

Sylvia

**Westmere Stage 3
Outline Plan & Land Use Redesignation**

Revised Application

Town of Chestermere, Alberta

Prepared for:
Westmere Communities Inc.

Prepared by:
**Brown & Associates Planning Group
Gibbs Gage Architects
Sunbow Consulting Ltd.
Finn Transportation
Harris Hudema Consulting**

May 2001

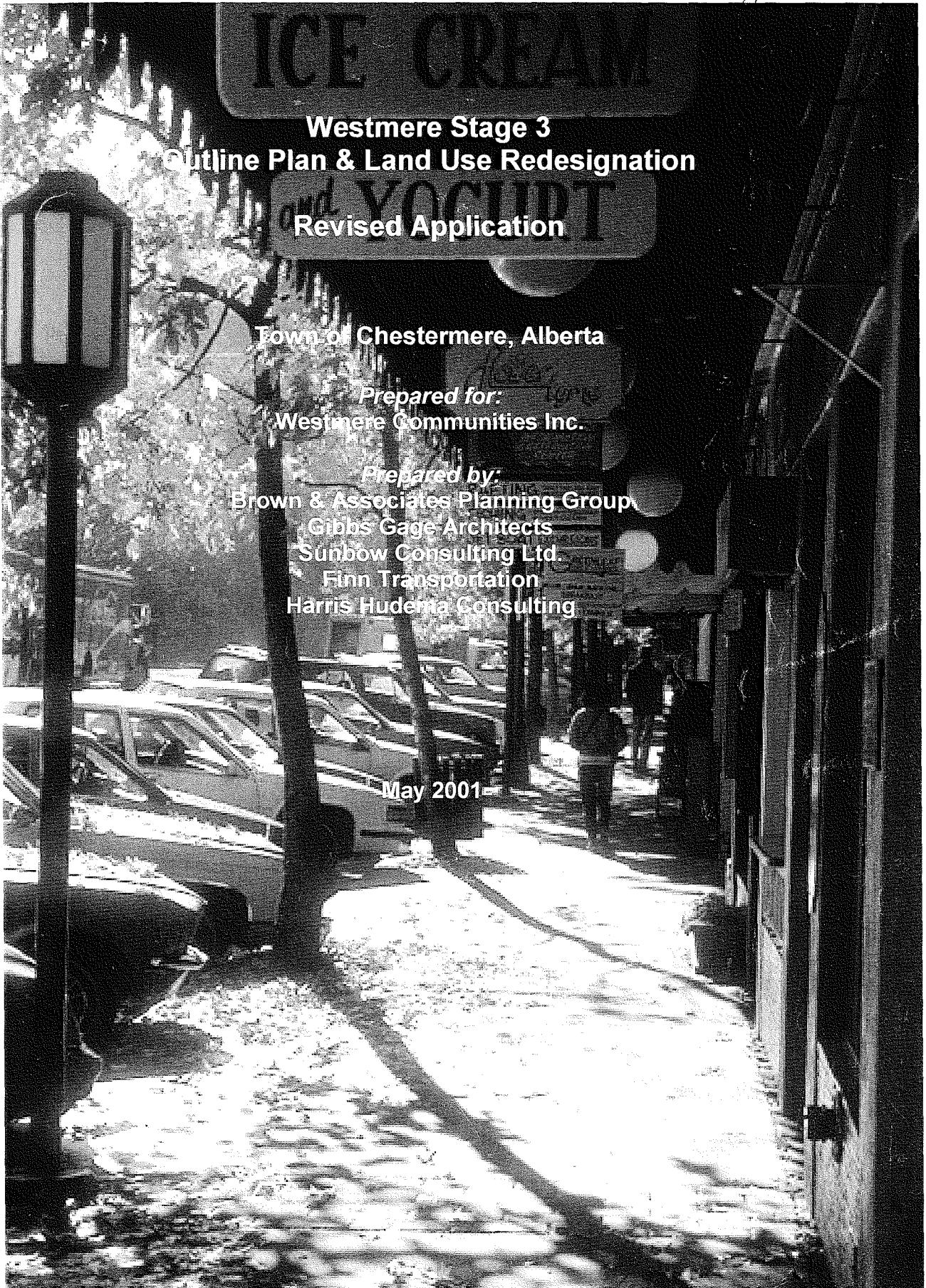
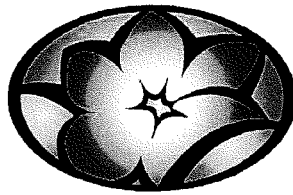


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WESTMERE

CHESTERMERE LAKE

Stage 3 – Town Centre Outline Plan & Land Use Redesignation Revised Application

Introduction

In June 2000, Westmere Communities Inc. (the developer) submitted an Outline Plan / Land Use Redesignation application to the Town of Chestermere that proposed a Town Centre development on the developer's lands known as "Westmere Stage 3." The developer subsequently presented the plan to Town Council and Town Administrative Staff in September 2000. At this informal session, it was recommended that the developer amend the proposed plan to address the Town's concerns.

In December 2000, Westmere Communities Inc. and the Town of Chestermere held a design charette to identify key issues affecting the Westmere Town Centre plan. Westmere Communities Inc. held a follow-up meeting with the Town on January 23, 2001 to further discuss these issues.

A new Outline Plan / Land Use Redesignation was proposed by the developer in April 2001, and this new proposal was presented by Town Council at a Town Hall meeting on April 25, 2001.

This revised application is subsequent to the design charette and the aforementioned meetings.

Westmere Communities Inc. (the developer) has drafted a revised concept plan and land use / outline plan in response to these meetings. Following is a discussion of this revised concept plan and the resolution of the issues that arose at the design charette.

Overview

- The proposed outline plan and land use redesignation is for approximately 24.73 hectares (+/- 61.11 acres) in the Westmere community of the Town of Chestermere. Westmere is a new community of approximately 235 hectares (580 acres) situated immediately west of Chestermere Lake, between Highways 1 and 1A.

Location

- The subject land is located in the southeast portion of Westmere, immediately west of Chestermere Lake and north of Highway 1A, and east of the Westmere Stage 2 lands. (see Figure 1).

Ownership & Legal Description

- The subject land is legally known as a portion of Section 15, Township 24, Range 28, West of the 4th Meridian. The property is owned jointly by Melcor Developments Ltd., Chelson Management Ltd., and Argyle Management Ltd., under the name "Westmere Communities Inc."

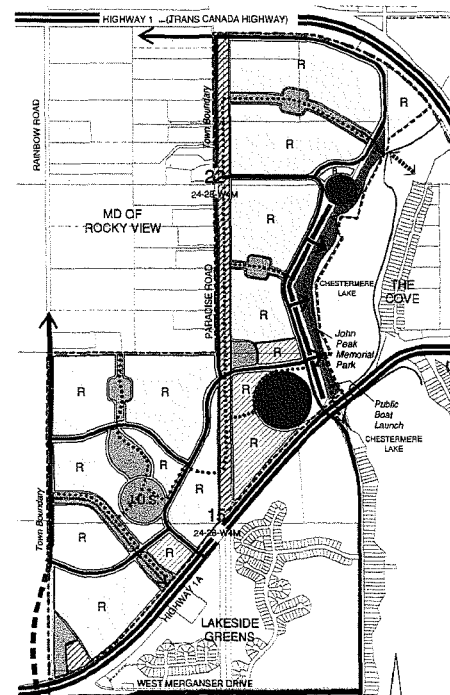
Planning Policies Affecting the Subject Site

Town of Chestermere Municipal Development Plan (MDP)

The Town of Chestermere Municipal Development Plan was approved by Town Council on December 6, 1999 (Bylaw 99-601/1). This document is the senior municipal planning document with which all other statutory planning documents must conform. The Municipal Development Plan includes a general land use strategy and policy framework that guides development of area structure plans and other statutory plans and policies.

Westmere Area Structure Plan (ASP)

The Westmere ASP was approved by Town Council in September 1998 and adopted as a bylaw in accordance with Part 633 of the Municipal Government Act. The ASP does not supercede, repeal, replace, regulate or otherwise diminish the Town of Chestermere Municipal Development Plan or other statutory plan in effect.



The Westmere ASP identifies the subject lands as future multi-dwelling residential / commercial / office town centre. The lands are regulated by the residential and commercial policies found in Sections 2.4 and 2.5 of the ASP respectively. This Stage 3 Outline Plan and Land Use Redesignation submission conforms to the approved Westmere Area Structure Plan.

Land Use Overview

The Town of Chestermere Land Use Bylaw will need to be amended to accommodate this report's proposed land use redesignations. Since no land use district exists that has the intent of the town centre concept and multi-dwelling residential, parameters for a new Town Centre (TC) District are proposed, and may be found in Appendix A.

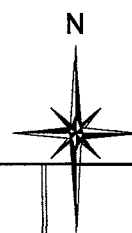
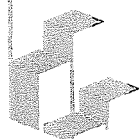


FIGURE 1
LOCATION MAP
WESTMERE STAGE 3
MAY 2001



The Proposal

The Westmere Stage 3 plan (see Figure 2) proposes that a portion of the lands be redesignated from:

- Urban Reserve to **Town Centre (TC)**, for which a new district in the Land Use Bylaw is required (+/- 19.15 hectares, +/- 47.32 acres). The proposed Town Centre land use district may be found in Appendix A.
- Urban Reserve to **Public-Quasi Public District (P)** to accommodate open space in the plan area (+/- 0.89 hectares, +/- 2.22 acres).
- Approximately 4.69 hectares (+/- 11.57 acres) are proposed as roadways.

The commercial component of the **Town Centre** is intended to serve the needs of Chestermere and residents within the vicinity of the Town. A range of personal services, financial institution(s), restaurants, offices, convenience store(s), a food store, gas bar(s), and retail shops are some of the intended uses. Also proposed, at the northeast end of the plan area (Site 7), is a multi-dwelling seniors' facility. The Town Centre redesignation would enable residents to enjoy less traveling time and trips to and from east Calgary's commercial areas.

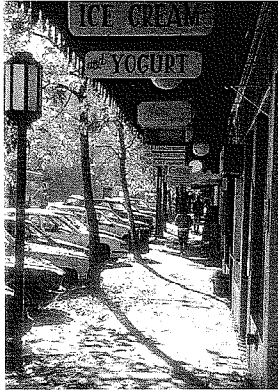
The multi-unit/dwelling component proposed in this new district would allow Chestermere to offer a range in housing options and choices, especially for senior citizens, while the mixed-use component of the district would offer residential / commercial building flexibility.

The location of buildings and landscaping are anticipated to correspond to the Concept Plan illustrated in Figure 3a, 3b, and 3c.

