

ACCESS MANAGEMENT STUDY
HIGHWAY 3 AND HIGHWAY 36N:
Town of Taber and Municipal District of Taber

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Date: November 30, 2004



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Executive Summary

CastleGlenn Consultants was retained in the spring of 2003 to undertake the Town of Taber Access Management Study along the Highway 3 and Highway 36 corridors. The study involved investigating ways to improve traffic operations along the Highway 3 and 36 corridors to meet the growing needs of the Town of Taber.

It was recognized that access management would be a key factor in arriving at the most effective solutions to improve traffic operations. From the outset of this study it was recognized that a by-pass solution would ultimately be considered to address the needs of highway traffic through the Town of Taber in the next century. However, the goal of this study was to investigate those short-term improvements that could be made to the existing Highway 3 corridor that would defer this ultimate by-pass solution for as long as possible.

One of the overriding requirements established for Highway 36N was to assure that sufficient flexibility existing within the access management strategy to provide for an ultimate four-lane facility with limited access. The access management measures implemented along the Highway 36N corridor required integration with this long-term objective.

Hence, the key to this study was the need to address the right-of-way requirements necessary to enable the Town of Taber to continue to plan for development along the periphery of the Highway 3 and 36 North corridors and provide Alberta Transportation with an access management strategy that could be implemented over time while maximizing the use of existing infrastructure.

The Study Proponents

The proponents of this access management study are The Town of Taber and the Municipal District of Taber.

- The Town of Taber is required by law to have in place those land use by-laws, municipal development plans and area structure plans that assist the municipality in managing, programming and planning for urban growth and the upgrading of the Town's roadway system. A recent initiative of the Town was to establish a new local intersection with Highway 3 to promote development and relieve congestion at the 50th Street intersection.
- The Municipal District of Taber expressed concern regarding traffic operations in the vicinity of the Red Trail / Highway 3 / Highway 36N intersection.

Alberta Transportation responded to this municipal request, by initiating this study with the objective of identifying the required access management measures that would permit the Town of Taber to respond to development initiatives. As well, the study would assure that Alberta Transportation would be able to best advance its position to ensure the use of existing highway infrastructure is maximized through improved traffic operations.

The Study Approach and Methodology

CastleGlenn Consultants designed a tailor-made approach to address the planning requirements of this study by undertaking significant technical analysis and review of all relevant factors associated with the access management alternatives. The process included involvement of the community in a traffic count program, several Technical Review Committee meetings, 2 public open house, meetings with individual property owners, several workshops and focus groups with effected owners and businesses and several Council updates and presentations

As the future development of the 57th Street intersection and the closure of the 51st Street CP Rail crossing remain a local initiative of the Town of Taber, consultation regarding approvals from CP Rail was mandated to the local municipality. Closures of the informal accesses to the CP lands along the Highway 3 corridor were deemed to be ancillary to the major 57th Street – 51st Street issues. Consultation with CP did take place regarding the technical viability of the recommended solutions.

The Study Area

The study area encompasses the Highway 3 corridor from Highway 36S on the west to the Highway 3 / Highway 36N intersection on the east. The Highway 36N corridor is bounded on the south by Highway 3 and on the north by 72nd Avenue which is located just north of the corporate limits of the Town of Taber.

Existing Conditions: Highway 3

The current posted speed limits on Highway 3 is 50 km/hr within the urban limits of the Town of Taber; this transitions to 80 km/hr outside of the urban limits and further increases to 110 km/hr within the surrounding rural areas. **Within the 1.7 kilometer distance of the study limits there are a total of 28 accesses** comprised of:

- Seven operating intersections (50th, 51st, 52nd [RI-RO], 53rd, 54th, 55th, 57th [south side only])
 - Two sets of traffic signals (50th, 51st [pedestrian activated]).
 - Five intersections are STOP-controlled.

