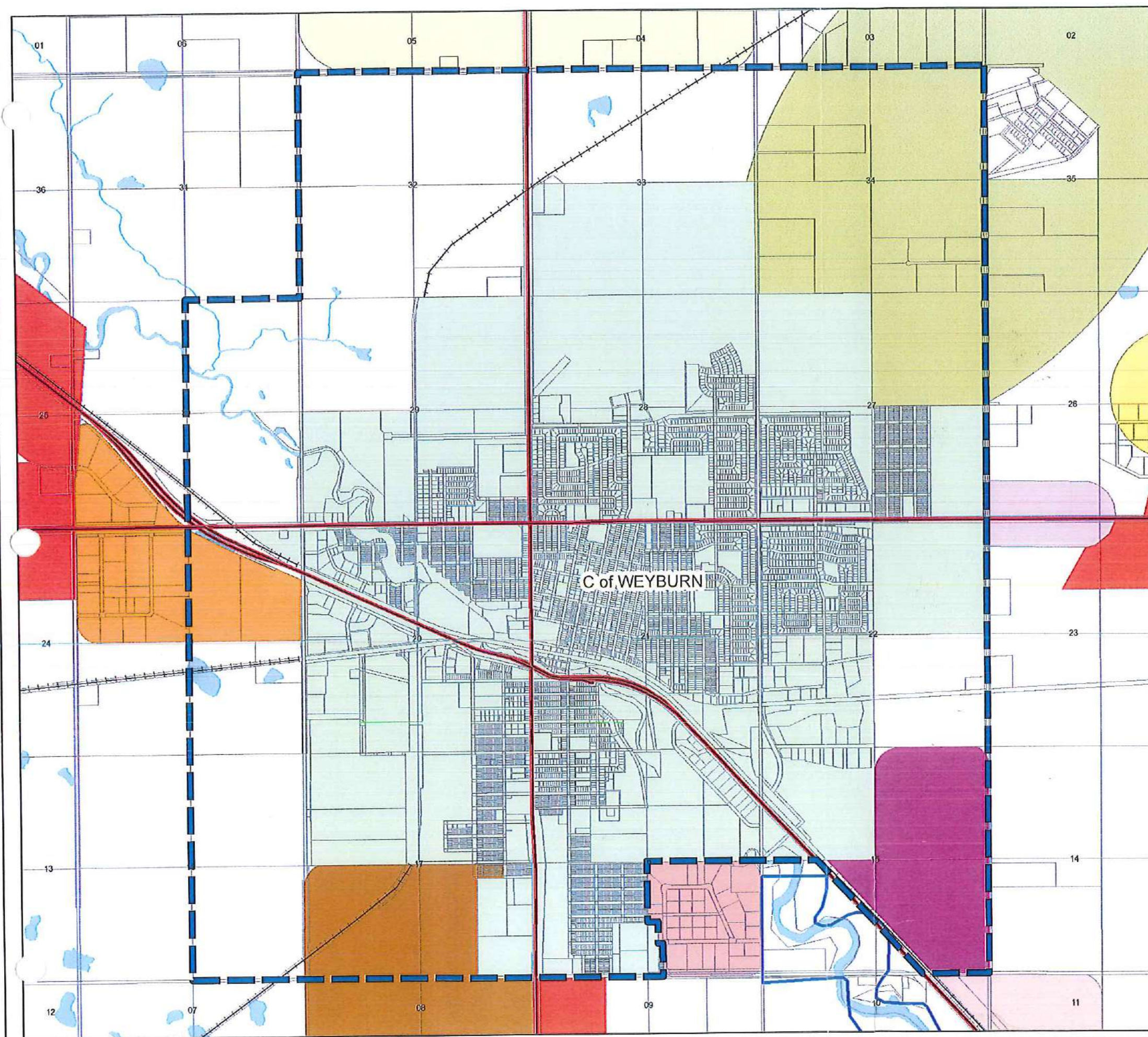


Appendix A: Future Land Use and Future Growth Study Area Maps and Joint Management Area Maps

Weyburn Planning District

Future Land Use Future Growth Study Area



- Country Residential Development
- Highway Commercial
- Mixed Use - Highway Commercial
- Medium-term Commercial Strip
- Medium-term Prestige Commercial
- Long-term Growth Area for Country Residential
- Long-term Prestige Commercial
- Long-term Industrial
- Future Study Area
- Short-term Industrial
- Future Growth Study Area

++++ Railways

Urban Municipality

Waterbody-Drainage

Tatagwa Parkway District

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98

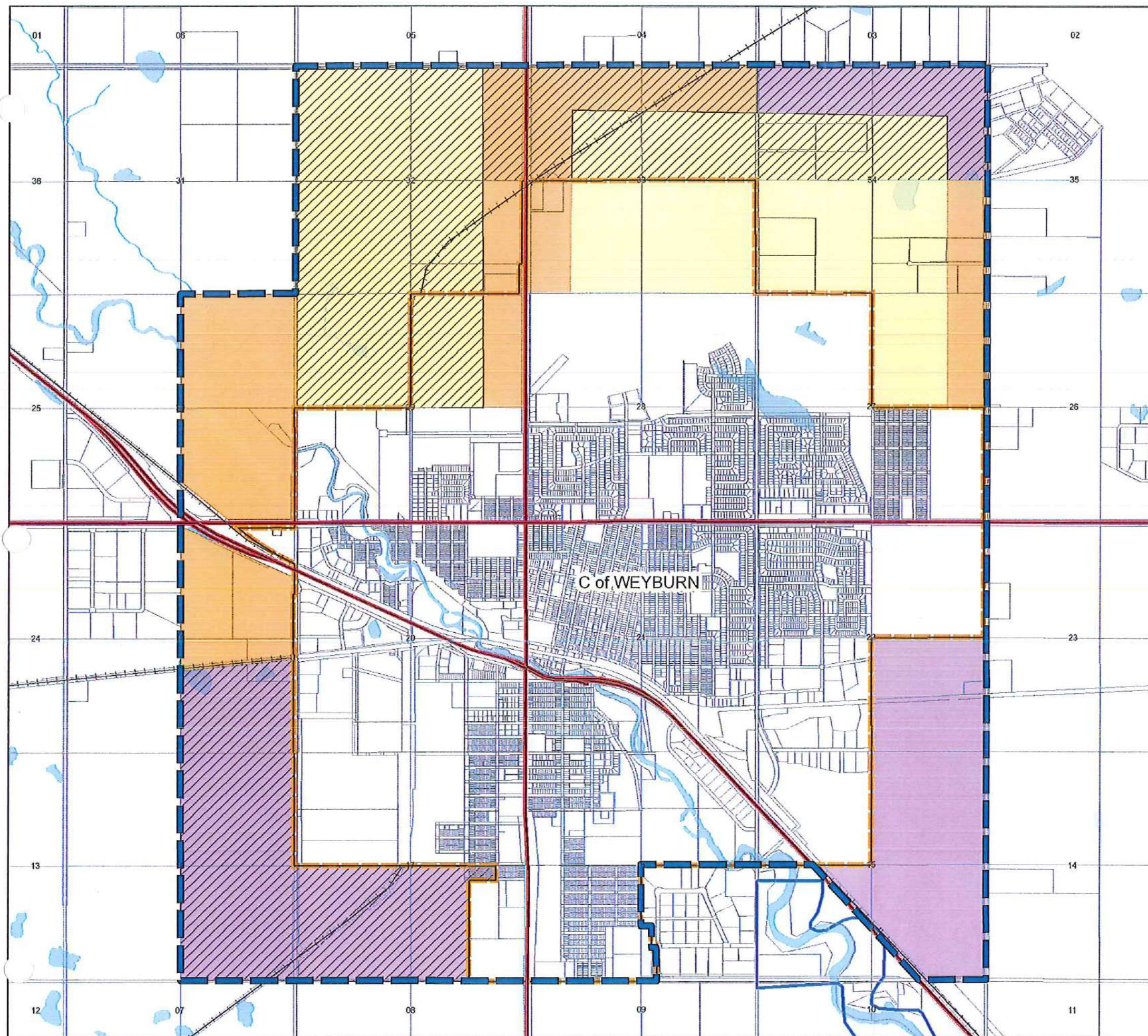


0 0.25 0.5 1 1.5 2 KM

Weyburn Planning District

Future Land Use Future Growth Study Area

LAND USES FOR ILLUSTRATIVE PURPOSES
WILL REQUIRE FURTHER DETAILED STUDY
TO DETERMINE SUITABILITY FOR
ANY DEVELOPMENT

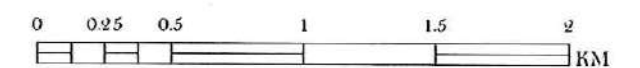


Future Growth Study Area

- Residential
- Commercial
- Industrial
- Potential Residential
- Potential Commercial
- Potential Industrial

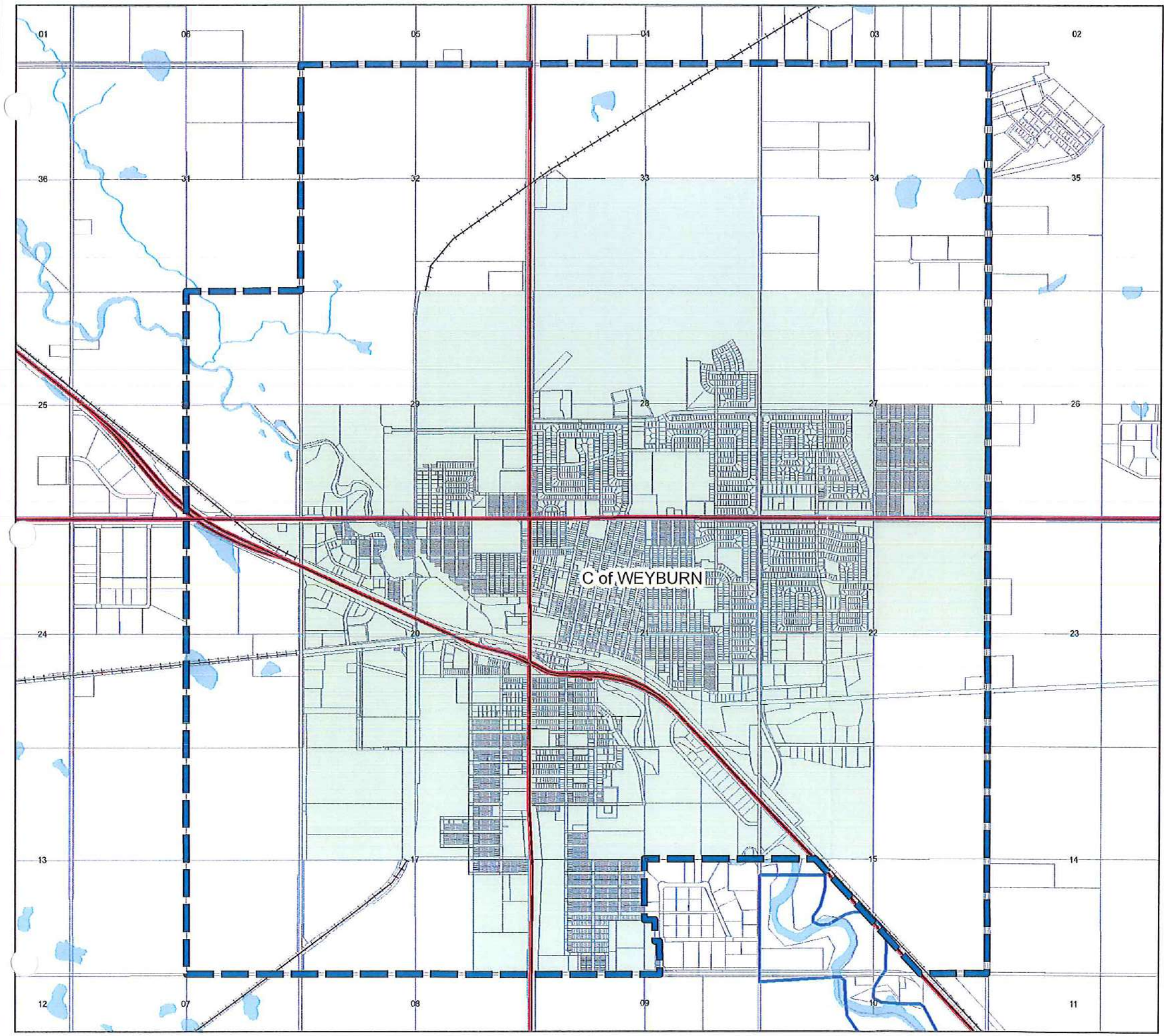
- Railways
- Urban Municipality
- Waterbody-Drainage
- Tatagwa Parkway District

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98







Weyburn Planning District

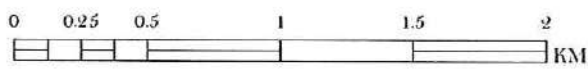
Future Growth Study Area



 Future Growth Study Area

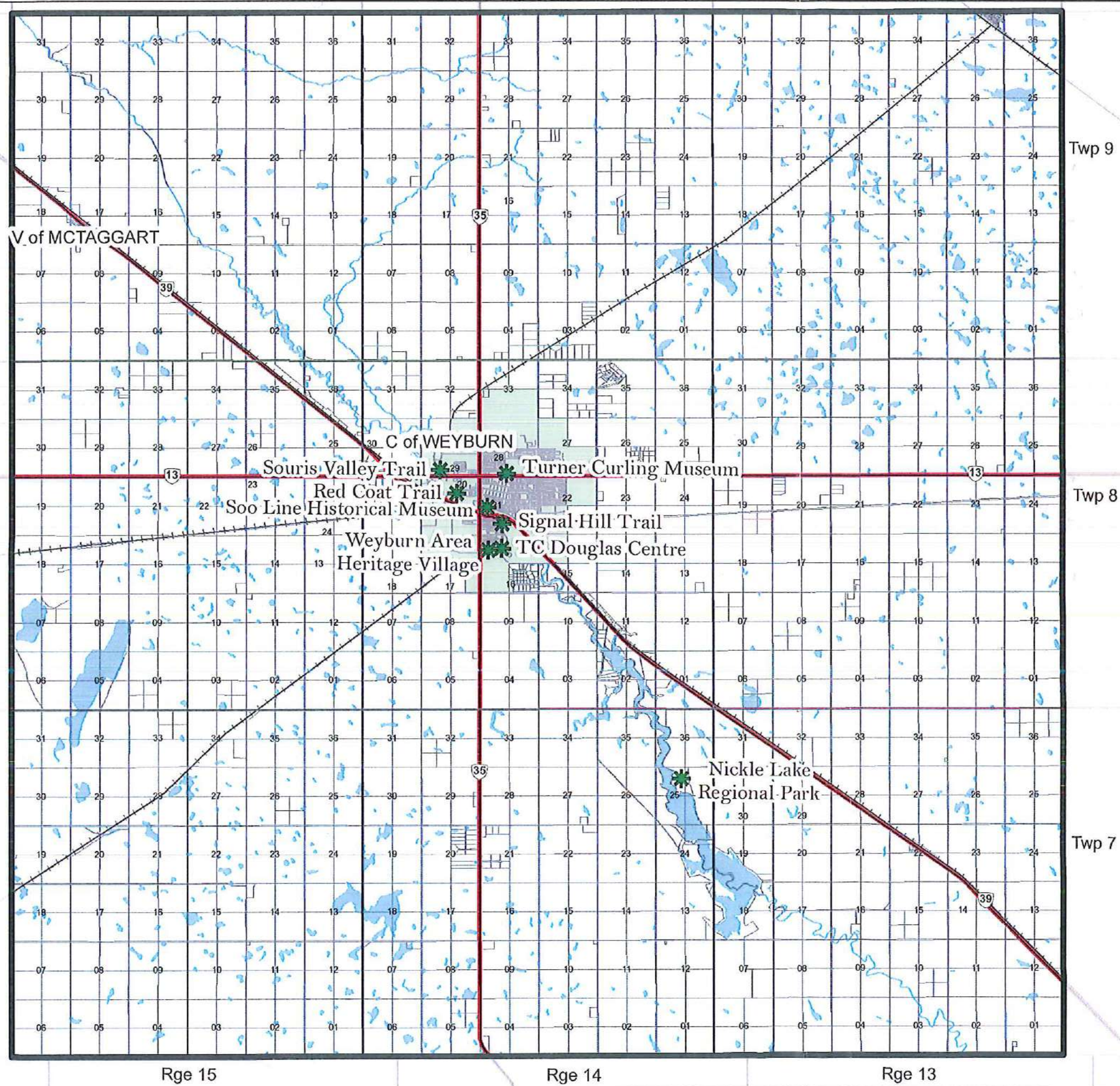
-  Railways
-  Urban Municipality
-  Waterbody-Drainage
-  Tatagwa Parkway District

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



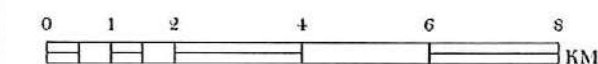
Weyburn Planning District

Map 1. Recreational Amenities



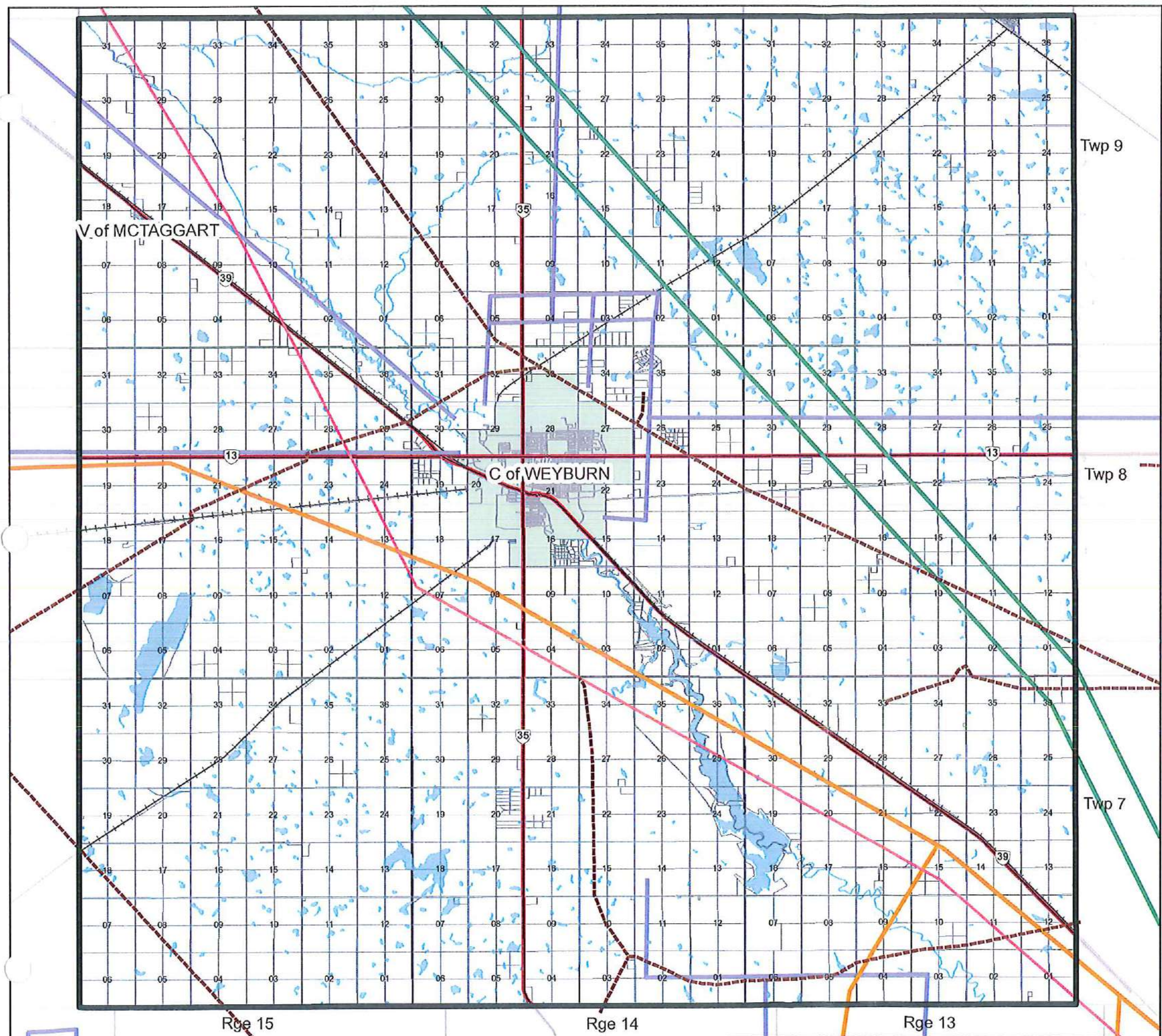
- Recreational Amenities
- Railways
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



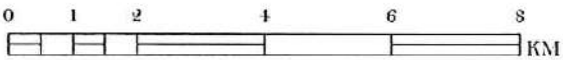
Weyburn Planning District

Map 2. Utilities



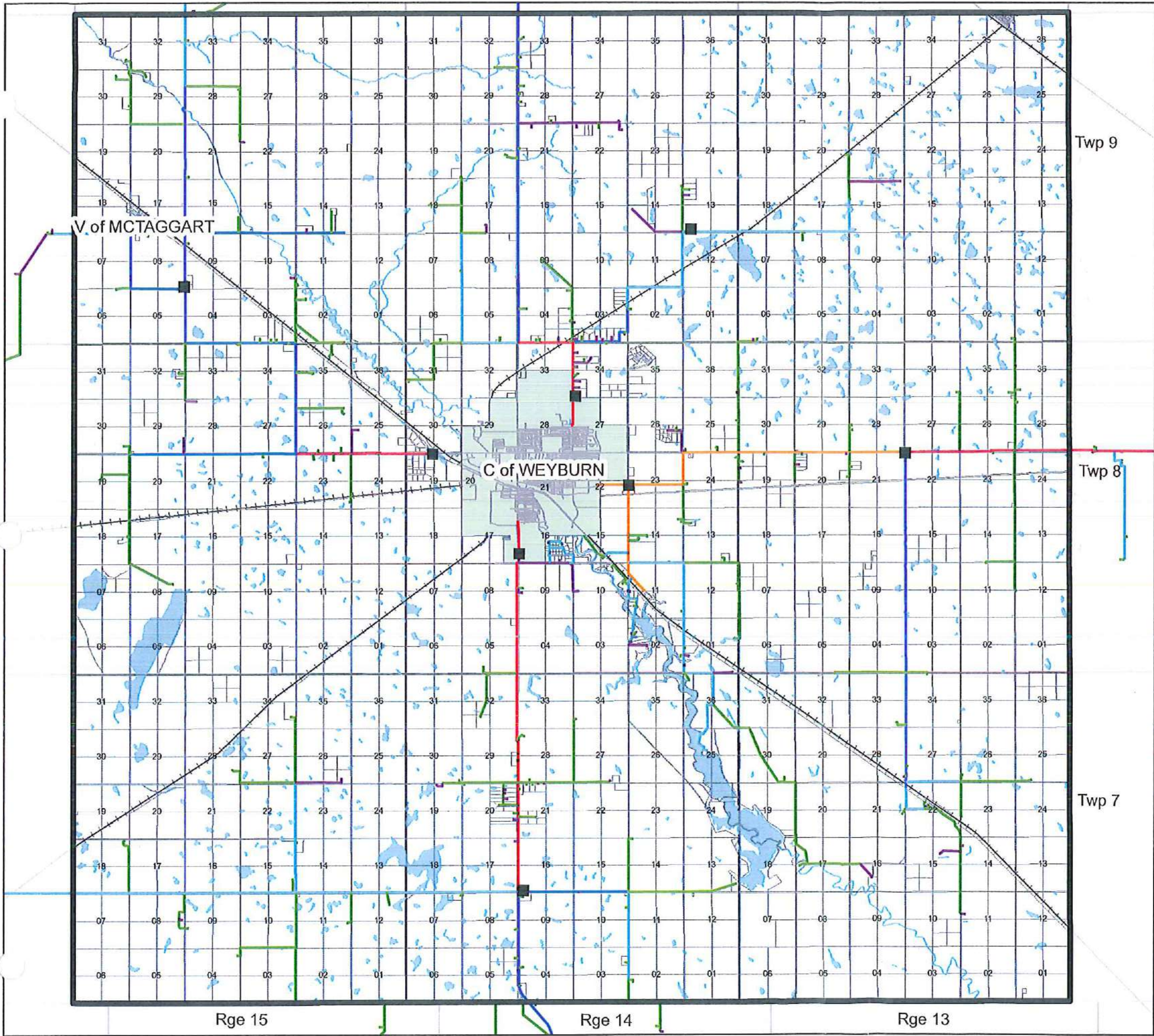
- TransGas
- SaskPower 138 kV
- SaskPower 230 kV
- SaskPower 72 kV
- SaskPower 25 kV Aboveground
- Railways
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



Weyburn Planning District

Map 2a. Utilities (Water Lines)



■ Pumphouse

Pipelines Classification

- M-100
- M-150
- M-38
- M-50
- M-75
- M-08

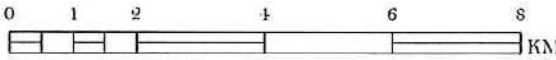
++++ Railways

Urban Municipality

Waterbody-Drainage

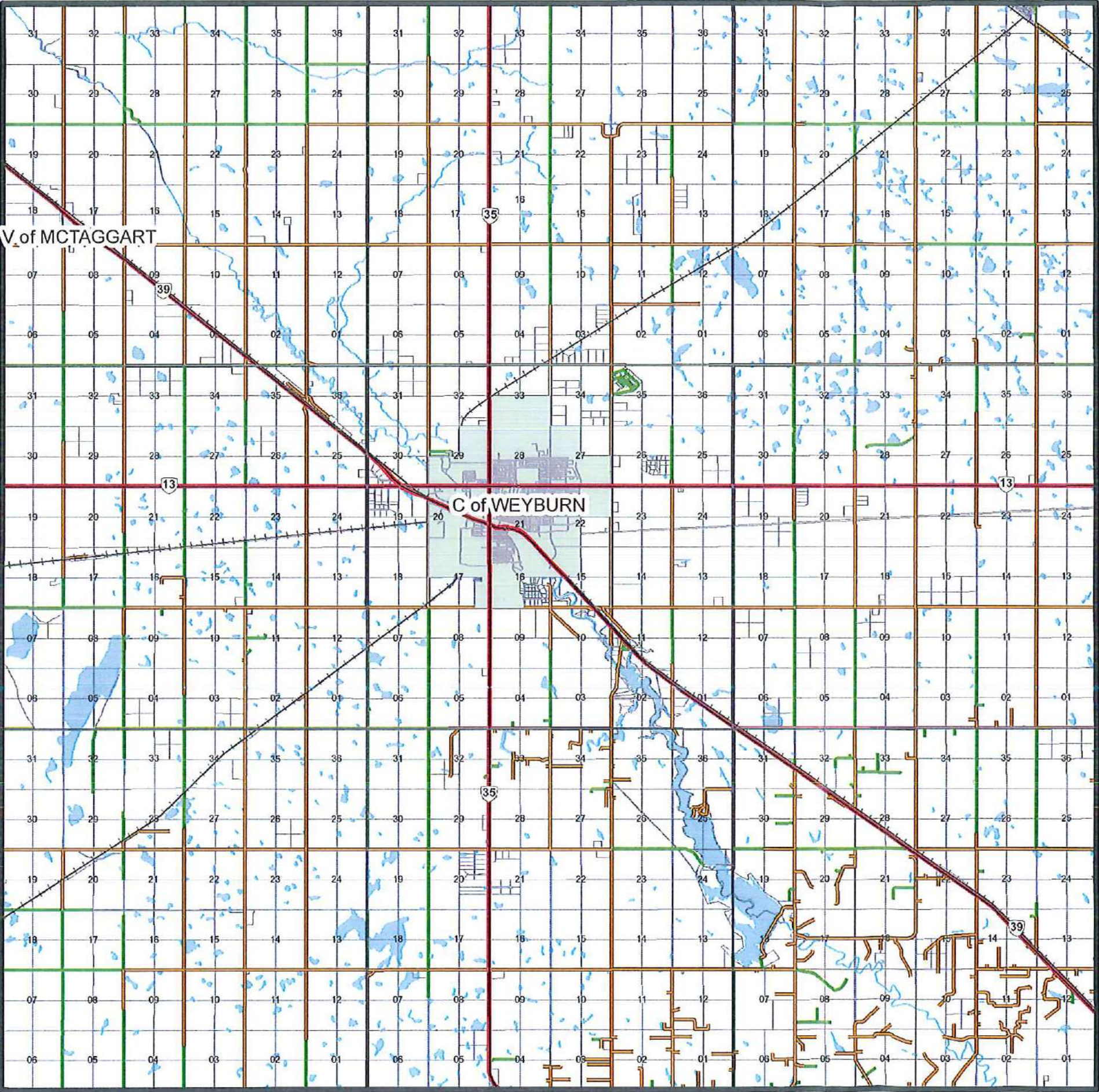
Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



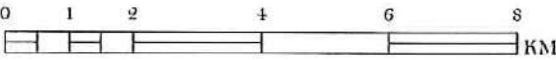
Weyburn Planning District

Map 3.
Transportation



- ++++ Railways
- Provincial Highway
- Primary Collector / Grid Road
- Grid / Access Road
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



Rge 15

Rge 14

Rge 13

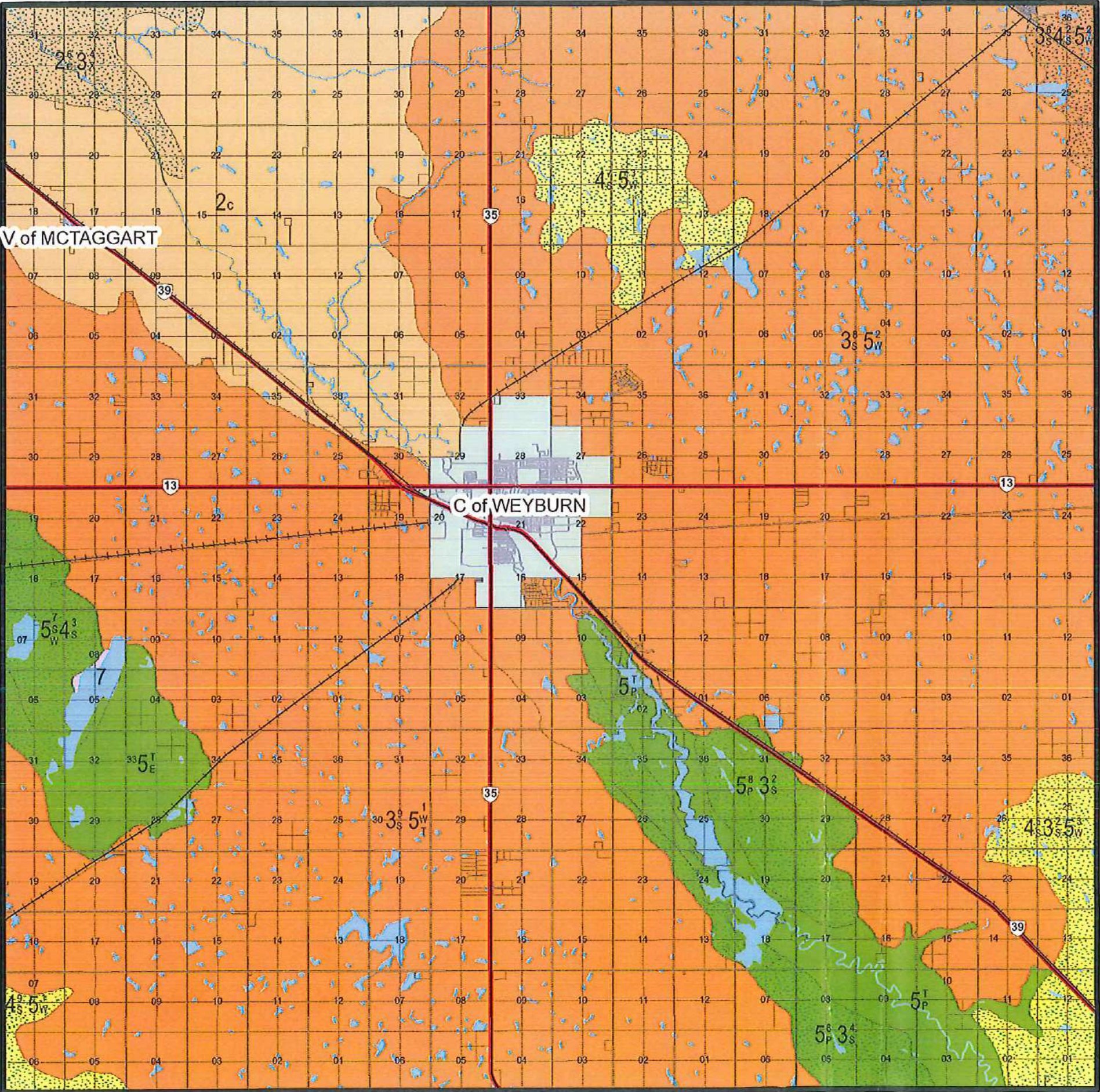
Twp 9

Twp 8

Twp 7

Weyburn Planning District

Map 4. Agricultural Potential



- ++++ Railways
- Waterbody-Drainage
- Urban Municipality
- Planning District Boundary

Soil Capability

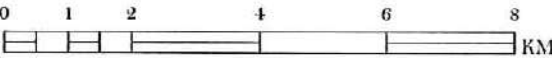
- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- CLASS 5
- CLASS 6
- CLASS 7

- SUBCLASS C: ADVERSE CLIMATE
- SUBCLASS E: EROSION DAMAGE
- SUBCLASS I: INUNDATION
- SUBCLASS P: STONINESS
- SUBCLASS R: SHALLOW SOILS
- SUBCLASS S: SOIL LIMITATIONS
- SUBCLASS T: ADVERSE TOPOGRAPHY
- SUBCLASS W: EXCESS WATER
- SUBCLASS X: MORE THAN ONE LIMITATION

EXAMPLE

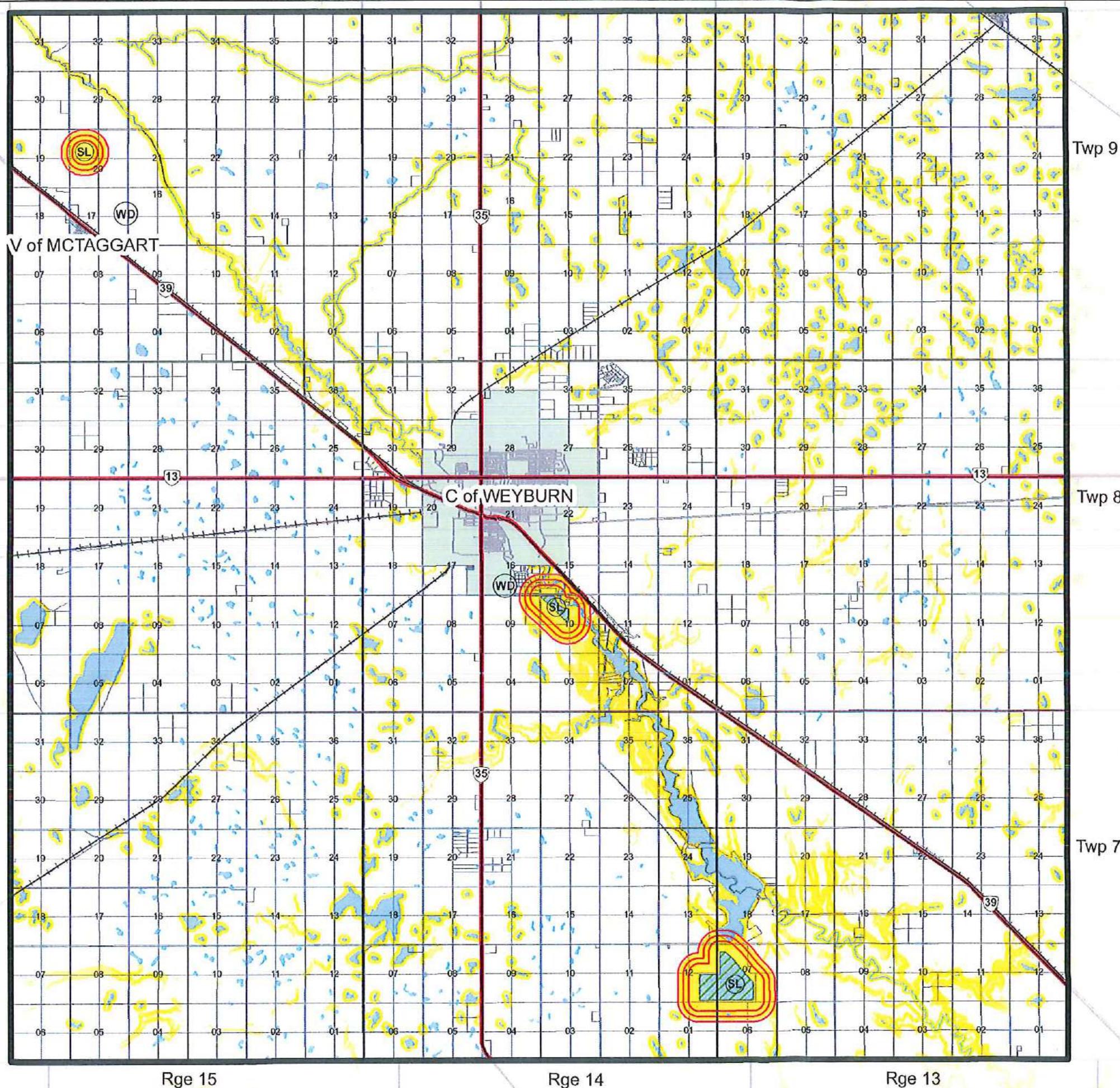
5⁸ 3² Area with Class 5 with stoniness limitations, and Class 3 with soil limitations, in the proportion of 8:2.