As delineated in Figure 2, eight sites are proposed as part of the Land Use Redesignation. The anticipated purpose and intent of each site are as follows:

Site 1 (+/- 1.32 ha, 3.26 acres)

Special consideration will be taken in the planning of this cell to ensure that the site is pedestrian friendly and developed as a “main street.”



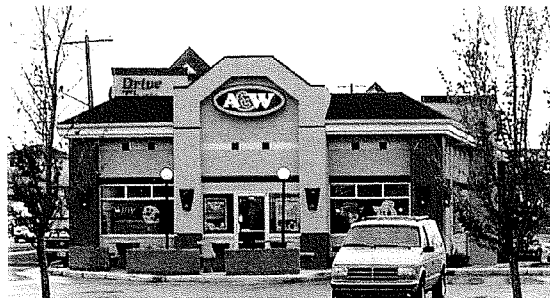
Site 2 (+/- 0.56 ha, 1.38 acres)

Development on this site will be cognizant of vehicular accessibility as it is situated at a key entrance point.



Site 3 (+/- 2.64 ha, 6.52 acres)

Commercial uses situated in Site 3 shall have additional landscaping / buffering at the Highway 1A interface, as shown on the concept plan.



Site 4 (+/- 1.17 ha, 2.89 acres)

Similar to Site 2, development on this site will be cognizant of vehicular accessibility as it is situated at a key entrance point.

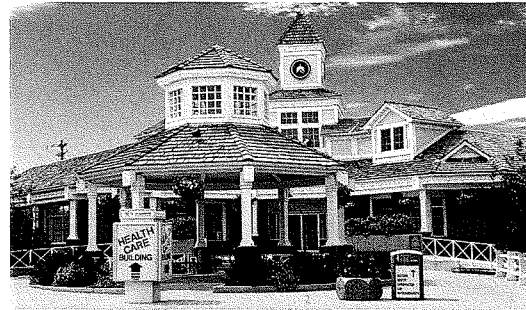


Site 5 (+/- 2.40 ha, 5.93 acres)

Site 6 (+/- 4.14 ha, 10.23 acres)

Site 7 (+/- 1.98 ha, 4.89 acres)

These Sites shall be treated as “swing sites” that may be developed either as multi-unit or commercial. Special consideration will be taken to minimize the impact development may have on adjacent single-family homes through setbacks and landscaping.



Site 8 (1.98 ha, 4.89 acres)

This Site shall be designed comprehensively to accommodate a major tenant / accessory uses. Although the site design shall be pedestrian friendly to tie into the rest of the Town Centre, special consideration shall be taken to provide efficient vehicular accessibility to the site.



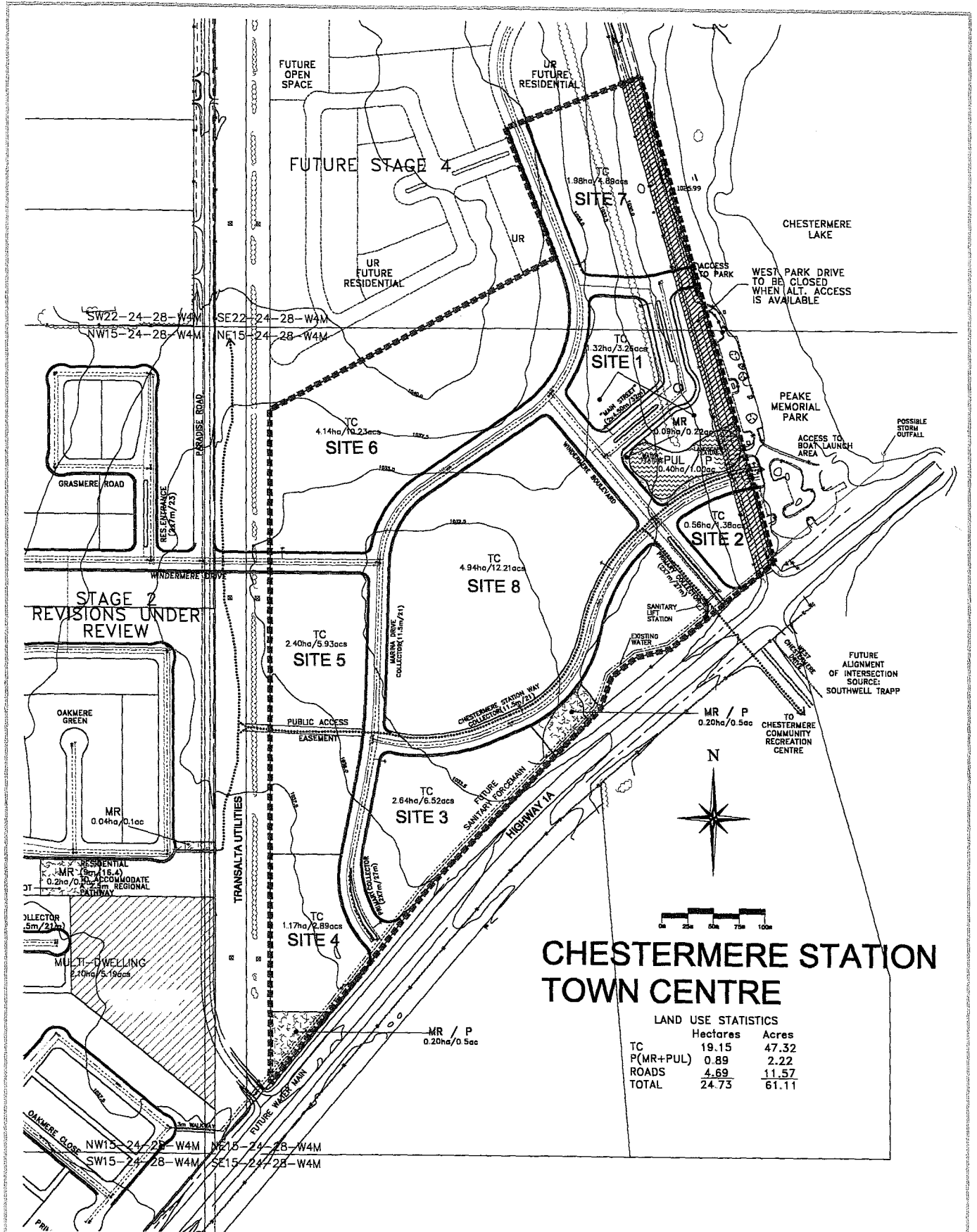
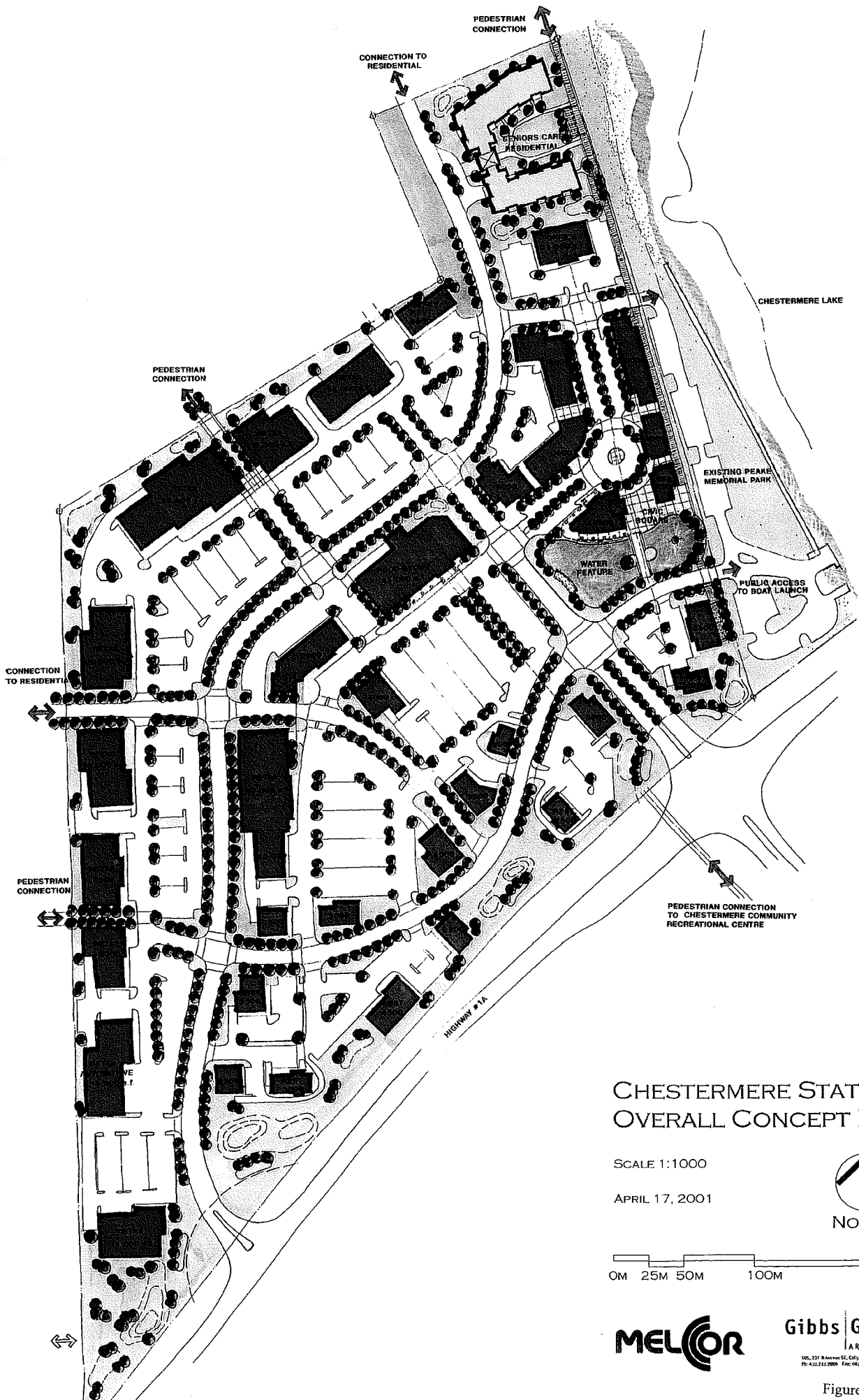


FIGURE 2
OUTLINE PLAN & LAND REDESIGNATION
WESTMERE STAGE 3
MAY 2001



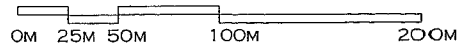
CHESTERMERE STATION OVERALL CONCEPT PLAN

SCALE 1:1000

APRIL 17, 2001



NORTH



Gibbs | Gage
ARCHITECTS
505, 517 Bannock St., Calgary, Alberta T2K 6C3
PH: 403.232.8800 FAX: 403.243.0871