- Eighteen private accesses from commercial developments on the south side of Highway 3; and
- Three accesses to the CP Rail corridor on the north side of Highway 3

Existing Conditions: Highway 36

Highway 36N has a posted speed of 50 km/hr within the urbanized town limits. **Within the 1.7 kilometer distance of the study limits** there are 20 accesses comprised of:

- Eight intersections;
 - Four 4-way intersections [52nd, 54th, 56th and 64th Avenues each having 2 approaches]
 - Five “T” intersections [Hwy 3 WB slip ramp, 50th Avenue, Dirt Road North of 56th, 60th and 72nd Avenue]
- Four private accesses;
 - Rogers Sugar Access immediately south of 56th Avenue
 - Grower Supply Entrance immediately north of 60th Avenue
 - Anmart Fuels Access immediately south of 64th Avenue
 - Taber Machine Shop Access immediately north of 64th Avenue
- a CP Rail crossing controlled by safety gates onto the corridor; and.
- A farm access north of 64th Avenue

The junction of Highway 3 and 36N is STOP-controlled in the north-south direction Highway.

The Access Management Strategy

The preferred access management strategy calls for modifications to the existing infrastructure that would **reduce the number of accesses onto Highway 3 from 28 to 17** by undertaking the following actions:

- Undertake intersection modifications and increase the number of intersections with traffic signals from 2 to 4 which would include:
 - Highway 36S; (Underground plant – Install traffic signals when warranted)
 - 50th Street; (already signalized)
 - 57th Street; (new north leg to intersection - underground plant when constructed – Install traffic signals when warranted.) and
 - Highway 36N (Install traffic signals when warranted – short term)
- Reduce the number of STOP controlled intersections with Highway 3 from 5 full movement intersections to 1 full movement (53rd Street) and 2 right-in, right-out movement (Heritage Drive, 51st Street) intersections by initiating the following measures:
 - Heritage Drive intersection: (Modified to Right-in, Right-out operation);
 - McDonald’s Access: Closed
 - 51st Street North Leg: Closed
 - 51st Street South Leg: (Modified to Right-in, Right-out operation)

- 52nd Street: Closed
- 54th Street: Closed
- 55th Street: Closed
- Closure of all CP Rail access points on the north side of Highway 3 (by providing a formalized access to the CP structure at the 51st Street location.)
- Reduce the number of direct commercial accesses onto Highway 3 between 50th Street and 57th Street from 18 to 9.
 - 50th to 51st Street (Shell & Luigi's reduced to 1 shared access – 711 access closed)
 - 51st to 52nd Street (No Changes 2 accesses remain)
 - 52nd to 53rd Street (Closed 1 Kenway Chrysler Access and Closed Driveway Access to Residence)
 - 53rd to 54th Street (Closed both accesses to Lodge Motel and developed shared access between Lodge Motel and Chinook Service)
 - 54th to 55th Street (Closed one of Taber Motel accesses)
 - East of 55th Street (No changes)
 - CP Access to North Side of Highway 3 (2 accesses east of 54th Street closed and one access at 53rd Street closed.)
- Provide for fully integrated signal communications (advanced pre-emption) between the CP Rail safety gate system and all existing and proposed traffic signals locations.
- Provide for intersection modifications to provide enhance accessibility (auxiliary turning lanes) and maneuverability to accommodate large vehicle traffic (WB-21).

The preferred access management strategy calls for modifications to the existing infrastructure that would **reduce the number of accesses onto Highway 36N from 20 to 10** by undertaking the following actions:

- Provides for a two-lane Highway 36N configuration but can accommodate a 4-lane configuration at some future time period if necessary.
- reduce the number of controlled intersections north of Highway 3 from 8 STOP-controlled intersections to 3 modified intersections with underground plant provisions for future traffic signals with appropriate intersection spacing in concert with Alberta Transportations access management policies and guidelines.
 - 50th Avenue (closed);
 - 52nd Avenue (closed);
 - 54th Avenue (closed);
 - 56th Avenue (modified)
 - Taber Fertilizer Access Road (Dirt Road north of 56th Avenue); (closed);
 - 60th Avenue; (closed);
 - 64th Avenue; (modified); and
 - 72nd Avenue; (modified)
- reduce the number of all directional commercial accesses onto Highway 36N between Highway 3 and 72nd Avenue from 8 to 3.
 - Roger's Sugar Access No. 1 (Changed to right-in, right-out)
 - Roger's Sugar Access No. 2 (Closed)
 - Dirt Road Access to Roger's Sugar located just south of 56th Avenue (Closed)

- Roger's Sugar Access No. 3 / 56th Avenue (Modified intersection – Remains Open)
- Grower's Supply Entrance North of 60th Avenue (Closed)
- Anmart Fuels Access South of 64th Avenue (Closed)
- Taber Machine Shop Entrance / 64th Avenue (Modified intersection – Remains Open)
- Steam Team Access North of 64th Avenue (Closed)
- assure future flexibility by confirming sufficient property exists to convert Highway 36N to 4-lane operation when warranted.
- conform to the planning requirement of the Municipal District of Taber and the Town of Taber.