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



Weyburn Planning District

Map 5. Environmentally Sensitive Areas



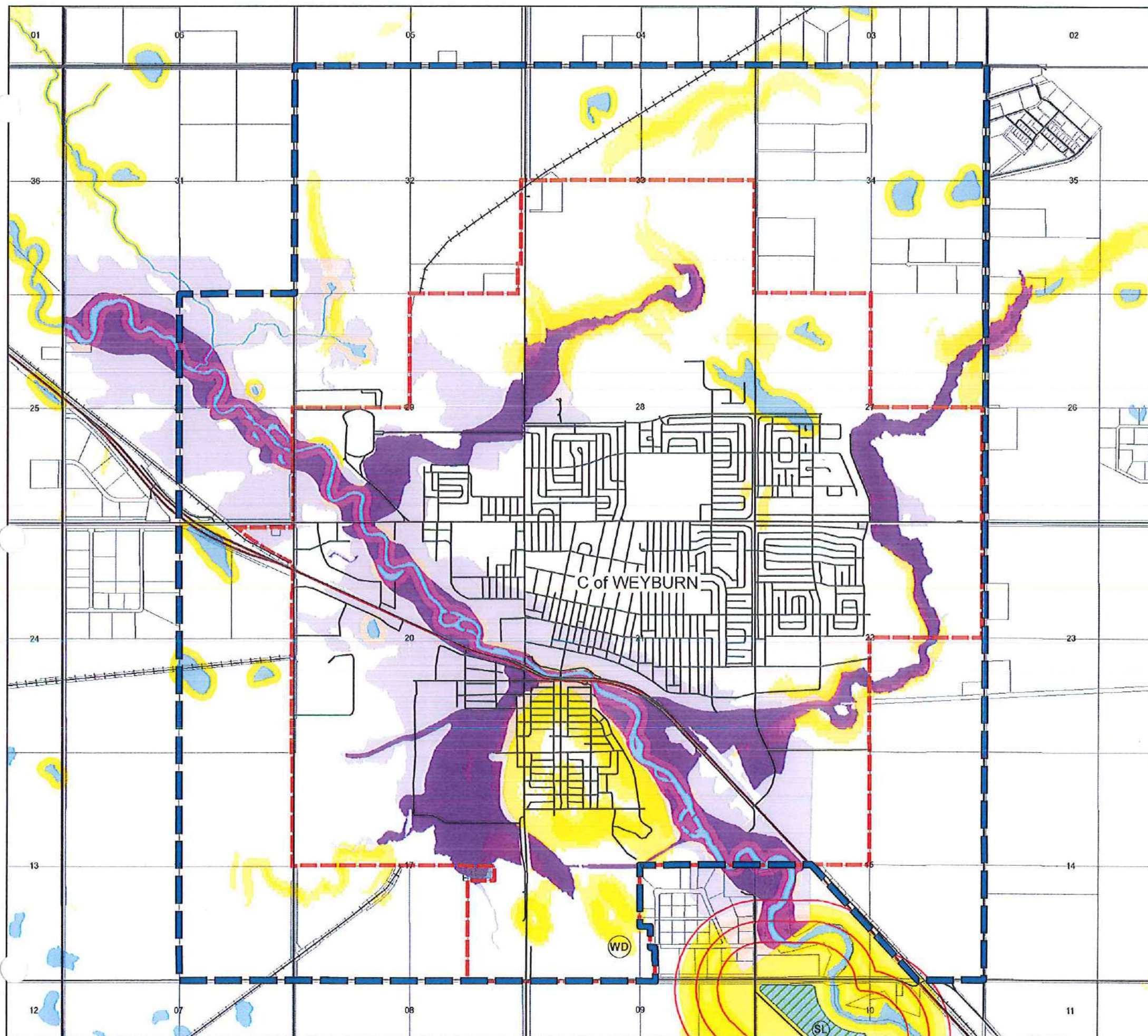
- ++++ Railways
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary
- Environmentally Sensitive Areas
- Waste Disposal Site (Landfill) (WD)
- Sewage Lagoons (SL)
- 600m Buffer
- 450m Buffer
- 300m Buffer

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



Weyburn Planning District

Map 5a. Environmentally Sensitive Areas



- ++++ Railways
- Municipal Boundary
- Waterbody-Drainage
- Designated Floodway
- Designated Floodway Fringe
- Future Growth Study Area
- Environmentally Sensitive Areas
- Waste Disposal Site (Landfill) (WD)
- Sewage Lagoons (SL)
- 600m Buffer
- 450m Buffer
- 300m Buffer

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98

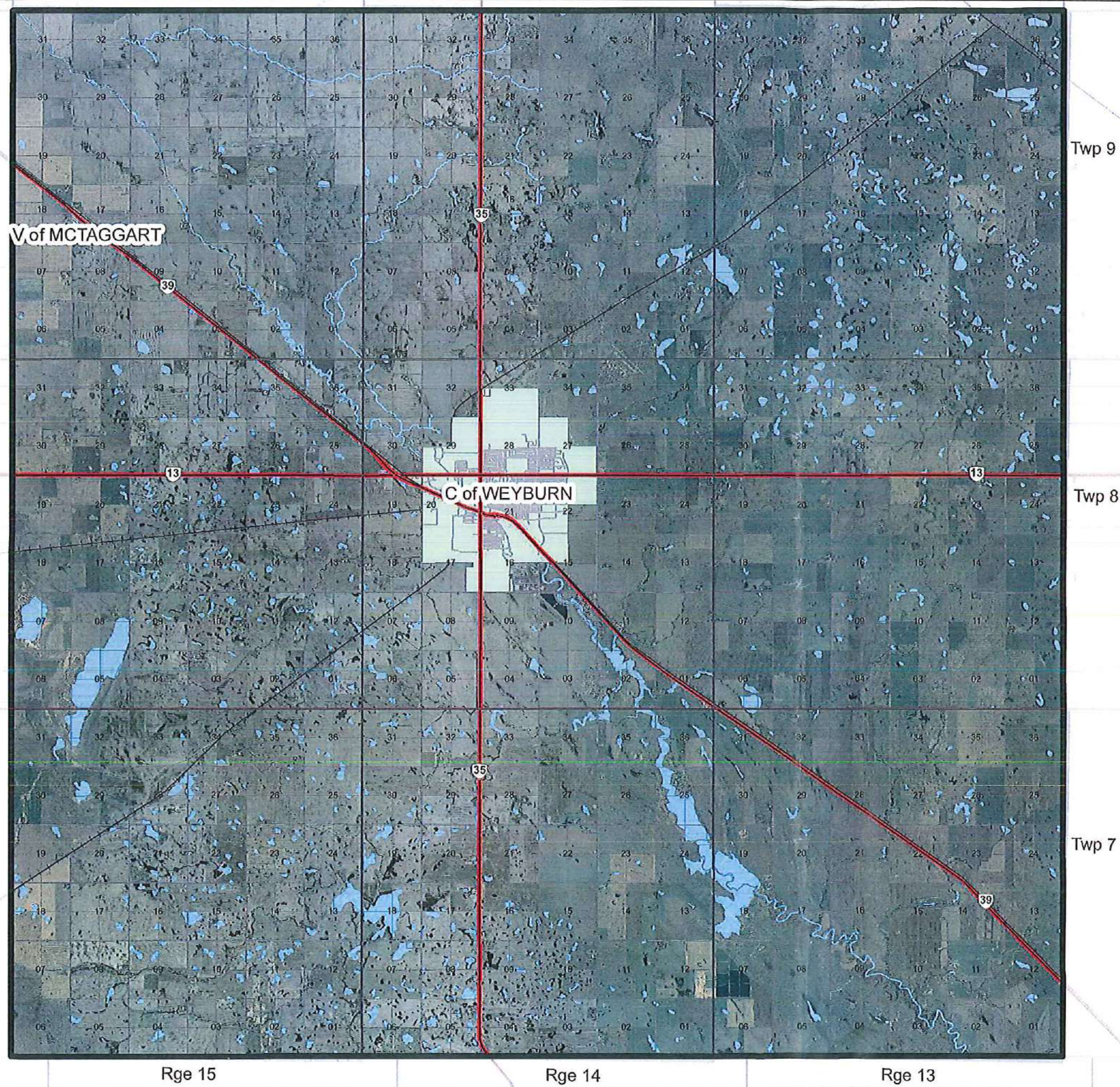
Flood Hazard Map
Land Protection Branch
Ministry of Environment

Flood hazard areas are shown as identified in hydrologic and hydraulic analyses conducted in 1977-79.



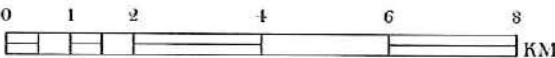
Weyburn Planning District

Map 6. Air Photo Mosaic



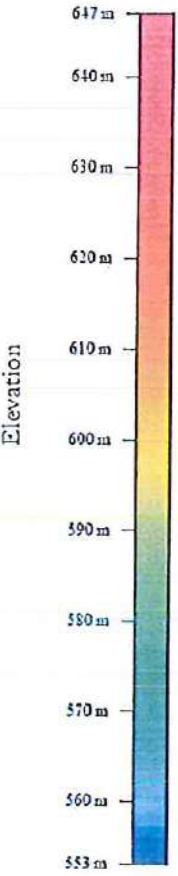
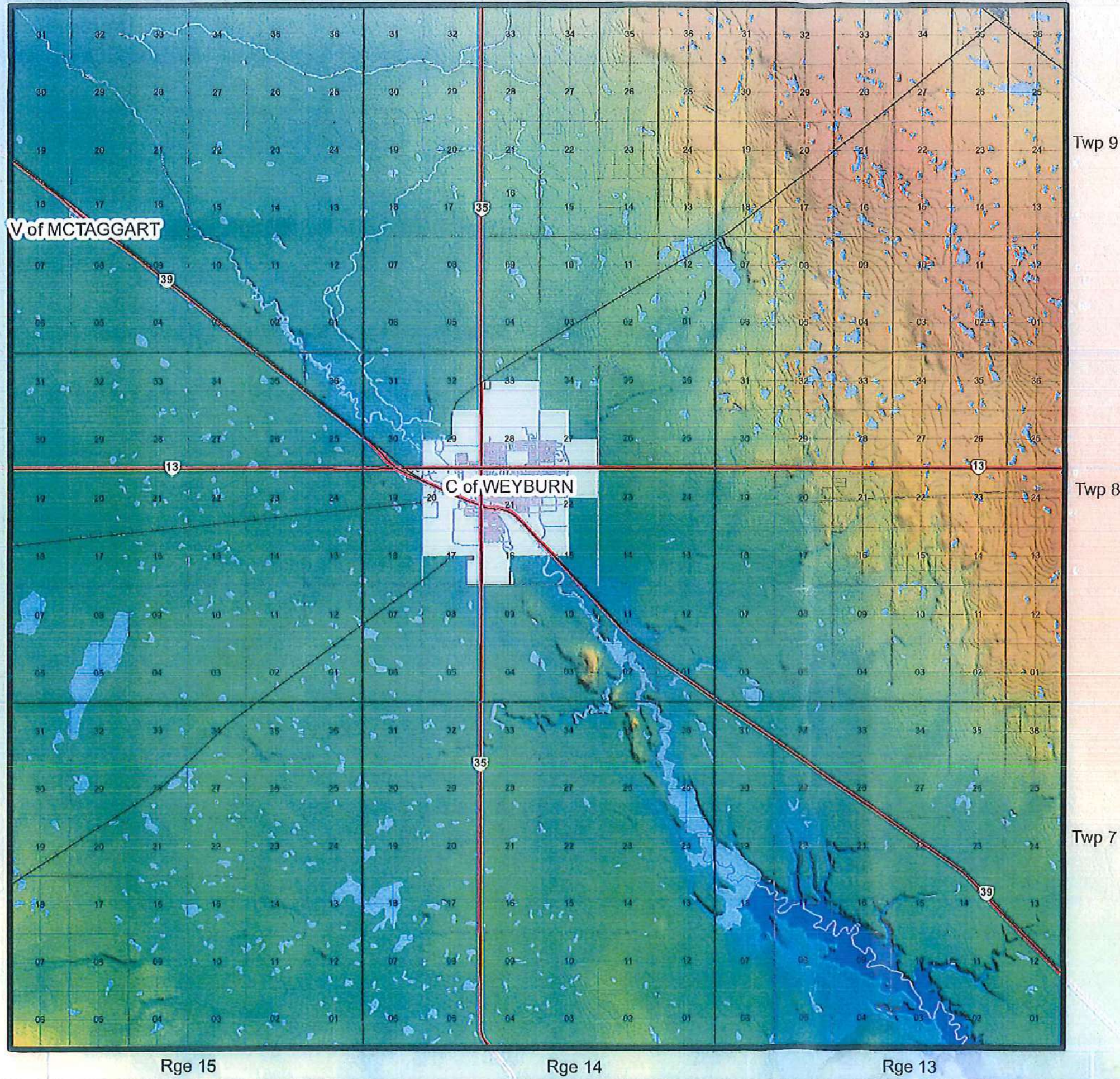
- ++++ Railways
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



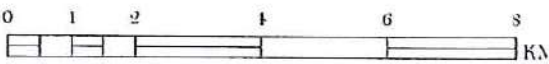
Weyburn Planning District

Map 7. Shaded Relief Drainage



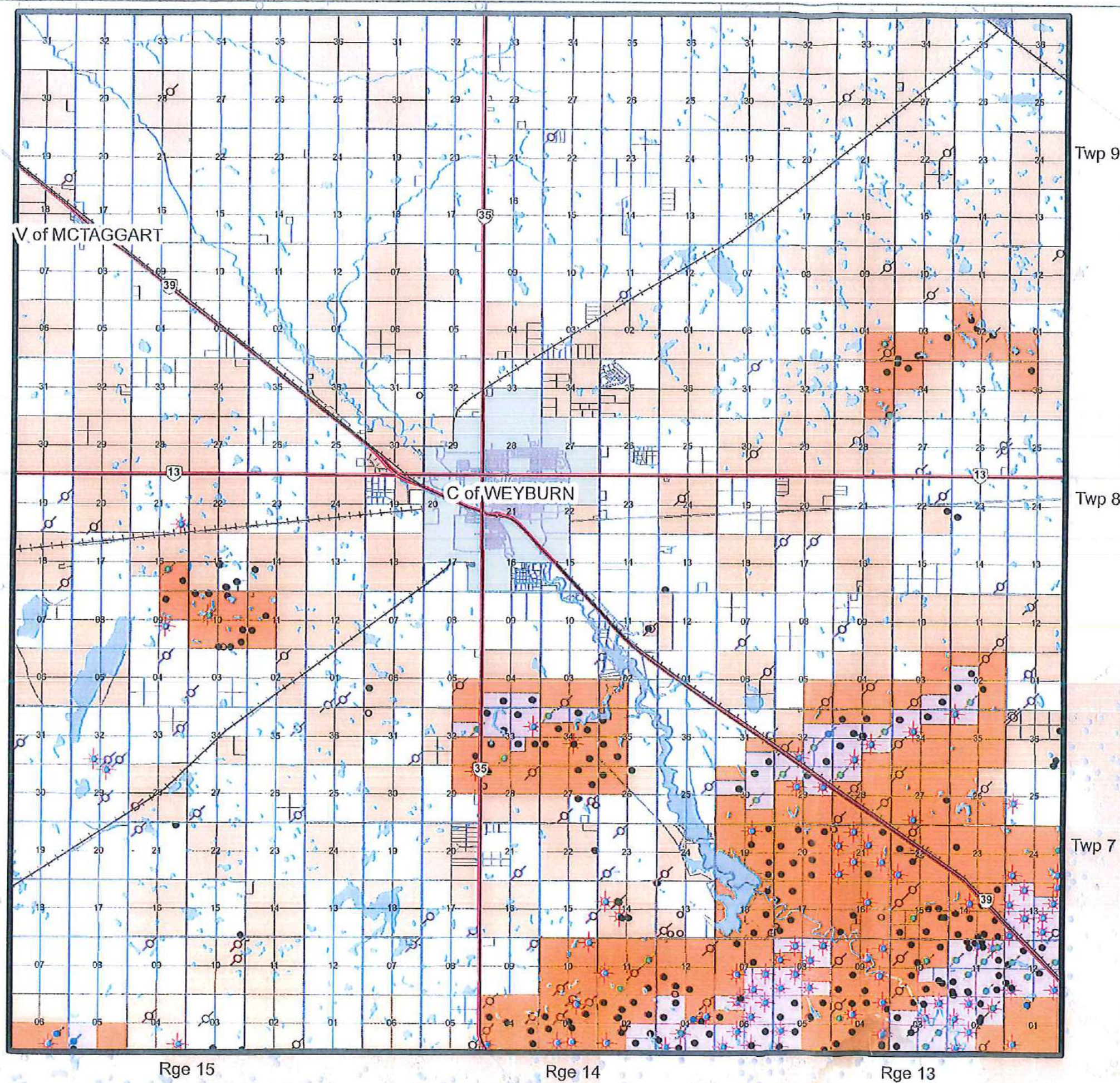
- ++++ Railways
- Urban Municipality
- Waterbody-Drainage
- Planning District Boundary

NAD 1983 CSRS98 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 98



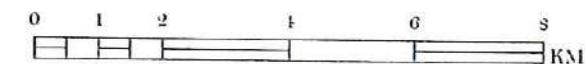
Weyburn Planning District

Map 8. Resources Resource Extraction



- Licensed Well
- Drilling Well
- ⊕ Cased Well
- Oil Well
- ⊕ Water Injector Well
- ⊕ Water Source Well
- ⊕ Miscellaneous Well
- ★ Abandoned Other Well
- ⊕ Abandoned Dry Well
- Railways
- Active Oil and Gas Unit Boundaries
- Oil Pools
- Oil and Gas Dispositions
- Waterbody-Drainage
- Urban Municipality
- Planning District Boundary

NAD 1983 CSRS93 UTM Extended Zone 13N
Canadian Spatial Reference System (CSRS) 93



Appendix B: Action Plans

Plans are only as good as their Implementation. Action Plans provide guidance and a framework for ongoing dedication through inter-municipal cooperation to fulfill this Plan's objectives. Successful implementation of this Plan depends to a large degree on whether its policies can guide local and regional development and action in a variety of contexts over the next ten to fifteen years to advance the Plan's core themes.

The Implementation and Action Plans are essential as a course to ensure the Planning District has the opportunity to fully implement the Planning District Plan over the short and long term. Action Plans have been included to provide a checklist of the key action items that will need to be completed to help the Planning District achieve its goals outlined in this Plan. It is recommended that the Action Plans be reviewed regularly to monitor progress and revised as necessary.

Five Year Action Plans 2014-2019

Weyburn Planning District Commission Action Items	Timeline to Complete	Responsibility
<ul style="list-style-type: none"> Secure and develop access to low pressure water for all developers in RM to ensure safe potable water for whole district and renew Weyburn Utility Board Agreement to reflect growth opportunities. 		
<ul style="list-style-type: none"> Secure and develop access to safe efficient sewage disposal for whole district and finalize Joint Sewage Services Agreement. Construction of Joint Sewage Services Facility. 		
<ul style="list-style-type: none"> Develop and implement the land/growth forecast for future city and RM growth. 		
<ul style="list-style-type: none"> Undertake a Joint Management Plan/Structure Plan for the North Weyburn and Airport area. 		
<ul style="list-style-type: none"> Complete the review and implementation of the respective individual OCPs and Zoning bylaws. 		
<ul style="list-style-type: none"> Develop and implement marketing plan for joint development areas and region. 		

Weyburn Planning District Commission Action Items	Timeline to Complete	Responsibility
<ul style="list-style-type: none"> Discuss and develop future infrastructure requirements for transportation (i.e. dangerous goods routes, etc.). 		
<ul style="list-style-type: none"> Discuss and Develop district policy regarding recommended developments suitable for rural and urban. 		
<ul style="list-style-type: none"> Review current Fire Protection and Protective Services agreements and Building Inspection Services agreements, and update as required to retain consistencies and address current and future needs. 		
<ul style="list-style-type: none"> Discuss and review recreation funding, including arts and culture. 		
<ul style="list-style-type: none"> Preparation of a District Recreation Plan (Golf Course, Tatagwa Regional Pathway extensions, Motor Cross, Nickle Lake etc.) Develop and maintain to best of municipalities' abilities an inventory of recreation, arts & culture services, parks, etc. 		
<ul style="list-style-type: none"> Discuss potential for future members of District. 		
<ul style="list-style-type: none"> Monitor to ensure environmentally sensitive areas are protected in all jurisdictions and ensure development of infrastructure, utilities and services are not detrimental to environment. 		
<ul style="list-style-type: none"> Develop and maintain district website with links from/to district members. 		
<ul style="list-style-type: none"> Review and ensure joint emergency plan is current and regularly maintained. 		
<ul style="list-style-type: none"> Develop and maintain long term plan for future infrastructure development in joint management areas. 		
<ul style="list-style-type: none"> Establishment of District Development Appeals Board. 		

Action Plans

Plans are only as good as their Implementation. Action Plans provide guidance and a framework for ongoing dedication through inter-municipal cooperation to fulfill this Plan's objectives. Successful implementation of this Plan depends to a large degree on whether its policies can guide local and regional development and action in a variety of contexts over the next ten to fifteen years to advance the Plan's core themes.

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Action Plans

Weyburn Planning District Commission Action Items	Timeline to Complete	Responsibility
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Weyburn Planning District Commission Action Items	Timeline to Complete	Responsibility
<ul style="list-style-type: none"> • Discuss and Develop district policy regarding recommended developments suitable for rural and urban. 		
<ul style="list-style-type: none"> • Review current Fire Protection and Protective Services agreements and Building Inspection Services agreements, and update as required to retain consistencies and address current and future needs. 		
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<ul style="list-style-type: none"> • Monitor to ensure environmentally sensitive areas are protected in all jurisdictions and ensure development of infrastructure, utilities and services are not detrimental to environment. 		
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<ul style="list-style-type: none"> • Develop and maintain long term plan for future infrastructure development in joint management areas. 		
<ul style="list-style-type: none"> • Establishment of District Development Appeals Board. 		

Appendix C: District Planning Agreement

Schedule "A"

Weyburn Planning District Agreement

MADE IN QUADRUPLICATE THIS 16 DAY OF January, 2013.

BETWEEN:

The City of Weyburn
Saskatchewan, hereinafter called the "City"

OF THE FIRST PART;

- and -

The Rural Municipality of Weyburn No. 67
of Saskatchewan, hereinafter called the "RM "

OF THE SECOND PART;

The Parties named above are entering into an agreement, pursuant to the provisions of *The Planning and Development Act, 2007* (PDA) to establish a planning district to advise the Parties and guide development throughout the RM and the City.

The Parties individually and collectively agree that:

1. The adoption of this agreement, subject to Sections 97, 98 and 99 of the PDA, to establish a planning district; to be known as "The Weyburn Planning District".
2. The area of the planning district shall encompass all those lands situated within the RM and the City.
3. A District Planning Commission (Commission), to be known as "The Weyburn District Planning Commission", is established pursuant to Section 97(2) of the PDA. The Commission will consist of five members, to be appointed in the following manner:
 - a. two members shall be appointed from the Council of the City;
 - b. two members shall be appointed from the Council of the RM; and
 - c. a fifth member, not sitting on either Council, shall be appointed jointly by the Councils of the City and the RM.

4. The tenure of office of the members of the Commission shall be as follows:

- a. the City will appoint two council members to the commission during the first regular council meeting following an election and those appointees will be renewed or replaced on an annual basis;
- b. the RM will appoint two council members each to the commission during the first regular council meeting following an election and those appointees will be renewed or replaced on an annual basis;
- c. the City and the RM will jointly appoint one person to the commission during the first regular council meeting following an election and that appointee will be renewed or replaced on an annual basis;
- d. where vacancies arise, by reasons other than the expiry of the appointee's term of office to the commission, the council(s) concerned shall appoint someone to complete the unexpired term only; and
- e. appointees to the commission shall continue to hold office until a successor is appointed.

5. Pursuant to sections 100 and 104 of the PDA, the Commission may:

- a. make rules of procedure that are not contrary to law or inconsistent with the PDA or its regulations for the conduct of its business, the governing of its proceedings, the calling of meetings and the requirements for quorum;
- b. establish procedures for the City and RM to permit the holding of joint public hearings for the adoption, amendment or repeal of a district plan, official community plan or zoning bylaw;
- c. appoint any consultants or employees that may be necessary for the exercise of any of its powers or the performance of any of its duties and fix their remuneration;
- d. appoint advisory committees, consisting of one or more of the members of the district planning commission or any other person, and fix their remuneration;
- e. with the consent of an affiliated municipality, utilize the services of any officer or employee of that municipality;
- f. hold public meetings and publish information for the purpose of obtaining the participation and co-operation of the residents of the planning district, and any adjacent area, in determining the solution to problems or issues affecting the development of any part of the planning district;
- g. assist the City or the RM in the preparation of any bylaw or bylaw amendment authorized by the PDA;

- h. review any existing bylaw adopted pursuant to the PDA and submit to the respective council any suitable amendments with a recommendation that they be adopted;
 - i. suggest to any council ways and means of financing public or capital works to be carried out by public authorities over a specified period;
 - j. investigate and study proposed bylaw amendments, subdivisions or development permits within the planning district, and submit reports and recommendations to the appropriate council;
 - k. identify social or economic implications to a member municipality of adopting the commission's recommendations; and
 - l. prepare and submit to the affiliated municipalities an operating budget for the planning district for the upcoming fiscal year.
- 6. The Parties agree that:
 - a. the councils of the City and RM shall have the power to remunerate their appointees to the Commission and that the amount of remuneration, if any, will be fixed and provided by the respective councils;
 - b. any jointly appointed members of the Commission shall be paid by the planning district and remuneration, if any, will be fixed by the Commission during the first meeting of the calendar year;
 - c. any members of an advisory committee established by the Commission, that are not municipal appointees to the Commission, shall be paid by the planning district and remuneration, if any, will be fixed by the Commission; and
 - d. any consultants or employees of the planning district will be paid by the planning district and remuneration will be fixed by the Commission.
- 7. The Commission shall annually appoint their chairperson from among the appointed representatives during the first meeting of the calendar year.
- 8. The Commission will utilize the Weyburn Chamber of Commerce (Chamber) to administer and manage the business of The Weyburn Planning District under the direction of the Commission.
- 9. The Chamber will be:
 - a. responsible for ensuring administration of the planning district and managing meetings, hearings, agendas, financial reporting, accounting; advertising, keeping of minutes, issuance of decisions and other business;

- b. responsible for the hiring and management of other planning district personnel, under the direction of the Commission; and
 - c. remunerated, if at all, for from the finances of The Weyburn Planning District.
- 10. Individual Official Community Plans and Zoning Bylaws will be maintained and administered by each municipalities appointed Development Officer. The appropriate Development Officer for each municipality will bring items forward to the commission where applicable.
- 11. Funds required to meet the expenses of the Planning District and the Commission, as approved by the councils of the City and RM, shall be contributed by the City and the RM on an equal shared basis.
- 12. In addition to referrals regarding the district plan, official community plans and zoning bylaws within the area of the planning district:
 - a. the RM agrees to refer all discretionary use development permits and subdivision applications within 5 kilometres of the City boundary to the Commission for comment;
 - b. the Urban agrees to refer all discretionary use development permits and subdivision applications within 500 metres of their municipal boundary to the Commission for comment;
 - c. the Commission will provide a written recommendation to the affected municipality within 14 days of the referral being presented to the Commission; and
 - d. the Parties agree to withhold an approval decision on discretionary use development permits and subdivision applications until a recommendation from the Commission have been received for consideration.
- 13. In the event that a dispute arises between the Parties, the Parties will attempt to resolve the issue by following a progressive dispute resolution process by:
 - a. firstly, striking a negotiating committee, consisting of two elected officials and one staff member representing each affected municipal council, to negotiate a resolution;
 - b. secondly, hiring a professional mediator to guide discussions to resolve the dispute working with the appointed committee; and
 - c. thirdly, seek non-binding arbitration from the professional mediator or a legal professional.

14. With regards to amending this agreement:

- a. the agreement will only be reviewed and amended upon:
 - i. application from the council of one of the Parties to the agreement;
 - ii. adoption of a new district plan for The Weyburn Planning District;
 - iii. inclusion of a new municipality into The Weyburn Planning District; or
 - iv. the termination of affiliation of a party to this agreement.
- b. amendments will be prepared and submitted to each council by the sitting Commission for the planning district;
- c. amendments will not be submitted to the provincial government for approval until each affiliate municipal council has signed the new agreement; and
- d. amendments will not take effect until an order has been issued by the Minister responsible for the PDA.



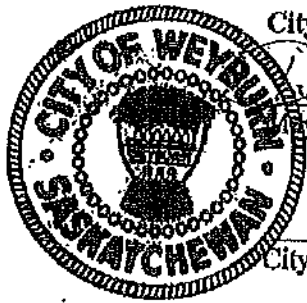
15. Any municipality wishing to withdraw from The Weyburn Planning District must provide 60 days written notice to the Commission, stating the reasons for withdrawal from the planning district and:

- a. seek unanimous approval of the Commission members to withdraw from The Weyburn Planning District; or
- b. follow the dispute resolution mechanisms provided for under section 13 of this agreement.

16. Should a municipality terminate its affiliation with the planning district or should the planning district be dissolved all assets and liabilities of the planning district will be distributed in proportion with the cost sharing model outlined in section 11 of this agreement.

17. This agreement forming the Weyburn Planning District dissolves and replaces the previous Tatagwa Planning District agreement.

The Parties hereby affixed their corporate seals, duly attested by the hands of their respective officers, the day and year first above written.



City of Weyburn

Debra Button

Mayor

[Signature]

City Manager

Approved by the Minister
responsible for *The Planning and
Development Act, 2007*, in the
Province of Saskatchewan

This 11 day of April,
2013.

[Signature]

Minister Responsible

Rural Municipality of Weyburn,
No. 67



[Signature]

Reeve

[Signature]

RM Administrator



Appendix D: Sample Development Proposal

The Creeks Concept Plan

Prepared on behalf of
Weyterra Development Corp.

December 2012



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Appendix A - Concept Plan Figures

1 Introduction

In 2012, the NE ¼ of Section 22-8-14 W2M (subject lands) was brought into the City of Weyburn (City) corporate boundaries to plan development of *The Creeks*, a mixed use neighbourhood including commercial development and a spectrum of housing types, by Weyterra Development Corporation. Located at the easternmost edge of Weyburn, south of Highway 13, *The Creeks* neighbourhood is a logical extension of the City of Weyburn's infrastructure network, make best use of the east highway commercial corridor, expands the Tatagwa Park system and integrates residential development with Burnway Place. Situated between existing City development and agricultural land uses in the Rural Municipality of Weyburn No. 67 (RM), the site is defined by an intermittent tributary of the Souris River running the length of *The Creeks* modified to provide a primary open space feature, designed flood protection and a sense of unique identity to the neighbourhood.

2 Concept Plan Development Background

2.1 Site Selection and Inter-municipal Co-operation

The Creeks Development Concept envisions a multi-use, multi-phase development requiring City level services and a central open space feature expanding upon the existing natural capital of the Tatagwa Parkway. The lands selected for this development were not initially in the City corporate limits, but were within an area that was predicted for City growth under the interim policies of the Weyburn Planning District Formation Committee (District Committee).

The initial concept planning and servicing feasibility study for this area were presented by Associated Engineering (AE), at the joint City/ RM District Committee. Integrating input into the proposal by both municipalities, the future land use concept was revised. It was agreed by both municipalities to proceed with annexation and necessary planning approvals process. Both the City and RM councils approved motions for the annexation of this land into the corporate boundaries of the City of Weyburn and a draft Creeks Concept Plan was prepared and submitted to the City for review.

2.2 Public Involvement

One public open house was held on September 27th, 2012. Representatives from the City, the Developer, and the Developer's Engineering Consultant presented draft concepts for future land use, servicing and phasing of *The Creeks* concept plan to a total of 25 people that attended. Those in attendance were given the opportunity to ask questions directly to the Developers' and City representatives as well as provide feedback on comment cards.



The overall reception by the public was positive. Residents were primarily interested in the layout, land use, and features planned for the subdivision, which including the types and locations of the various housing and commercial areas and the development planned in and around the creek area.

Several neighbouring home owners attended the open house to review of the proposed plan were supportive of the project design. No written comments were received by the City of Weyburn.

3 City Growth Context

Weyburn is a growing City. Weyburn reported the second highest population growth for Saskatchewan Cities over the 2006-2011 periods and is diversifying in cohorts of age distribution, cultural background and household incomes. The development of a range of housing types, providing adequate living conditions for young families, aging local population, immigrants, and an influx of professionals and trades, is recognized as a constraint to the City's expected economic growth and a priority for maintaining the quality of life for all citizens of Weyburn. To ensure City growth continued in an orderly and socially beneficial manner, Weyburn undertook a Housing Needs and Demand Assessment in 2011. Findings of this report include:

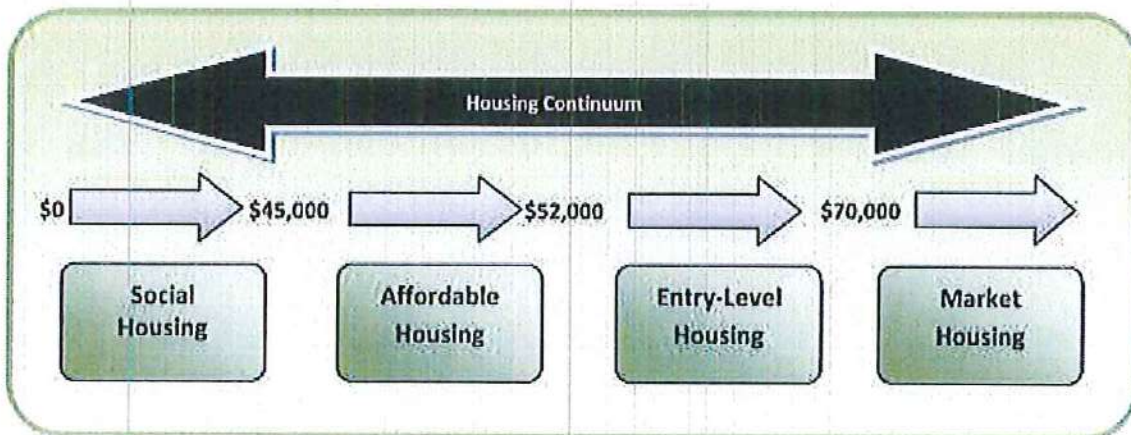
"[The] mid-level projections [of] Weyburn's growth statistics indicate that the community could reach 22,000 people by 2025. ...even by modest population growth, Weyburn could need 3,900 new housing units in the next 15 years..."

Under these circumstances of growth, the City is in a position to leverage new development to provide for housing options in the housing continuum that the community needs, such as:

- entry-level housing suitable for young families;
- affordable purpose-built rental units;
- options for the aging population; and
- higher density housing supply.

To provide for an adequate mix of these housing options, approximately 30% of Weyburn residential development over the next 15 years should be smaller lot entry level homes, multi-family development or purpose built rental, including considerations for secondary suites.

Weyburn's Housing Continuum – Income Assessment



4 Future Land Use Concept

4.1 Existing Land Use

The subject land is 155 acres, located at the eastern most edge of Weyburn, directly south of Highway 13, situated between an existing residential neighbourhood to the west and agricultural land uses. The defining feature of this greenfield development is the east Souris tributary flowing north to south through the center of the property, creating opportunities for natural open space, passive recreation, and flood protection.

4.2 Interface with Adjacent Lands

4.2.1 West Boundary

To the west of the subject lands is the Burnway Place development area. The Creeks is a similar land use pattern and composition as Burnway Place, being a primarily a mixed use residential neighbourhood with commercial develop along Highway 13. Burnway Place is physically separated from The Creeks by an existing laneway and a 40m strip identified as the eastern north-south connection of the Tatagwa Park system. Installation of a formal pathway along this buffer is contemplated under the Tatagwa Parkway Master Plan and preservation of the mature growth trees is required to provide a benefit as an aesthetic amenity to existing and future residents. The Creeks expansion of Tatagwa Parkway trail system originates from this buffer at the north-western edge of the development and links to a local park improvement in Phase 1 and provides opportunity for extension of the trail systems along the east Souris tributary.

4.2.2 North Boundary

To the north of the subject land is Highway 13 and property under agricultural production, but within the jurisdiction of the City. The Highway 13 east highway commercial corridor is one of the last remaining Highway Commercial expansion opportunities readily available to the City and maintaining the viability of this commercial asset for commercial uses is important to the overall City land use pattern. The Creeks contemplates 18 acres of Highway Commercial land use along the length of this corridor to ensure compatibility with future neighbouring development to the north. Anticipating linkage with a potential development to the north, both a collector roadway and Tatagwa Parkway trails have been designed to accept movement of traffic and pedestrians.

4.2.3 East Boundary

To the east of the subject land is the RM and the Terminal Road heavy haul route, linking Highway 13 and Highway 39. This road functions as the east bypass for the City of Weyburn and may require upgrades or dust treatment in the later phases of development. The use of the lands to the east is primarily crop production and several country residential

sites; this land use pattern is expected to continue over the medium term and should not be unduly affected by the development.

4.2.4 South Boundary

To the south of the subject land are agricultural land uses in the RM. The east Souris tributary continues through this parcel and, should these lands be annexed into the City in the future, will likely be developed for a mix of residential land uses. The agricultural uses should not be unduly affected by the development.

4.3 Proposed Land Use

The Creeks neighbourhood is a logical extension of City infrastructure, make best use of the east highway commercial corridor, expands the Tatagwa Park system and integrates with the existing Burnway Place commercial and residential land use pattern. The future land use concept accommodates a range of housing types and densities to suit different lifestyles, income levels and special needs throughout the housing continuum.

The predominant land use in *The Creeks* is residential development, with nearly 40% of all anticipated future residents accommodated in medium or high density dwellings. Approximately 11% of *The Creeks* will support Highway Commercial uses creating a buffer between Highway 13 and higher density residential areas. The composition of proposed land uses is summarized in Table 4.1 below. The land use concept is shown on Figure 2 – Subdivision Land Use Plan.