Figure 3a



CHESTERMERE STATION PHASE ONE

SCALE 1:1 000

APRIL 17, 2001

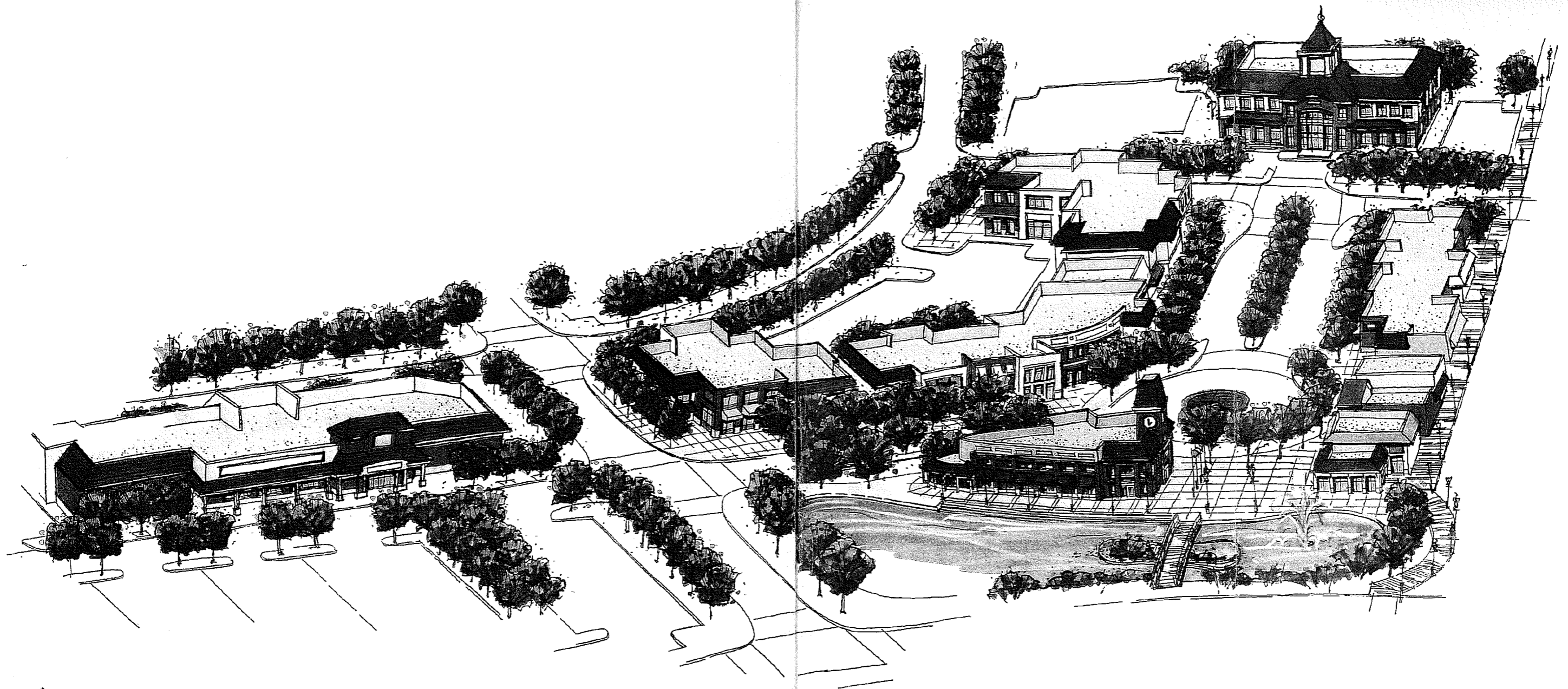


0M 25M 50M 100M 200M



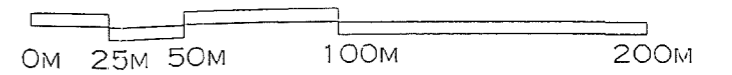
Gibbs Gage
 ARCHITECTS
505, 131 St. Avenue SE Calgary, Alberta T2C 6G2
 Tel: 403.233.2000 Fax: 403.264.8879

Figure 3b



CHESTERMERE STATION

APRIL 17, 2001



Gibbs Gage
ARCHITECTS

535, 293, K. Lorne St. Calgary, Alberta T2L 6P9
Ph: 403.253.2000 Fax: 403.264.0819

Figure 3c

Issues Arising from Charette

Following is a discussion of the key issues that arose during the December 2000 Design Charette. These issues have been addressed in the revised Westmere Stage 3 Concept Plan (see Figure 3) and in the revised proposed Town Centre Land Use District.

Site Size

Harris Hudema Consulting Group completed a market analysis report in January 2001 that projected commercial floorspace demand for the Town of Westmere. This analysis was forwarded to the Town in February 2001.

Harris Hudema's study is conservative in its population forecast and its Secondary Trade Area (STA) size. Nonetheless, there is strong demand for commercial uses at this site. Even though the study indicates that full build-out could occur by 2005, the developer feels that full build-out may take an extra few years. The developer is confident about the absorption rate and success of a Town Centre this size, but has included three swing/flex sites as a contingency.

Transportation¹

To support a town centre of this size, two access points off Highway 1A are required. Since the Town is not opposed to the developer approaching Alberta Infrastructure (AI) about two access points, ultimate signalization at each intersection, and about reducing the speed limit to 60 k/hr along this stretch of Hwy 1A, the developer (with the support of the Town) is prepared to have discussions with AI regarding these issues.

The developer conducted a traffic impact analysis in conjunction with the original application. A correspondence from FINN Transportation that addresses this revised application, and the original FINN Westmere Traffic Review, have been included in Appendix D.

Lake Interface

A possible civic component, the location of the pedestrian oriented "main street" at the lake interface, and location of the water feature/landscaped area reinforces the lake as the Town's key amenity, and creates a synergy at the lake interface. To create some open space areas, the developer proposes some Municipal Reserve be transferred from the Stage 4 lands to the Town Centre (along the water feature and along Highway 1A) as shown on Figure 2. A re-calculated open space allocation for Westmere may be found in Appendix B.

The size of the water feature will be finalized after further analysis, but at this time, it is anticipated to be approximately one-acre in size.

¹ The developer may propose to Town Administration and Council to change some of the Stage 3 Town Centre street/road names at a later date.

Tenants/Uses

The intent of the Town Centre development is to provide Chestermere with a diverse level of commercial products and services. There is immediate demand for a food store, gas bar, fast-food retailers, a drug store, dentist/doctor's office, a drive-thru bank, and possibly a hardware store.

Commercial uses along Highway 1A and uses that abut residential areas will have landscaped buffer areas as shown on the concept plan. Retail uses along the highway interface will not be positioned in a "line," rather they will be oriented as "clusters" or campuses.

Phasing/Servicing

Phase 1 will stem from Windermere Boulevard/Windermere Boulevard due to servicing availability – this will include a portion of the "main street" and the likely food store site.

Sunbow has been working with Southwell Trapp to reconcile sewage servicing capacities.

The uses on the perimeter of the Town Centre that abut the residential areas can be converted into low-density multi-unit sites if commercial/retail market conditions change. Vacant areas will be seeded/grassed until the land is developed.

Pedestrian

Pedestrian connectivity has been considered throughout the plan area, and will be incorporated into the built-form. The "main street" location, combined with a civic component, reinforces pedestrian connections along the lake interface.

Residential

In the case of multi-unit development, the developer proposes low-density, low profile buildings (no more than 4 storeys). Multi-unit development in the Town Centre will likely begin with a seniors' complex. Multi-unit sites located on the edge of the plan area could be treated as commercial "swing" sites.

The developer is willing to hold public open houses to inform the public relative to multi-unit development in the Town Centre.

Urban Form

The Revised Concept Plan guidelines, and developer implemented / regulated, architectural guidelines will be incorporated into the Town Centre. Conformity to the design theme(s) and design guidelines would be demonstrated before the development permit stage. It is the developer's intent to have the Town approve the guidelines at a later date, to be incorporated as a part of this revised land use/outline plan application. The developer will administer these guidelines with each potential tenant.

These architectural guidelines will be submitted for the Town's approval prior to submission of the project's first development permit.

Site Context

Topography

The site is located on the eastern slopes of the Chestermere Lake basin. There is an undulating, rolling terrain and low-lying areas as one moves westwards from the lake.

Geotechnical

McIntosh Lalani Engineering Ltd. in March 1998 conducted a preliminary site reconnaissance with the following observations:

“Generally the site is a rolling hummocky terrain with an average gradient of 5 percent. The slopes located on the east side of the development slope downward to Chestermere Lake at a gradient of approximately 8 percent. The east half of the site generally drains toward Chestermere Lake and the west portion of the site (west of Paradise Road) drains into a series of low-lying areas in the centre.”

There are not visible signs of groundwater seepage or surface erosion on the site. However, there are some low-lying areas where surface water tends to drain. These areas will be evaluated at a detailed design stage as part of an overall stormwater/wetlands/open space management program.”

Subsurface

At the present time, a subsurface investigation within the area has not been undertaken. Site specific geotechnical information will be established at the plan of subdivision stage.

Geotechnical Evaluation

Based on the above observations, an evaluation of the site concludes the following:

- There does not appear to be any unusual geotechnical concerns with the development of these lands; and
- The subject site can be classified as lands free from geotechnical hazards.

Sour Gas Wells/Pipelines

Touch Tone Data Inc. performed a search in February 1998 to identify any sour gas wells and/or pipelines within a three-mile radius of the Westmere Area Structure Plan. One dry and abandoned well site was identified in NW 15-24-28-W4M. Other wells in the vicinity have been identified and their required habitable building setbacks are located outside the application area.

Vegetation

The only on-site vegetation is a row of trees along the eastern and western edges of the property that were planted by the present owners some years ago.

Existing Structures

There are no existing structures on the subject property other than TransAlta's overhead power lines located along the western boundary of the plan area.

Historical Assessment

An Historical Resources Impact Assessment was completed by Aresco Ltd. for the subject land in 1998. The Province concluded in a letter dated October 21, 1998 that further work was not required for this property.

Transportation

Public Roadway Standards

The Westmere Stage 3 road standards include a local major with no parking for the entranceway roads Marina Drive and Windermere Boulevard (2x7 metre pavements and a 3.5-metre median, all in a 27-metre right-of-way), with all other roads being collectors (11.5-metre pavement in a 21-metre right of way).

Windermere Boulevard / Highway 1A Intersection

The plan illustrates this intersection as it will be ultimately constructed. Southwell Trapp has provided preliminary drawings that would correct the angle of the intersection and therefore provide for safer driving conditions.

Traffic Assessment

Finn Transportation has completed an update of the Westmere area based on the criteria as proposed for Stage 3. Further information can be gleaned from the Finn Transportation report under separate cover.

