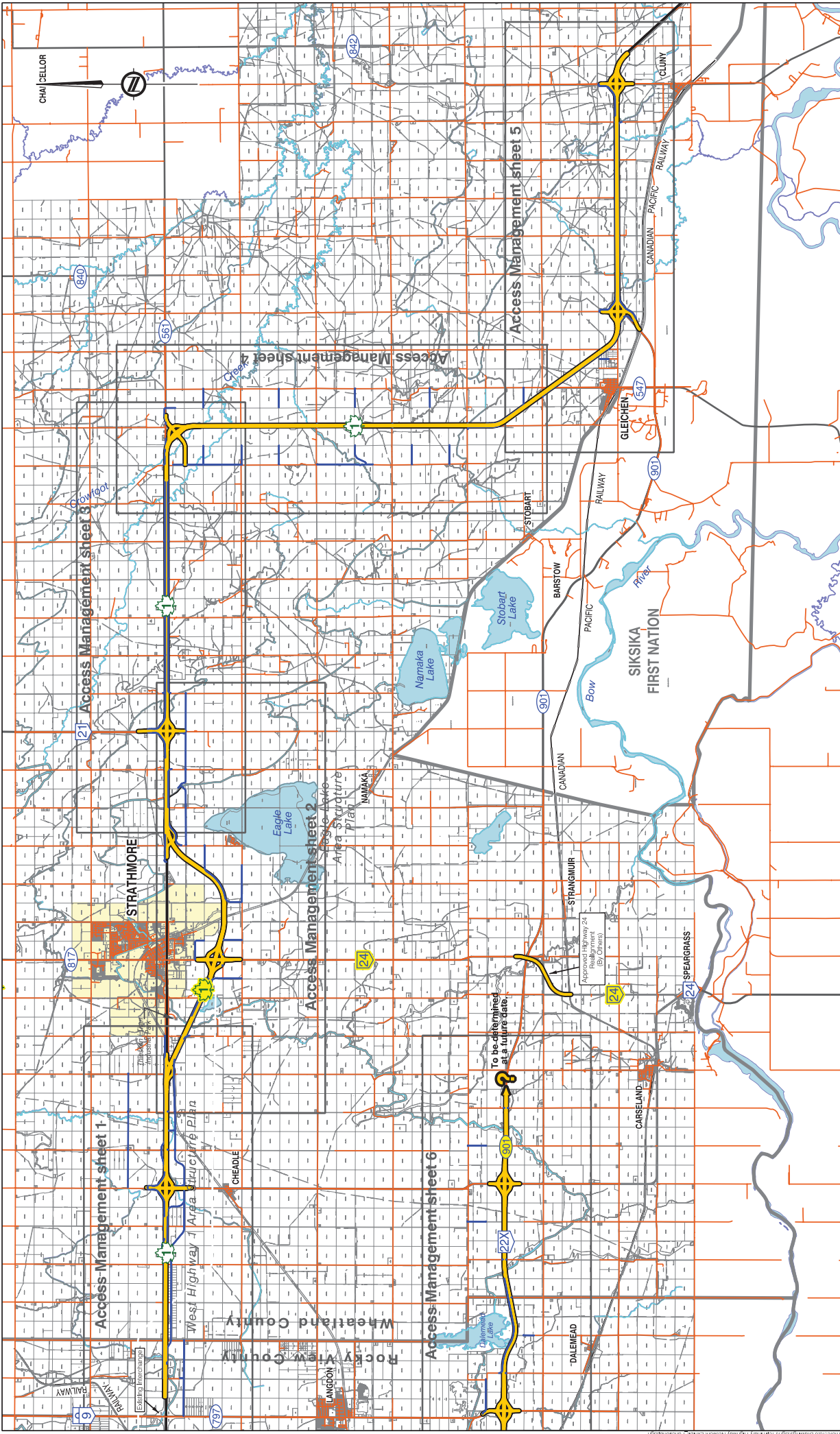
The overall study purpose is three-fold:

1. To rationalize the highway network through the study area;
2. To define the access management requirements and associated interchange spacing; and
3. To prepare functional plans for the selected strategy based on a long-term plan that will:
 - a. Serve as a shared blueprint for the province and the municipalities, guiding future development in the highway corridor;
 - b. Protect the land necessary for long-term highway upgrading and access management requirements; and
 - c. Inform existing and future study area residents and business owners about the long-term changes that will ultimately affect highway access and traffic circulation.

1.3 Planning Issues

In order to sufficiently plan and provide the engineering guidance for upgrades to both the Highway 1 and Highway 22X corridor, various planning issues and constraints were analysed as part of this study and grouped into three unique categories – Highway Corridor Constraints, Land Use and Adjacent Development Constraints and Other Major Constraints.

Highway Corridor Constraints included both the Highway 1 and Highway 22X existing cross-sections, Highway 1 alignment through the Town of Strathmore, the devolution of Highway 24, the future upgrading of Highway 817 (i.e. New Highway 24), the location and spacing of existing intersections, the classification of Highway 1 a High Load Corridor and the proximity of existing Vehicle Inspection Stations and rest areas along Highway 1.