Table 4.1 Land Use Composition

Land Use Classification	Area	% of Total Area	# of Units/ Dwellings	Units per Area	Projected Population	% of Total Population
Highway Commercial	17.9 ac	11.5%	-	-	-	-
<u>R1 Residential</u> (Single Detached)	67.4 ac	43.4%	335 lots	5.0 / ac	1072	56.7%
<u>R3 Residential</u> (Semi-Detached)	1.58 ac	1.0%	14 lots	8.9 / ac	45	2.4%
<u>R4 Residential</u> - High Density - Medium Density	11.2 ac 3.94 ac 15.1 ac	7.2% 2.5% 9.7%	420 units 64 units 484 units	37.5 / ac 15.2 / ac	672 102 774	35.5% 5.4% 40.9%
<u>Roadways</u> - Collector (22.0 m) - Local (18.0 m) - Alleyways (6.0 m)	16.0 ac 13.9 ac 0.97 ac 30.9 ac	19.9%	-	-	-	-
<u>Public Open Space</u> - Municipal Reserve (MR) - Walkway (W) - Tatagwa Parkway (PW)	4.09 ac 0.17 ac 18.0 ac 22.3 ac	14.4%	-	-	-	-
TOTAL	155.2 ac	100%	833	-	1891	100%

4.4 City Residential Development Needs Assessment

Build out of *The Creeks* neighbourhood is expected between 2017-2020, it is expected to contain over 800 dwelling units, housing a population of nearly 2000 persons based on 3.2 persons per household in low-medium density areas and 1.6 persons per household in high density development. The density of residential development is projected to be 9.9 dwellings per developed residential acre with nearly 15% public open space. The Creeks provides Weyburn with a neighbourhood design respectful of the existing community and establishes a land use mix meeting 20% of the needed residential growth, in an appropriate mix of land uses, over the next 12 years.

5 Transportation

5.1 Road Network

The subject lands are bounded by Highway 13 to the north and the Terminal Road heavy-haul grid within the RM to the east. There will be six main entrances, including the extensions of four existing roads along the west side of the site providing linkage with Burnwey Place. Warren Avenue, Eaglesham Avenue, and Coteau Avenue would all be continued into the development. 20th Street NE would be extended into the site from the south service road, providing an entrance into the northwest end of the site from Highway 13. The municipal reserve shown at the southwest end of the site was allocated to allow for a potential future road that connects to residential development to the south.



Eaglesham Avenue would also continue east crossing the east Souris tributary/Tatagwa Park extension linking the neighbourhood. The crossing would feature large culverts accommodating the free flow of storm water in moderate weather events. To handle significant storms (1:500 year event), the crossing will be designed to allow for weir flows overtop the roadway.

The east half of the development will primarily be served by a new north entrance road proposed along Highway 13. This will be the only roadway that intersects with the highway and will serve as primary access to commercial areas of *The Creeks*. There is one proposed access to Terminal Road, which is RM infrastructure. The Developer will enter into a separate servicing agreement with the RM during the phase this connection is required to be developed.

5.2 Laneways

Laneways will be incorporated along the back of some of the lots, to accommodate homeowners need for rear yard access and storage. Attached garages will still be required along the front of the house. The lane will be hard packed gravel; with the initial 3 meters paved at each entrance up to the back of curb or sidewalk. These laneways will convey the storm water runoff along the back of lots and will contain catch basins where required.

5.3 Trip Generation

For the initial phases of residential development a traffic assessment is not required, as the four existing collector roads will be extended into the subdivision without the addition of major intersections. These four entrances will primarily serve the residential traffic in the west side of *The Creeks* as well as approximately half of the residential development east of the creek. Projected trip generation along the west side collector road extensions is expected to remain well below 5000 vehicle trips per day and traffic calming measures are not necessary along Warren Avenue, Eaglesham Avenue, or Coteau Avenue.

The north entrance road is projected to be the primary access to the commercial area, as well as half the residential traffic east of the tributary. It is recommended a *Site Impact Traffic Study* be completed for the north entrance road intersection at Highway 13 when commercial subdivision and development commences. This future traffic analysis would provide a basis for the intersection design of the north entrance road.

Overall, *The Creeks* is expected to generate 13,270 vehicles per day. Table 5.1 below shows land use and trip generation assumptions used to determine total trip generation for the area.

Table 5.1 Projected Traffic Volumes

Land Use	Area	# of Units	Daily		P.M. Peak Hour			
			Trip Rate	Total Trips	Trip Rate	Total Trips	% In/Out	Total In/Out
Highway Commercial								
- Hotel	3.34 ac	120	5	600	0.5	60	70/30	42/18
- Gas Bar/Coffee Shop	1.86 ac	1	1040	1040	312	312	48/52	150/162
- Restaurant/Lounge	1.50 ac	1	310	310	84	84	45/55	38/46
- Shopping (Strip Mall)	11.2 ac	105	37.5	3938	3.75	394	49/51	193/201
R1 Residential	67.4 ac	335	10	3350	1.0	335	65/35	218/117
R3 Residential	1.58 ac	14	10	160	1.0	14	65/35	9/5
R4 Residential								
- High Density	11.2 ac	420	8	3360	0.8	336	65/35	218/118
- Medium Density	3.94 ac	64	8	512	0.8	51	65/35	33/18
Total		833	-	13,270	-	1586	57/43	901/685

5.4 Park and Open Space Linkage / Pedestrian Circulation

The Creeks encourages vehicles to travel on the collector streets, minimizing traffic on local streets. Collector streets will have sidewalks on both sides of the street and the local streets will have sidewalk on one side of street as indicated on Figure 3 – Road Network and Pedestrian Circulation. The major pedestrian linkages throughout *The Creeks* are proposed to be improvements contained within either the street right-of-way or the centrally located park space. These pedestrian linkages designate the predominant routes for pedestrians and cyclists through the neighbourhood.

6 Open Space, Green Design & Aesthetics

6.1 Public Open Space

The creek is a tributary of the Souris River and flows north to south through *The Creeks*. This tributary is primarily a dry feature most of the year, but serves an important water conveyance function for runoff during the spring. The Tatagwa Parkway extension, which incorporates the tributary, is a passive recreation area for all City residents and strategically located to serve as a centrally open space for the neighbourhood. In accordance with Tatagwa Park Master Plan every 500 metres of trail system will require a rest stop; however these will be placed at locations where the trail connects with walkways entering the residential area. The pathway will be designed to have of a granular surfacing capable of compaction; acceptable materials can be confirmed with the City Parks staff.

Various municipal reserve parcels are proposed throughout *The Creeks*, located adjacent to the Tatagwa Parkway, and would serve as the active recreational areas. These sites would see a higher degree of landscaping, including some irrigated turf, children's play structures, and bench seating.



6.2 Green Design

Although the current vegetation is expected to be removed, the *Tatagwa Parkway* extension and improved wetlands feature will be re-vegetated to a more natural prairie landscape than currently exists, including seeding of native prairie grasses and riparian vegetation along the creek, ponds, and storm channels/swales. The parkway areas will have a dual purpose as both open space and as storm water retention areas and will feature a number of permanent wet ponds. Consideration was given in the development of the plan to incorporate sustainable design principles regarding the storm water management of the site. The staged detention of water in the ponds will allow better infiltration of rainwater into the aquifer, contributing to the protection of water resources used by neighbouring RM residents.



The existing row of mature trees between Burnway Place and *The Creeks* is identified as a significant asset to the City's Tatagwa Parkway and provides intrinsic value to both neighbourhoods. The natural capital these aged trees provide will remain throughout the development, with only select areas being removed to allow for City approved improvements and the extensions of Warren Avenue, Eaglesham Avenue, and Coteau Avenue. Trees not located on City owned parkway lands may need to be removed where grading is required for storm water drainage, however the removal of City trees for this purpose will require approval from the City Engineers Office. City owned trees removed to accommodate development improvements will be replaced under "a tree for a tree" program, in which a new tree of a City approved type will be planted, in a location determined by City Parks staff.

Opportunities for solar heating, lighting and power generation are provided for by the subdivision design, as a majority of R-1 lots having north/south frontage. This provides opportunities for passive solar lighting and heating in the majority of new detached dwellings and active solar energy capture is encouraged. Active solar equipment is required to meet any building code requirements and should be placed and designed to aesthetically compliment the materials and design of the dwelling.

7 Public Works

7.1 Water (Figure 4)

Weyburn's current potable water supply system has sufficient capacity to service *The Creeks* without the need for upgrades to existing City infrastructure. The water distribution network would connect at four locations along the west end of the site, tying into existing watermain at 20th Street NE, Warren Avenue, Eaglesham Avenue, and Coteau Avenue. To provide peak demand flow and fire protection to east phases of development, two watermain trunks will need to cross the creek to provide a loop to the west side. One watermain would run along Eaglesham Avenue, which is the sole roadway connection to the east side within *The Creeks*. The other trunk is planned to run within a walkway off an extension of Warren Avenue, cross underneath the creek, and run along the main east-west roadway in the commercial and high density residential area south of Highway 13. Stubs should be left for a future crossing north of Highway 13, east at Terminal Road in the RM, and for future residential development anticipated for the south.

7.2 Wastewater (Figure 5)

The Creeks is serviced by an existing wastewater trunk located along Coteau Avenue, installed with additional depth and capacity to service future development as the City grew eastward. All domestic sewers are directed along a gravity-fed sewer main that ties into an existing stub on Coteau Avenue, maximizing the existing City infrastructure without the need for downstream improvements. There is adequate depth to service the entire site without the need for a lift station, however some pipe will likely need to be oversized and run at minimum grade to maintain sufficient cover across the site. A stub should be left for the future residential development anticipated for the south.

7.3 Storm Water (Figure 6)

The Creeks will utilize the east Souris tributary running through the site as both a minor system and major overland storm water outlet. The proposed subdivision would see a "channelization" of the tributary, to improve the conveyance of waters through the site and limit potential flood to the Tatagwa Parkway area. Swales are proposed along the south of *The Creeks* allowing for rear lot drainage to the watercourse, while maintaining the existing grade along the south property line.



The vegetated swales and permanent wet-ponds would provide treatment of the storm water prior to exiting the site and increase aquifer recharge rates. The construction of the ponds will provide a source of fill material to raise low spots within the developable area above the 1:500 year flood elevations. The minor storm collection systems will be 'localized' and outlet to various vegetated swales that tie into the ponds. In major storm events, runoff will cascade along the roadways and flow overland to the tributary.

7.4 Crown and Shallow Utilities

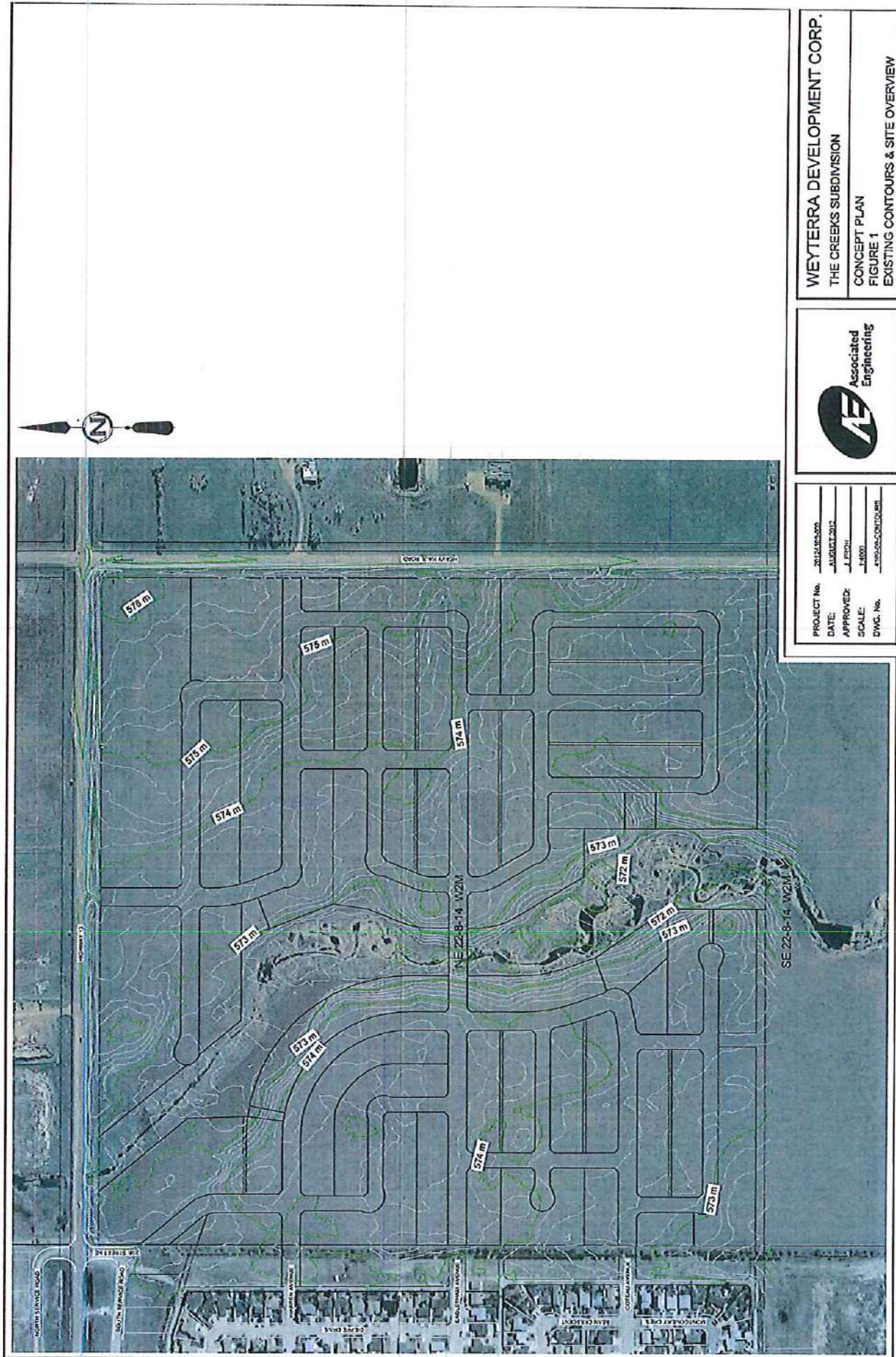
Crown and Shallow Utilities will be required to be installed by the Developer. The Developer will have the responsibility to ensure these services are accommodated under the subdivision design; easements are provided, and for all costs associated with servicing each lot with such services.

8 Development Phasing (Figure 7)

The Creeks is a multi-phase development expected to be built over the period of 5-10 years. The City currently has all services required to develop the subject land and the initial phase of development is expected to begin construction in 2013. The Development will begin in the South-western corner of the property and develop northward in three (3) phases before bridging the east Souris tributary to development multifamily and commercial uses on the eastern half of the site. *The Creeks* initial three (3) phases are expected to be completed in three years, with market conditions dictating the timing of further phases of growth. The commercial and high density residential (R4) parcels that are adjacent to the highway will be developed independently of the residential development and as the market dictates.

ERROR! UNKNOWN DOCUMENT PROPERTY NAME.

Appendix A - Concept Plan Figures



WEYTERRA DEVELOPMENT CORP.
THE CREEKS SUBDIVISION
CONCEPT PLAN
FIGURE 1
EXISTING CONTOURS & SITE OVERVIEW



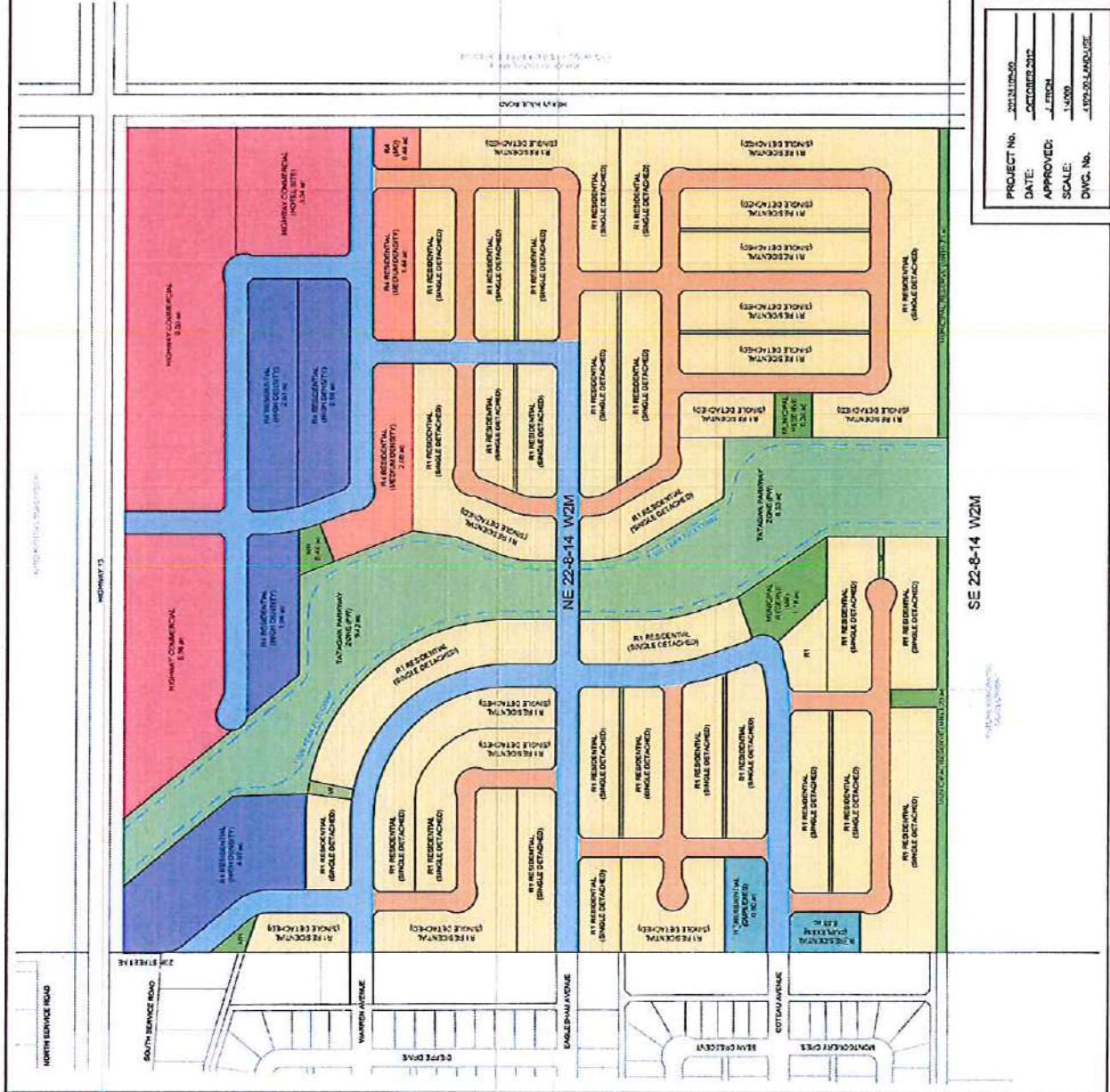
PROJECT No. 2012-05-009
DATE: AUGUST 2012
APPROVED: J. PERI
SCALE: 1"=100'
DWG. No. 4700-01-CONTOURS



LEGEND:

LAND USE CLASSIFICATION	AREA
HIGHWAY COMMERCIAL	17.9 ac
RESIDENTIAL	
- R4: HIGH DENSITY (APARTMENTS / CONDOMINIUMS)	11.2 ac
- R4: MEDIUM DENSITY (TOWNHOUSES)	3.94 ac
- R3: SEMI-DETACHED DWELLINGS (DUPLICES)	1.50 ac
- R1: SINGLE DETACHED DWELLINGS	67.4 ac
ROADWAYS	
- COLLECTOR (22 m ROW)	16.0 ac
- LOCAL (18 m ROW)	13.9 ac
- REAR LOT ALLEYWAY (6 m ROW)	0.97 ac
PUBLIC OPEN SPACE	
- MUNICIPAL RESERVE (MR)	4.00 ac
- WALKWAY (W)	0.17 ac
- TAXIWAY PARKWAY ZONE (PW)	15.0 ac
TOTAL AREA	154.2 ac

PROJECTED DWELLING UNITS	EST. POP.
R4: HIGH DENSITY (APARTMENTS)	420 UNITS
R4: MEDIUM DENSITY (TOWNHOUSES)	64 UNITS
R3: SEMI-DETACHED DWELLINGS (DUPLICES)	14 LOTS
R1: SINGLE DETACHED DWELLINGS	335 LOTS
TOTAL	833 UNITS



WEYTERRA DEVELOPMENT CORP.
THE CREEKS SUBDIVISION
CONCEPT PLAN
FIGURE 2
SUBDIVISION LAND-USE PLAN



PROJECT No. 2012-0000
DATE: OCTOBER 2012
APPROVED: J. JEN
SCALE: 1:5000
DWG. No. 1502-00 LANDUSE

FUTURE HIGHWAY 20/24
COMMERCIAL & RESIDENTIAL SUBDIVISION

HIGHWAY 17

400th SERVICE ROAD
200th STREET

WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK

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BANK CREEK

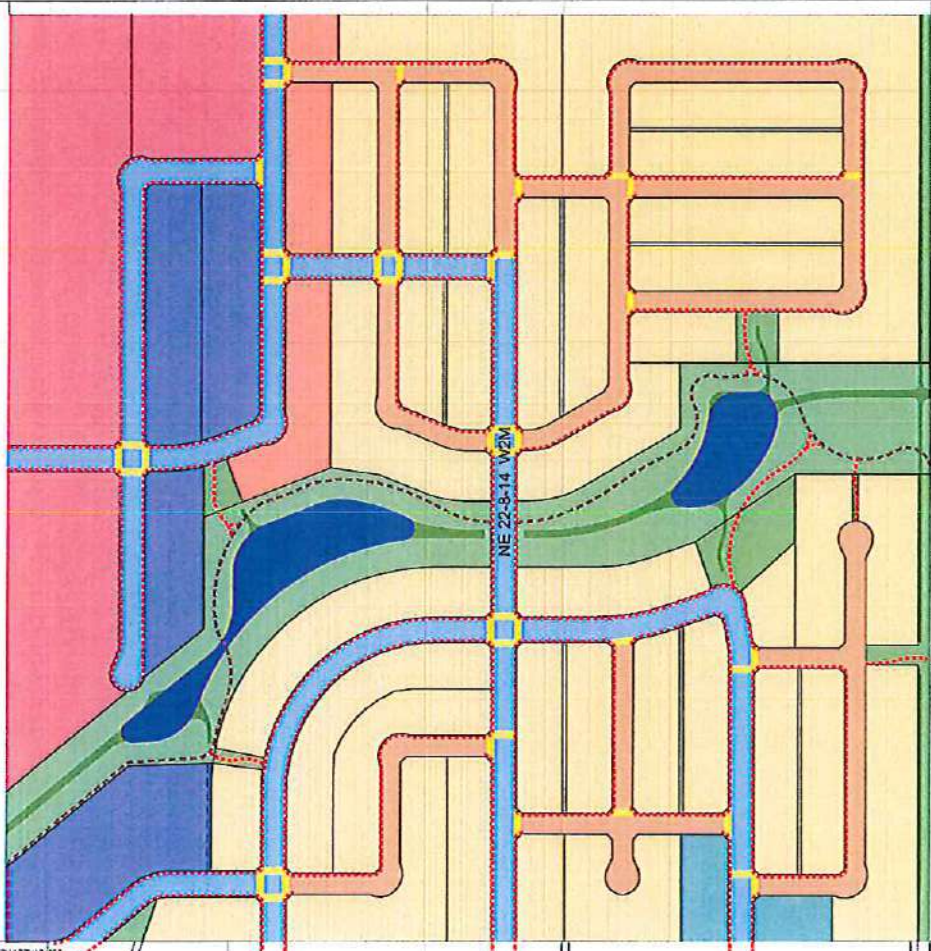
WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK

WATSON CREEK
BANK CREEK



- LEGEND:**
- ROADWAYS**
- | | ROW WIDTH | VEHICLES / DAY |
|-------------------|-----------|----------------|
| COLLECTOR | 22.0 m | 5000 > 1000 |
| LOCAL | 18.0 m | < 1000 |
| REAR LOT ALLEYWAY | 6.0 m | |
- SURFACE FEATURES**
- PEDESTRIAN CROSSING
 - PEDESTRIAN WALKWAY (SIDEWALK OR PATHWAY)
 - TATAGWA PATHWAY EXTENSION
 - STORM CHANNEL / DRAINAGE DITCHES
 - STORM WATER RETENTION POND (WET POND)



SE 22-8-14 W2M

FUTURE HIGHWAY 20/24
COMMERCIAL & RESIDENTIAL SUBDIVISION

PROJECT No.	2014-10-20
DATE	OCTOBER 2014
APPROVED	J. FORD
SCALE	1:1000
DWG. No.	2014-10-20-ROADWAYS

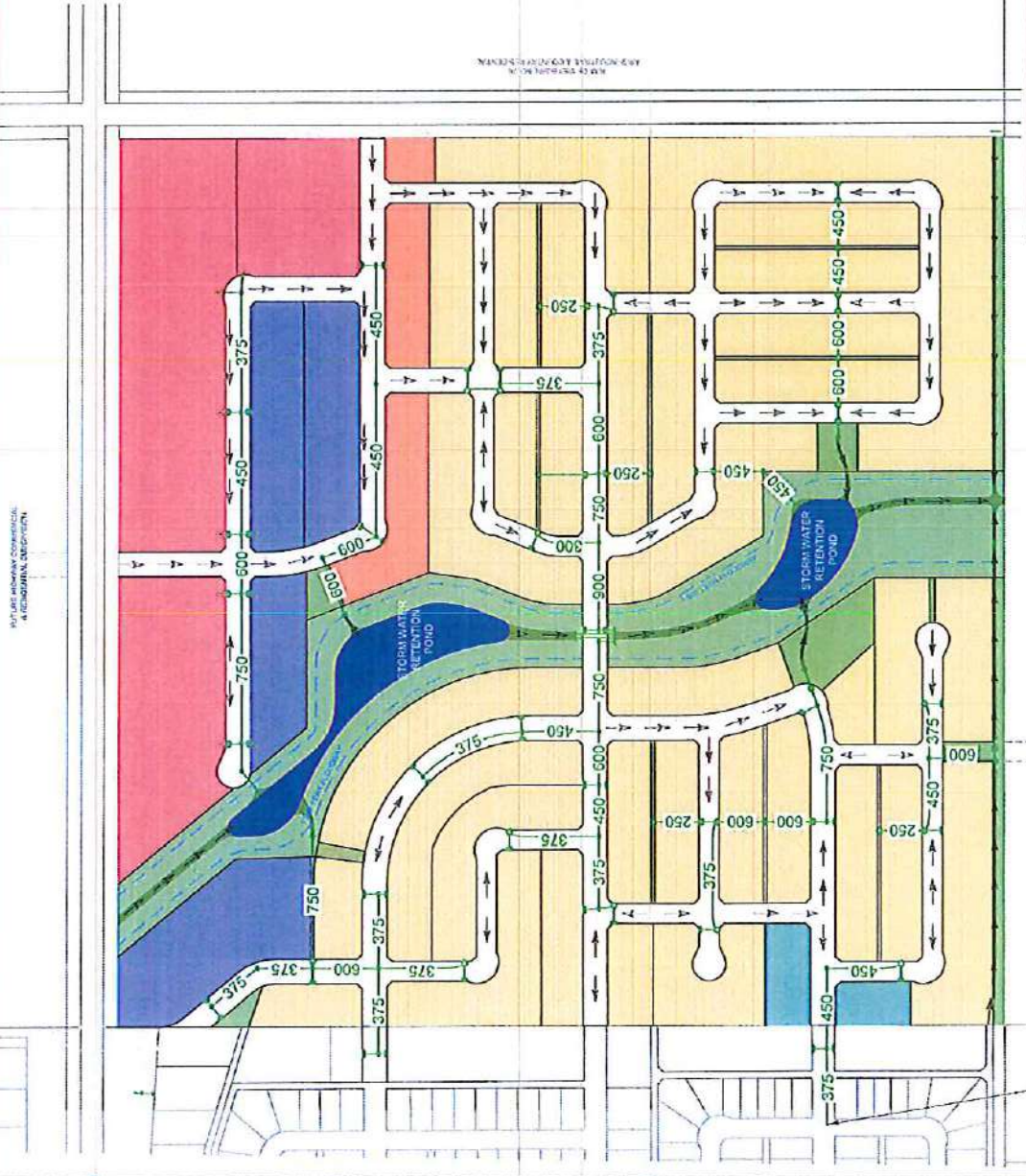


WEYTERRA DEVELOPMENT CORP.
THE CREEKS SUBDIVISION
CONCEPT PLAN
FIGURE 3
ROAD NETWORK & PEDESTRIAN CIRCULATION



LEGEND:

- STORM**
- MANHOLE
 - CATCH BASIN MANHOLE
 - CATCH BASIN (STREET)
 - CATCH BASIN (OFF-STREET)
 - STORM CHANNEL / DRAINAGE DITCH
 - STORM WATER RETENTION POND (WET POND)
 - OVERLAND FLOW



WEYTERRA DEVELOPMENT CORP.
THE CREEKS SUBDIVISION
CONCEPT PLAN
FIGURE 6
STORM WATER MANAGEMENT PLAN

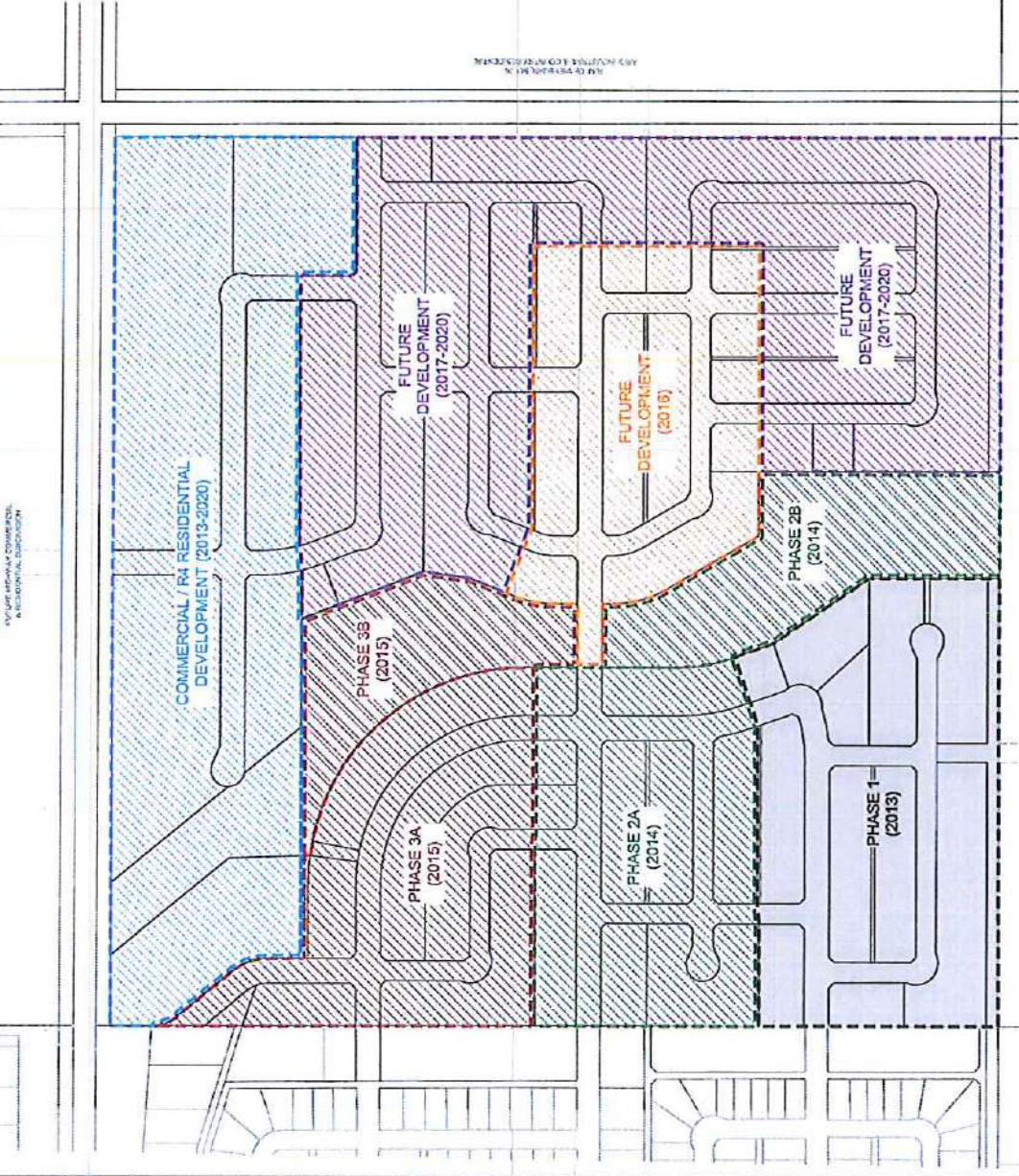


PROJECT No.	201241002002
DATE:	OCTOBER 2002
APPROVED:	J.F.H.
SCALE:	1"=500'
DWG. No.	2105-001-0000

CONNECTION TO EXISTING 3750
STORM ON COTEAU AVENUE



- LEGEND:
- PHASE 1 (2013)
 - PHASE 2 (2014)
 - PHASE 3 (2015)
 - COMMERCIAL / R4 RESIDENTIAL DEVELOPMENT (2013-2020)
 - FUTURE DEVELOPMENT (2016)
 - FUTURE DEVELOPMENT (2017-2020)



WEYTERRA DEVELOPMENT CORP.
THE CREEKS SUBDIVISION
CONCEPT PLAN
PROJECTED PHASES OF DEVELOPMENT



PROJECT No. 2013.00.002
DATE: OCTOBER 2012
APPROVED: J. FROST
SCALE: 1"=500'
DWG. No. 4105.00.00.010

TRIOD SUPPLY (2011) LTD.

2016 Mower Blade Booking Order

Blades For Bush Hog, Degelman

BOOK NOW and SAVE!!! DO NOT PAY TILL SPRING!!!

Quantity	Booking Price	Regular Price	2815/3815 Blades Part #
	\$45.95 ea.	\$61.07 ea.	50068273 Center & Right Wing (Counter)
	\$45.95 ea.	\$61.07 ea.	50068272 Left Wing (Clockwise)

Bush Hog 3715 (Fits Schulte XH1500)

\$47.59 ea.	\$47.59 ea.	7555 Right Wing (Counter Clockwise)
\$35.88 ea.	\$47.59 ea.	11150 Left Wing (Clockwise)
\$35.88 ea.	\$53.30 ea.	7556 Counter Clockwise Center
\$39.92 ea.	\$61.25 ea.	90242 Clockwise Center
\$45.68 ea.	\$52.52 ea.	Super Up Draft Blades Part #
\$38.95 ea.	\$52.30 ea.	97032 Right Wing (Counter Clockwise)
\$38.90 ea.	\$57.95 ea.	97033 Left Wing (Clockwise)
\$43.76 ea.	\$56.75 ea.	97034 Counter Clockwise Center
\$42.80 ea.		50036606 Clockwise Center

2715 Blades

\$39.97 ea.	\$53.55 ea.	Standard Blades Part #
\$39.97 ea.	\$53.55 ea.	50054545 Center & Right Wing (Counter)
\$39.97 ea.	\$53.55 ea.	50054546 Left Wing (Clockwise)
\$39.97 ea.	\$53.55 ea.	Super Up Draft Blades Part #
\$38.88 ea.	\$51.76 ea.	50053084 Center & Right Wing (Counter)
\$38.88 ea.	\$51.76 ea.	50053083 Left Wing (Clockwise)
\$38.85 ea.	\$39.45 ea.	Bush Hog Bolt Kit Part #
\$29.95 ea.		63607 Bolt Kit

Degelman 5" Mower Blades

\$50.85 ea.	\$58.99 ea.	Degelman Part #
\$50.85 ea.	\$58.99 ea.	501027 Clockwise
\$50.85 ea.	\$58.99 ea.	501028 Counter Clockwise
\$13.50 ea.	\$15.44 ea.	Degelman Bolt & Locknut
\$12.60 ea.	\$14.19 ea.	117415 Blade Bolt
		117417 Locknut

Booking Deadline is January 27, 2016 - SORRY NO EXCEPTIONS

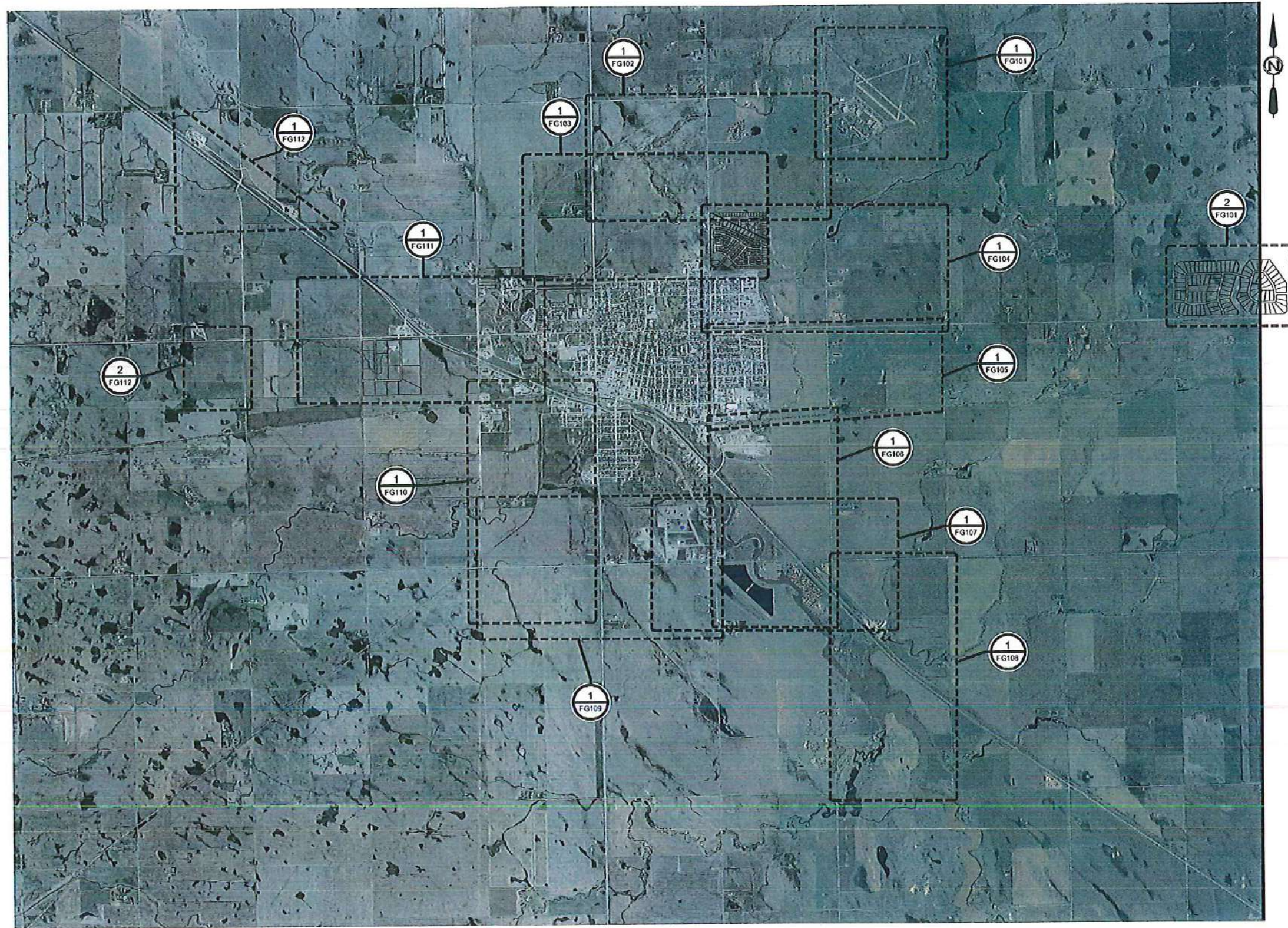
Customer: _____ Ordered By: _____
 Deliver To: _____ Contact Number: _____

Phone # 306-445-1200 Fax # 306-445-5499 Toll Free # 1-800-728-8343

Appendix E: Engineering Studies

THIS DRAWING IS NOT TO BE USED FOR THE PURPOSES OF ANY PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ASSOCIATED ENGINEERING FIRM.