Road Closure – West Park Drive

The developer proposes to have West Park Drive closed in principle once Windermere Boulevard is completely constructed and tied back to West Park Drive at the north end of the plan area.

Highway 1A Access

All turns access is expected at the Highway 1A and Windermere Boulevard intersection. On an interim basis, the intersection of Highway 1A and Marina Drive should be designed as right-in / right-out. Ultimately, after Highway 1A is upgraded to an urban major standard (divided) and the speed limits adjusted accordingly, the intersection can be designed for full turns.

Servicing

Sanitary Sewer

Sanitary servicing will drain down to a location in the southeast corner of the site. The sewers will drain to a sanitary lift station and be pumped by forcemain to the existing subdivision within the Westmere Stage 2 outline plan area. A 300 mm sanitary sewer is available to drain this sewage by gravity to the Town's recently built storage and pump station then back to Calgary.

Storm Sewer

Storm sewer servicing for this parcel is to drain to Chestermere Lake. Based on the recommendations of the Master Drainage Plan for the Town of Chestermere (Southwell Trapp & Associates, April 1995), storm drainage is allowed to drain to the lake at 1:5 year post development rates. These rates equate approximately to 50 – 70 l/s/ha discharge range.

Recent requirements by Alberta Environmental Protection specify that stormwater quality improvements are required for the storm drainage of all new developments. The best management practice for this subdivision is for the use of an online stormwater storage facility, designed to improve stormwater quality entering the lake. The storage pond will likely locate in the area labeled "Site 1" as a water feature. The size of this pond is to be confirmed, but it is anticipated to be approximately one-acre in size.

Water

Water services are provided by an existing 300mm water line that is within the property running immediately adjacent to Highway #1A. This water line, constructed with the existing Westmere residential development, is considered a major loop with the Chestermere water system. Two ties to this line (from the two road intersections with Highway #1A) would adequately service this site. Hydrants will be located throughout the subdivision as is currently required by City of Calgary subdivision standards for commercial areas.



Architectural Guidelines

The purpose of these Architectural Guidelines is to ensure that proposed development is visually compatible with the surrounding environment, and to encourage a high quality of design in the built environment.

Theme

- The Westmere Town Centre development shall reflect an architectural theme designed to unify the streetscape and to celebrate the history of the Town of Chestermere.

Approval Process

- Architectural Guidelines are applicable to both multi-unit residential and commercial developments unless otherwise noted. All building designs must comply with the Town of Chestermere Land Use Bylaw.
- The Architectural Guidelines Committee (AGC) will consist of qualified consultants experienced in engineering and architectural design and will be administered by the developer. The approval process will review the site grades, drainage and building design elements in accordance with the Architectural Guidelines. Sites will be reviewed on a parcel-by-parcel basis prior to a builder's request for a building permit.
- The developer shall retain a refundable damage deposit from each builder of a minimum \$1,000.00 per parcel to ensure conformity to the guidelines.

- The builder shall submit one set of the following to the AGC:
 - Site plan complete with building grades;
 - Architectural drawings: plans, elevations, sections, and colours.
- The AGC will review the drawings for compliance with architectural guidelines and will submit the package back to the builder with required changes or a compliance stamp.
- Following approval by the AGC, the builder may submit plans to the Town for development and building permits.

The Architectural Guidelines will address the following:

- Building mass and height;
- Exterior finishes;
- Roof materials;
- Site grading;
- Location of access and egress points;
- Retaining walls, if any;
- Landscaping;
- Fencing;
- Lighting;
- Signage;
- Internal pedestrian connections and street furniture;
- Building setbacks.

Appendix C illustrates a range of building designs, massing, and types that would be appropriate for commercial and multi-unit dwellings.

APPENDIX A -Town Centre (TC) Land Use District

Part III Section 21.0.0

Town Centre (TC)

21.1.0 PURPOSE

21.1.1 The purpose and intent of the **Town Centre District** is to provide for a flexible variety of commercial, retail, institutional, residential, public and quasi-public uses at a comprehensively planned Town Centre. The Town Centre will promote a pedestrian-friendly environment, provide linkages to Lake Chestermere and the commercial / residential areas, and will encourage a high architectural design standard of buildings.

21.2.0 LAND USE

21.2.1 LIST OF DISCRETIONARY USES

- Accessory uses
- Apartment (seniors) buildings
- Attached housing
- Automotive services (containing a grocery store)
- Bakeries
- Bed & Breakfast Accommodations
- Cocktail lounges
- Community buildings and facilities
- Convenience stores
- Delicatessens
- Drinking establishments
- Duplexes
- Dwelling units
- Essential public services
- Financial institutions
- Fourplex dwellings
- Gas bars & auto repair shops
- Grocery stores
- Health and wellness centres
- Hotels
- Liquor stores
- Lodging houses
- Marina and snowmobile sales and service
- Marine gas sales

Medical clinics
Mixed-use (residential-commercial) buildings
Motels
Multi-unit structures
Offices (Professional and Business)
Parking lots
Parks and playgrounds
Personal service businesses
Police stations or offices
Post offices
Public or Quasi-Public uses
Restaurants
Restaurants – food services or take-out
Retail food stores
Retail stores
Semi-detached dwelling units
Senior's multi-unit dwellings
Signs
Townhomes
Triplexes
Utilities

21.3.0 GENERAL REQUIREMENTS

In addition to the general land use regulations contained in Part III, Section 9.0.0, the following regulations shall apply to every development in this district.

21.4.0 MINIMUM REQUIRMENTS

For commercial uses:

21.4.1 Side Yard Setback:

- (a) A minimum of 3.0 m (10 ft) when the side yard abuts a residential district

21.4.2 Rear yard Setback

- (a) A minimum of 6.0 m (20 ft) when the site abuts a residential district

For residential uses:

21.4.3 Side Yard Setback

- (a) A minimum of 1.2 m (4 ft).

21.4.4 Rear Yard Setback

- (a) A minimum of 6.0 m (20 ft) from the rear of the building to a property line.

21.5.0 MAXIMUM LIMITS

- 21.5.1 Height of Buildings: 13.5 metres (4 storeys) at any eaveline for all commercial and residential uses.
- 21.5.2 Residential density shall not exceed 44 units per acre.

21.6.0 SPECIAL REQUIREMENTS

21.6.1 The façade of residential and commercial buildings in the District shall be maintained to standards prescribed in the Council approved and Developer administered Architectural Guidelines.

21.6.2 Landscaping and Screening:

For commercial uses,

- (a) The boulevard and minimum of 10% of the site area shall be landscaped in accordance with the concept plan approved by the Approving Authority;

For residential uses,

- (b) The boulevard and a minimum of 40% of the site area shall be landscaped in accordance with the concept plan approved by the Approving Authority;

For all commercial and residential uses,

- (c) All landscaping shall be generally located as shown on the concept plan approved by the Approving Authority;

(d) Any trees or shrubs which die must be replaced on a continuing basis;

(e) Where a proposed development abuts or faces an existing residential site, adequate screening and/or buffering of the proposed site shall be provided to the satisfaction of the Approving Authority.

21.6.3 For commercial uses, all on-site parking shall be located a minimum of 1.2 (4 ft) metres from the front property line.

21.6.4 Dwelling accommodations in structures with non-residential uses shall:

- (a) be limited to the second storey or above;
- (b) not be located below or on the same floor as a non-residential use; and
- (c) have an entrance to grade that is separate from the entrance to any non-residential component of the building.

21.7.0 OTHER REQUIREMENTS

21.7.1 Architectural Guidelines

Adherence to architectural controls and guidelines shall be demonstrated prior to the development permit stage. Architectural style must reflect a uniform Town Centre theme.

21.7.2 Signage

Along with all buildings and structures, signage and illumination shall also be guided by architectural guidelines.

21.7.3 Development Plans

Approval of the application does not constitute approval of a development permit. Comprehensive plans shall subsequently be submitted to the satisfaction of the Development Authority as part of a development permit application.

21.7.4 Site Requirements

Site 1

Special consideration will be taken in the planning of this cell to ensure that the site is pedestrian friendly and developed as a “main street.”

Site 2

Development on this site will be cognizant of vehicular accessibility as it is situated at a key entrance point.

Site 3

Commercial uses situated in Site 3 shall have additional landscaping / buffering at the Highway 1A interface, as shown on the Council approved concept plan.

Site 4

Similar to Site 2, development on this site will be cognizant of vehicular accessibility as it is situated at a key entrance point.

Site 5, Site 6, and Site 7

These Sites shall be treated as “swing sites” that may be developed either as multi-unit or commercial. Special consideration will be taken to minimize the impact development may have on adjacent single-family homes through setbacks and landscaping.

Site 8

This Site shall be designed comprehensively to accommodate a major anchor tenant and accessory uses. Although the site design shall be pedestrian friendly to tie into the rest of the Town Centre, special consideration shall be taken to provide efficient vehicular accessibility to the site.

APPENDIX B – Westmere Overall Density Analysis

Westmere

OVERALL OPEN SPACE ALLOCATION

May 2001

Revised January 17, 2000

Revised February 5, 2001 for Stage 2 (school sites) and Stage 4

Revised April 30, 2001 for Stage 3 (commercial) and Stage 4

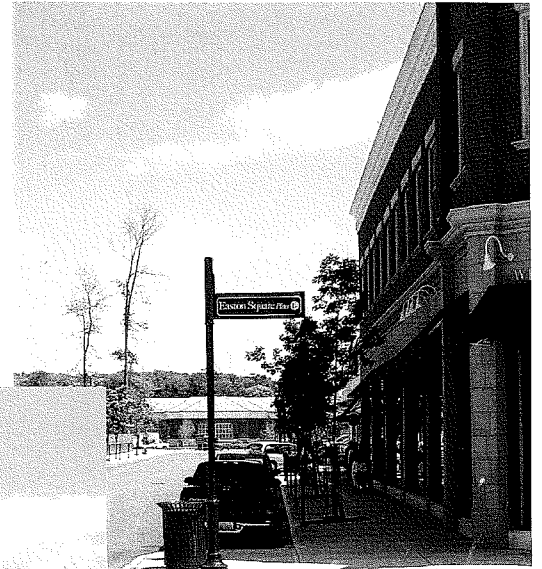
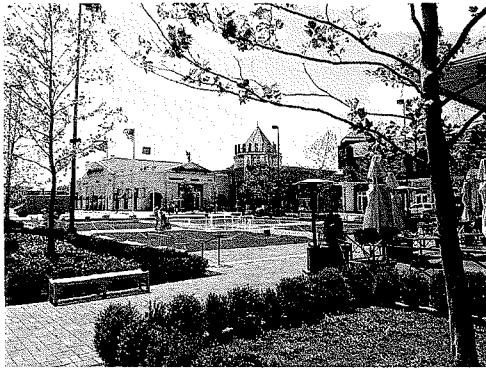
	<u>Approximate Acres</u>
GROSS HOLDINGS	440.0
Add Westpark Drive	<u>7.3</u>
TOTAL	447.3
Less Estimated ER*	<u>2.9</u>
GROSS DEVELOPABLE	444.4
10% MUNICIPAL RESERVE	44.4
Stage 1	4.9
Stage 2	29.6
Stage 3**	1.2
Stage 4	8.7

* Assumes 1.3 acs in Stage 1 (Phase 1), 1.1 acs in Stage 2, and 0.5 ac in Stage 4.