Benefits of the Access Management Staging

The Highway 3 / 36N Access Management Study was developed as a comprehensive strategy that offers Alberta Transportation:

- flexibility in staging as the strategy is segmented into various projects each of which can be scheduled to meet development timetables or warrants;
- flexibility to respond to municipal initiatives such as the proposed 57th Street intersection with the required highway road improvements;
- flexibility to respond to development initiatives with functional plans made in preparation of development plans advancing;
- operational integrity by significantly reducing the number of access in terms of driveways and intersections; and
- additional highway through-lane capacity through the reduction of turning movements and improved intersection spacing; and
- opportunity to delay the need for a by-pass around the Town of Taber (based on LOS, traffic operations and growth assumptions) for at least two decades.

Access Management Staging

A staging strategy was developed to implement the access management strategy. In terms of timing, the improvements within the access management strategy are varied in that:

- access consolidation can be scheduled as part of regular maintenance activities;
- small individual projects such as median closures and closures to minor accesses can be implemented as low costs items with short duration times and can result in immediate benefits;
- other projects may still involve intersection modifications, service road modifications, off-site costs, the requirement of additional property and be subject to adjacent development initiatives.
- the staging strategy may be used as a guideline for future development and access management initiatives;

- priority projects include:
 - reaching consensus regarding the necessary improvements associated with the Town of Taber initiative to develop a new 57th Street intersection with to Highway 3;
 - addressing improvements to the Highway 3 / 36N intersection inclusive of traffic signals; and
 - initiating improvements to the north leg of the 50th Street intersection.
- Alberta Transportation is encouraged to implement the projects contained within this access management strategy on an as required basis. This would serve to integrate with various development initiatives, municipal initiatives and preserve the integrity of the Highway 3 and 36N corridors.

The Costs

- The total construction cost estimate associated with development of the preferred access management strategy for Highway 3 and 36N was estimated at \$7.7M and include provision of a 25% contingency and 10% for engineering services.
- A property estimate of \$3M was determined for the additional property requirements necessary to implement the access management solution and still provide for an ultimate 4-lane cross section along the Highway 36N corridor.

Recommendations

- 1 The infrastructure improvements consistent with the *Highway 3/36N Access Management Study* be received by Alberta Transportation.
- 2 The Town of Taber and the Municipal District of Taber be informed that the *Highway 3/36N Access Management Study* represents a planning document and as such highway intersection construction by Alberta Transportation is currently not scheduled;
- 3 Town of Taber Council and the Municipal District of Taber Council general endorsement be received by Alberta Transportation noting comments related to ...
 - The desire to establish priority improvements such as:
 - the Highway 3 & 36N traffic signals;
 - a new north-south crossing of Highway 3 at 57th Street inclusive of an extension of the service road on the south side of Highway 3 from 55th Street to the existing service road;
 - upgrades to the 50th Street intersection with Highway 3; and
 - improvements to the 56th Avenue and 64th Avenue intersections that include turning radii sufficient to accommodate large truck traffic.
 - The desire to effect timing of improvements such that:

- the relocation of the Red Trail intersection located south of the Highway 3 & 36N intersection coincide with development opportunities in the surrounding area;
 - the issue of extending the service road located on the east side of Highway 36N north of 72nd Avenue be brought back to Municipal District of Taber Council; and
 - improvements to the east side of the 72nd Avenue intersection are a development driven initiative; and.
- 4 Subsequent to Alberta Transportations endorsement of the general intersection configurations as recommended in the *Highway 3/36N Access Management Study*, Alberta Transportation is encouraged to pursue those initiatives necessary to confirm the detailed engineering feasibility and identify the right-of-way requirements of the “ultimate” alignments associated with future requirements.

These activities would likely include, but are not limited to:

- a) a geo-technical investigation inclusive of drainage planning and engineering;
- b) the development of intersection construction staging strategies;
- c) a presentation to Town of Taber Council with the goal of seeking endorsement of the “ultimate” detailed design and access configurations.