PROJECT: WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
DATE: 2012-03-15
DRAWN BY: T. GRAHAM
CHECKED BY: T. WILLIAMS
APPROVED BY: [Signature]
DATE: 2012-03-15



1 DETAIL SCALE: 1:30,000

DRAWING
REDUCED TO
HALF SIZE

NO.	DATE	ENG.	BY	SUBJECT
1	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
2	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
3	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
4	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
5	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
6	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
7	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
8	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
9	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS
10	2012-03-15	T.G.	T.W.	WEYBURN DISTRICT WATER SERVICE IMPROVEMENTS

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1 PLAN SCALE: 1:5000



2 PLAN SCALE: 1:5000

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SERVICING CONCEPT

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1 PLAN SCALE: 1:5000

CITY OF WEYBURN (LONG TERM)
1200 AC - 19 200 PEOPLE
DEV COST - \$ 160 M
CITY COST = ?
LEVY COST - \$ 51.2 M

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1 PLAN SCALE: 1:5000

CITY OF WEYBURN (LONG TERM)
640 AC - 9600 PEOPLE
DEV COST - \$ 80 M
CITY COST = ?
LEVY COST - \$ 25.6 M

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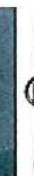


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1 PLAN SCALE: 1:5000

Q_{ENVY} = 40 500 L/day
= 14.8 x 10³ m³/yr
Q_{RES} = \$40 000 L/day
= 197.1 x 10³ m³/yr

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1 PLAN SCALE: 1:5000

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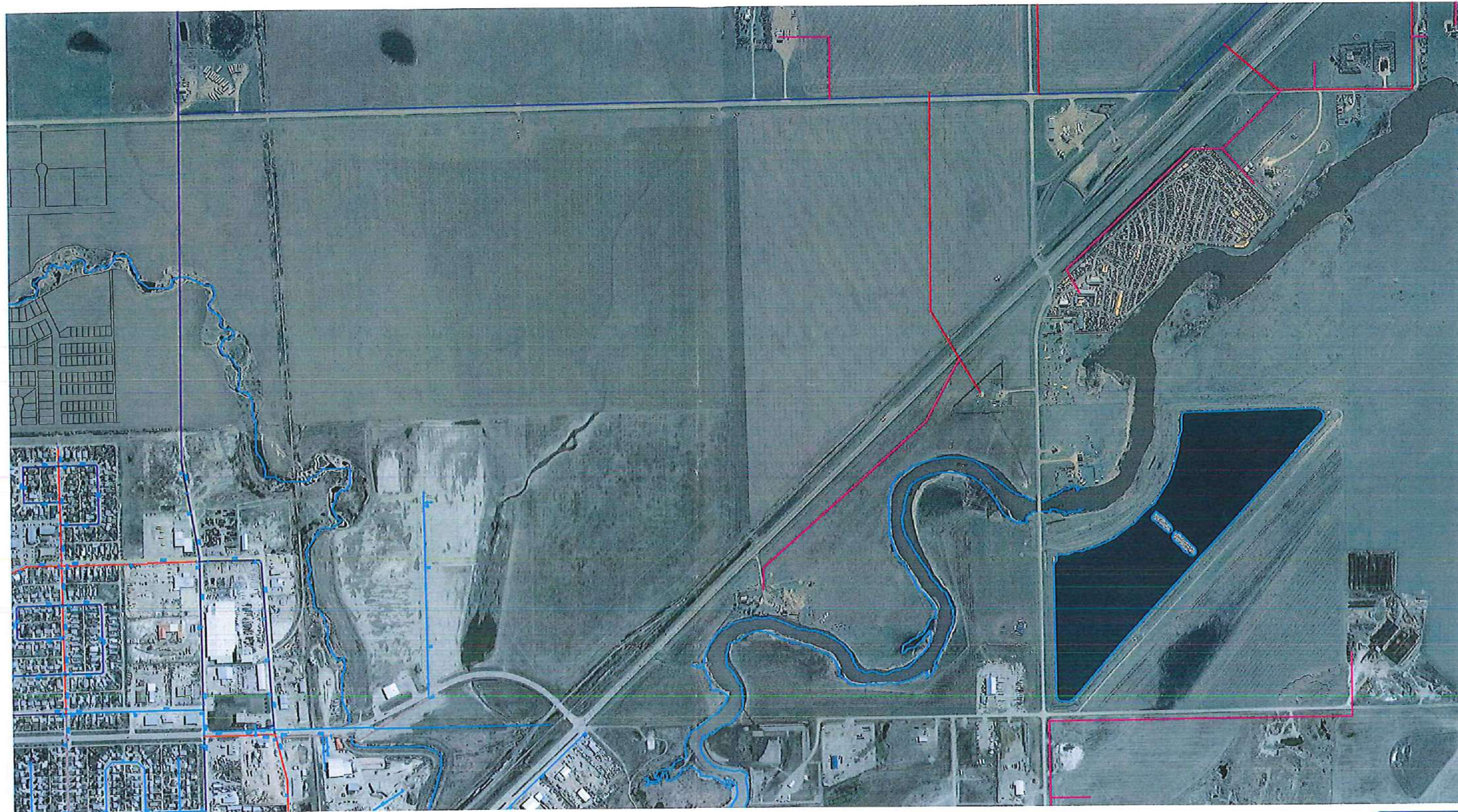
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APPROVED BY: [Signature]
DATE: 2012-03-16



38 mm
50 mm
75 mm
100 mm
150 mm
200 mm
250 mm
300 mm
UNKNOWN

1 PLAN SCALE: 1:5000

$Q_{CTV} = 1590 \text{ m}^3/\text{day}$
 $= 600,000 \text{ m}^3/\text{yr}$
 $Q_{SW} = 15,000 \text{ m}^3/\text{yr}$

SECTOR D - XXXX
DEV COST - \$ 62.25 M
MUN COST - \$ 10.25 M
LEVY COST - \$ 22.8 M

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1 PLAN SCALE: 1:5000

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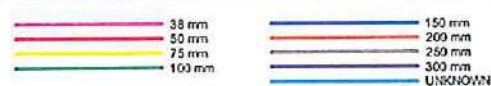
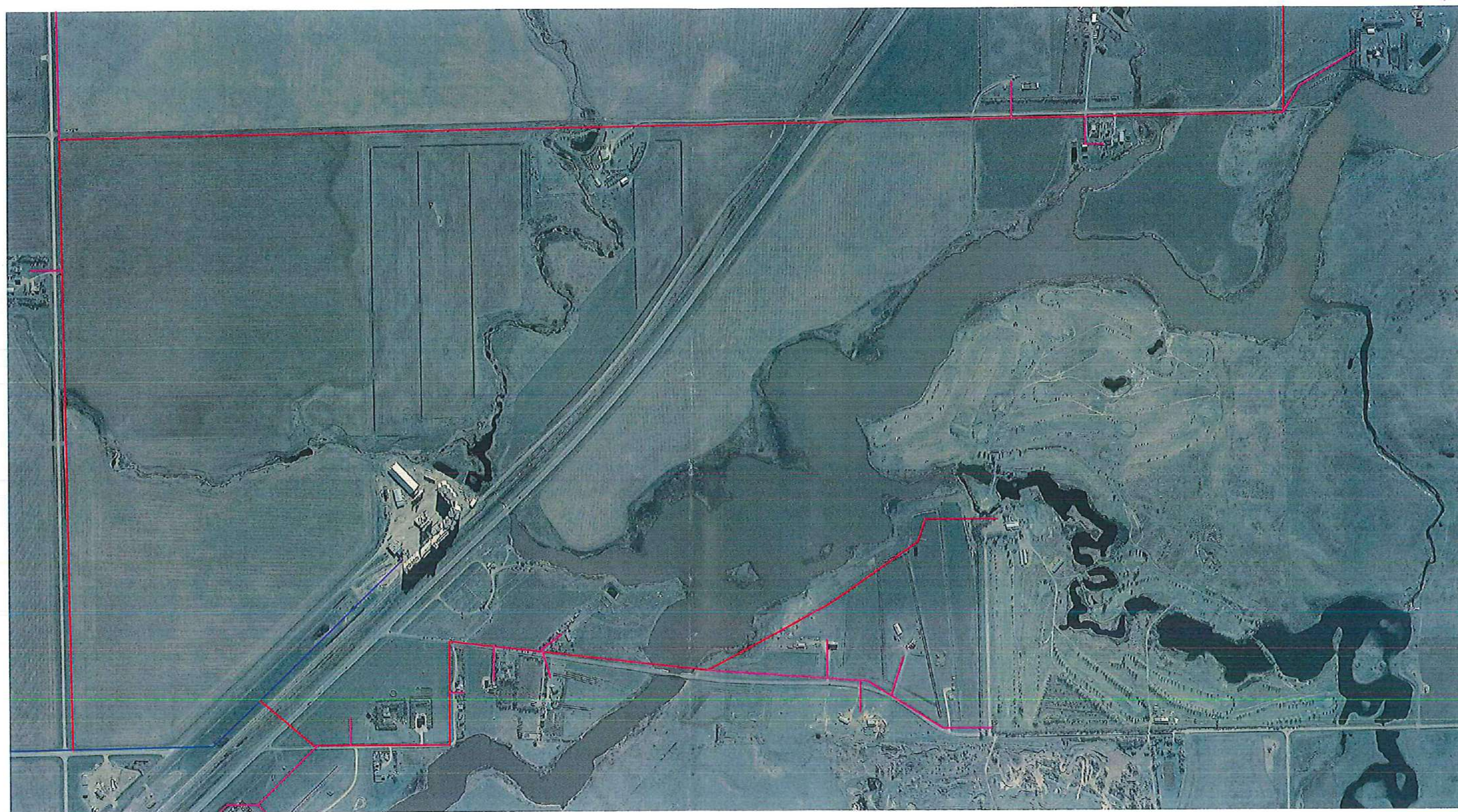
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User: T. Williams
Title: District Water Servicing Concept
Project: 2011/4947-010



1 PLAN SCALE: 1:5000

Q = 2000 m³/yr
SECTOR X - XXXXXX
DEV COST - \$ XX
MUN COST - \$ XX
LEVY COST - \$ XX

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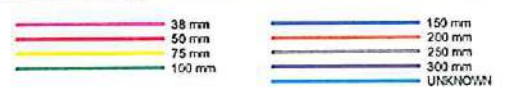
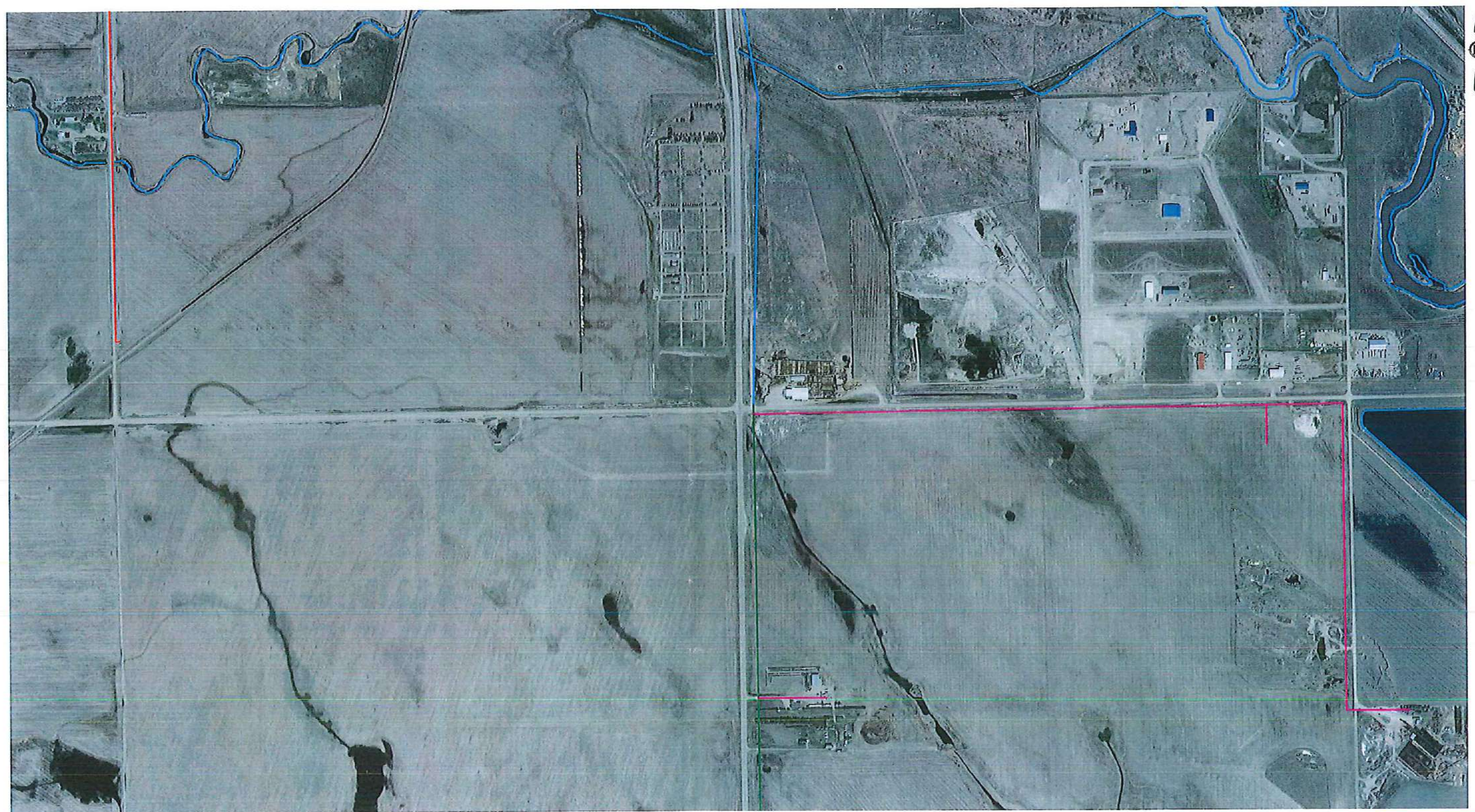
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PLAN SCALE: 1:5000

Q_{CH} = 49 200 m³/yr
Q₃₀ = 40 000 m³/yr
SECTOR C - INDUSTRIAL/RM STANDARD
DEV COST - \$ 20 M
MUN COST - \$ 500 K
LEVY COST - \$ 2.4 M

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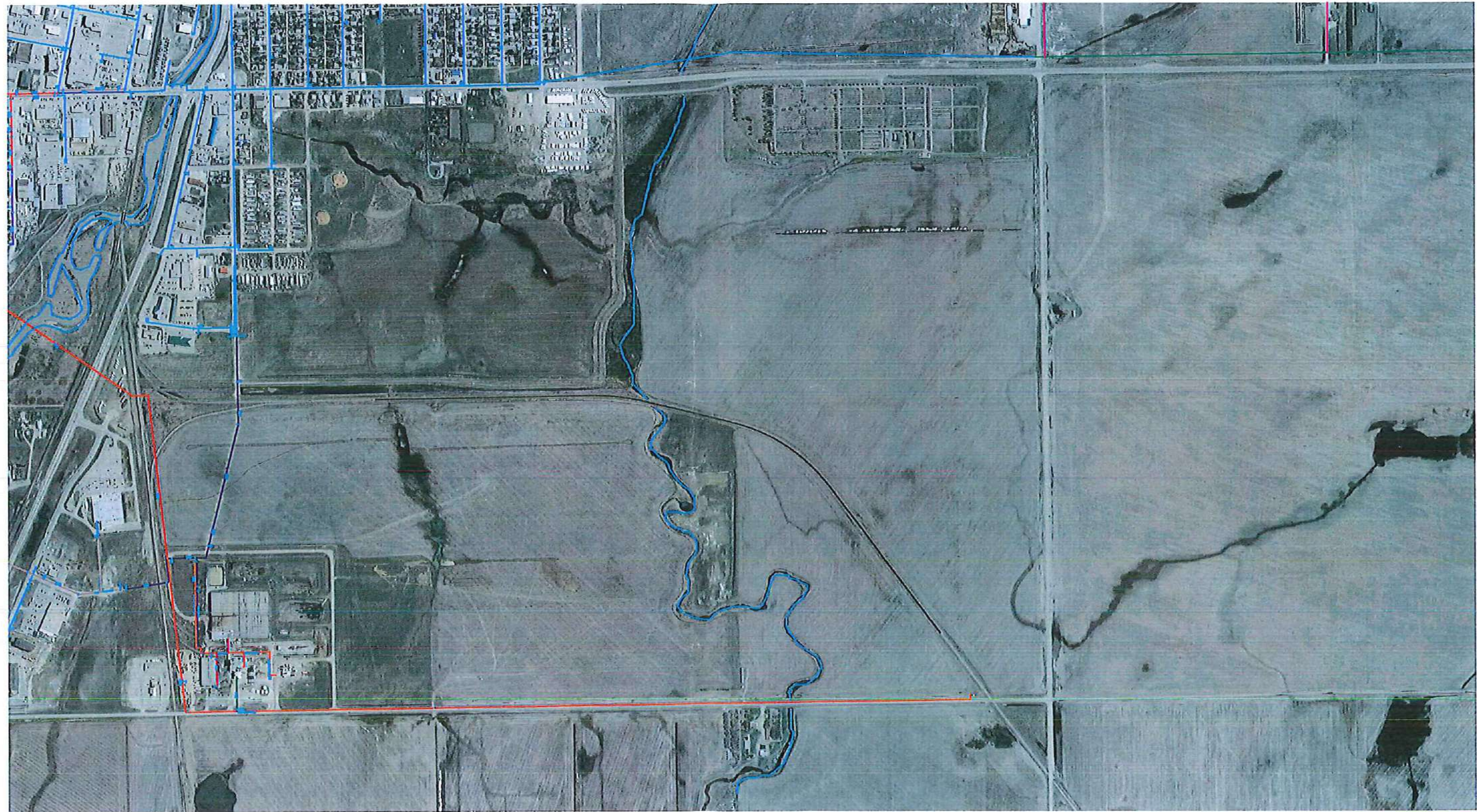


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| 38 mm | 150 mm |
| 50 mm | 200 mm |
| 75 mm | 250 mm |
| 100 mm | 300 mm |
| | UNKNOWN |

1 PLAN SCALE: 1:5000

$Q_{ENV} = 1658 \text{ m}^3/\text{day}$
 $Q_{DEV} = 615,000 \text{ m}^3/\text{yr}$
 $Q_{RES} = 40,000 \text{ m}^3/\text{yr}$

SECTOR B - INDUSTRIAL
DEV COST - \$ 66 M
MUN COST - \$ 10.3 M
LEVY COST - \$ 20.6 M

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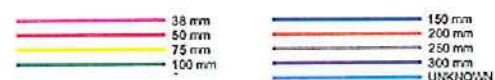
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1 PLAN SCALE: 1:5000

$Q_{CIV} = 625 \text{ m}^3/\text{day}$
 $Q_{CIV} = 228,000 \text{ m}^3/\text{yr}$
 $Q_{RW} = 20,000 \text{ m}^3/\text{yr}$

SECTOR A-1 - HIGHWAY COMMERCIAL/LIGHT INDUSTRIAL
DEV COST - \$22.4 M
MUN COST - \$4.25 M
LEVY COST - \$9.3 M

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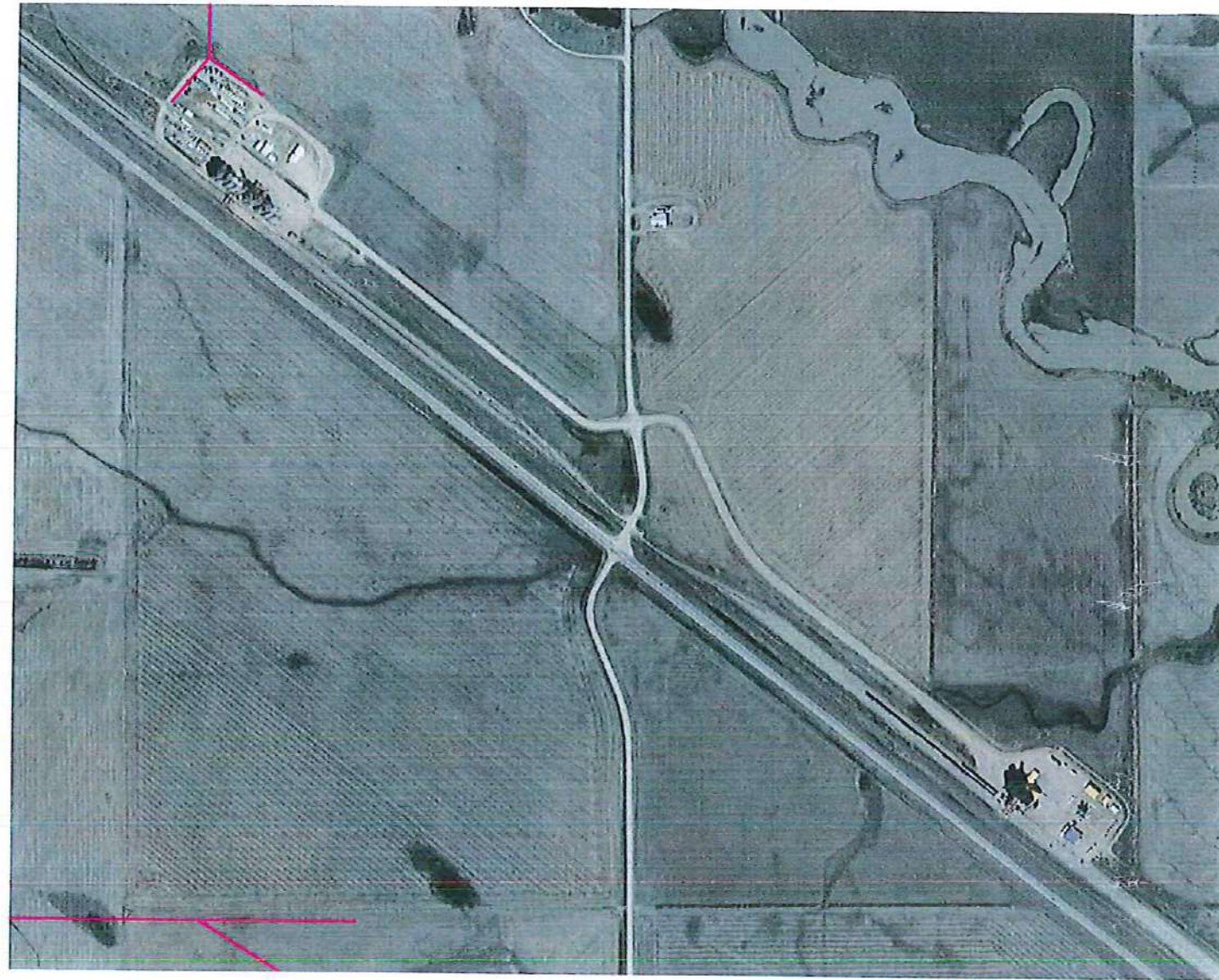
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1 PLAN SCALE: 1:5000

Q = 10 000 m³/yr
SECTOR A-2 - AG IND.
170 AC.
DEV COST - \$ 95 MILLION
LEVY COST - \$ 150 MILLION



2 PLAN SCALE: 1:5000

Q = 20 000 m³/yr
80 AC.
HWY COMMERCIAL CO
DEV COST - \$ 2 M
MUN COST - \$ 50 K
LEVY COST - \$ 750 K

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Prepared by Troy Libke
(signature)

Troy Libke

Reviewed by Art Skibinsky
(signature)

Art Skibinsky

Association of Professional Engineers & Geoscientists
of Saskatchewan
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STANTEC CONSULTING LTD.

Number C0969

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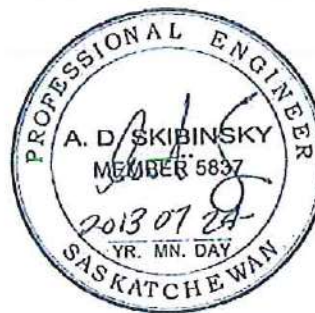
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5837

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A. Skibinsky

**City of Weyburn District - Water
Feasibility Study**



Stantec

July 25, 2013

Sign-off Sheet



Stantec

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(signature)

Troy Libke

Reviewed by _____
(signature)

Art Skibinsky

Association of Professional Engineers & Geoscientists
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1.0 Introduction

In December 2012, the City of Weyburn contracted Stantec to prepare a computer water model for the conceptual developments proposed for the Weyburn District. This work was a continuation of the initial work started by Associated Engineering.

The Weyburn District Planning Commission (WDPC) is interested to know which areas of interest within the Weyburn District could be serviced by the existing city water system. The City and the WDPC, in turn, together are further interested in determining what the impacts of adding each development to the City's existing system would be, and what upgrades may be necessary to service each proposed development within the District.

As part of a previous assignment, Stantec developed a calibrated WaterCAD steady state model of the City of Weyburn. For this study, Stantec has now received a plan outlining the existing rural water pipeline projects within the Weyburn District that connects to the City's existing system. This information was used to update the City's WaterCAD model.

The new areas of interest are located in all directions around the City and have been designated as Sectors A to Sector I. Based on preliminary concepts for land use zoning and estimated populations, demands and approximate elevations for each of the proposed developments were integrated into the City's base model.

This study's intent is to assess the existing City and extended distribution network to identify areas of low pressure or flow, and determine if the existing system is capable of providing projected consumptive demands to the Weyburn rural district. Necessary improvements to the City of Weyburn's existing water distribution system required to provide water service to the Weyburn rural district are discussed.

2.0 Model Setup

2.1 APPROACH

The existing Weyburn District distribution network plan was received from SAL Engineering and was used to update the current City model. Basic pipe networks for the new district developments were then tied in to the existing district, or to the city, within the model and each sector was individually assessed. The City's base model was analyzed prior to activating each all of the sectors to establish a baseline pressure in order to determine what the impact of each of the proposed Weyburn District developments would have on it.

The City provided Stantec with the Weyburn Regional Economic Plan (WREP) produced by DG Mercer Eco Research dated November 7, 2011. Within it was information regarding area of interest parcel sizes, populations, land uses and design criteria. Areas designated as 'City Standard' were designed for demand and pressure as per typical best management practices such as those outlined in the 2008 City of Regina DSM Section 10 – 'Water Design'. Fire flow analysis for all sectors was not included in this study. Areas designated as 'RM Standards' were designed for demand and pressure as per the Rural Water Pipeline Handbook for Saskatchewan (RWPHS).

There are a number of residential developments that have been approved by the City of Weyburn and are expected to be constructed in the near future. These areas have been included as 'existing' in the City model. These approved future developments include:

- Souris Valley - northwest sector,
- Assiniboia Park - north sector,
- Kountry Kots Phases 1 and 2 - northeast sector,
- The Creeks Phases 1, 2, 3, and future built-out - east sector,
- Douglas Heights - southwest sector (South Hill),
- Grasslands - south central sector.

The current model has been previously calibrated for the existing city only and was exclusive of the above mentioned approved residential developments.

2.2 MODELED SCENARIOS

Among other uses, water modeling software is a tool that can be used to identify the hydraulic impact that growth from a proposed development may have when connecting to an existing network. The main hydraulic parameter of interest in this study is pressure. This parameter can be tested under different user water demand conditions by creating scenarios. Commonly modeled scenarios are run such as average day demand (ADD), peak day demand (PDD) and peak hour demand (PHD). Design standards assist the Modeler to design water systems so they will provide the required consumptive demand flows at the minimum specified pressures.

As mentioned earlier, the areas of interest in this study are outlined in the 'Weyburn Regional Economic Plan' and are designated as sectors 'A-1', 'A-2' & 'B' to 'I'. Figure 1- Sector Layout illustrates the layout of the sectors.

Sector A-1 – outlines 115 + 70 acres (for Highway Commercial use developed to City Standard, 160 + 80 acres for Light Industrial developed to the Rural Municipality Standard, and 160 acres for Market Gardens and Greenhouses.

Sector A-2 – 170 acres for Highway Commercial and Industrial uses developed to the Rural Municipality Standard.

Sector B – 260 + 240 acres of industrial developed to City Standard and 320 acres of industrial developed to Rural Municipality Standard.

Sector C – 40 acres of industrial developed to City Standard, 150 acres of existing industrial that has already been developed to Rural Municipality Standard and 320 acres of long term light industrial developed to Rural Municipality Standard.

Sector D – 560 acres of Highway Commercial developed to City Standard and 120 acres of Highway Commercial developed to Rural Municipality Standard.

Sector E – 120 acres of Commercial developed to City Standard and 220 acres of high density residential and Commercial developed to City Standard.

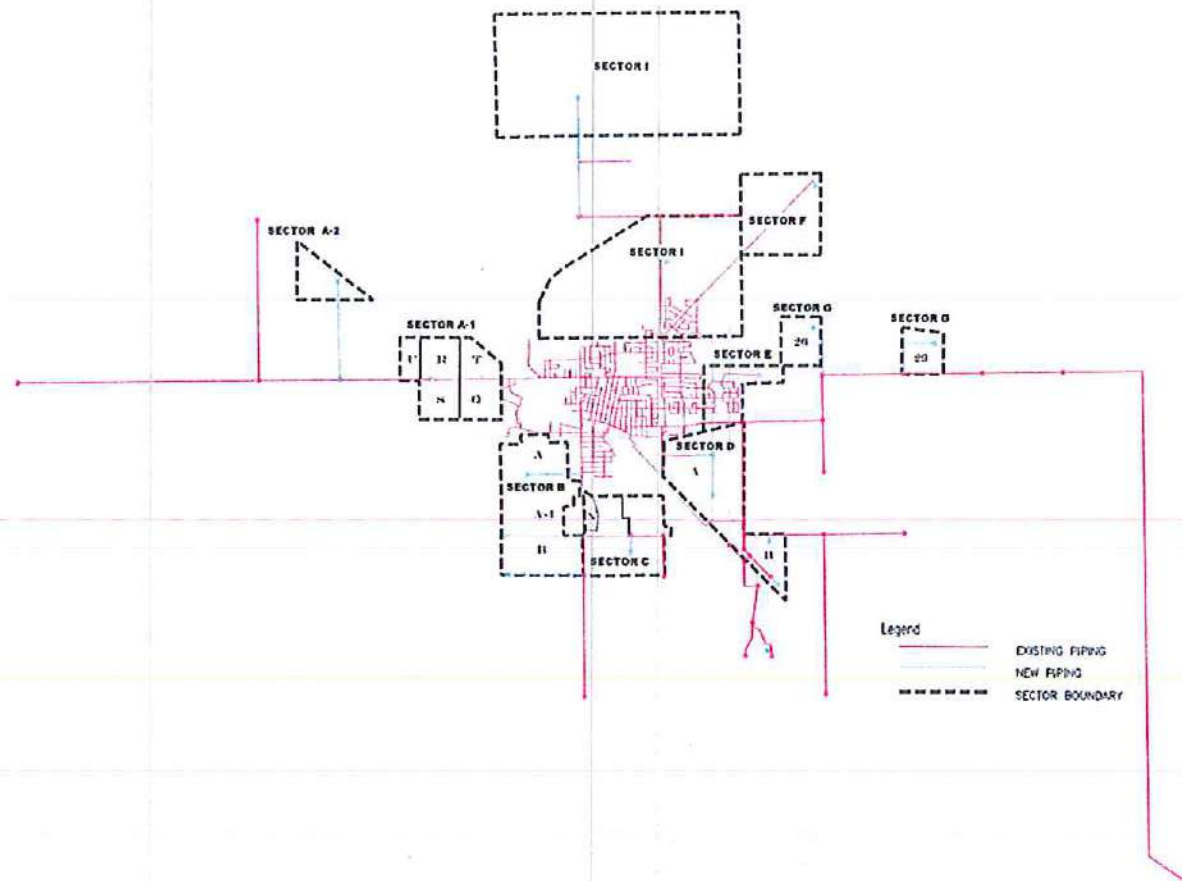
Sector F – Village of North Weyburn - accounting for some moderate future development

Sector G – consists of two rural residential developments with 19 and 95 lots respectively

Sector H – consists of a proposed six residence development located along the north side of the Weyburn golf course entrance

Sector I – Long term residential growth area for City of Weyburn and long term residential growth area for Regional Municipality of Weyburn.

Figure 1 - Sector Layout



2.3 ASSUMPTIONS

2.3.1 Demand Calculations

The average day demands (ADD) for the proposed development areas were calculated using the City of Regina Development Standards Manual (DSM). As a first step in determining ADD, land use information was gathered and population density was calculated for each development area. The DSM ADD is based on use of 415 litres per capita per day (LPCD). The design population densities identified by land use type are presented in Table 1.

Table 1 - Design Population Density

Zoning	Population
Single Family Residential	3.3 persons/unit
Multi-Family Residential	2.3 persons/unit
High Rise Residential	235 persons/ha
Commercial	65 persons/ha
Industrial	25 persons/ha

Once the ADD was established the Peak Day Demand (PDD) and Peak Hour Demand (PHD) were calculated by simply using design peaking factors. A peaking factor is applied to the ADD to determine consumptive demand for other significant demand milestones by simply multiplying the ADD by a peaking factor. The model can then be analyzed under the PDD as well as the PHD scenarios. The PDD and PHD demands are calculated as follows:

$$\text{PDD} = 2.1 \times \text{ADD}$$

$$\text{PHD} = 3.2 \times \text{ADD}$$

2.3.2 Pipe Network

Detailed design of the proposed developments is not available at this time thus only the transmission watermain necessary to reach these developments were included in the model. Typically only one or two nodes were placed at each development to represent the anticipated demand for a more complex subdivision. As concept plans become available, more detailed modeling is possible. All proposed pipe was modeled with PVC and a Hazen-Williams design roughness C-factor of 130. The internal detailed design of any distribution plans are the responsibility of the proponents of the developments.

Proposed pipe layouts were tied into the existing Weyburn Utility Board's (WUB) water distribution system using SAL Engineering's plan and through the use of aerial photography. Elevations of the proposed developments were based on 3-metre contour mapping provided by Information Services Canada. As a typical practice water pressures were corrected to ground elevations. Diameters of the proposed pipes were designed using the tie in point pipe diameters from the WUB. It was assumed that pipe sizes did not increase or decrease downstream. See Appendix A for the existing WUB network layout.

2.3.3 System Performance Criteria

The main criteria used for this assessment is to maintain DSM minimum pressures to all nodes within the existing Weyburn system and each proposed development under peak day and peak hour demand scenarios. As mentioned, the number of junctions within the existing City model with pressures below DSM standards were recorded as a baseline prior to activating each proposed sector. Each sector was then activated individually of all others and the numbers of additional pressure failures within the existing City system were tallied to assess the negative effects each subdivision had on the existing system. Several of the proposed developments are to be designed to Regional Municipal Standard and a lower pressure service is acceptable according to the RWPHS. The pressure criteria used for this modeling exercise for each demand scenario are summarized in Table 2.

Table 2 - Design Pressure Criteria

Minimum Pressure Design Standard	ADD (kPa)	PDD (kPa)	PHD (kPa)
City of Regina DSM	N/A	280.0	269.4
Rural Water Pipeline Handbook for SK	98	98	98

The RWPHS recommends a design flow for rural water pipelines of 0.076 L/s per service. Typically users are required to store up to two days of average water use for times of emergency or maintenance shutdown of the service. The use of booster stations with rechlorination capabilities are common practice for rural water systems in Saskatchewan. Indication of whether each study area can or cannot achieve consumptive demand flows are reported in this analysis. From the Weyburn Utility Board plan shows that there are booster stations located in each direction from the City. Application of these booster stations into this model and analysis of their subsequent pressure effects downstream were not part of the scope of this project. It is recommended that WUB tie-in points from the City and outflow pressures for each booster station be compiled and applied to this model to better understand the pressure benefits they provide and the effects on the City if development were to occur. Water quality for end users is also outside the scope of this study and is recommended at the pre-design stage of each development.