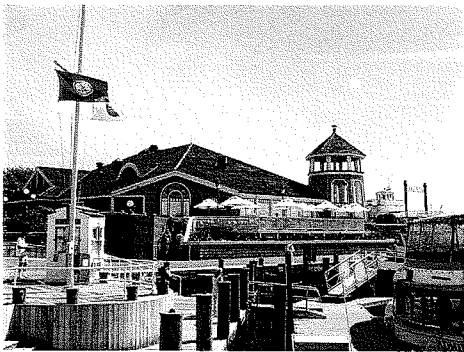
** Includes 1.2 ac transfer from Stage 4, as proposed in this LU Redesignation / OP application.

APPENDIX C – Building Examples for Residential and Commercial

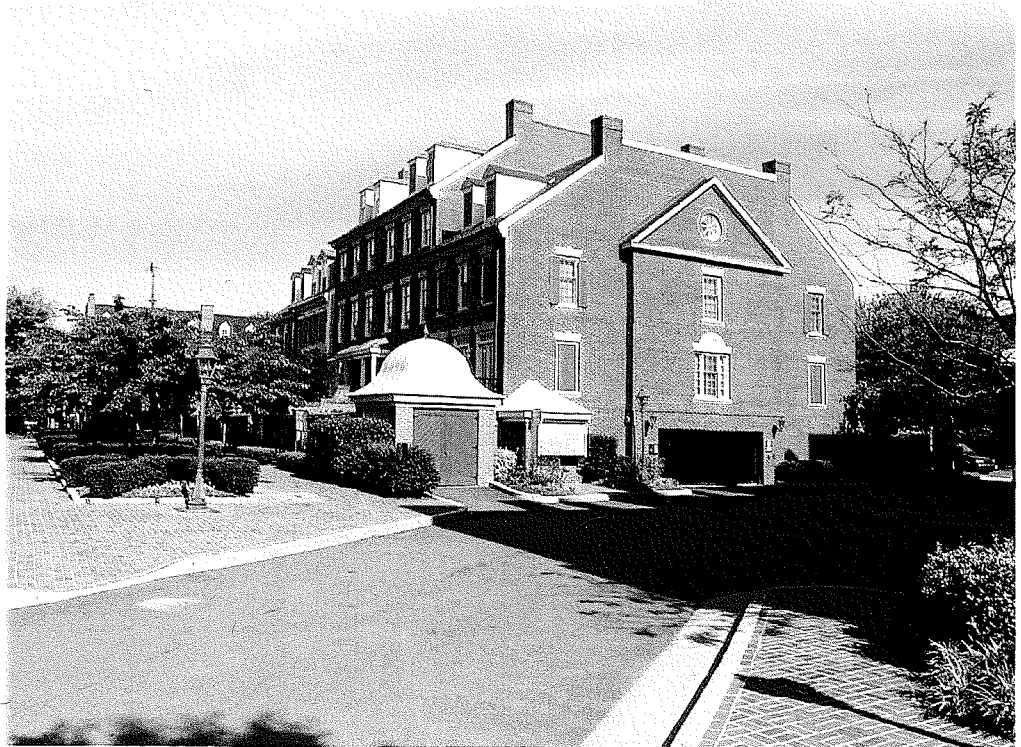
Commercial Examples



Commercial Examples (cont'd)



Multi Unit Examples



Multi Unit Examples (cont'd)



Multi Unit Examples (cont'd)



APPENDIX D – FINN Transportation Review

Finn Transportation Consultants



May 11, 2001
File #: 5297.05

Westmere Communities Inc.
c/o Melcor Developments Ltd.
2nd Floor, 1422 Kensington Road NW
Calgary, AB T2N 3P9

Attention: Mr. Kent Hystad

Dear Kent:

**RE: Westmere Communities
Chestermere Station Overall Concept Plan**

In accordance with our recent meeting, Finn Transportation Consultants (FINN) has undertaken a review of the Westmere Communities' Chestermere Station Overall Concept Plan (dated March 07, 2001) and offers the following comments:

- This scenario generates approximately the same traffic as was generated in the previous concept plan (as reviewed by FINN and contained in the *Westmere Stage 3 Traffic Review* report, dated July 24, 2000). Our review focused on PM peak hour, weekday traffic. There are no material differences between the traffic generation and traffic flows in the two scenarios (recognizing that the nature of the traffic may be different). The incremental traffic volumes highlighted in Exhibit 5 of the report remain valid under the new scenario, with minor changes. The attachment to this letter highlights the incremental traffic volumes under the revised development concept. The new scenario increases incremental daily traffic at Highway 1A/Chestermere Station Boulevard and decreases incremental daily traffic at Highway 1A/Marina Drive;
- Difficulties will be experienced at full build-out at Highway 1A/Marina Drive if access is not permitted at Highway 1A/Chestermere Station Boulevard. This may limit the uses on site unless major upgrading is undertaken at the intersection or access to the site from the west and north is restricted. Phasing the development to coordinate with access approval could mean that the site could be developed over time. Approximately 50% of the development could be accommodated immediately, 25% additional with full signalization at Highway 1A/Marina Drive, and the final 25% with access at Highway 1A/Chestermere Station Boulevard. As a minimum, it is suggested that right in/right out access be provided at this intersection. FINN is continuing to discuss the access points on Highway 1A with Alberta Infrastructure;

- The traffic volume warrants the installation of a traffic signal at Highway 1A/Marina Drive. With the signal in place FINN is confident that pedestrians will be able to cross both roads safely and efficiently. A pedestrian overpass does not appear to be required at this time. It has been our experience that pedestrian overpasses are not used if pedestrians deem there to be a safe at-grade crossing in the vicinity; and
- From an operational perspective, the southbound left turn movement at Highway 1A/Marina Drive will experience an average delay of approximately 70 seconds per vehicle during the PM peak hour. This may result in an average queue of 8-10 vehicles. It would be appropriate to ensure adequate storage space is available for these vehicles. Inadequate storage will result in degradation in the level of service offered by this intersection.

Please note that the above analysis has been based on the following assumptions:

- That full access would be permitted at Highway 1A/Marina Drive;
- That the site identified as automotive was for parts and servicing, not sales;
- That several of the fast food restaurants would have drive-through capability;
- That the sit-down style restaurants would have fast turnover, not fine dining; and
- That the smaller retail components would tend to be more specialized.

In summary, we are of the opinion that the configuration of the Chestermere Station Overall Concept Plan by Westmere Communities offers the best development configuration from a transportation perspective.

We are available to answer any further questions.

Sincerely,

Finn Transportation Consultants



Tully Clifford, P.Eng., M.Eng.

Attachment

cc: Gary Pooni, Brown & Associates

Finn Transportation Consultants



Westmere Stage 3

Traffic Review



MEMORANDUM

TO: Darrell Grant, Brown & Associates Planning Group
COPY: Kent Hystad, Melcor Development
FROM: Philip Wong, P.Eng.
FILE: 5297.05
DATE: July 24, 2000
RE: **WESTMERE STAGE 3 TRAFFIC REVIEW**

* * * * *

Darrell:

As requested, we have carried out a review of traffic issues related to Stage 3 of the Westmere development. This memo provides a summary of our methodology in carrying out the review and the results of our analysis.

Please note that our review has focussed primarily on a relatively short time frame (as have our reviews of traffic issues for Stages 1 and 2 of Westmere), as we are not doing a new 'full build-out' traffic analysis at this time.

Our review has assumed the following:

- A grade-separated interchange on Highway 1 at Rainbow Road.
- No direct connection of Paradise Road to Highway 1.
- An all turns intersection at the Highway 1A / Chestermere Station Boulevard junction at ultimate build-out of the site.

BACKGROUND TRAFFIC VOLUMES

In previous work carried out for the Westmere Area Structure Plan, we carried out an analysis of projected traffic volumes for the site in its entirety. Subsequent to this work, we carried out a more detailed study in support of the Stage 2 Outline Plan. The daily link volumes from this previous work is illustrated in **Exhibit 1**.

At this time, the developer proposes a new development scenario for Stage 3 than what was previously assessed. In order to determine the new traffic volumes on the road network, traffic resulting from the previous Stage 3 development scenario were "netted out" from those shown in Exhibit 1 to arrive at the 'Incremental Background Daily Traffic Volumes' (i.e., Stages 1 and 2 traffic only), illustrated in **Exhibit 2**.

NEW LAND USE SCENARIO

The new Stage 3 layout that is currently proposed is illustrated in **Exhibit 3**.

The following are the assumed land uses for the various parcels within Stage 3, based on the information you have provided to us.

- For **Commercial Type 1** Lands:
 - Four fast-food restaurants with drive-thru windows, each assumed to be 3,000 ft.² GFA
 - Two fast-food restaurants without drive-thru windows, each assumed to be 3,000 ft.² GFA
 - Four 'high-turnover sit-down' type restaurants, each assumed to be 6,000 ft.² GFA
- For **Commercial Type 2** Lands:
 - 45,000 ft.² GFA food store
 - 80,000 ft.² GFA mixed commercial retail units
 - 100,000 ft.² GFA general office space
- For **Commercial Type 3** Lands:
 - 10,000 ft.² GFA general offices
 - 25,000 ft.² GFA 'specialty retail' stores
 - 30 condominium residential units

- Total of 490 townhouse units in four residential cells (numbered ① to ④), based on a density of 45 units per acre

TRIP GENERATION

Table 1 (attached) provides a summary of the development areas, the trip rates assumed for p.m. peak hour trip generation, and the resultant numbers of vehicle trips expected to be generated by the Stage 3 development for the p.m. peak hour. Also shown in the table are the estimated percentages of 'pass-by' traffic (drivers already on the adjacent streets who stop in at businesses on the site), diverted-linked traffic (drivers already on the road system in general, but not on roads immediately adjacent to the site) and the remaining are 'primary' traffic (new trips on the road system as a result of the site's development).

For the purposes of this study, the diverted-linked trips have been treated as if they were primary trips, as they appear to be new traffic at the intersections in the immediate vicinity of the site.

In order to arrive at the daily volumes, a factor of 11x was applied to the p.m. peak hour volumes.