LEGEND

Proposed Alignment
Existing Roads
Proposed Access Management

Century Farms
Provincial List
County List

Crown Land
Municipal Land
Irrigation District

Probable Future Highway Numbers
Future Interchange

**McElhanney**
Consulting Services Ltd.

**Alberta**
Transportation

Exhibit 1-1
Recommended Highway Network
Highway 1 and Highway 22X
Functional Planning Study

NOV 07 2011

Plan No. P-3407.1.1

Checked by

Approved by

Drawn by

Designed by DF

Scale: 1:2000
0 200m 240m

Land Use and Adjacent Development Constraints included the prime agricultural land use (i.e. presence of Centennial Farms), the proximity of the Thiessen / Titan Industrial Park, Patterson Global Foods and Siksika First Nations, as well as the existing planning documents to include the *Eagle Lake Area Structure Plan* and the *West Highway 1 Area Structure Plan*. The historical population growth rates of the regional area also factored in the planning for the study objectives.

Other major constraints include existing and future utilities, watercourses & drainage, environmental issues, geotechnical conditions and historical resources.

1.4 Recommendations

Ultimately, the recommended upgrades within the study limits are as follows:

- Implementation of a Strathmore Bypass along a new section of Highway 1 to the south of the Town of Strathmore as follows:
 - Ultimate 8-lane Highway 1 Freeway following completely outside of the current Town boundaries;
 - Spread diamond interchange configuration at Highway 1 and New Highway 24 which retains the Highway 817 alignment; and
 - Directional interchange configurations at both the west and east side of Strathmore to allow for free-flow access to Old Highway 1 through Strathmore.
- Upgrading of the existing Highway 1 corridor from existing 4 lanes to ultimate 8 lanes.
- Twinning of the existing Highway 22X corridor from existing 2 lanes to ultimate 6 lanes.
- Access management for adjacent properties.

Although a portion of the upgrades, namely along Highway 1 to the east of Strathmore, are not forecasted to warrant a total of eight lanes of traffic until well after 2100, it is important to ensure that the Department satisfactorily protects the necessary land that is ultimately required.

The Implementation Strategy of this Functional Planning Study is flexible and can be constructed in stages as funding or traffic volumes warrant. However, for implementation purposes, the recommended functional design is comprised of four stages of development as follows:

- Stage 1: Implementation of the Strathmore Bypass;
- Stage 2: Upgrading of Highway 1 to Freeway Standards from Highway 797 to Strathmore;
- Stage 3: Twinning of Highway 22X from east City of Calgary limits to east of Highway 24; and
- Ultimate Stage (4): Upgrading of Highway 1 to Freeway Standards from Strathmore to Highway 842.

1.5 Cost Estimates

The total estimated cost of the recommended improvements along Highway 1 is **\$380 Million**, comprised of **\$107.9 Million** for the Stage 1, **\$79.0 Million** for Stage 2 and an additional **\$193.1 Million** to upgrade to the ultimate stage. The total estimated cost of the improvements along Highway 22x, all within Stage 3, is **\$83.2 Million**. (All costs are in 2012 dollars.)

1.6 Municipalities

This section of Highway 1 within the study limits crosses through three major jurisdictions which were all represented in the highway planning discussions as part of the Technical Review Committee (TRC) as key stakeholders in order to voice their issues, concerns and support for the recommendations of this study.

1.6.1 Town of Strathmore

Strathmore, located on Highway 1, is the largest urban centre within the study limits and serves as a commuter destination of Calgary to the east. In fact, the Town is the only low-speed signalized section of Highway 1 between Calgary and Saskatchewan without a proposed bypass plan in place, as presently, Highway 1 passes through the central business district of the Town.

Ultimately, potential upgrading of Highway 1 through the Town in order to achieve the function and standards intended for a National Highway in Alberta, would result in both highway widening and a proposed interchange. Both outcomes would not be received well by affected residents or by the municipality, as long-term highway upgrading would displace existing development that is directly adjacent to the existing highway. The general public (probably a majority of residents) are much more likely to support development of existing Highway 1 as a local road, and be opposed to upgrading to a high-speed route that would increasingly bisect the town.

Strathmore council issued their support for the Bypass plan as presented at Open House #3 within a formal letter, dated January 19, 2012, by an undisputed resolution from council with a number of transportation related items that Strathmore Council put forth to Alberta Transportation as conditions in their resolution.

1.6.2 Wheatland County

The majority of the study area falls within the boundary of Wheatland County, which includes the hamlets of Gliechen, Namaka, Cheadle, Stobart, and Cluny. At the outset of the network planning for the regional area and directly following Open House #1, Wheatland County sent a letter to Alberta Transportation outlining their resolution in support of a freeway designation for Highway 1, but with reservations about fragmenting agricultural lands throughout the County.

The Department replied by acknowledging their concerns and stating that the final decision will be made by the Department's executive and Minister upon review of the complete documentation of technical information, justification and stakeholder comments within the functional report. During Technical Review Committee #7, it was documented that Wheatland County council supports the revised Strathmore Bypass based upon a medium-term implementation.

1.6.3 Rocky View County

Rocky View County is a municipal district located outside and surrounding the City of Calgary on its eastern, northern, and western sides. As Rocky View encompasses the very western section of the study area directly adjacent to Highway 797/Highway 9, their stake in the outcome of this project was to maintain sufficient capacity and connectivity to the other major freeways adjacent to Highway 1 and Highway 22X, as well as the recommended access management plans for conformity to the *West Highway 1 Area Structure Plan*, previously approved for planning objectives.