3.0 Water Demands

3.1 FUTURE DISTRICT SECTOR DEMANDS

Two design criteria were used to determine the water demands for each study area, City standards and RM standards. The City standards demands for each of the study areas were calculated based on the gross area, land use and the 2008 City of Regina DSM population density standards. The remaining developments were to be constructed to Rural Municipal Standards. The Rural Water Pipeline Handbook for Saskatchewan by the Prairie Farm Rehabilitation Administration (PFRA) was referred to for demand, flow and pressure standards used to design rural water systems. Demands for each scenario were divided and distributed evenly as necessary to all representative junctions within each study area. Table 4 summarizes the design standard and demands (bolded in litres per second) applied to each of the proposed developments.

Table 3 – Scenario Demands for Study Areas

WREP Report Sector	WREP Report Division	Design Standard	Land Use	Area		Number of Units	Population	RM Standard Demand		City Standard Demand					Peak Hour Demand (L/s)	Model Node ID
				(ac)	(ha)			Demand per unit (L/s)	Demand - No Peaking Factor (L/s)	Average Day Demand (L/day) 415 Lpcd	Average Day Demand (L/s)	Number of Nodes	Total Sector/Node Demand (L/s)	Peak Day Demand (L/s)		
F	RM		Residential	15	6	45	N/A	0.076	3.420	N/A	N/A	1.0	N/A	N/A	N/A	FG101
G	26	RM	Residential	50	20	5	N/A	0.076	0.380	N/A	N/A	1.0	N/A	N/A	N/A	FG102-1
G	29	RM	Residential	280	113	95	N/A	0.076	7.220	N/A	N/A	1.0	N/A	N/A	N/A	FG102-2
I		City		2,080	842	N/A	9,600	N/A	N/A	3,984,000	46	1.0	46,111	96,833	147,556	FG103-1
I		RM		2,880	1,166	290	N/A	0.076	22.040	N/A	N/A	1.0	N/A	N/A	N/A	FG103-2
E		City	Commercial	120	49	N/A	3,157	N/A	N/A	1,310,014	15.16	1.0	15,162	31,841	48,519	FG104
E		City	Mixed Retail/Apartment Residential	220	89	25	5,565	N/A	N/A	2,309,319	26.73	2.0	13,364	28,065	42,765	FG105-1
E		City	Mixed Retail/Apartment Residential					N/A	N/A				13,364	28,065	42,765	FG105-2
D	A	City	Hwy Commercial	560	227	N/A	14,731	N/A	N/A	6,113,398	70.757	1	70,757	148,590	226,422	FG106-A
D	B	RM	Commercial	120	49	12	N/A	0.076	0.912	N/A	N/A	1	N/A	N/A	N/A	FG106-B
H		RM	Proposed Residential		0	6	N/A	0.076	0.456	N/A	N/A	1	N/A	N/A	N/A	FG107-10
C	X	City	Industrial	40	16	N/A	405	N/A	N/A	167,951	1.944	1	1,944	4,082	6,220	FG109-X
C		RM	Industrial	320	130	30	N/A	0.076	2.280	N/A	N/A	1	N/A	N/A	N/A	FG109-4
B	A	City	Industrial	260	105	N/A	2,631	N/A	N/A	1,091,678	12.635	1	12,635	26,534	40,433	FG110-1
B	A-1	City	Industrial	240	97	N/A	2,428	N/A	N/A	1,007,703	11.663	1	11,663	24,493	37,322	FG110-2
B	B	RM	Industrial	320	130	32	N/A	0.076	2.432	N/A	N/A	1	N/A	N/A	N/A	FG110-3
A-1	Q	City	Hwy Commercial	115	47	N/A	3,025	N/A	N/A	1,255,430	14.530	1	14,530	30,514	46,497	FG111-Q
A-1	T	City	Greenhouse/Market Garden	160	65	N/A	4,209	N/A	N/A	1,746,685	20.215	1	20,215	42,454	64,692	FG111-T
A-1	R	City	Commercial	70	28	N/A	1,841	N/A	N/A	764,175	8.845	1	8,845	18,574	28,303	FG111-R
A-1	S	RM	Industrial	160	65	15	N/A	0.076	1.140	N/A	N/A	1	N/A	N/A	N/A	FG111-S
A-1	U	RM	Industrial	80	32	8	N/A	0.076	0.608	N/A	N/A	1	N/A	N/A	N/A	FG111-U
A-2		RM	Ag Industrial	170	69	6	N/A	0.076	0.456	N/A	N/A	1	N/A	N/A	N/A	FG112-1

Note: No peaking factor was applied for each scenario for areas developed to RM standards.

3.2 WEYBURN UTILITY BOARD DEMANDS

The Weyburn Utility Board administers water to the rural areas around the City of Weyburn and connects to the City network at five locations. As the 2008 metered water usage for the Weyburn Utility Board was available it was applied to each the nodes from which they leave the City in place of the PRRA guidelines for flow. These demands were not subject to peaking factors and remained constant for all scenario analysis. Demands for each of the 5 points can be seen in Table 4. Locations of these tie-in points can be seen in all analysis diagrams in Appendix B.

Table 4 – Weyburn Utility Board 2008 Metered Water Usage

Weyburn Utility Board Line	2008 Metered Usage (m ³)	Usage (L/s)
Weyburn - North	8262.5	0.262
5th Ave/16th St. Hamlet of N. Weyburn	13908	0.441
Truckers Inn - West	20432	0.648
Manhole Hwy 5/Stockyards - South	26085	0.827
Rural Line - East	27539	0.873

4.0 Analysis

This section looks at pressures within the existing City system and the District's existing network demand as well as the effects on pressure that activation of each of sector individually would have on the existing system. Each of these scenarios was analyzed under average day demand (ADD), peak day demand (PDD), and peak hour demand (PHD).

4.1 EXISTING CITY OF WEYBURN PLUS EXISTING REGIONAL DEMAND

This scenario looks at the existing City of Weyburn system in addition to the surrounding communities that currently receive water service from the City system through the Weyburn Utility Board. Initial analysis of the existing system was used as a baseline by which to quantify the number of substandard pressures within the existing system prior to the addition of each study sector. Following this, each study sector was activated individually and additional substandard pressures within the City were tallied. This information can be used to identify the feasibility of connecting each sector with no improvements to the City system and what negative effects it may have. Based on the model of the existing water distribution network there are some failures currently within the system under all three demand scenarios as are indicated in Tables 5 to 7.

4.2 AVERAGE DAY DEMAND – PRESSURE ANALYSIS

Baseline analysis of the existing City system did not extend past the City proper limits. Under ADD demand it was found that 6 nodes in the South Hill area of the City's 575 nodes in the model had pressures less than 280 kPa (PDD standard – DSM ADD does not state a minimum pressure standard). Minimum pressure in the system was 245 kPa located in the South Hill area.

As Table 5 - Scenario – Average Day Demand – Pressure Analysis Summary shows, addition of any of the study area sectors had very little negative impact on the existing City pressures, with only two or three additional junctions displaying pressures less than 280 kPa. South Hill and the WUB south system primarily experienced reduced pressures.

Table 5 – Scenario – Average Day Demand – Pressure Analysis Summary

Sector	Sub-Sector	Parcel	Area (ac)	Model Node	Design Standard	Pressure					Number of Existing City Pressure Failures Before Sector Activated (<280 kPa)	Number of Existing City Pressure Failures After Sector Activated (<280 kPa)	Areas Affected By Low Pressure
						Minimum Required (kPa)	Sector Pressure (kPa)	Pipe Diameter (mm)	Minimum Existing City Pressure Before Sector Activated (kPa)	Number of Existing City Junctions			
A-1	Q	NE 19	115	FG111-Q	City	280	120	150	245 (South Hill)	575	8 (South Hill)	7	South Hill
	R	SW 30	70	FG111-R	City	280	95	150	245 (South Hill)	575			
	S	NW 19	160	FG111-S	RM	98	105	150	245 (South Hill)	575			
	T	SW 25	160	FG111-T	City	280	110	150	245 (South Hill)	575			
	U	NE 23	80	FG111-U	RM	98	105	150	245 (South Hill)	575			
A-2		NW 35	170	FG112-1	RM	98	<350	100	245 (South Hill)	575	6	6	N/A
	A	N 1/2 17	260	FG110-1	City	280	55	100	245 (South Hill)	575	6	9	South Hill, WUB South
B	A-1	S 1/2 17	240	FG110-2	City	280	negative (suction)	100	245 (South Hill)	575			
	B	N 1/2 8	320	FG110-3	RM	98	negative (suction)	100	245 (South Hill)	575			
C	X	SW 16	40	FG109-X	City	280	<375	100	245 (South Hill)	575	6	7	South Hill, WUB South
		N 1/2 9	320	FG109-4	RM	98	negative (suction)	50	245 (South Hill)	575			
D	A	SEC 15	560	FG108-A	City	280	90	200	245 (South Hill)	575	6	7	South Hill
	B	NW 11	120	FG108-B	RM	98	425	150	245 (South Hill)	575			
E		Hwy 13 E	120	FG104	City	280	300	200	245 (South Hill)	575	6	7	South Hill
		E 1/2 22		FG105-1	City	280	<330	200	245 (South Hill)	575			
		E 1/2 22	220	FG105-2	City	280	<340	200	245 (South Hill)	575			
F		NW 35	15	FG101	RM	98	<110	150	245 (South Hill)	575	6	6	South Hill
G	26	SE 26	50	FG102-1	RM	98	215	75	245 (South Hill)	575	6	6	South Hill
	29	S 1/2 29	280	FG102-2	RM	98	negative (suction)	100	245 (South Hill)	575			
H		NW 2	5	FG107-10	RM	98	400	50	245 (South Hill)	575	6	6	South Hill
I		SEC 33, 34, NW 1/2 27, 28, NE 29	2080	FG103-1	City	280	negative (suction)	100	245 (South Hill)	575	6	7	South Hill
		SEC 8, 9, 10 S 1/2 15, 16, 17	2880	FG103-2	RM	98	negative (suction)	100	245 (South Hill)	575			

The following proposed sectors met minimum ADD standard pressures:

- Sectors A-1, Subsectors S, U
- Sector A-2
- Sector C, Subsector X
- Sector D, Subsector B
- Sector E
- Sector F
- Sector G, Section 26
- Sector H

The following proposed Sectors did not meet minimum ADD standard pressures:

- Sector A-1, Subsectors Q, R, T
- Sector B, Subsector A-1 & B
- Sector C, N ½ Section 9
- Sector D, Subsector A
- Sector G, Section 29
- Sector I, All

Analysis suggests that under ADD there is virtually no negative impact on pressure to the existing City system with the addition of any one sector at a time. However, not all sectors were able to meet design criteria minimum pressures and would require additional pumping to boost pressures to these areas. Additional modeling of the City's major pumping facilities and/or booster stations to the rural systems would be required to determine necessary pipe diameters, pump sizing and possibly reservoir capacity in order to supply water to these areas.

4.3 PEAK DAY DEMAND SCENARIO

Under PDD demand it was found that 15 nodes in the South Hill area of the City's 575 nodes in the model had pressures less than 280 kPa. Minimum pressure in the system was 223 kPa located in the South Hill area under existing conditions.

As Table 6 Scenario – Peak Day Demand shows, addition of Sectors A-1, D, E and I had more significant negative impacts on the existing City pressures, with anywhere from 45 to 208 additional junctions displaying pressures less than 280 kPa. General areas experiencing reduced pressure included South Hill, WUB south, WUB west, Kountry Kots, Sun Valley, Hwy 39 Commercial, North Weyburn, East Weyburn, The Creeks, Assiniboia Park.

Table 6 – Scenario – Peak Day Demand – Pressure Analysis Summary

Sector	Sub-Sector	Parcel	Area (ac)	Model Node	Design Standard	Pressure						Areas Affected By Low Pressure
						Minimum Required (kPa)	Sector Pressure (kPa)	Pipe Diameter (mm)	Minimum Existing City Pressure Before Sector Activated (kPa)	Number of Existing City Pressure Failures Before Sector Activated (<280 kPa)	Number of Existing City Pressure Failures After Sector Activated (<280 kPa)	
A-1	Q	NE 19	115	FG111-Q	City	280	negative (suction)	150	223 (South Hill)	575		Entire WLB West Negative Pressure; South Hill, Kountry Kola; Sun Valley; Hwy 39 Commercial
	R	SW 30	70	FG111-R	City	280	negative (suction)	150	223 (South Hill)	575		
	S	NW 19	160	FG111-S	RM	98	negative (suction)	150	223 (South Hill)	575	15	
	T	SW 25	160	FG111-T	City	280	negative (suction)	150	223 (South Hill)	575		
	U	NE 23	80	FG111-U	RM	98	negative (suction)	150	223 (South Hill)	575		
A-2		NW 35	170	FG112-1	RM	98	375	100	223 (South Hill)	575	15	South Hill
B	A	N 1/2 17	260	FG110-1	City	280	negative (suction)	100	223 (South Hill)	575		South Hill, Kountry Kola
	A-1	S 1/2 17	240	FG110-2	City	280	negative (suction)	100	223 (South Hill)	575	15	
	B	N 1/2 8	320	FG110-3	RM	98	negative (suction)	100	223 (South Hill)	575		
C	X	SW 16	40	FG109-X	City	280	300	100	223 (South Hill)	575	15	South Hill
		N 1/2 9	320	FG109-4	RM	98	negative (suction)	50	223 (South Hill)	575		
D	A	SEC 15	560	FG106-A	City	280	negative (suction)	200	223 (South Hill)	575	15	South Hill, North Weyburn, East Weyburn, The Creeks, Kountry Kola, Assinibola Park
	B	NW 11	120	FG106-B	RM	98	335	150	223 (South Hill)	575		
E		Hwy 13 E	120	FG104	City	280	200	200	223 (South Hill)	575		South Hill, The Creeks, Kountry Kola, Assinibola Park Phase 3, Hwy 13 North Service Road
		E 1/2 22		FG105-1	City	280	250	200	223 (South Hill)	575	15	
		E 1/2 22	220	FG105-2	City	280	250	200	223 (South Hill)	575		
F		NW 35	15	FG101	RM	98	79	150	223 (South Hill)	575	15	South Hill
G	26	SE 26	50	FG102-1	RM	98	205	75	223 (South Hill)	575		South Hill
	29	S 1/2 29	280	FG102-2	RM	98	negative (suction)	100	223 (South Hill)	575	15	
H		NW 2	5	FG107-10	RM	98	390	50	223 (South Hill)	575	15	South Hill
I		SEC 13, 34, N 1/2 27, 28, NE 28	2080	FG103-1	City	280	negative (suction)	100	223 (South Hill)	575	15	South Hill, The Creeks, Kountry Kola, Assinibola Park All Phases, Existing NE Weyburn, Hwy 13 North Service Road
		SEC 8, 9, 10 S 1/2 15, 16, 17	2880	FG103-2	RM	98	negative (suction)	100	223 (South Hill)	575	92	

The following proposed sectors met minimum PDD standard pressures:

- Sector A-2
- Sector C, Subsector X
- Sector D, Subsector B
- Sector F
- Sector G, Section 26
- Sector H

The following proposed Sectors did not meet minimum PDD standard pressures:

- Sectors A-1, Subsectors S, U
- Sector A-1, Subsectors Q, R, T
- Sector B, Subsector A-1 & B
- Sector C, N ½ Section 9
- Sector D, Subsector A
- Sector E
- Sector G, Section 29
- Sector I, All

Analysis suggests that under PDD there is more significant negative impact on pressure to the existing City system with the addition of any one sector at a time, as shown above. However, not all sectors were able to meet design criteria minimum pressures and would require additional pumping to boost pressures. Additional modeling of the City's major pumping facilities and/or booster stations to the rural systems would be required to determine necessary pipe diameters, pump sizing and possibly reservoir capacity in order to supply water to these areas.

4.4 PEAK HOUR DEMAND SCENARIO

Under PHD demand it was found that 45 nodes in the South Hill, Kountry Kots Phase 2 and Assiniboia Park Phase 3 area of the City's 575 nodes in the model had pressures less than 69.4 kPa. Minimum pressure in the system was 190 kPa located in the South Hill area under existing conditions.

As Table 7 Scenario – Peak Hour Demand shows, addition of all sectors separately, with the exception of Sectors A-2, Sector G Section 29 and Sector H, all had significantly negative impacts on the existing City pressures, with anywhere from 45 to all junctions displaying less than standard pressures of 269.4 kPa. General areas experiencing reduced pressure included South Hill, Kountry Kots Phase 2, and Assiniboia Park Phase 3.

Table 7 – Scenario – Peak Hour Demand – Pressure Analysis Summary

Sector	Sub-Sector	Parcel	Area (ac)	Model Node	Design Standard	Pressure						Number of Existing City Pressure Failures After Sector Activated (<280 kPa)	Areas Affected By Low Pressure
						Minimum Required (kPa)	Sector Pressure (kPa)	Pipe Diameter (mm)	Minimum Existing City Pressure Before Sector Activated (kPa)	Number of Existing City Junctions	Number of Existing City Pressure Failures Before Sector Activated (<280 kPa)		
A-1	Q	NE 19	115	FG111-Q	City	269.4	negative (suction)	150	190 (South Hill)	575			
	R	SW 30	70	FG111-R	City	269.4	negative (suction)	150	190 (South Hill)	575			
	S	NW 19	160	FG111-S	RM	98	negative (suction)	150	190 (South Hill)	575			All
	T	SW 25	160	FG111-T	City	269.4	negative (suction)	150	190 (South Hill)	575			
	U	NE 23	80	FG111-U	RM	98	negative (suction)	150	190 (South Hill)	575			
A-2		NW 35	170	FG112-1	RM	98	345	100	190 (South Hill)	575	45		South Hill, Kountry Kots Phase 2, Assinibola Park Phase 3
B	A	N 1/2 17	260	FG110-1	City	269.4	negative (suction)	100	190 (South Hill)	575			
	A-1	S 1/2 17	240	FG110-2	City	269.4	negative (suction)	100	190 (South Hill)	575	45		All Areas not immediately around either WTP or the River
	B	N 1/2 8	320	FG110-3	RM	98	negative (suction)	100	190 (South Hill)	575			
C	X	SW 16	40	FG109-X	City	269.4	190	100	190 (South Hill)	575	45		South Hill, Kountry Kots Phase 2, Assinibola Park Phase 3
		N 1/2 9	320	FG109-4	RM	98	negative (suction)	50	190 (South Hill)	575			
D	A	SEC 15	560	FG106-A	City	269.4	negative (suction)	200	190 (South Hill)	575	45		All
	B	NW 11	120	FG106-B	RM	98	negative (suction)	150	190 (South Hill)	575			
E		Hwy 13 E	120	FG104	City	269.4	negative (suction)	200	190 (South Hill)	575			
		E 1/2 22		FG105-1	City	269.4	negative (suction)	200	190 (South Hill)	575	45		All
		E 1/2 22	220	FG105-2	City	269.4	negative (suction)	200	190 (South Hill)	575			
F		NW 35	15	FG101	RM	98	35	150	190 (South Hill)	575	45		South Hill, Kountry Kots Phase 2, Assinibola Park Phase 3
G	26	SE 26	50	FG102-1	RM	98	negative (suction)	75	190 (South Hill)	575	45		South Hill, Kountry Kots Phase 2, Assinibola Park Phase 3
	29	S 1/2 29	280	FG102-2	RM	98	190	100	190 (South Hill)	575			
H		NW 2	5	FG107-10	RM	98	375	50	190 (South Hill)	575	45		South Hill, Kountry Kots Phase 2, Assinibola Park Phase 3
I		SEC 33, 34, N 1/2 27, 28, NE 29	2080	FG103-1	City	269.4	negative (suction)	100	190 (South Hill)	575			
		SEC 8, 9, 10 S 1/2 15, 16, 17	2880	FG103-2	RM	98	negative (suction)	100	190 (South Hill)	575	45		All

The following proposed sectors met minimum PHD standard pressures:

- Sector A-2
- Sector G, Section 26
- Sector H

The following proposed Sectors did not meet minimum PHD standard pressures:

- Sectors A-1, Subsectors S, U
- Sector A-1, Subsectors Q, R, T
- Sector B, Subsector A-1 & B
- Sector C, Subsector X
- Sector C, N ½ Section 9
- Sector D, Subsector A
- Sector D, Subsector B
- Sector E
- Sector F
- Sector G, Section 29
- Sector I, All

Analysis suggests that under PHD there is significant negative impact on pressure (negative pressures) to the existing City system with the addition of most of the proposed sectors, one at a time, as shown above. Most sectors were unable to meet design criteria minimum pressures and would require additional pumping to boost pressures. Additional modeling of the City's major pumping facilities and/or booster stations to the rural systems would be required to determine necessary pipe diameters, pump sizing and possibly reservoir capacity in order to supply water to these areas.

It is recommended that further analysis be conducted on a sector by sector basis to determine the necessary upgrades to the existing infrastructure as well as the requirements for the new developments. Analysis of the City's storage requirements should be conducted parallel to intentions to expand each sector.

5.0 Recommendations and Conclusion

The following Table 8 – Preliminary Recommended Upgrades summarizes the suggested preliminary recommendations for each sector. Most recommendations suggest that more modeling and analysis for each sector be conducted in order to assist the City on what, if any modifications to the City infrastructure are necessary or if a small booster station may be necessary outside of the City. Most of the scenarios suggested that an increase in water pressure throughout the system is required. For sectors requiring large demands, increased pumping capacity of the reservoirs is recommended to be studied in more depth.

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Recommendations and Conclusion

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Table 8 – Preliminary Recommendations/Upgrades

Sector		Preliminary Suggested Solutions	
Sub-Sector	Parcel		
A-1	Q NE 19		
	R SW 30		
	S NW 19		Upgrade of the 150 mm WUB west line to a 300 mm and upgrade within the City limits of this line up to the 1st Avenue Reservoir and pumping station. Pumps at the 1st Avenue Reservoir would need to be increased in size. Further modeling and analysis of this option is recommended.
	T SW 25		
	U NE 23		
A-2	NW 35		No improvements necessary to the existing City system.
B	A N 1/2 17		
	A-1 S 1/2 17		Increasing pipe size to WUB south line using the model did not provide adequate pressure to this area, nor did it significantly improve pressures within the rest of the City to meet standards. PHD for this area represents a significant portion of the City's total demand. Further modeling is recommended to determine upgrades necessary to the existing system to support this sector.
	B N 1/2 8		
C	X SW 16		Connection of this sector to the system would require a second pressure zone for the South Hill area to minimize pressure effects on this area. Further modeling of a booster station, its location and pump size, and pipe sizing is recommended for this area.
D	A SEC 15		Construction of the east trunk main to support this area is essential. Larger pumps at the WTP are necessary to deliver flow to this area. As City standards are expected for a portion of this sector, extension and looping of the east trunk main south will likely be required to provide adequate flow and pressure to this area. Further modeling and more accurate demand calculations for this area would be necessary at the pre-design stage.
	B NW 11		
E	Hwy 13 E		Construction of the east trunk main to support this area is essential. Larger pumps at the WTP are necessary to deliver flow to this area. As City standards are expected for a portion of this sector, extension and looping of the east trunk main south will likely be required to provide adequate flow and pressure to this area. Further modeling and more accurate demand calculations for this area would be necessary at the pre-design stage.
	E 1/2 22		
	E 1/2 22		
F	NW 35		New demands for this area suggest that Kountry Kots Phase 2 will see substandard pressures due to development of this sector. It is recommended that a study of the capacity and condition of the existing reservoir and transmission line to North Weyburn be conducted in order to assess continuation use of this infrastructure and the feasibility of development of this sector.
G	26 SE 25		As the expected design standard for this sector are to RM standards, no improvements are expected within the City for this area. Individual users will be expected to provide minimum 2 days average day storage and pumping. It is recommended that further analysis of the location of a booster station and pipe sizing to this sector be conducted.
	29 S 1/2 29		
H	NW 2		No improvements are expected to be necessary to the existing system. As the expected design standard for this sector are to RM standards, no improvements are expected for this area. Individual users will be expected to provide minimum 2 days average day storage and pumping. It is recommended that further analysis of pumping and pipe sizing to this sector be conducted.
I	SEC 32, 34		Due to the large population and demand for these areas, detailed modeling and more accurate demand information would need to be determined. It is expected that the east trunk main would need to be looped to this area, with the possibility of a new reservoir and pumping station. Currently the City of Weyburn is designing reservoir capacity for a population up to 20,000. Significant upgrades to the existing water treatment plant would be necessary to support demands for this sector. It is recommended that a more detailed study be conducted in order to understand the requirements to provide water service to this sector.
	N 1/2 27		
	SEC 8, 9, 10 S 1/2 15, 16, 17		

*Additional modeling at the pre-design stage is necessary to confirm suggested solutions.

The existing City has challenges meeting existing demands and pressures. Any additional load will incrementally add to the problems currently being faced. Improvements should be more closely analyzed and designed through modeling for the current issues with the supply and pressure. The City of Weyburn water system was not analyzed for fire flow protection. Fire flow scenarios should be run for the existing city as well as any of the proposed development that will be designed to City design standards. Areas to be built to RM standards will require further analysis of the need for and size of booster stations, if necessary, and pipe sizing to larger communities.

In conclusion, the City of Weyburn's existing water distribution system is not ready to handle any of the larger demand sector concept areas that have been proposed to be designed to City standards. There needs to be major upgrades to the existing system, including construction of the east trunk main, increased pump capacity at one or both reservoirs and analysis of reservoir capacities before any district development can be considered. Development of the study areas to be designed to RM standards are much more feasible as far lower pressure and flow are required, coupled with storage capacity requirements for each user.

It is recommended that further analysis be conducted on a sector by sector basis to determine the necessary upgrades to the existing infrastructure as well as the requirements for the new developments. Any indication of the priority of development should be considered. Information regarding the existing pumping stations within the Weyburn Utility Board and application of the pumps to the water model would assist with future analysis. Consideration for water quality meeting regional standards must accompany any design efforts. Modeled values within this report should be verified by flow and pressure measurements in the field and represent theoretical conditions.



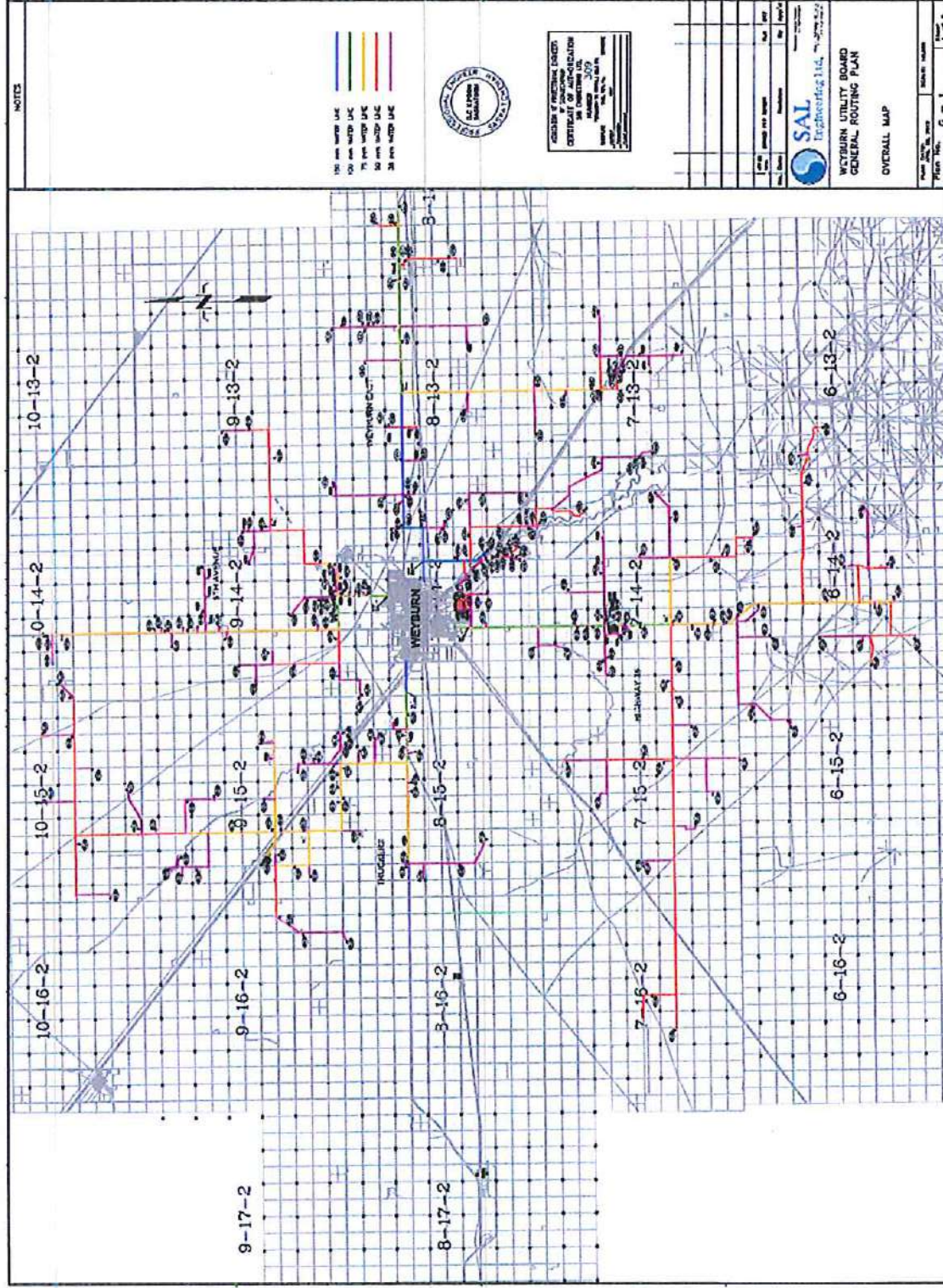
CITY OF WEYBURN DISTRICT - WATER FEASIBILITY STUDY

Appendix A

July 24, 2013

Appendix A

Existing Weyburn Utility Board General Routing Plan

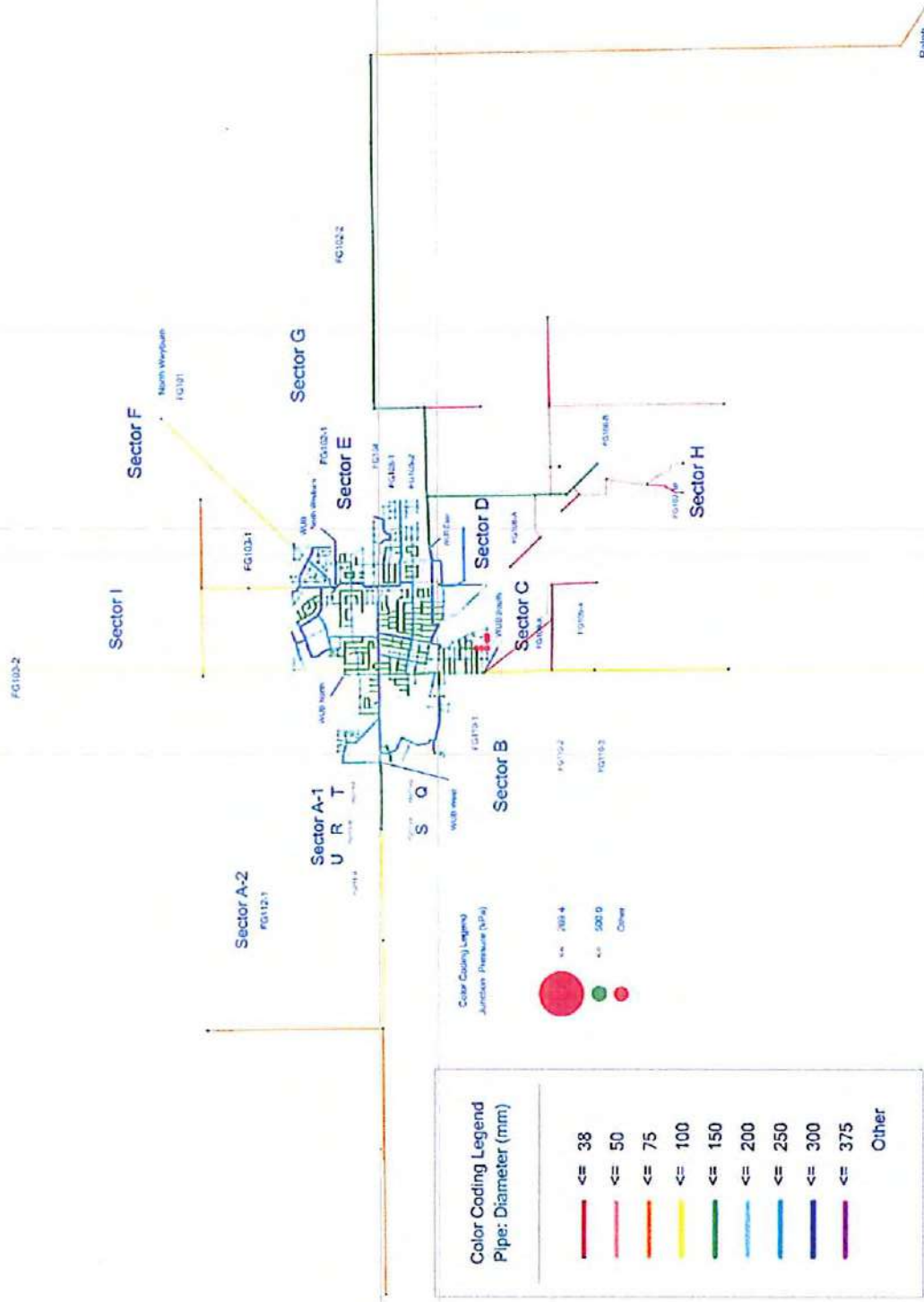


Appendix B

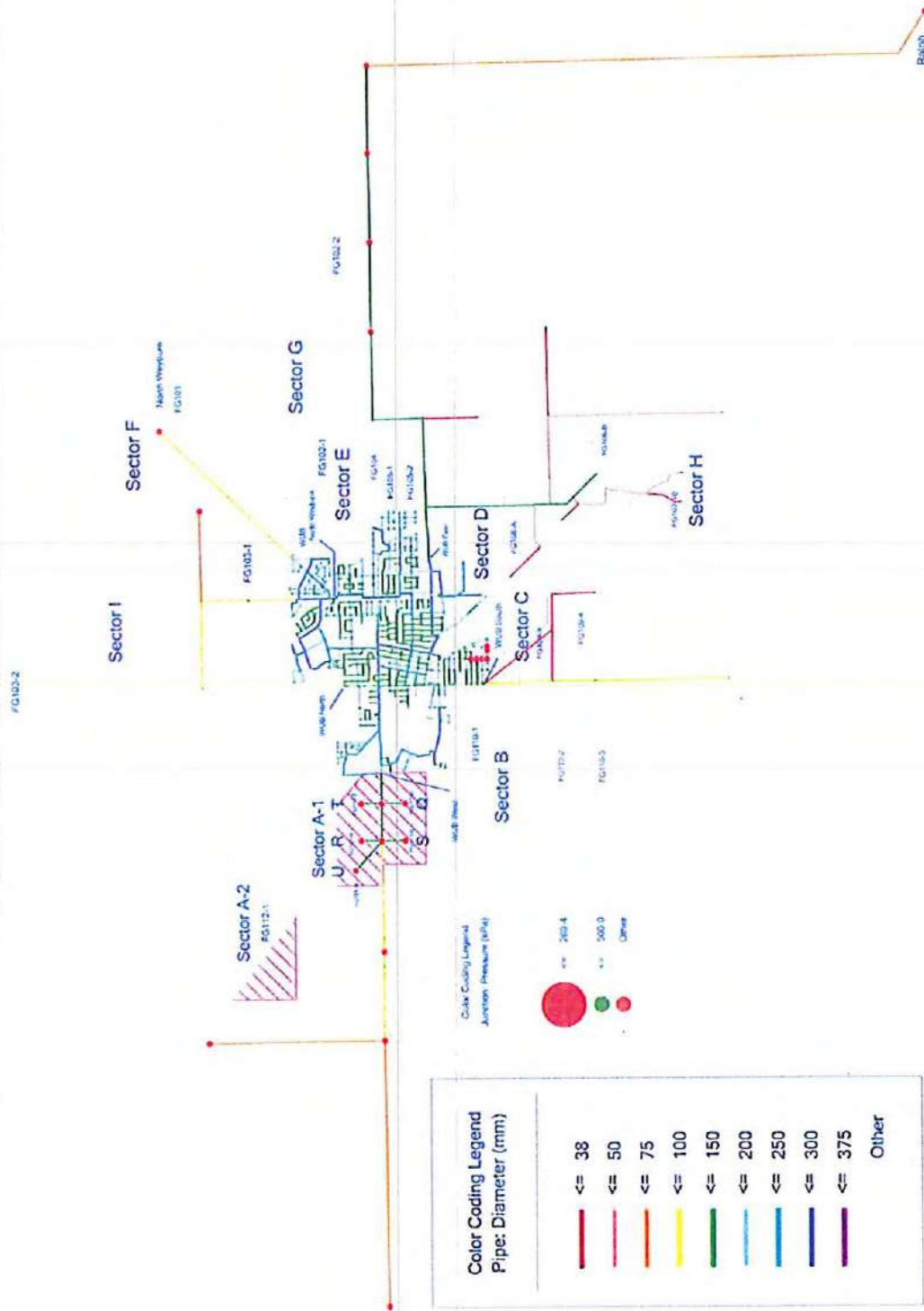
Pressure Analysis Visuals

B.1 SCENARIO -- AVERAGE DAY DEMAND VISUALS

Scenario: ADD Exist + Weyb.Dist.