TRIP DISTRIBUTION

In terms of a directional distribution for the site-generated traffic, we have utilized the same distribution patterns derived previously for our review of the overall Westmere development area and for our Westmere Stage 2 work. As expected, given the relatively small size of the Town of Chestermere and the site's close proximity to the Calgary market, much of the site-generated traffic will be to and from the west on Highway 1A.

SITE TRAFFIC

Based on the estimated traffic generation levels for the new Stage 3 scenario and the assumed trip distribution patterns, the site traffic was assigned to the proposed road network. The daily link volumes are shown in **Exhibit 4**.

Exhibit 5 shows the estimated daily link volumes on the area roadways assuming full development of the residential uses in earlier stages (Stages 1 and 2) of the Westmere development plus the additional traffic generated by Stage 3 as currently proposed.

Illustrated in **Exhibit 6** are the p.m. peak hour turning movement volumes at the two key intersections on Highway 1A (at Windermere Boulevard and Chestermere Station Boulevard).

POST-DEVELOPMENT OPERATING CONDITIONS

Our analysis for Stage 3 development assumes that Highway 1A will not yet be divided (to a four-lane cross section) through this area. 'By inspection' the projected turning movements at the Highway 1A/West Chestermere Drive/Windermere Boulevard intersection will require at least separate left-turn lanes for the eastbound and westbound Highway 1A approaches. For the purposes of this analysis, it is assumed that the eastbound and westbound legs will each have a single left-turn lane, a single through lane, and as a minimum, a right-turn deceleration taper. This same lane arrangement was also assumed for the side street (northbound and southbound) approaches.

At the Highway 1A/Chestermere Station Boulevard intersection at ultimate site build-out, our analysis indicates that it will operate satisfactorily with an exclusive eastbound left-turn lane, a single southbound left-turn lane and a deceleration taper for the westbound movement. For the southbound rights, an acceleration taper would be beneficial.

With this overall configuration in place, we evaluated whether or not the intersection would be able to operate with just STOP sign control on the minor legs. The analysis clearly shows that during the p.m. peak hour, there would **not** be sufficient capacity for the Highway 1A/West Chestermere Drive/Windermere Boulevard intersection to operate without traffic signals. Even with signals assumed to be in place, the intersection would be operating close to its effective capacity. This finding suggests that the timing of the twinning of the highway may need to be revisited.

We note that the north leg of the Highway 1A/West Chestermere Drive/Windermere Boulevard intersection is expected to carry significant volumes of traffic both during the p.m. peak hour and on a daily basis. The volumes suggest that this should be at least a 'major stub' in terms of cross section. At the more westerly intersection (Chestermere Station Boulevard), we have assumed an all movements intersection at time of ultimate build-out of the site. Our analysis indicates that the north leg of this intersection could see traffic volumes in the neighbourhood of 8,400 vehicles per day (vpd). For the section of these north legs south of Chestermere Station

Way, we note that the concept of 'environmental capacity' would not apply as there are no adjacent residential development.

Given the anticipated traffic volumes (12,600 – 19,500 vpd) on Windermere Boulevard, careful consideration needs to be given to intersection spacing, access control, and geometrics for this roadway. Generally for a divided primary collector standard road, the City of Calgary's environmental guideline limit is 10,000 vpd. However, in the section of Windermere Boulevard between Highway 1A and Chestermere Station Way (projected traffic volumes of 19,500 vpd), there is no residential frontage, and therefore, the maximum allowable traffic level on this section depends more on intersection operating conditions than environmental capacity constraints.

With regards to the section of Windermere Boulevard between Chestermere Station Way and Windermere Drive (projected traffic volumes of 12,600 vpd), there are some 30 condominiums above ground floor retail that front this section of road. While the volume of traffic is above the 10,000 vpd limit, we note that there have been initiatives in Calgary to increase the environmental capacity limit for divided primary collector standard roads from 10,000 vpd to 15,000 vpd. Generally, we do not believe that the additional 2,600 vpd over the current environmental capacity guideline for this section of road is of any significant concern.

* * * * *

I trust that this provides a sufficient summary of the analysis we've carried out. Please let me know if there are any questions regarding this review.

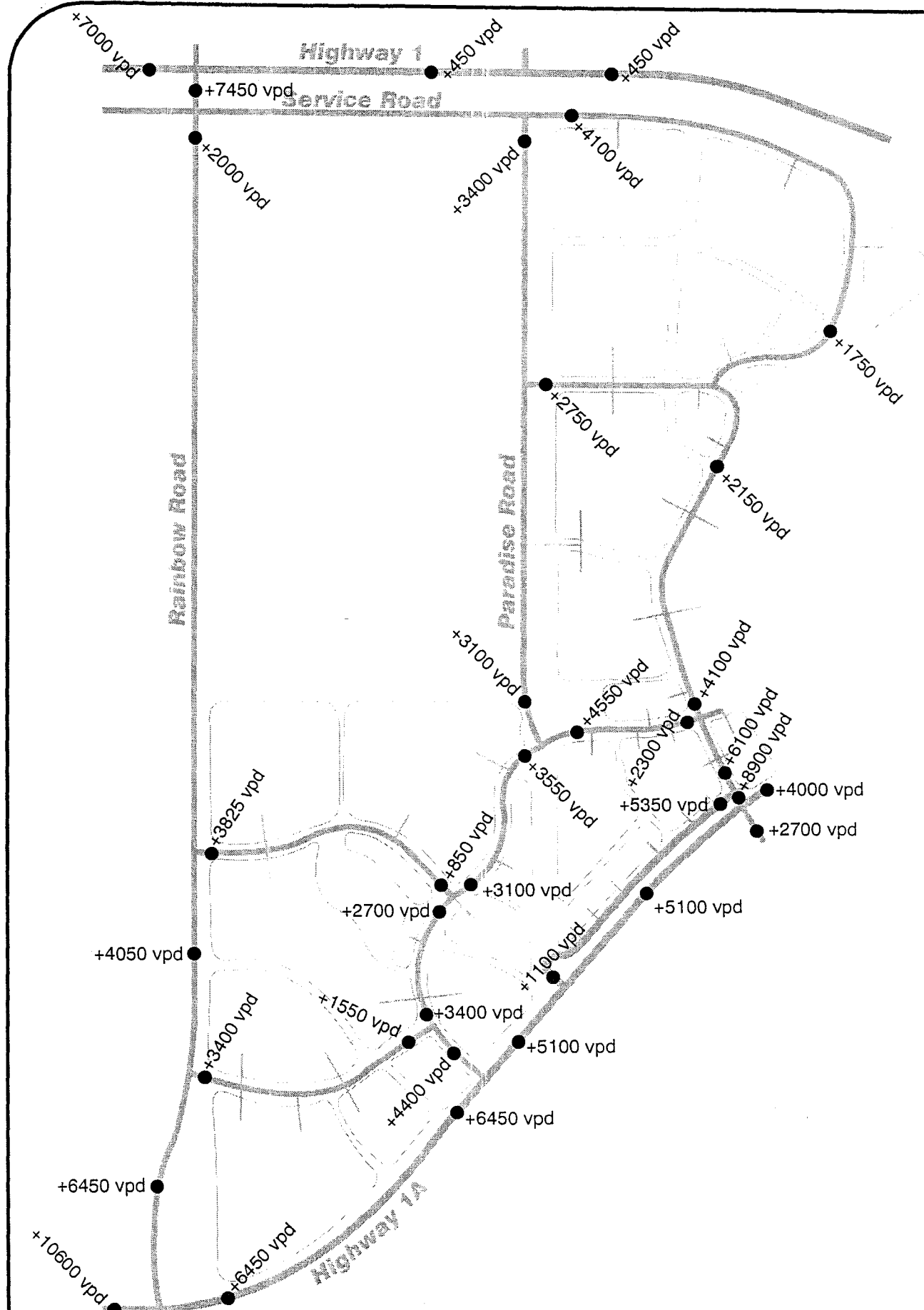
Table 1: P.M. PEAK HOUR TRIP GENERATION SUMMARY

CELL # and DESCRIPTION	DEVELOPMENT INTENSITY	BASE TRIP RATE	TOTAL TRIPS	INBOUND		OUTBOUND	
				split	trips	split	trips
Commercial 1							
4 Fast-Food Rest. w/ Drive-Thrus	12,000 ft² GFA	33.50 / 1,000 ft² GFA	402	52%	209	48%	193
2 Fast-Food Rest. w/o Drive-Thrus	6,000 ft² GFA	26.20 / 1,000 ft² GFA	157	51%	80	49%	77
4 High-Turnover Sit-down Rest.	24,000 ft² GFA	10.90 / 1,000 ft² GFA	262	60%	157	40%	105
Commercial 2							
Food Store	45,000 ft² GFA	7 / 1,000 ft² GFA	315	50%	158	50%	158
CRU (ITE Shopping Centre Rates)	80,000 ft² GFA	6.80 / 1,000 ft² GFA	544	48%	261	52%	283
Office	100,000 ft² GFA	2.70 / 1,000 ft² GFA	270	17%	46	83%	224
Commercial 3							
Offices	10,000 ft² GFA	2.70 / 1,000 ft² GFA	27	17%	5	83%	22
Condos	30 units	0.80 / unit	24	67%	16	33%	8
Specialty Retail (from ITE)	25,000 ft² GFA	2.60 / 1,000 ft² GFA	65	43%	28	57%	37
Residential 1							
Townhouses	170 units	0.80 / unit	136	67%	91	33%	45
Residential 2							
Townhouses	155 units	0.80 / unit	124	67%	83	33%	41
Residential 3							
Townhouses	90 units	0.80 / unit	72	67%	48	33%	24
Residential 4							
Townhouses	75 units	0.80 / unit	60	67%	40	33%	20

PASS-BY SPLIT	PASS-BY TRIPS		DIV. LINK SPLIT	DIV. LINKED TRIPS		PRIMARY TRIPS	
	IN	OUT		IN	OUT	IN	OUT
35%	70	70	30%	60	60	78	62
35%	28	28	30%	24	24	29	26
35%	46	46	30%	39	39	72	20
40%	63	63	30%	47	47	47	47
25%	68	68	25%	68	68	125	147
0%	0	0	0%	0	0	46	224
0%	0	0	0%	0	0	5	22
0%	0	0	0%	0	0	16	8
25%	8	8	25%	8	8	12	21
0%	0	0	0%	0	0	91	45
0%	0	0	0%	0	0	83	41
0%	0	0	0%	0	0	48	24
0%	0	0	0%	0	0	40	20