Scenario: ADD Exist + Weyb.Dist A-1



FG:02-2



Scenario: ADD Exist + Weyb.Dist B

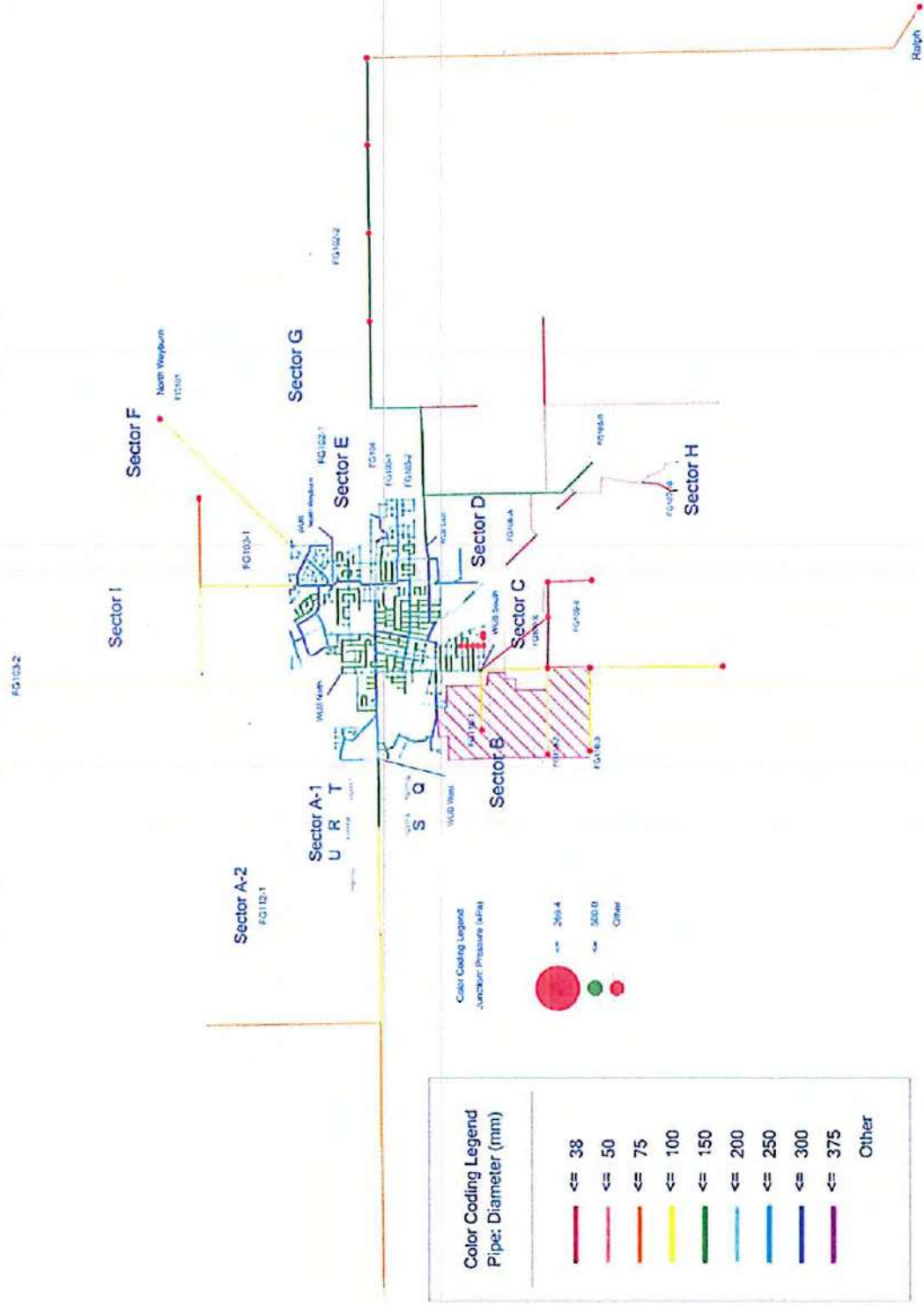
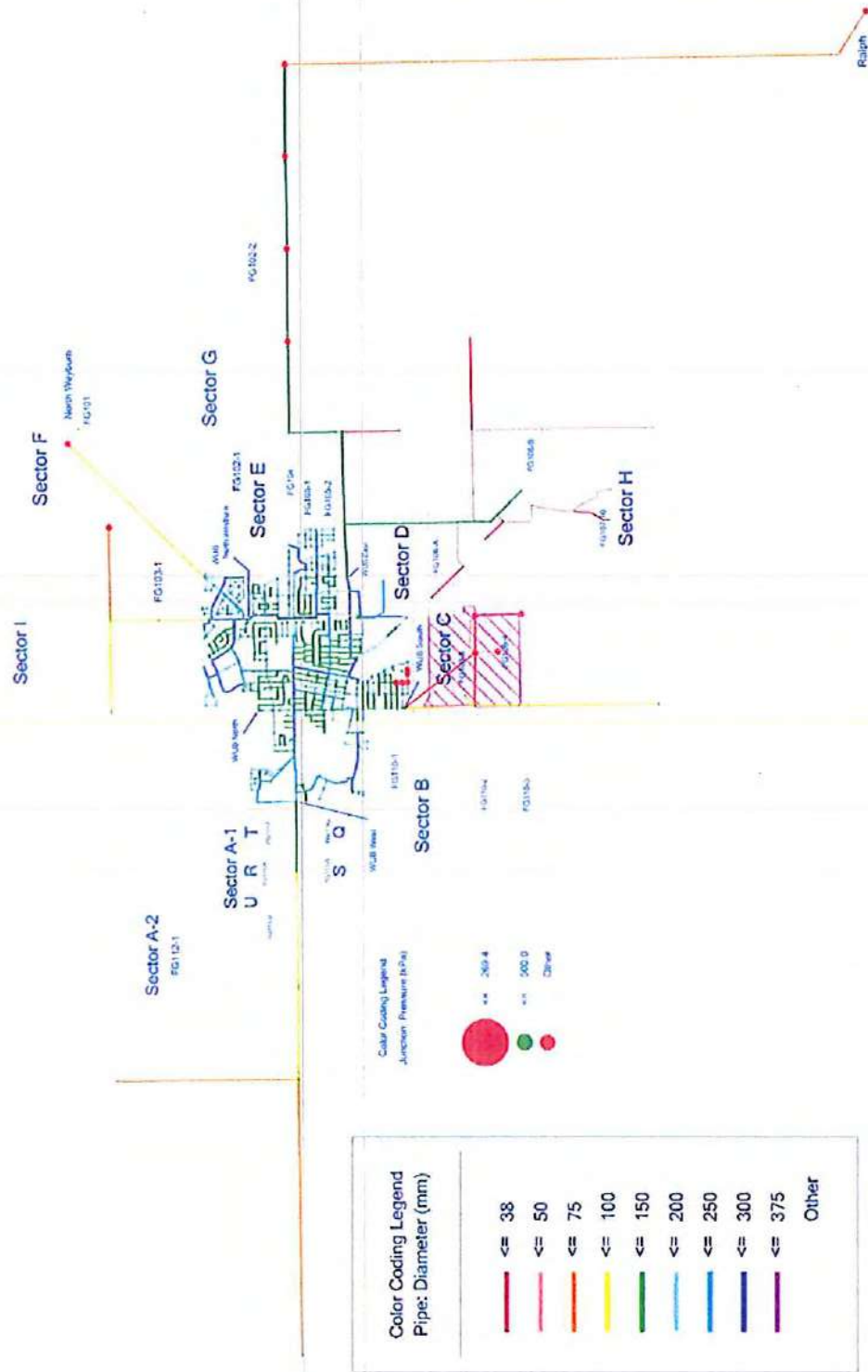
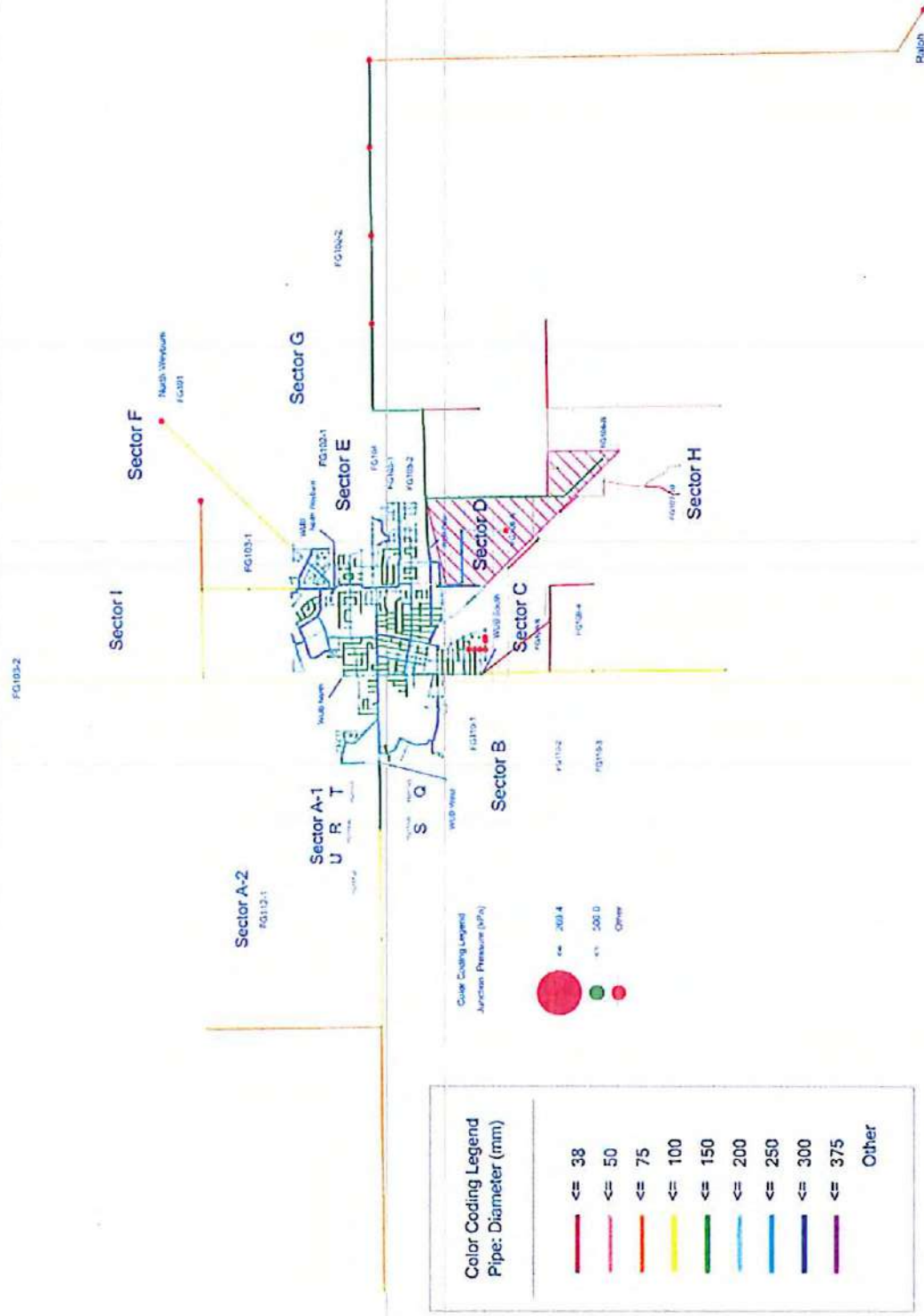


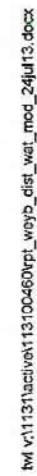
FIGURE 2



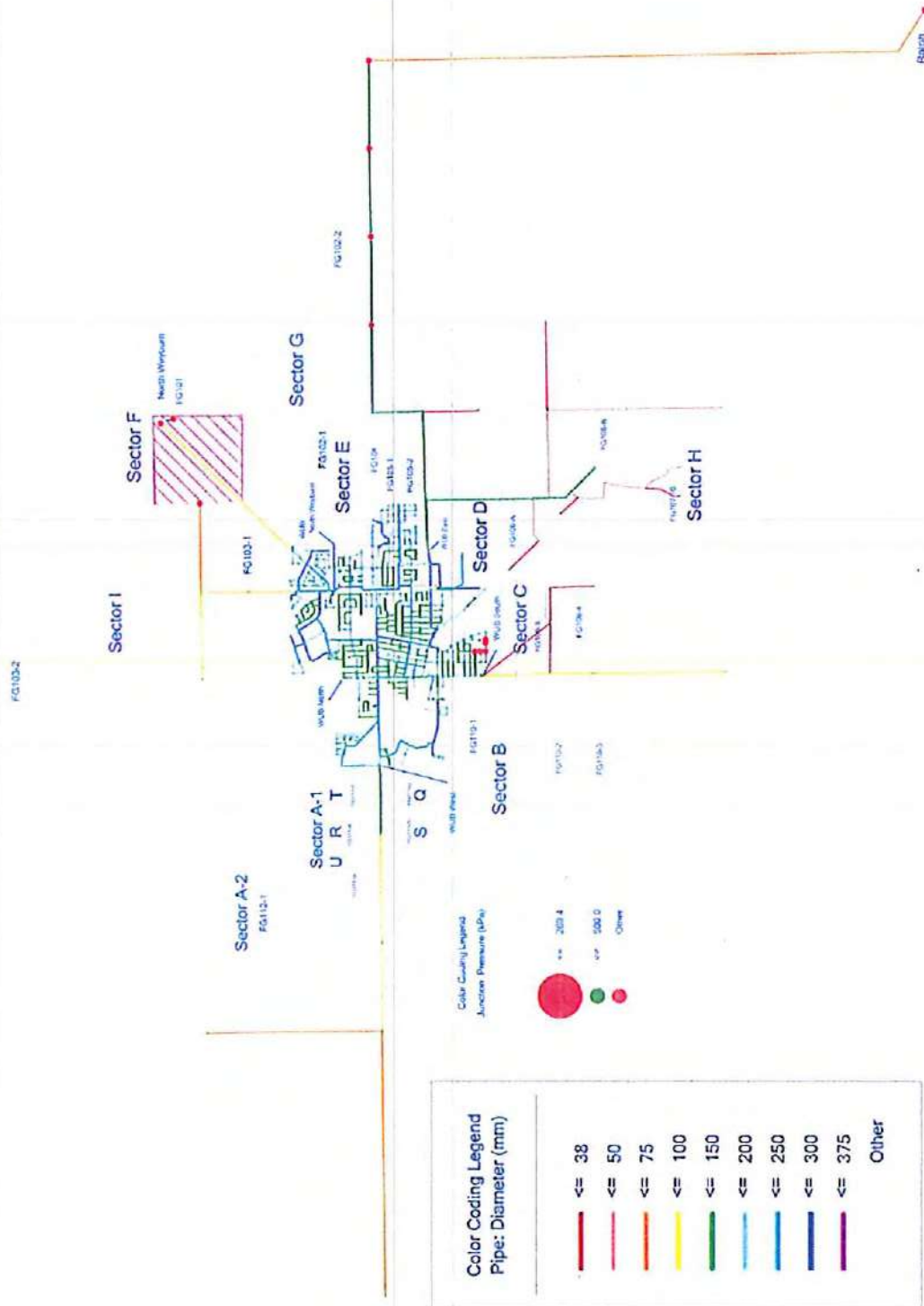
Scenario: ADD Exist + Weyb.Dist D



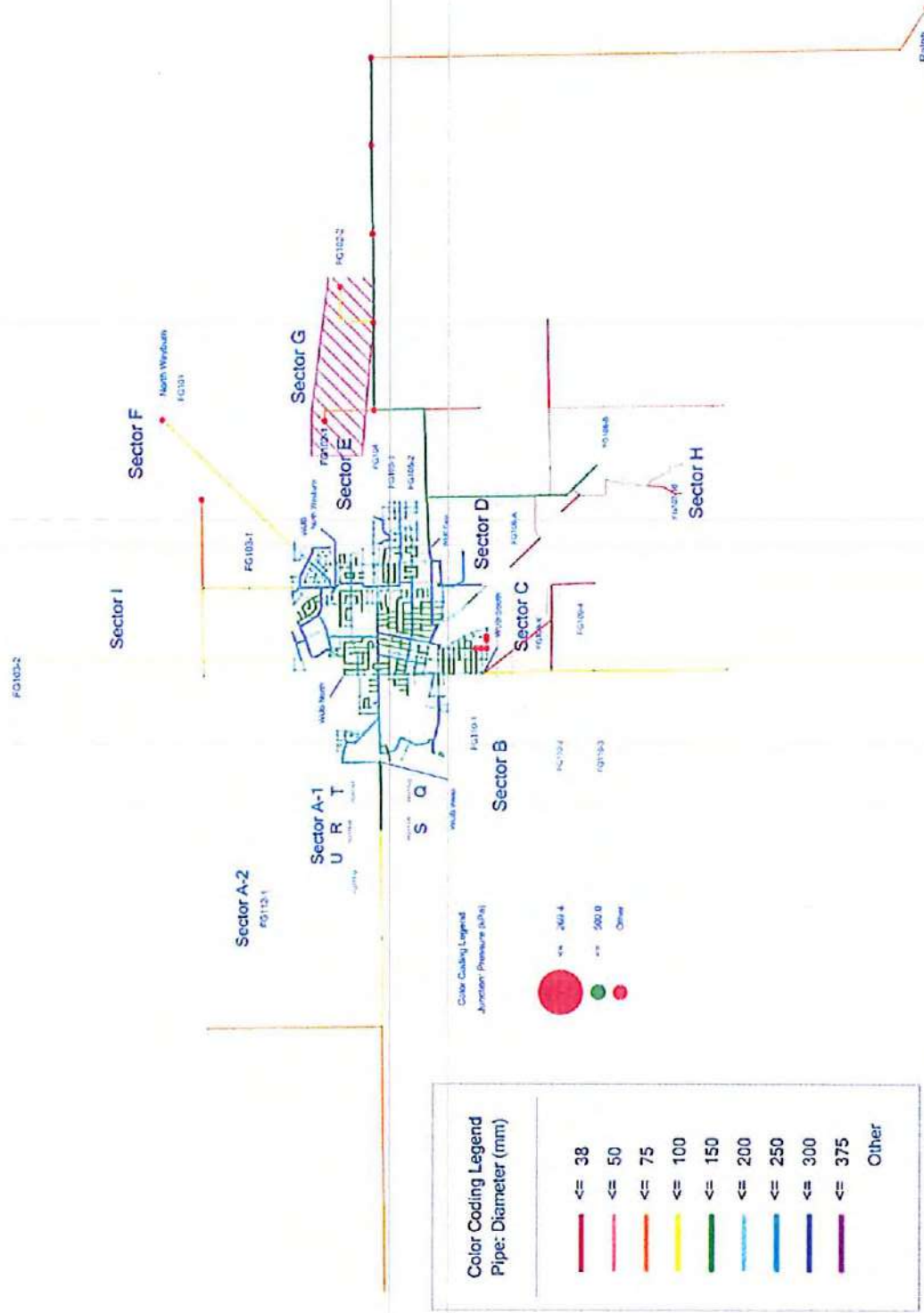
FG103-2



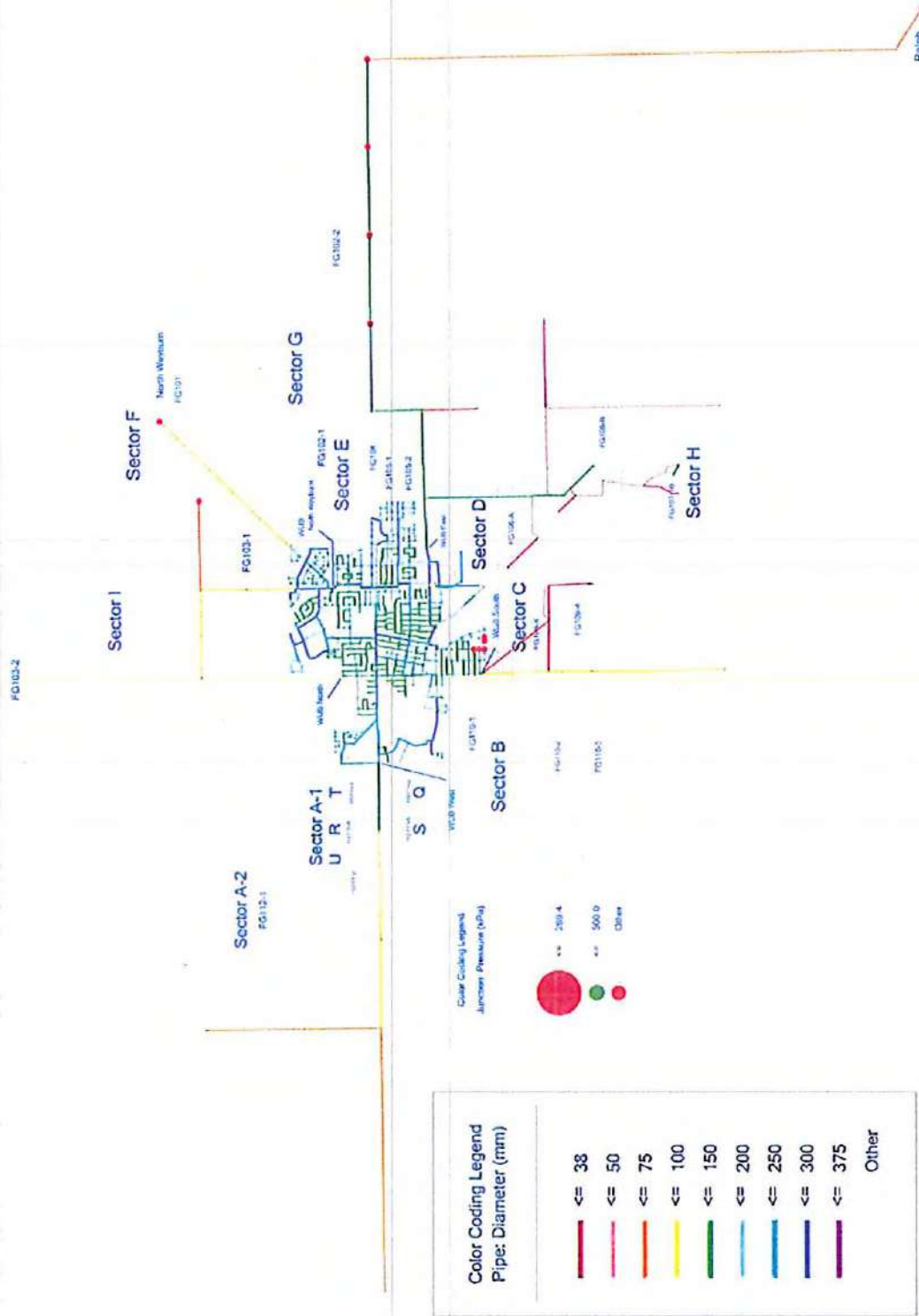
Scenario: ADD Exist + Weyb.Dist F



Scenario: ADD Exist + Weyb.Dist G



Scenario: ADD Exist + Weyb.Dist H



Color Coding Legend
Pipe: Diameter (mm)

Red	≤ 38
Pink	≤ 50
Orange	≤ 75
Yellow	≤ 100
Green	≤ 150
Light Blue	≤ 200
Blue	≤ 250
Dark Blue	≤ 300
Purple	≤ 375
Other	Other

Color Coding Legend
Junction Pressure (kPa)

Red	≤ 200.4
Green	≤ 500.0
Other	Other

The map shows the following sectors and features:

- Sector A-1 (U R T):** Located in the center, labeled with 'U R T'.
- Sector A-2:** Located to the west of Sector A-1.
- Sector B:** Located to the east of Sector A-1.
- Sector C:** Located to the south of Sector B.
- Sector D:** Located to the north of Sector C.
- Sector E:** Located to the north of Sector D.
- Sector F:** Located to the west of Sector E.
- Sector G:** Located to the north of Sector F.
- Sector H:** Located to the east of Sector G.

Key locations and features include:

- North Waterbury Water Treatment Plant:** Located in the northwest.
- Waterbury Water Treatment Plant:** Located in the center.
- Waterbury Water Treatment Plant:** Located in the center.
- Waterbury Water Treatment Plant:** Located in the center.

Stantec

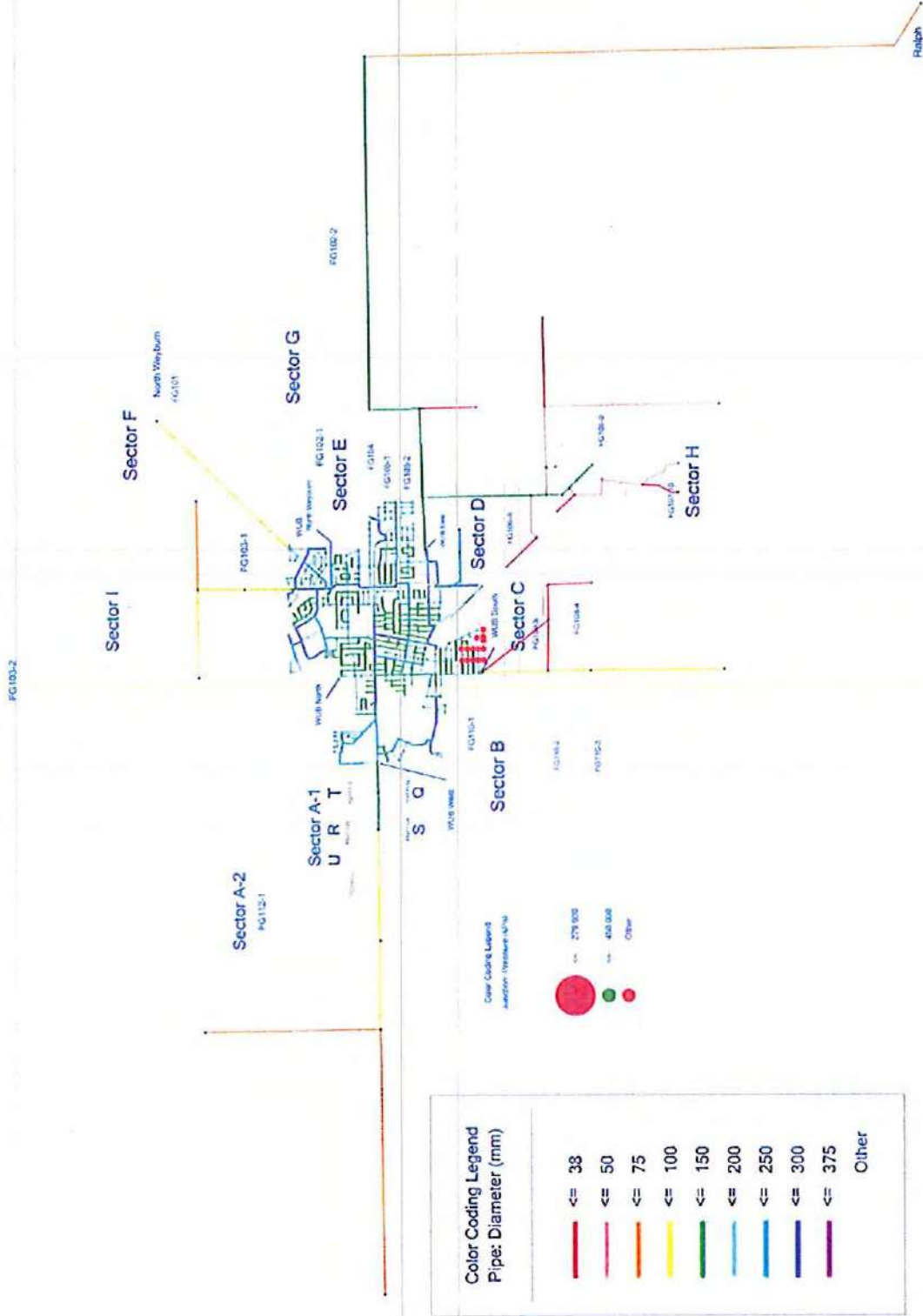
CITY OF WEYBURN DISTRICT - WATER FEASIBILITY STUDY

Appendix B

July 24, 2013

B.2 SCENARIO - PEAK DAY DEMAND VISUALS

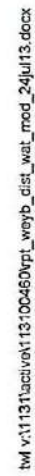
Scenario: PDD Exist + Weyb. Dist.



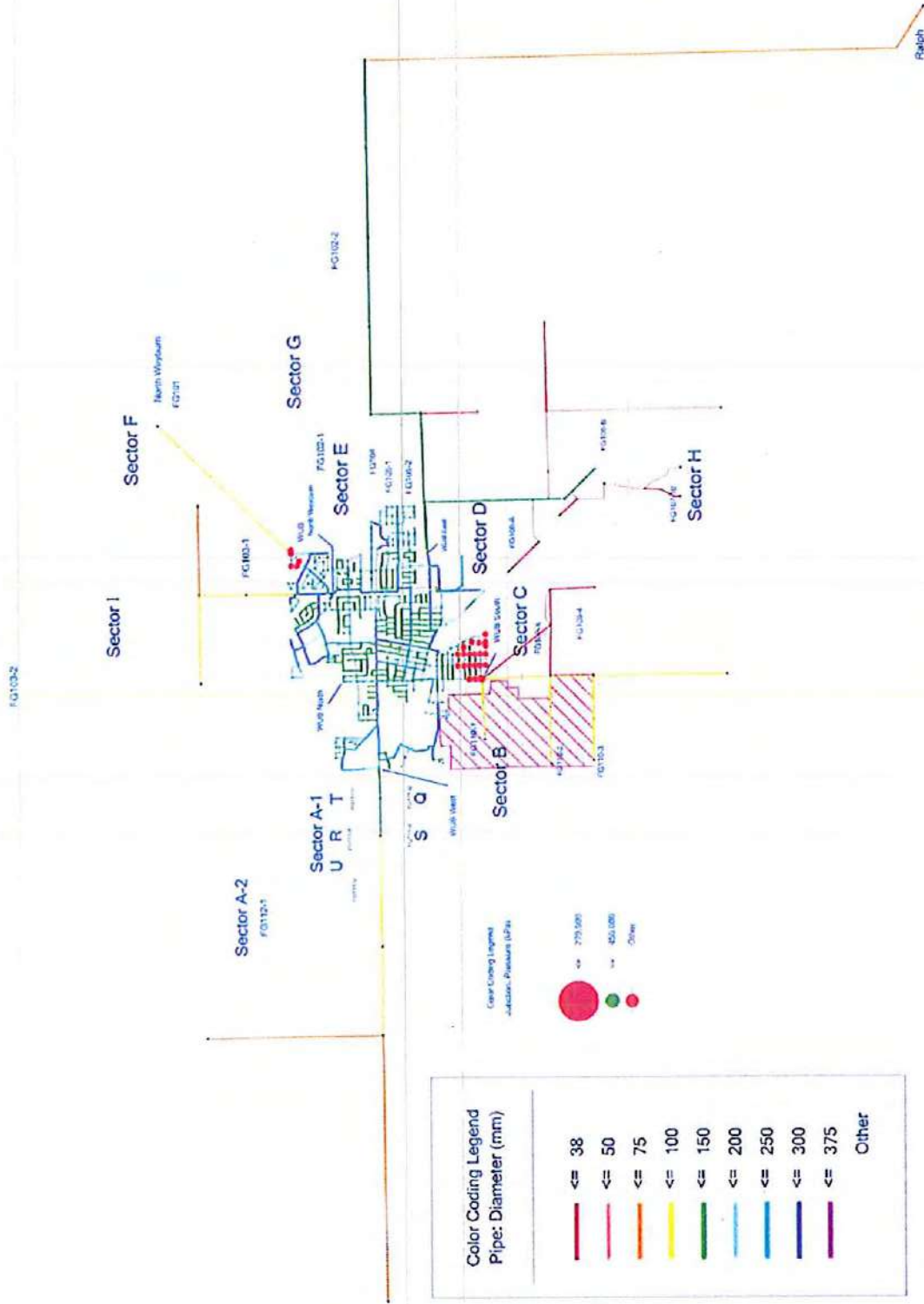
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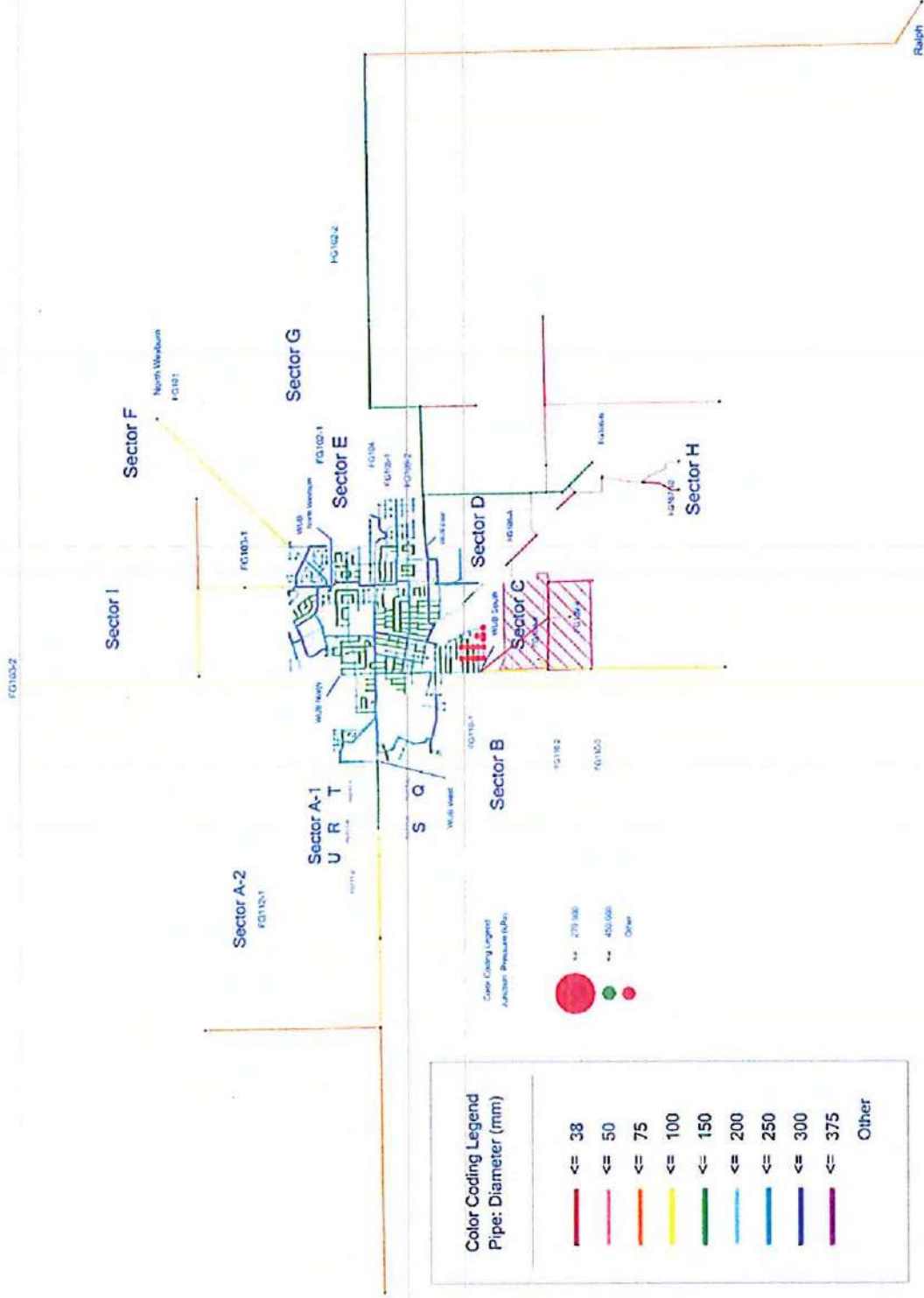
107033-2



Scenario: PDD Exist + Weyb.Dist B

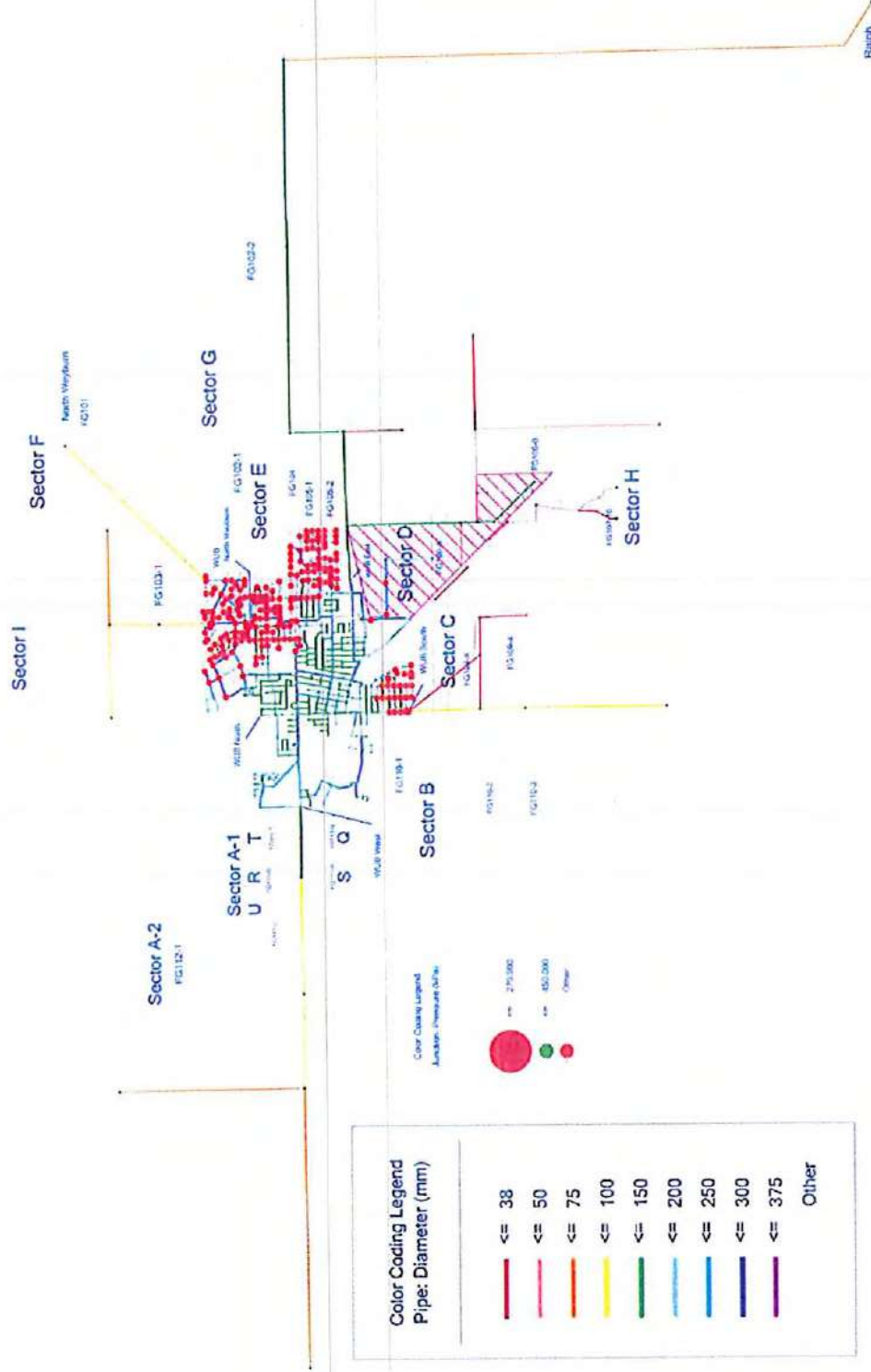


Scenario: PDD Exist + Weyb.Dist C

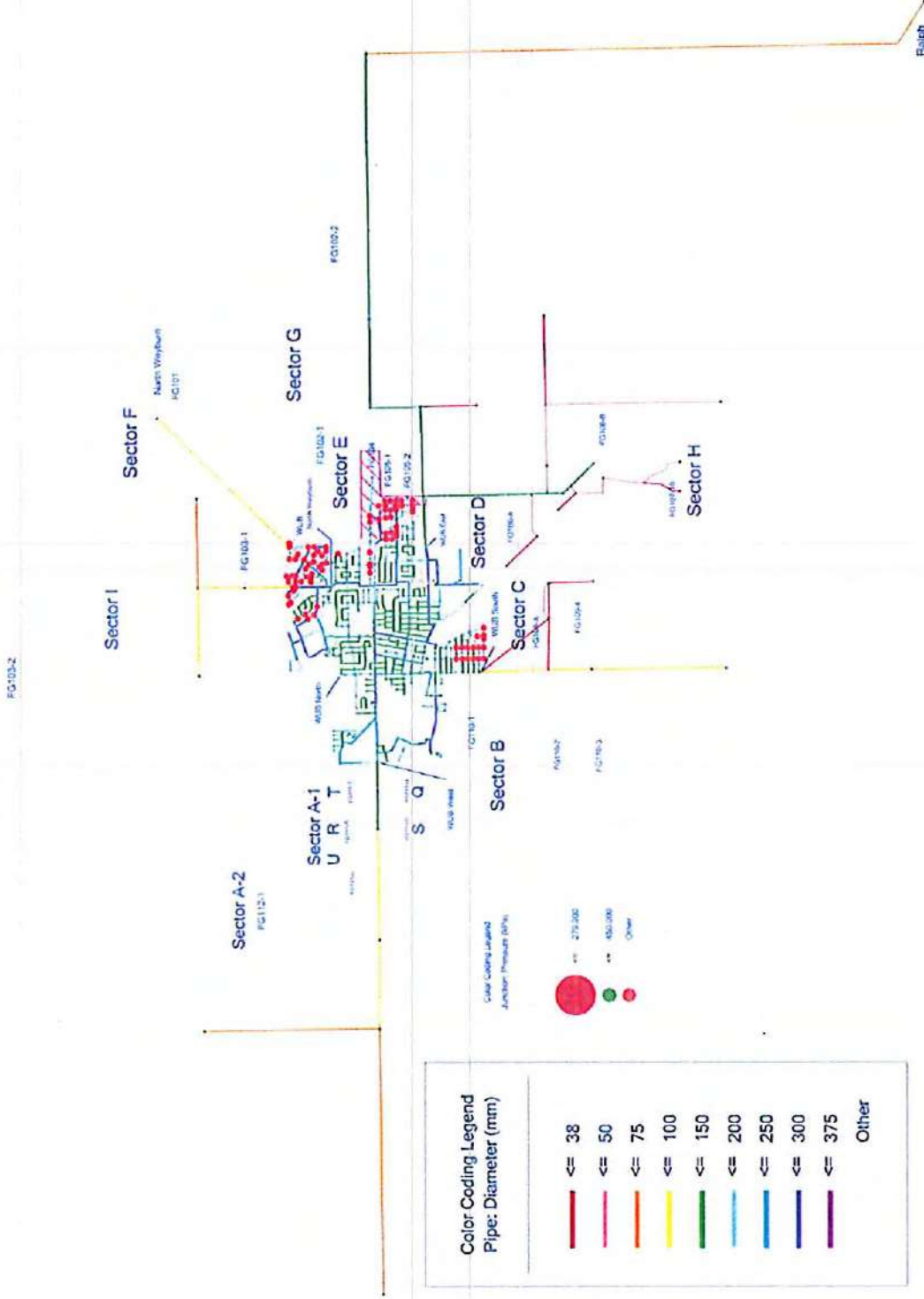


Scenario: PDD Exist + Weyb.Dist D

FG-103.2

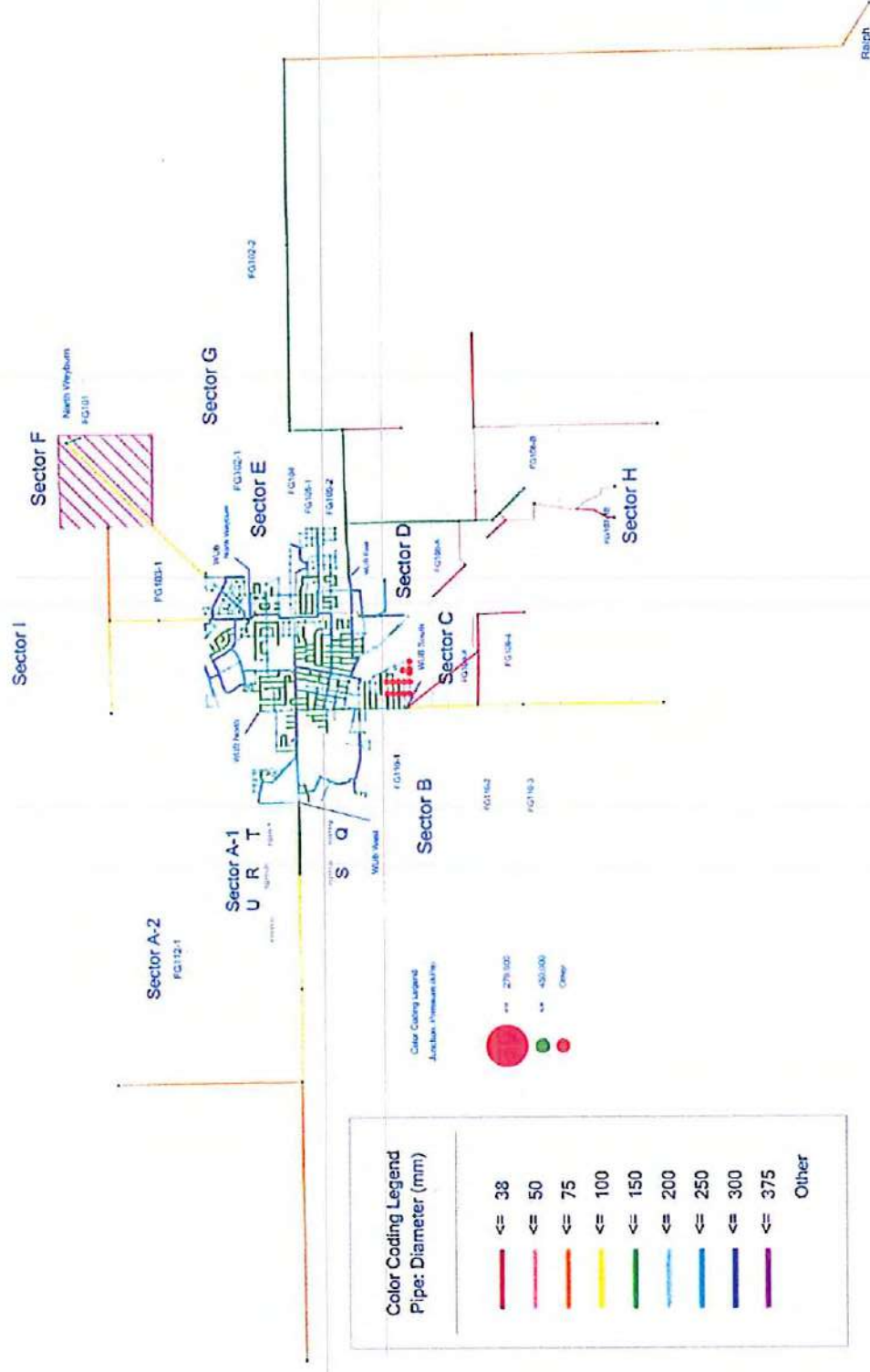


Scenario: PDD Exist + Weyb.Dist E



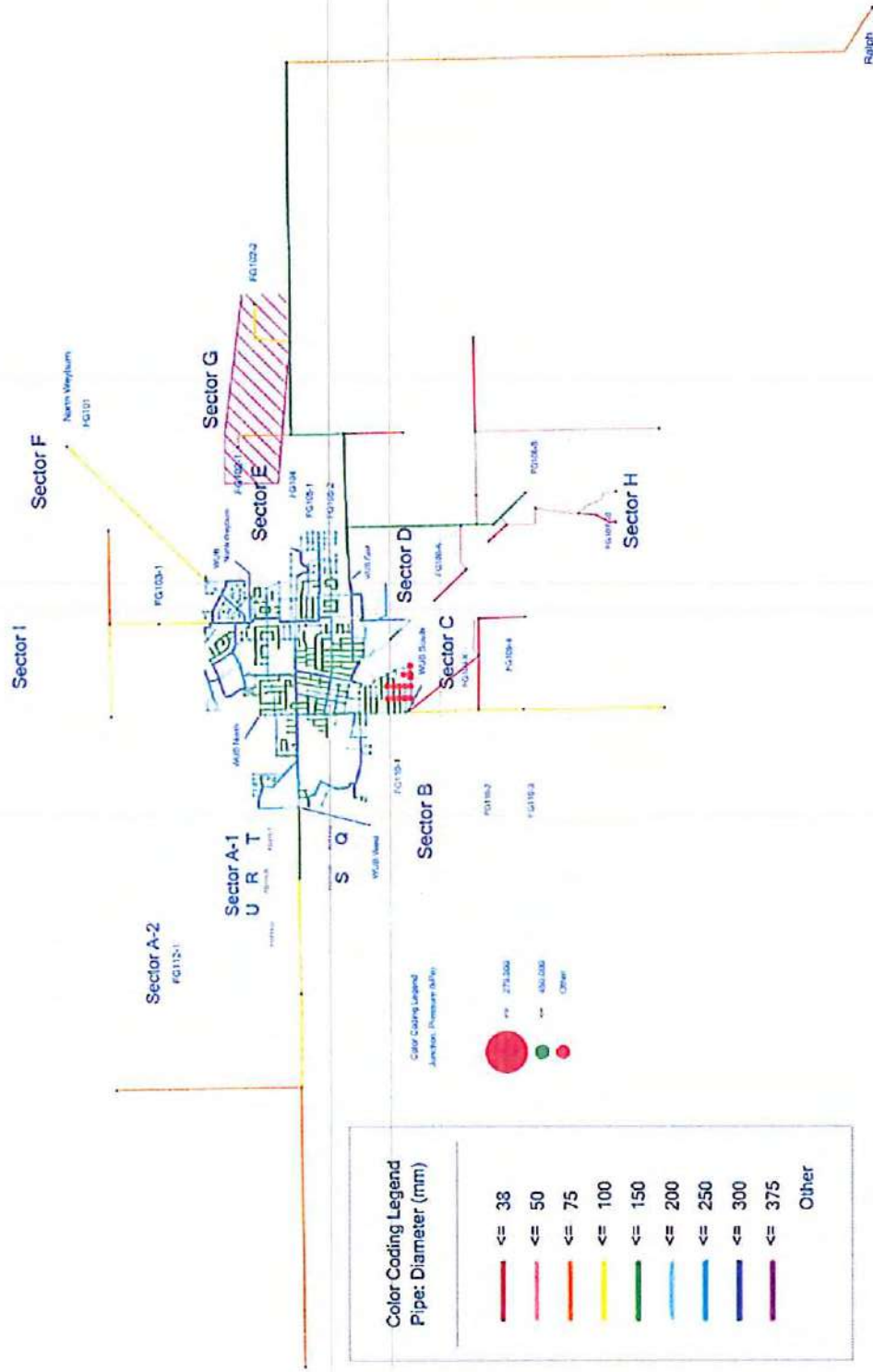
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FG103-2



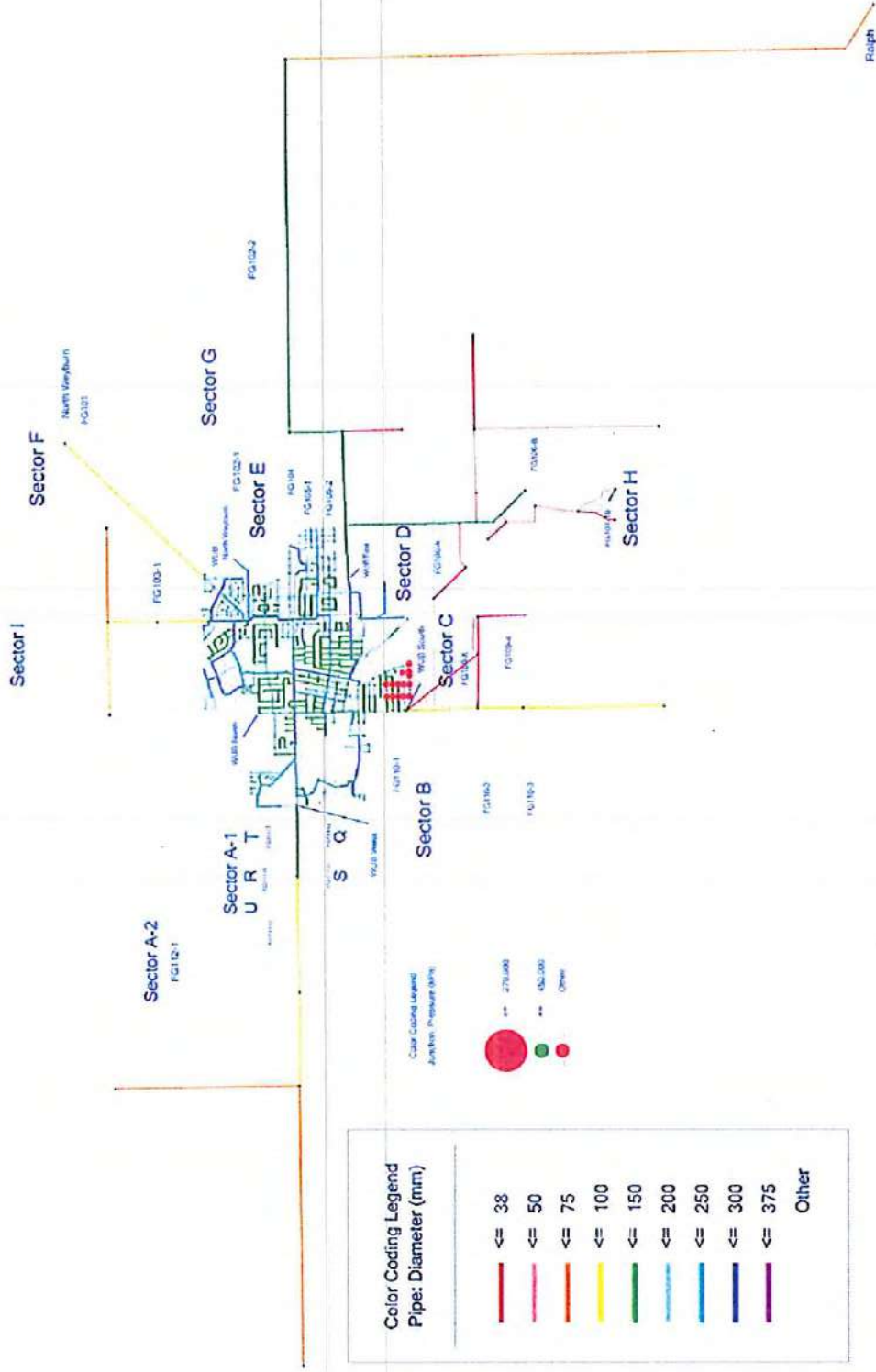
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FG103-2

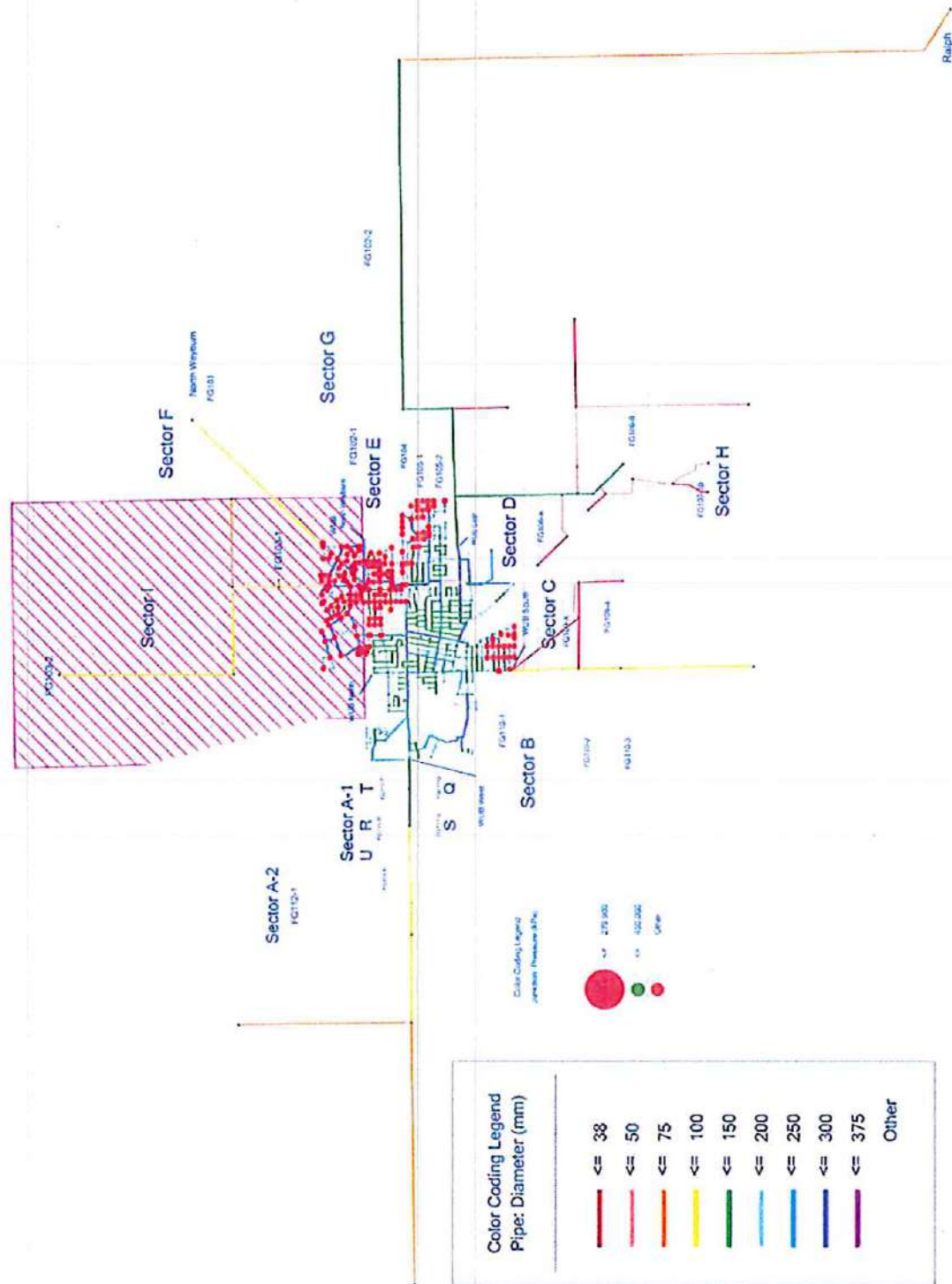


Scenario: PDD Exist + Weyb.Dist H

FG 103-2



Scenario: PDD Exist + Weyb.Dist I



Stantec

CITY OF WEYBURN DISTRICT - WATER FEASIBILITY STUDY

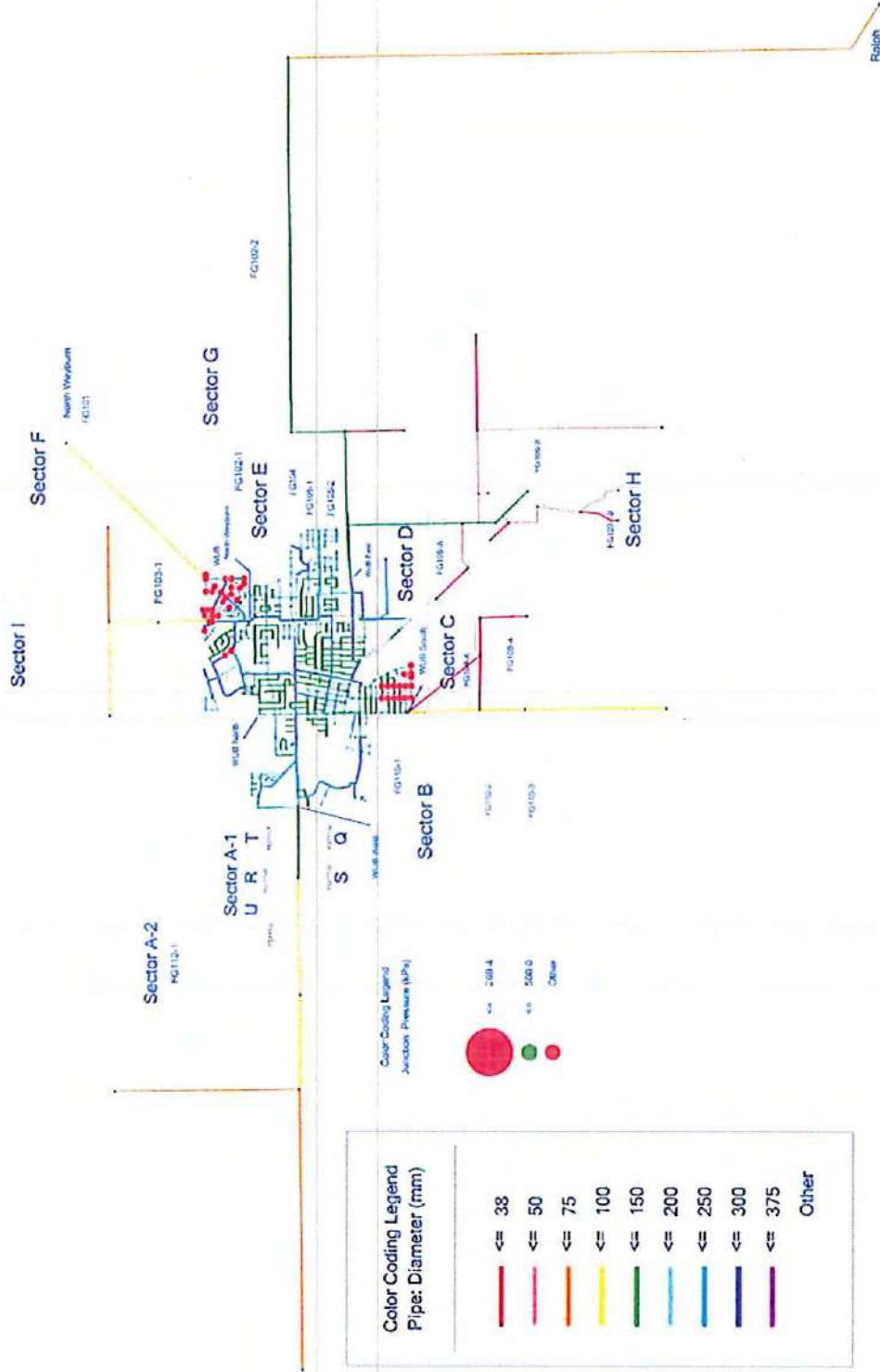
Appendix B

July 24, 2013

B.3 SCENARIO - PEAK HOUR DEMAND VISUALS

Scenario: PHD Exist + Weyb.Dist.

PG 103-2



Scenario: PHD Exist + Weyb.Dist A-1

FG103-2

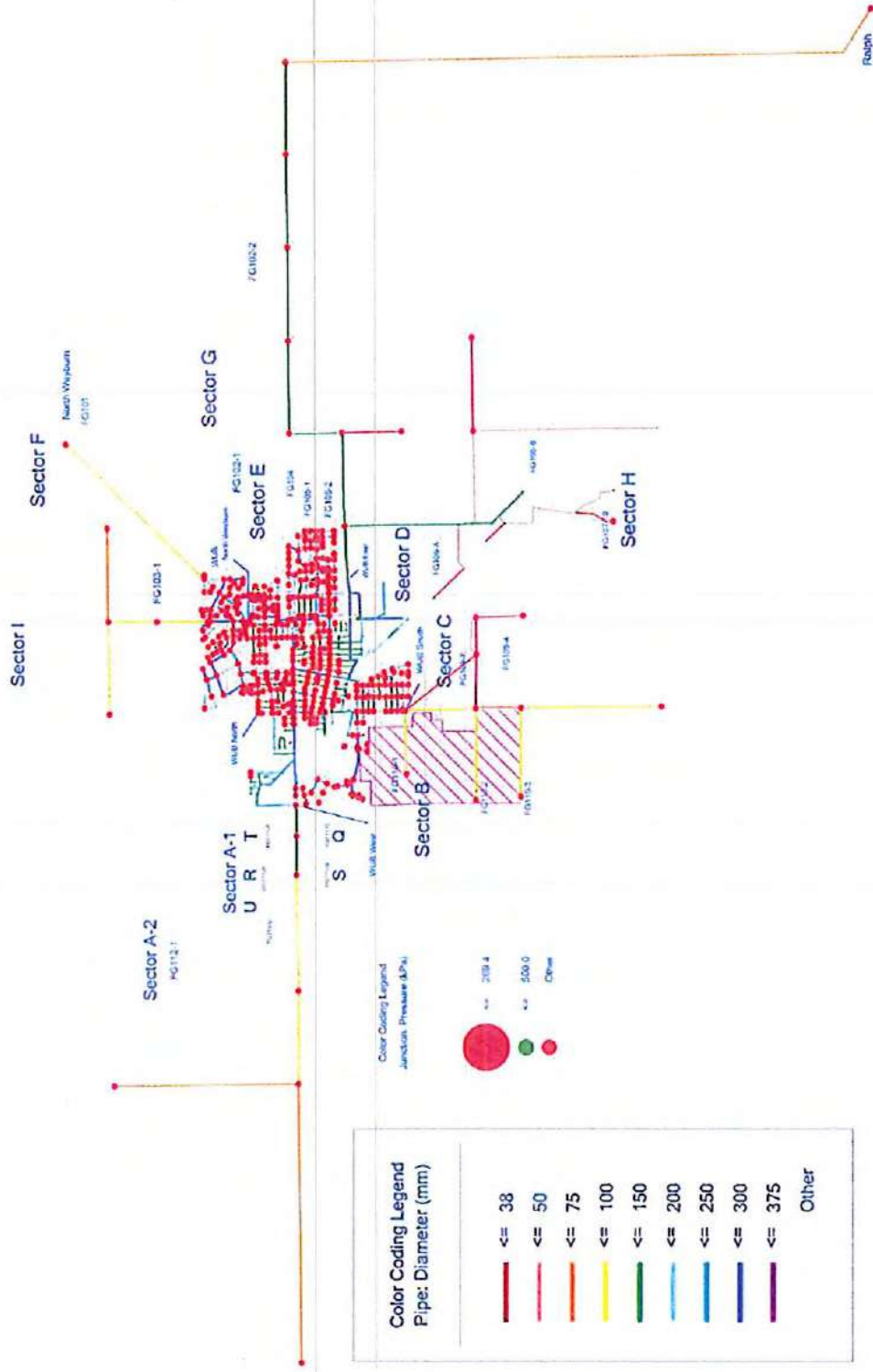


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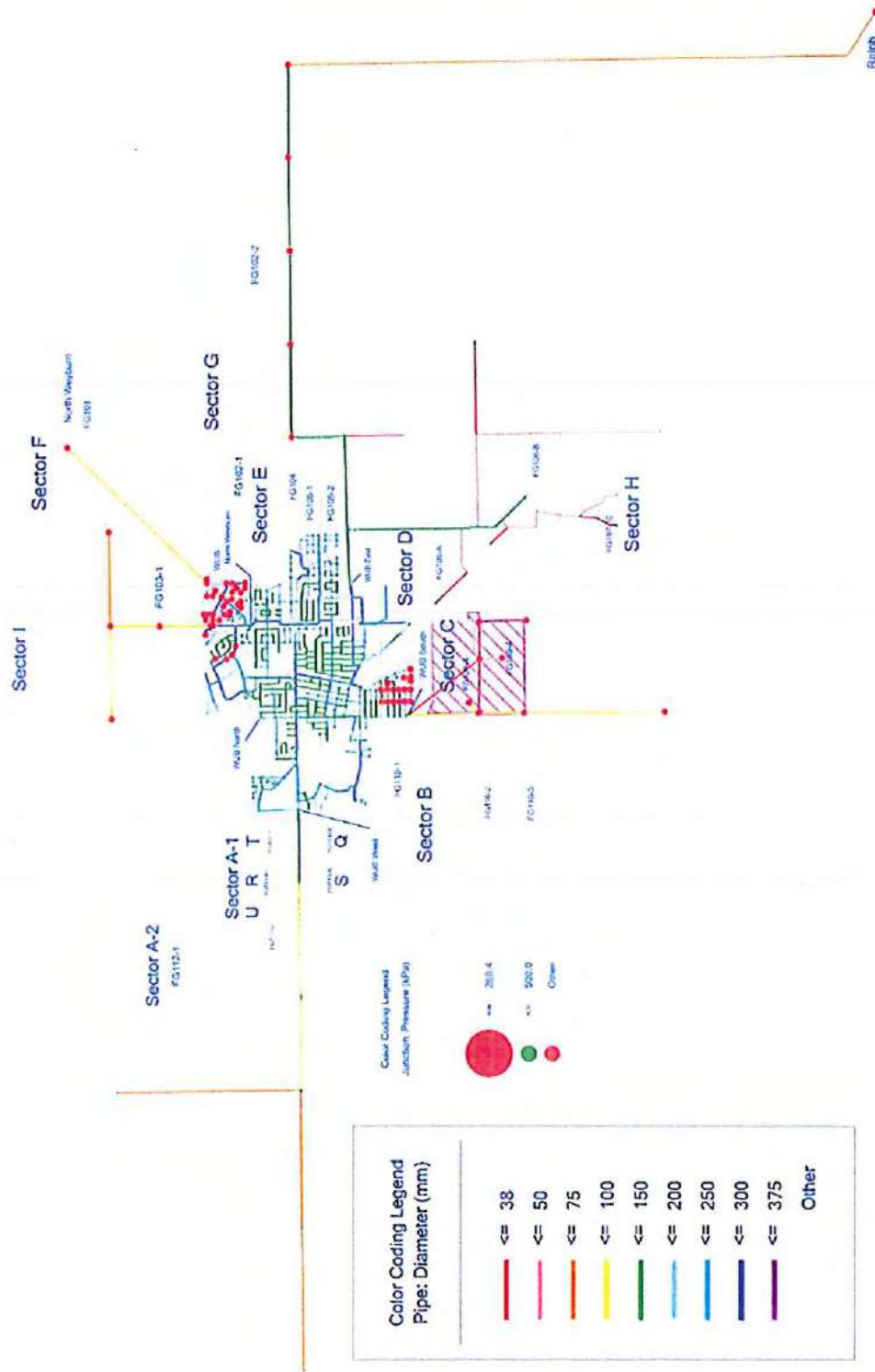


Scenario: PHD Exist + Weyb.Dist B

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FG100-2



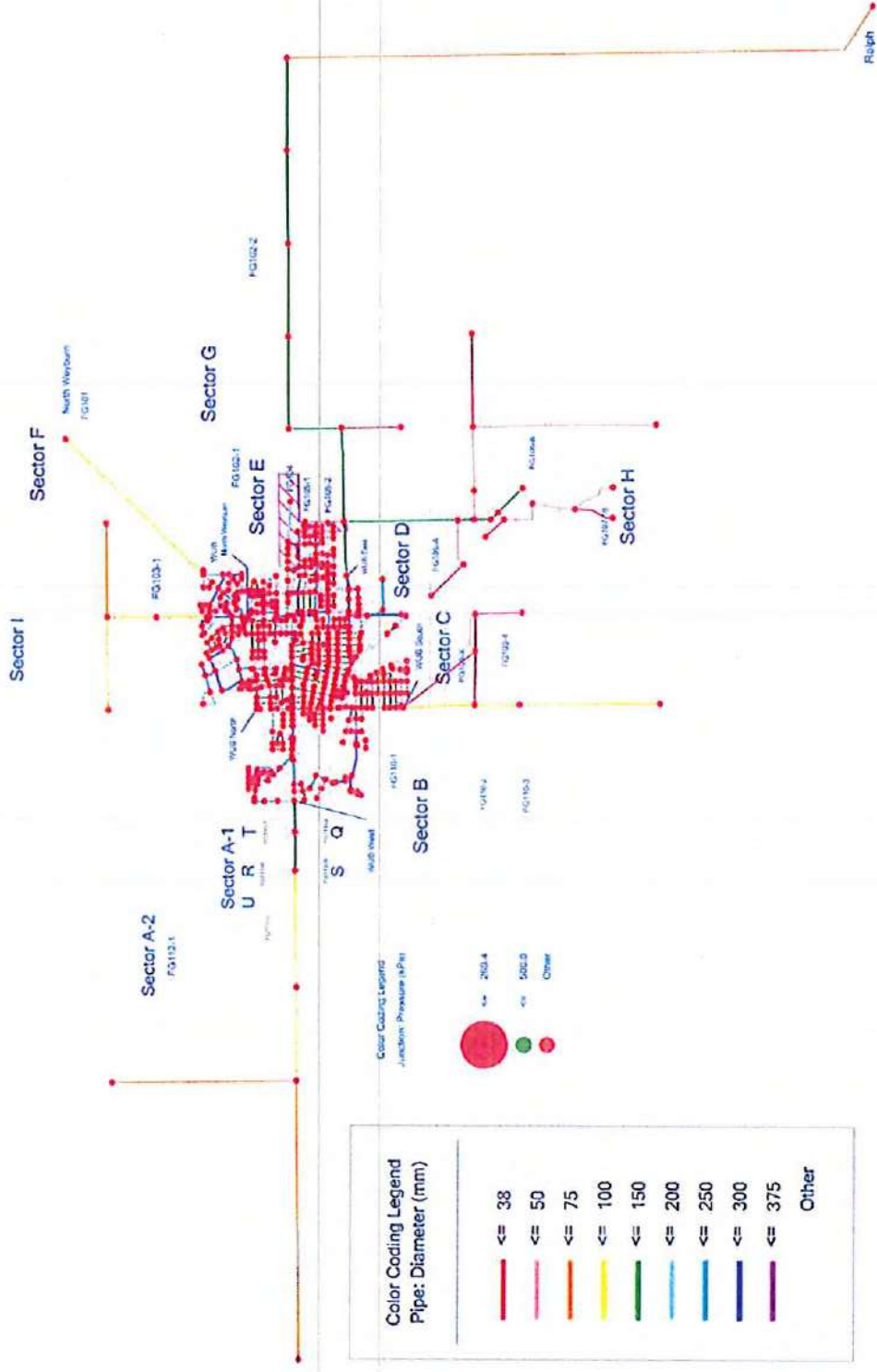
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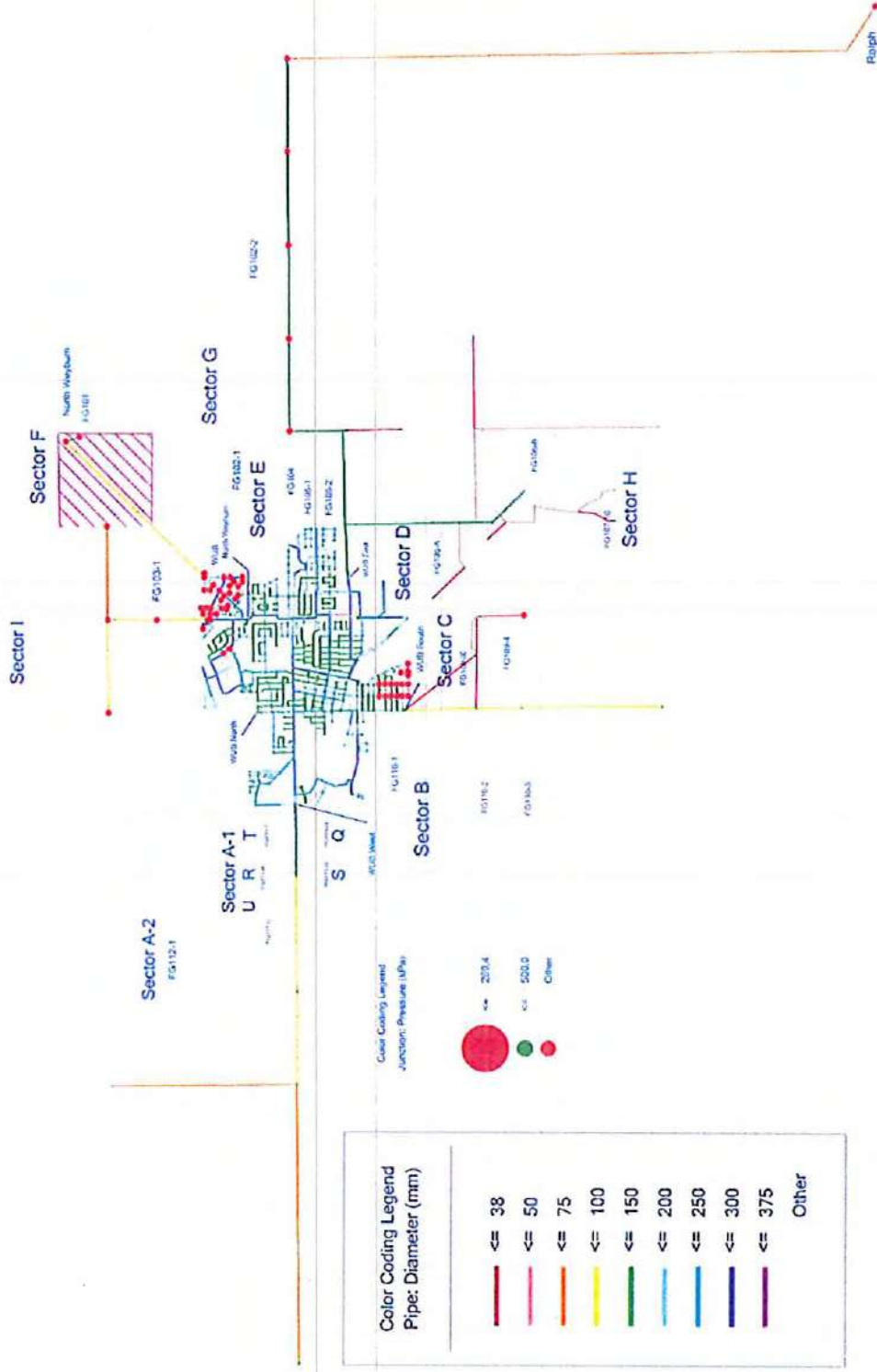
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FG102-2