OVERALL TOTALS 2,458 1,222 1,236

283 283 246 246 693 707

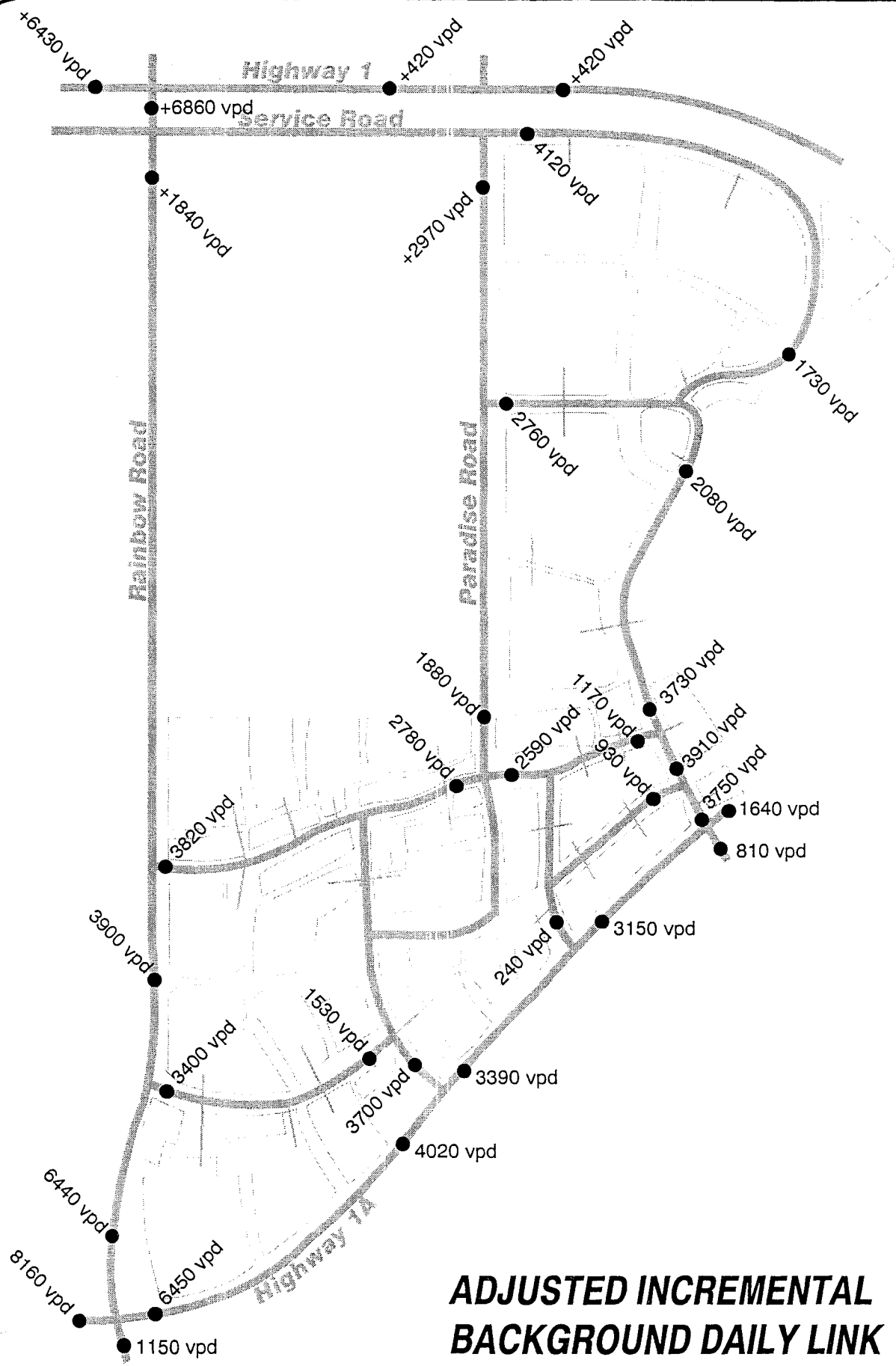


**PREVIOUS POST-DEVELOPMENT INCREMENTAL
DAILY TRAFFIC VOLUMES (ALL STAGES)**

Exhibit

1



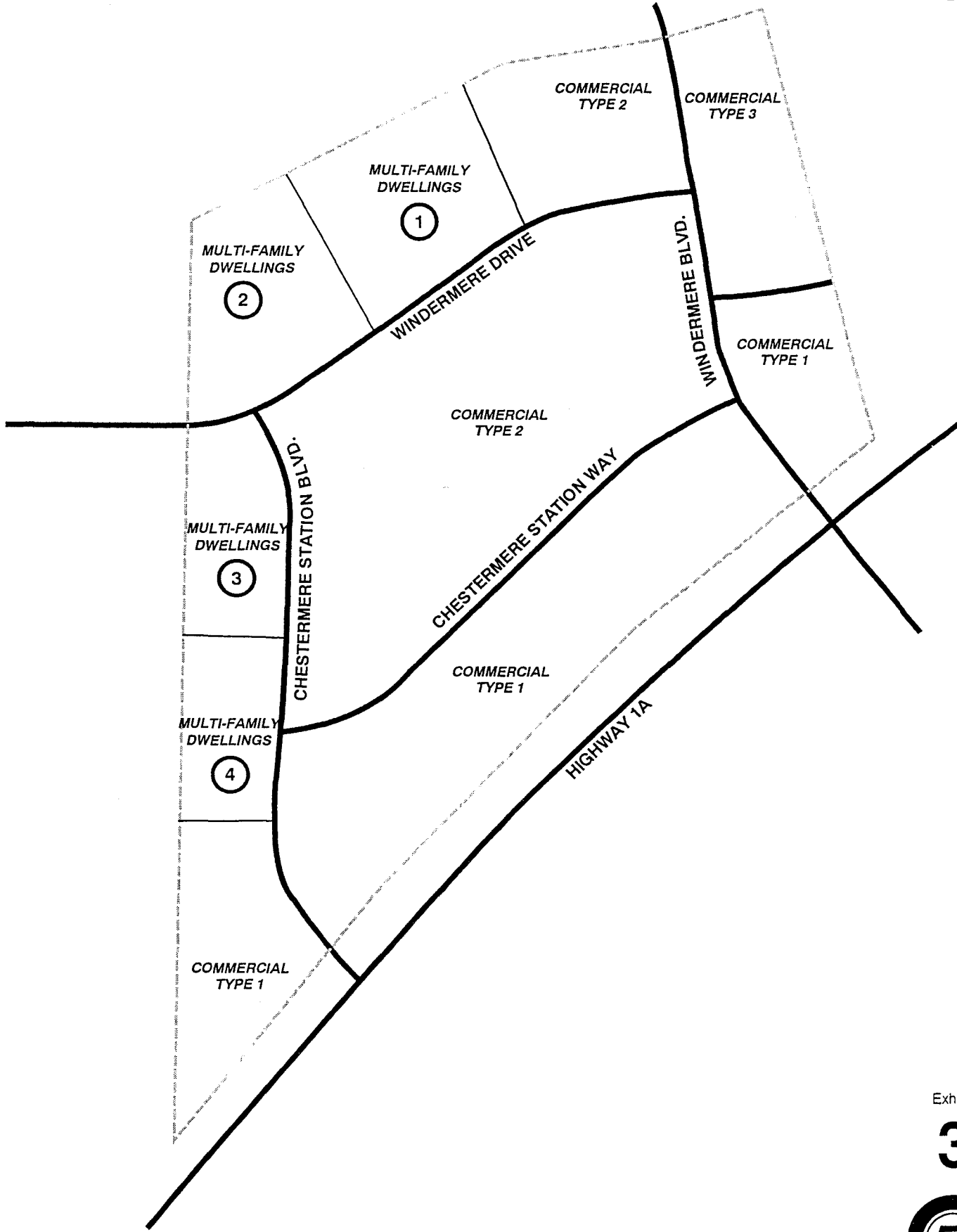


**ADJUSTED INCREMENTAL
BACKGROUND DAILY LINK
VOLUMES (WITH PREVIOUS
STAGE 3 TRAFFIC REMOVED)**

Exhibit

2





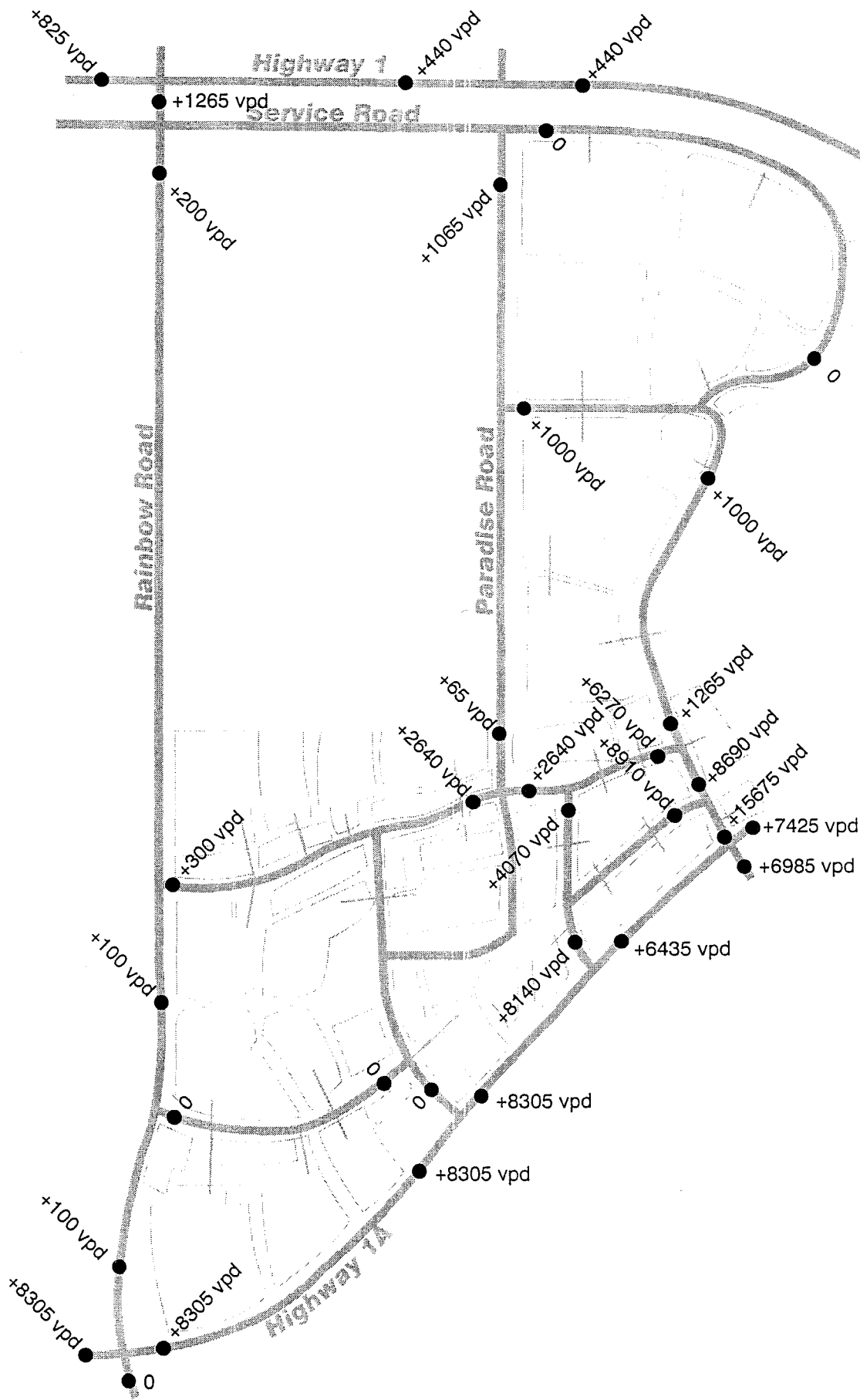
Exhibit

3



SITE CONTEXT (STAGE 3)

File# 5297 05, July 2000



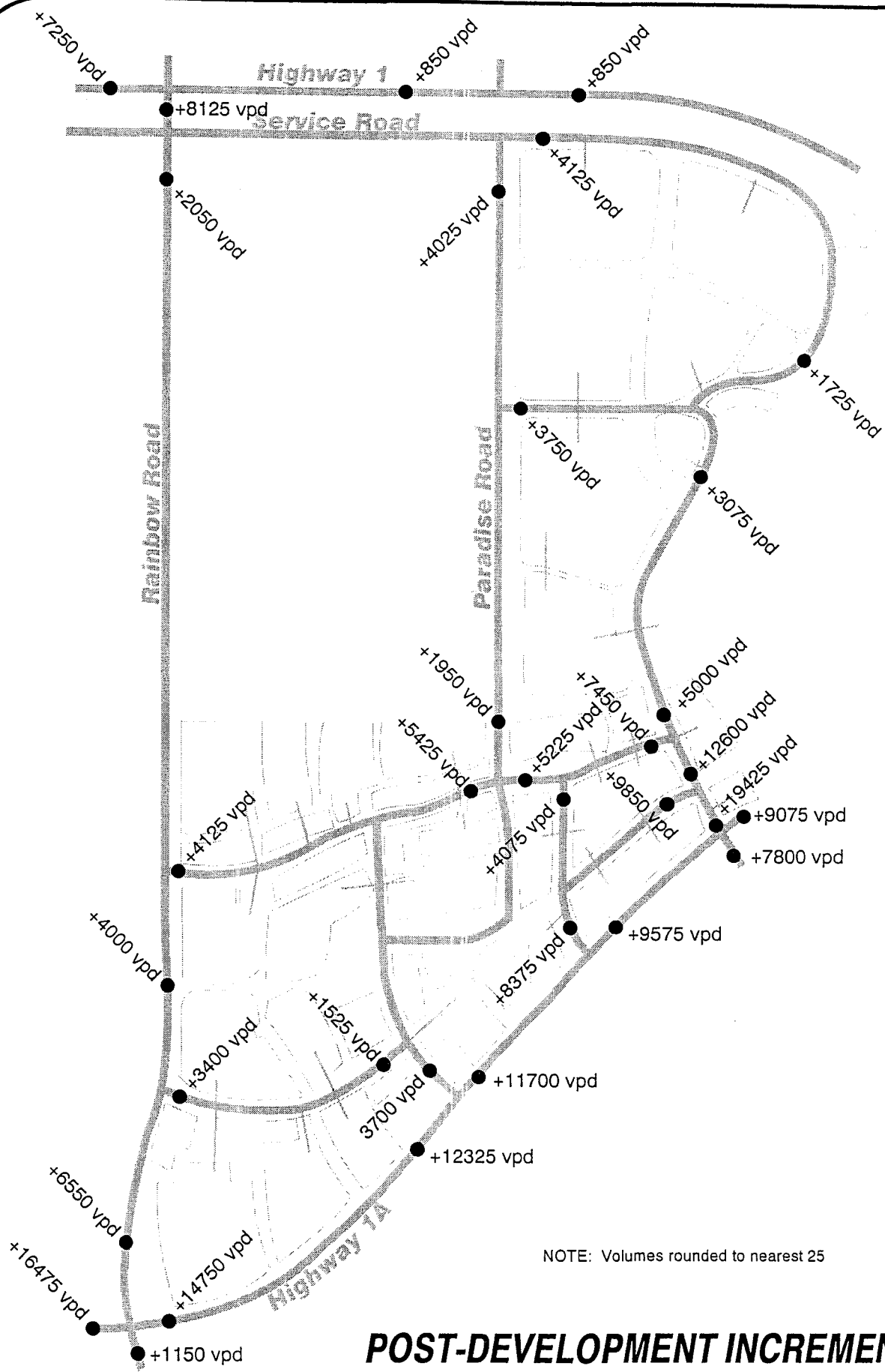
Exhibit

4

**STAGE 3 INCREMENTAL
DAILY LINK VOLUMES**



File# 5297 05, July 2000



NOTE: Volumes rounded to nearest 25

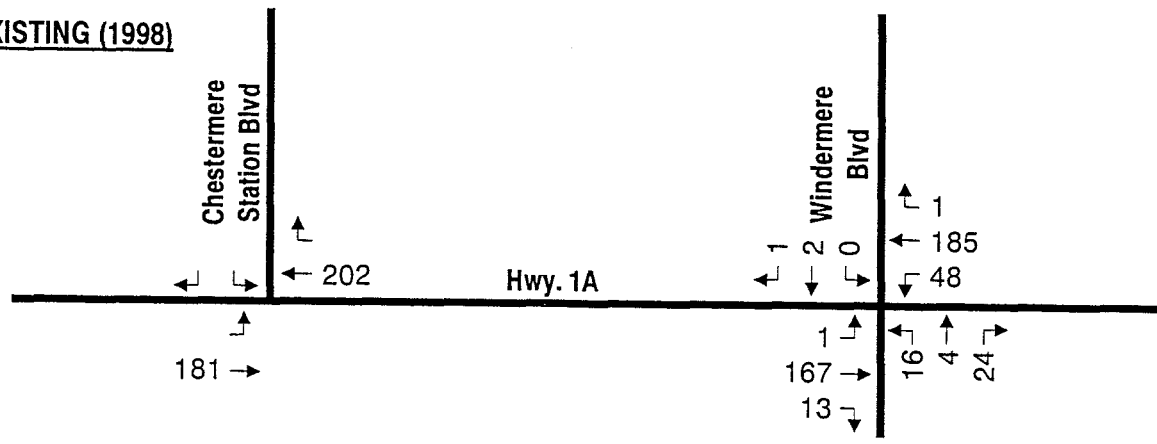
Exhibit

POST-DEVELOPMENT INCREMENTAL TRAFFIC VOLUMES (ALL STAGES WESTERMERE DEVELOPMENT)



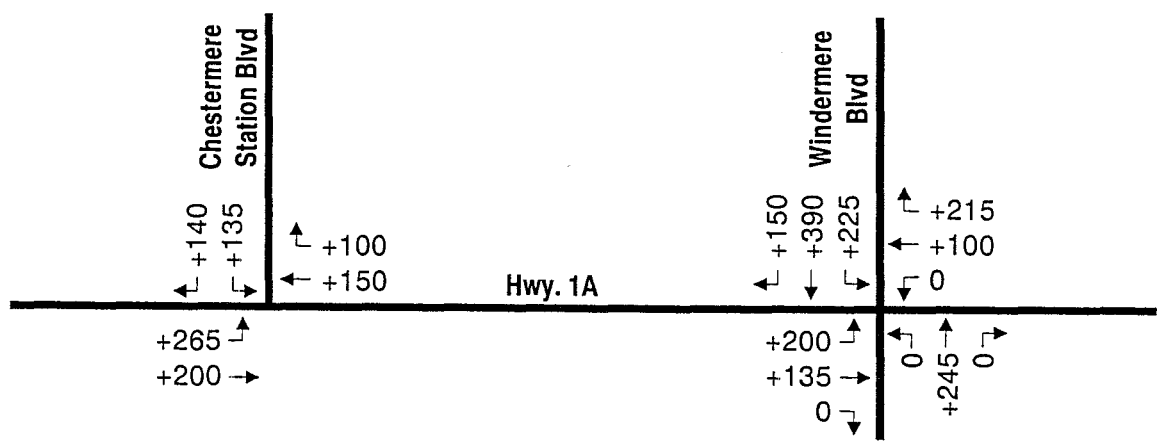


EXISTING (1998)

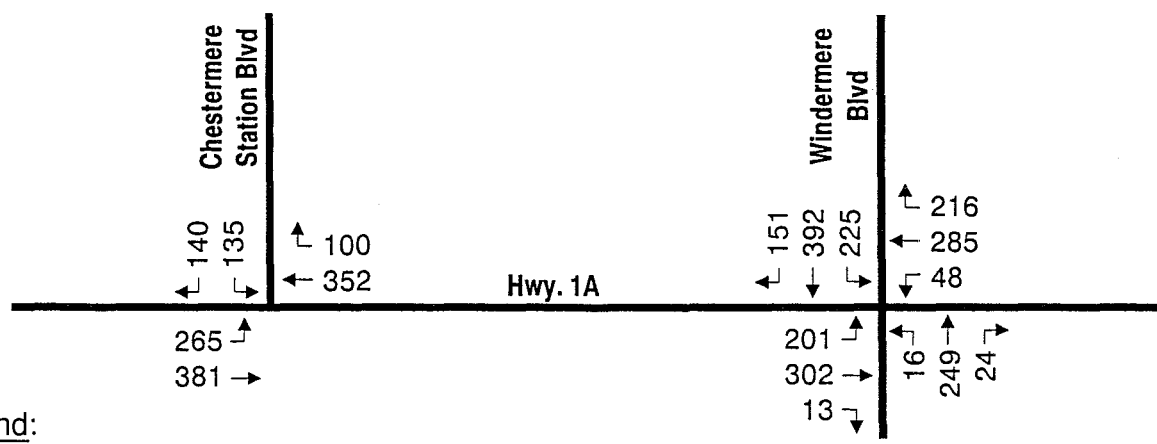


Source: Alberta Infrastructure Traffic Estimate of 30th highest p.m. peak hour (Ref# 85212)

SITE (Primary & Passby)



TOTAL POST-DEVELOPMENT TRAFFIC VOLUMES (Existing + Site Traffic)



Legend:

XX →
 PM Peak Hour Vehicle Turning Movements

Exhibit

6

P.M. PEAK HOUR TURNING MOVEMENT VOLUMES AT HWY. 1A ACCESSES