Scenario: PHD Exist + Weyb. Dist F

FG 103-2



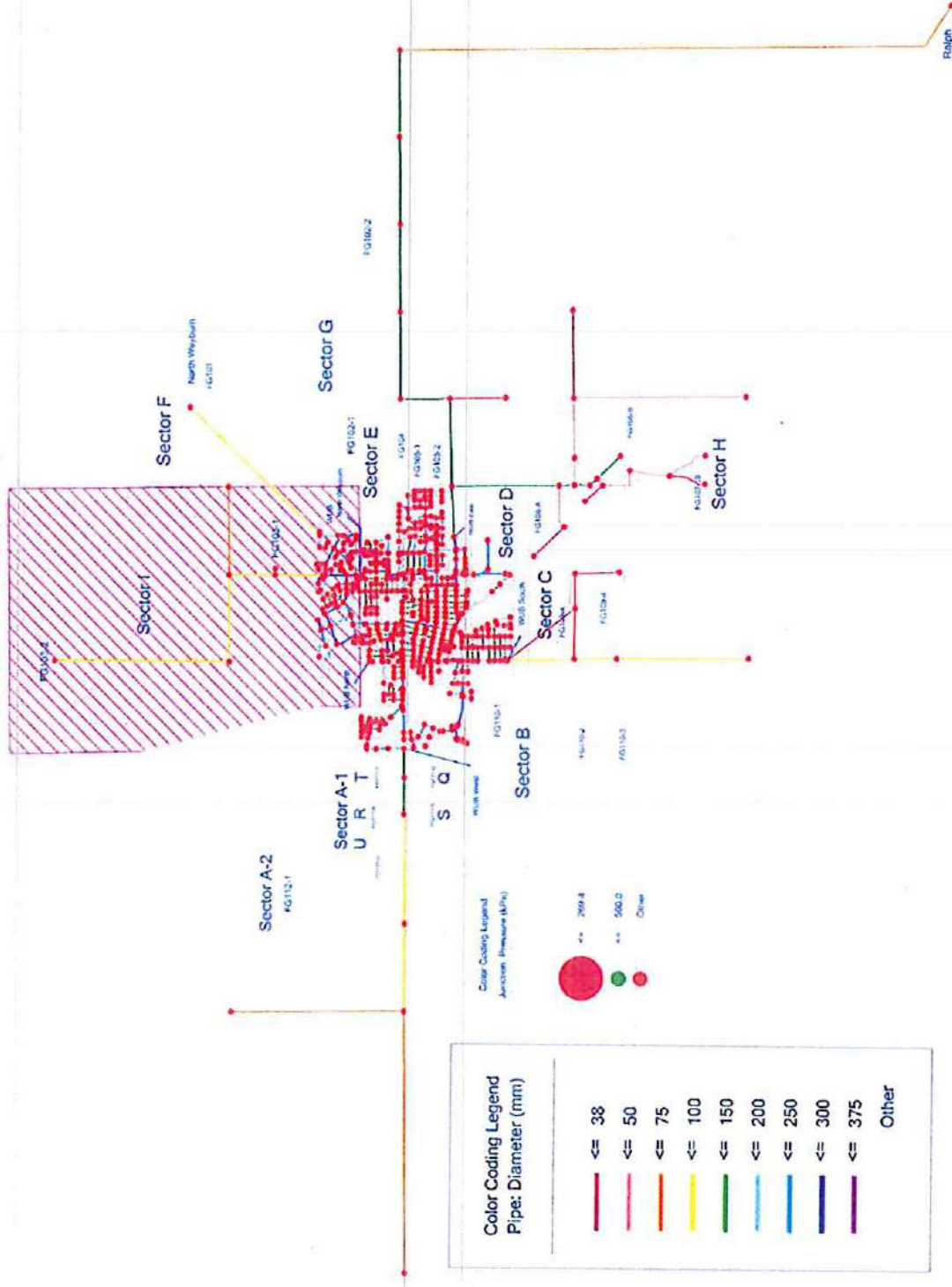
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FG100-2



Scenario: PHD Exist + Weyb.Dist I



WEYBURN REGIONAL ECONOMIC PLAN

COMMERCIAL, INDUSTRIAL & RESIDENTIAL LAND DEVELOPMENT

Preliminary Sector Concept Maps

DGMercer Eco Research
Aude Sapere

7 November 2011

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INTRODUCTION

The Weyburn and Area Economic Development Strategy seeks a united and more formal inter-municipal partnership for economic development. This partnership consists of the Council's of the Rural Municipality of Weyburn and the City of Weyburn. In the short-term, most indications suggest a broad range of development pressure across most business sectors. A shortage of serviced land for residential, commercial and industrial development is being experienced now - failure to address this situation represents a lost opportunity.

Further, positive indicators identified in the February 2011 report entitled "*Weyburn District Planning Commission Profile - Selected Socio-Economic Profile Data for Study Area*" are also expected to provide further incentive for investment in the Study Area. The upcoming 2011 Canada Census, when published, will most likely document further positive growth in the Study Area. A range of serviced commercial and industrial land bases is required to capture this growth potential.

One under-lying premise of this report is an expected expansion of the existing and diverse service sector in the region. The oil and gas sectors are strong and suggest expansion over the medium term - 10 to 20 years. Opportunities for "value-added" agricultural still remain a viable option for this agricultural service centre. In addition, a significant amount of exploratory drilling for solution and potash mines are now occurring in the Milestone area with regular announcements by Western Potash¹ for the construction and operation of a solution potash mine. These mining projects may employ 500 to 1,000 short-term construction jobs and provide 250-350 long-term mining positions. Secondary and tertiary employment would be additional employment.

Collectively, the City and the RM of Weyburn have the combined resources of infrastructure and land base respectively to develop a coordinated and cohesive economic strategy - in some cases resource sharing and tax base revenue sharing may present more flexible options than annexations or singular development. Some possible boundary amendments have been identified for consideration where it is expected to be a demand for full services for high pressure water and underground sewer systems for higher density development.

A survey of businesses is also being conducted in the summer and fall of 2011 to establish some quantitative benchmarks regarding short and medium-term demand for new commercial and industrial land in the City of Weyburn and the RM of Weyburn - the results will be documented in a separate report.

While the City of Weyburn has the majority of needed infrastructure - it generates the majority of its growth from providing services to the greater region. Conversely, the RM of Weyburn provides an extensive land base - this base can be utilized for lower

¹ Western Potash is a junior mining company now active in the Milestone area northwest of Weyburn on Highway 6 and 39. The exploration "footprint" is about 45 km from the Weyburn Study Area. Details can be found at URL: <http://www.westernpotash.com/projects/milestone>

density commercial and industrial development. A mutually agreeable balance is needed to harness the synergies from both municipalities.

In association with review of the commercial and industrial land use development in the Weyburn Study Area, this report will identify general land development parcels for both future engineering feasibility studies and the posturing of said lands for short, medium and longer-term development. Further, a cursory engineering assessment for the provision of water and sewer services to each of the study sectors has been undertaken.

The current Official Community Plan for the City of Weyburn (February 2003) is sound but may require some specific updates and amendments at a later date. Similarly, the RM of Weyburn requires a more major review and update to its Official Community Plan. Collectively, an updated *District Official Community Plan* is being proposed for the Study Area. This report provides some of the initial background research and concepts which may be included in the pending new District Official Community Plan.

It is critical that both municipalities establish an mutually supportive economic land development plan to facilitate the development of a "catalogue" of commercial and industrial land parcels to market to business interests. Different business require different economic land bases. These land bases must be serviceable with economic infrastructure and address a wide range of service and cost options - the servicing of these lands must also conform with the intent of the Official Community Plans and the infrastructure capacities of the RM of Weyburn and the City of Weyburn.

In general, it is recommended that higher density commercial and industrial development be directed to sectors which can be serviced with high pressure water and underground sewage systems - these areas would be within the City of Weyburn. Conversely, lower density development with more extensive uses of land should be directed to the RM of Weyburn and into areas where it may not be feasible to provide a full level of infrastructure. This differentiation will enable the City and the RM to provide a balanced "portfolio" of commercial and industrial land for a wider range of business interests. This balance will provide the Weyburn region with a competitive advantage.

In the current review, both existing land development opportunities and constraints for residential, commercial and industrial uses were examined in a cursory manner. Site specific planning and engineering plans will still be required to effect development planning - this will occur on a land sector basis. A general engineering infrastructure assessment has been undertaken by Associated Engineering of Regina and the preliminary results are included in this report. A second more detailed and sector specific sewer, water and drainage engineering assessment will still be required to bring the land development assessments closer to a "build-ready" status. This should be initiated in the near term.

Finally, the RM of Weyburn and the City of Weyburn will need to develop a fair and equitable sharing of resources and revenue sources to facilitate the economic development of the Study Area.

RECOMMENDATIONS

The Weyburn and Area Economic Development Strategy seeks a united and more formal inter-municipal partnership for economic cooperation between the Rural Municipality of Weyburn and the City of Weyburn to address a shortage of serviced land for residential, commercial and industrial development. As part of this initiative, this report outlines several land use concepts by specific land location sectors.

What is required at this time and the recommendations of this report are as follows:

- A detailed review of the proposed land use concept plans in this report by the RM of Weyburn and the City of Weyburn and the identification of sectors in which there is mutual agreement to proceed immediately;
- Sector H, which includes the Wal-Mart/Canadian Tire retail development area, requires updated mapping and aerial photos now - the concept plan for the land use needs to be reviewed in the short-term. This is a priority area with high development pressure and should be acted upon now.
- Agreement to the premise that higher level serviced areas should be within the City of Weyburn and lower level serviced areas should remain within the RM of Weyburn;
- The initiation of a more detailed engineering assessment of the priority land development sectors regarding the provision municipal infrastructure including water, sewage, drainage, access and related services;
- In the priority development sectors found to be feasible by the engineering assessment, it is recommended more detailed land use Concept Plans and preliminary Plans of Proposed Subdivision be initiated;
- The City of Weyburn and the RM of Weyburn should consider the merits of jointly commission *District Official Community Plan* to integrate the planning of the city with the planning of the rural municipality - priorities should be commercial, industrial and country residential development;
- Specific discussions with Saskatchewan Highways and Transportation regarding their medium and long-term plans for any twinning of Provincial Highway 39 and any proposed road and interchange design plans in the immediate Weyburn area;
- Specific discussions with Saskatchewan Highways and Transportation regarding the possible upgrading of Industrial Road as a possible heavy haul truck route around the southern limits of Weyburn;

- A more detailed review of the City of Weyburn land associated with and around the Weyburn Landfill to ensure appropriate plans are in place for future long term use and expansion of the landfill and including possible recycling facilities when and if required;
- Drainage and floodplain management will continue to be important elements in this development area and every effort should be made to incorporate proactive flood proofing of new developments through site elevation improvements;
- Aesthetics and landscaping standards should be promoted for the gateway approaches through the RM of Weyburn and into the City of Weyburn;
- Recognition that some municipal boundary alterations between the RM of Weyburn and the City of Weyburn may be required in the medium term and preliminary identification of issues and progress towards this end are initiated in the near term;
- It is important to determine the future development intentions for North Weyburn and to determine if an upgrade to the low pressure water line should be considered. If feasible to upgrade water supply - then consider development of Concept Plans for Sector F, Parts A-D inclusive over the medium term;
- Mutual agreement between the RM of Weyburn and the City of Weyburn regarding the long-term direction of growth patterns for the City of Weyburn as illustrated in Figure 11 in this report;
- Consideration for the long-term planning and budgeting for substantial infrastructure investments for the residential, commercial and industrial growth;
- Maintenance of momentum to move expeditiously towards a range of development-ready commercial and industrial land in both the RM of Weyburn and the City of Weyburn; and
- Monitoring the industrial activities of the Western Potash Corporation in the Milestone area and posturing the Weyburn Study Area to be development ready.

WEYBURN DISTRICT PLANNING COMMISSION - STUDY AREA

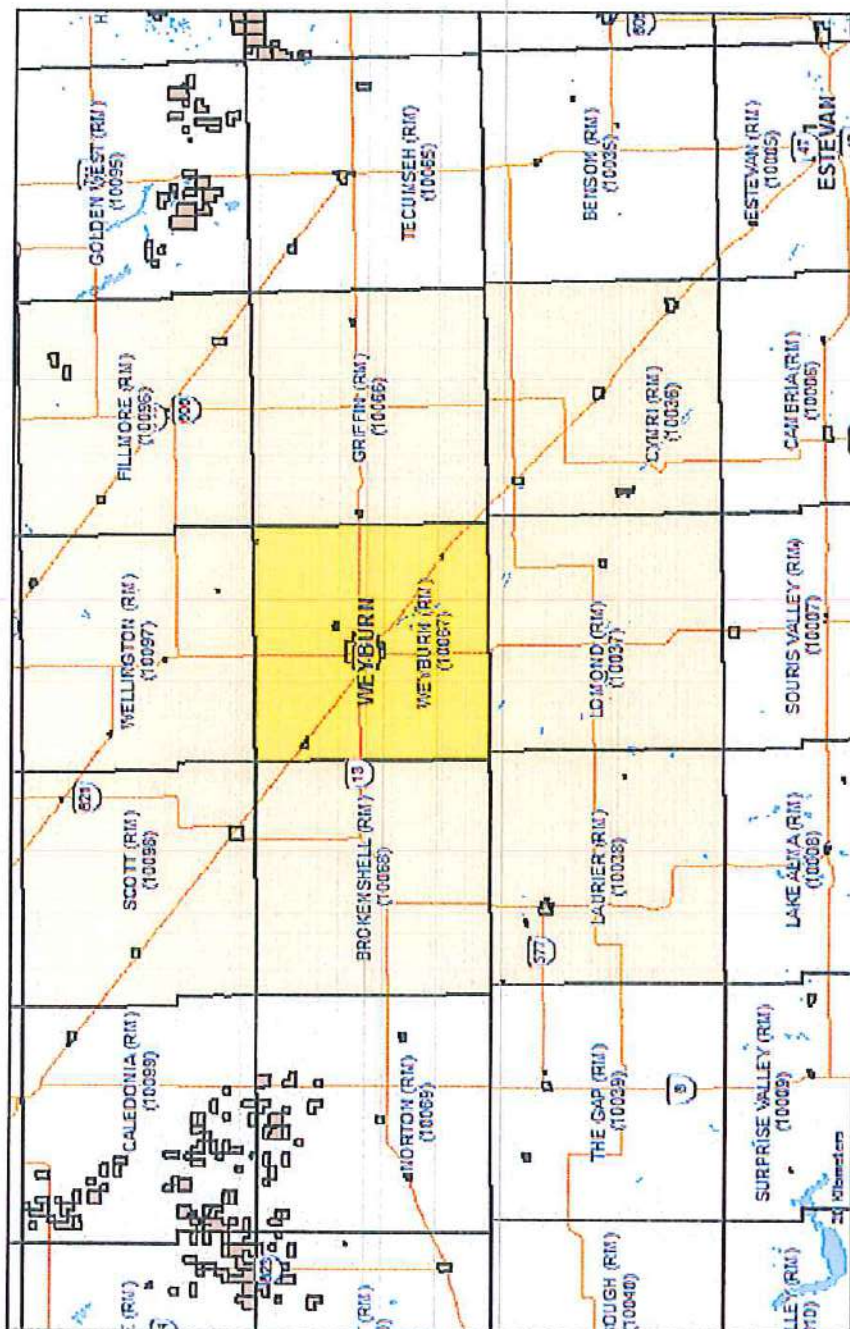
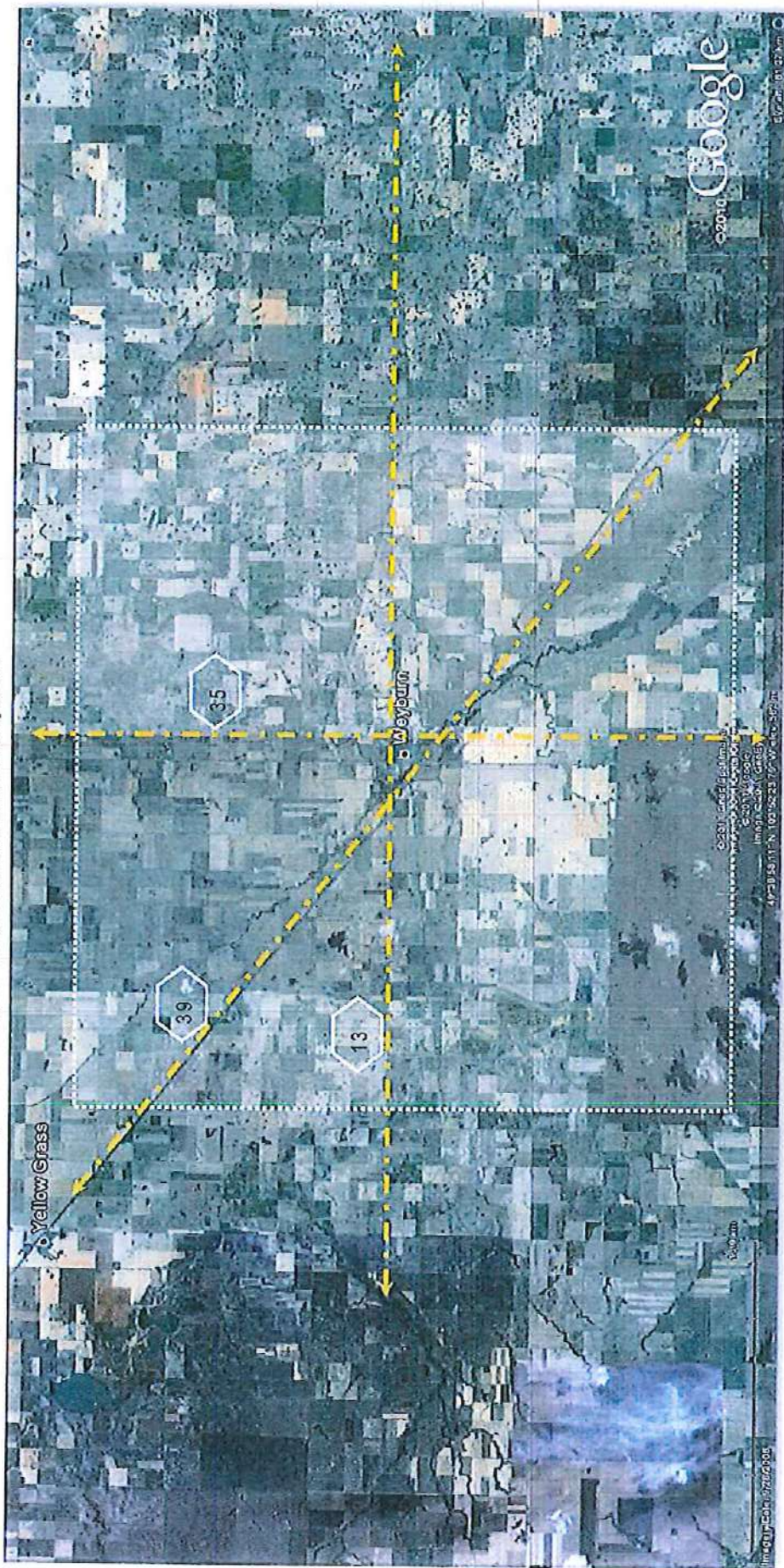
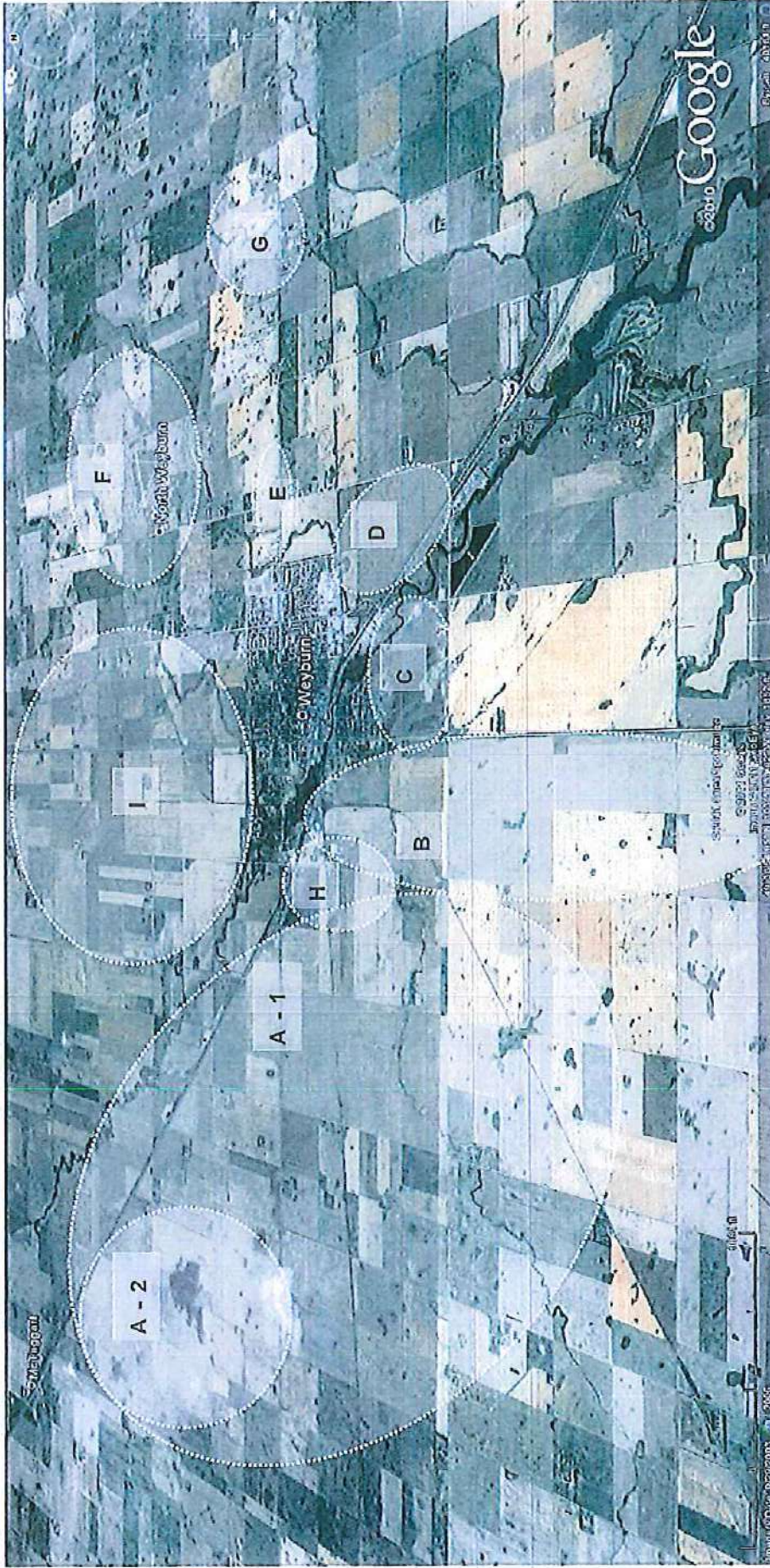


Figure 1 General Weyburn District Study Area - City of Weyburn and RM of Weyburn



The Study Area includes the RM of Weyburn and the City of Weyburn in central south-east Saskatchewan
 The Study Area is transected by provincial highways 39, 35 and 13
 The estimated Study Area population is estimated to 10,300 (2006 Census) or 11,782 under the 2010 SHSP data
 The Study Area is experiencing solid population growth which is expected to continue over the medium term

Figure 2 General Weyburn District - Planning Sectors A to I



- It is necessary to create a "catalogue" of commercial and industrial land sector to address a wide range of space and servicing requirements
- The land suitability and economic provision of infrastructure services (water, sewer, drainage, access, protective services etc.) needs to be assessed
- Commercial and industrial users requiring larger amounts of frontage and reduced services - should be directed to the RIM of Weyburn
- Commercial and industrial users requiring higher levels of services and infrastructure - should be directed to the City of Weyburn
- Option for shared provision of services and shared property tax revenue - needs to be studied, discussed and agreed upon by both parties

NOTE: These Sectors are conceptual, for discussion purposes only and subject to both further discussion and infrastructure assessment

INTEGRATION OF LAND USE PLANS WITH ENGINEERING SERVICEABILITY

General land use planning, concept plans for proposed sectors of development and then proposed plans of subdivision in a series of phases; *must be integrated with the realities of infrastructure servicing* - this in turn is based upon sound civil engineering and supplanted with realistic financial servicing costs.

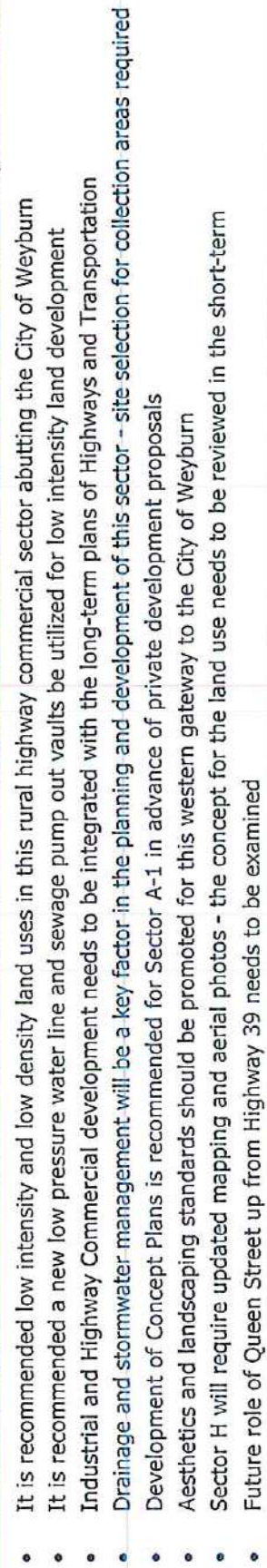
Associated Engineering from Regina was sub-contracted to provide an initial assessment of the servicing feasibility and estimates of servicing costs for the many possible growth sectors in the Study Area for the RM of Weyburn and the City of Weyburn. These estimates will need to be refined as selected development sectors proceed to a more detailed review and design leading to a "development ready" status. Development ready status can be undertaken by either the municipality or by a land developer. The raw data table is included in Appendix A attached to this report.

Each of the proposed growth sectors have been examined by land parcel, by land area, by a infrastructure servicing standard², an initial assessment of feasibility and finally an apportionment of costs between the land developer, the municipalities and finally the application of a development levy. The highest and best use for land is being estimated by this process. The short-term financial opportunities of private land developers, an essential service, needs to be balanced with the longer-term best interests and obligations for service delivery and infrastructure maintenance by the RM of Weyburn and/or the City of Weyburn. These proposed development sectors were outlined in Figure 2 above and are addressed in individual panels in this report.

The City Standard includes high pressure water, a piped sewer system plus paving with concrete curb, gutter, sidewalk and street lighting. The RM Standard generally includes low water pressure lines, septic tank sewer, a gravel road and more limited lighting. Collectively, this provides a balanced portfolio of land bases, servicing options and costs.

The Development Levy is a standard financial tool employed by municipalities to recover "off-site" costs associated with development within their jurisdiction. These are standard charges applied at the time of development and include such things as expansions to water and sewer treatment facilities, drainage and stormwater management, parks and recreation and other documented charges associated with additional indirect costs associated with development.

² The servicing standard has been divided into two options: the higher service standard of a typical urban setting typical for the City of Weyburn and a lower development standard for more extensive and lower density development more appropriate to be in the RM of Weyburn. For example, a bottling plant would require all weather pavement for heavy trucks and high pressure water supply and a robust waste water collection system. Conversely, a farm implement dealership places a greater importance on large display and storage areas at lower cost and would not make large demands on water and sewer services. Land development prospects are being matched with service levels.



The Northwest Agricultural Highway Commercial - Sector A-1 as illustrated in Figure 3 above has a wide range of land and servicing options and will be addressed on a sub-sector by sub-sector basis. In the short and medium, this area is likely to experience the greatest development pressure and also require the attention of both the City of Weyburn and the RM of Weyburn.

In addition, with a current shortage of serviced land in both Regina and Estevan, this area should be attractive to a wide range of businesses from the greater region including agricultural, oil and gas and possibly businesses related to solution potash mining and support industries.

The integration of land use with rough estimates of land servicing costs are provided for each of the following sectors and sub-sectors. It should be noted these are rough estimates and are based on limited data and several assumptions. Final cost estimates require more detailed land use concept plans, scale and phasing of development, specific civil engineering designs and costings, market conditions and unknown factors. In addition, some of the land will require drainage and stormwater management improvements in order to provide a longer term, safe development. Nevertheless, this land should be considered as a prime option.

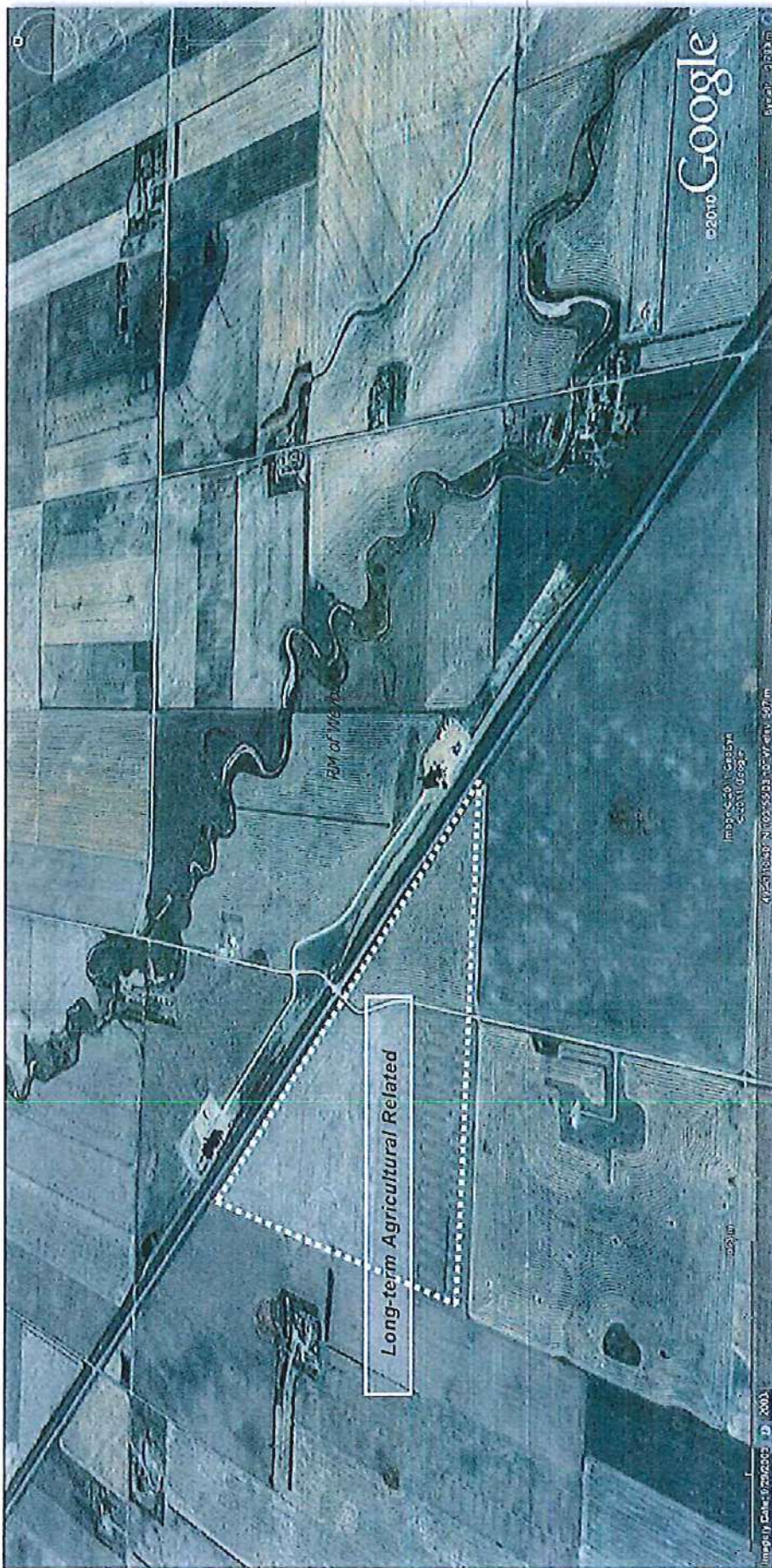
No land use concept plans and no phasing of development is included in this preliminary land use planning report.

- The 115 acres of land in NE Sec. 19 (denoted by 'Q') is recommended to be developed for Highway Commercial uses and to the "City Standard". This would include the requirement for a sewage lift station, a sewage force main and a 300 mm high pressure water main for both water consumption and full fire protection. It is proposed the financial funding for the servicing of Sector A-1 would be through a three way approach. The developers of the property is estimated to be responsible for \$11.5 million in direct infrastructure costs. The City of Weyburn would cover \$3.3 million in the servicing costs. Finally, an off-site development levy to cover incidental development costs away from this land (i.e. expansion of water treatment plant, expansion of sewage treatment plant, parks and recreation, adjacent roadway upgrades etc.) are estimated at \$4.6 million. Amortized over the 115 acres, this amounts to approximately \$170,000 per acre in 2011 infrastructure development dollars. This is considered a high priority location.
- SW Sec. 30 (denoted by 'R'), with an area of 70 acres is also recommended to be developed for Highway Commercial land uses and to the "City Standard". The new required infrastructure would replace the current services going to the existing truck stop. It is proposed the financial funding for the servicing of this parcel would be a two-party arrangement between the land developers who would spend and estimate of \$7 million in servicing costs and the off-site development levy estimated at \$2.8 million. Amortized over 70 acres, this amounts to approximately \$140,000 per acre in 2011 infrastructure development dollars.

- NW Sec. 19 (denoted by 'S') is 160 acres and includes the "Cross Road's Development with approximately 15 lots available for Light Industrial development; land already in the development phase is roughly outlined by the cross-hatching. It is recommended this area to be serviced and developed to the RM Standard with gravel roads, low pressure waterlines, septic tank sewage disposal and not include pavement, sidewalks, gutters or an extensive use of street lighting. Some preliminary concept plans have been created by other parties. At present, the RM costs are estimated at \$250,000 to complete the development with an off-site development levy estimated at \$375,000. Access is from the north-south grid road, however, in the medium term the east-west Industrial Road could be considered for upgrading, perhaps with some provincial assistance.
- SE Sec. 30 (denoted by 'T') is recommended for Market Gardens and Greenhouses as an interim to medium term land use. It is about 160 acres and adjacent to the Souris River floodplain. . An access road into the quarter-section would likely cost a developer about \$100,000. Other uses could be considered at a later date, however, many other locations are better suited for commercial and industrial development and the site is too isolated for a viable residential development.
- NE Sec. 23 (denoted by 'U') is approximately 80 acres within the RM of Weyburn and is recommended for light industrial use with servicing to the RM Standard.

Some additional lands are located still farther to the west in SW Sec. 25 and NE Sec. 23.

Figure 4 Northwest Agricultural Highway Commercial - Sector A-2



- Long-term agricultural based industrial - provision of lower level of services - possible revenue sharing between City of Weyburn and RM of Weyburn
- Low intensity, highway commercial and industrial land uses - large parcels with low servicing requirements and lower taxation levels
- It is recommended the six (6) remaining water connections from the "Truckers" low pressure waterline be reserved for this sector
- Sewage to be provided by pump-out septic vaults - lower intensity commercial development with lower water and sewage demand
- Industrial and Highway Commercial development needs to be integrated with the long-term plans of Saskatchewan Highways and Transportation
- Drainage, stormwater management and floodplain management will be a key factor
- Development of Concept Plans is recommended for Sector A-2 in advance of private development proposals

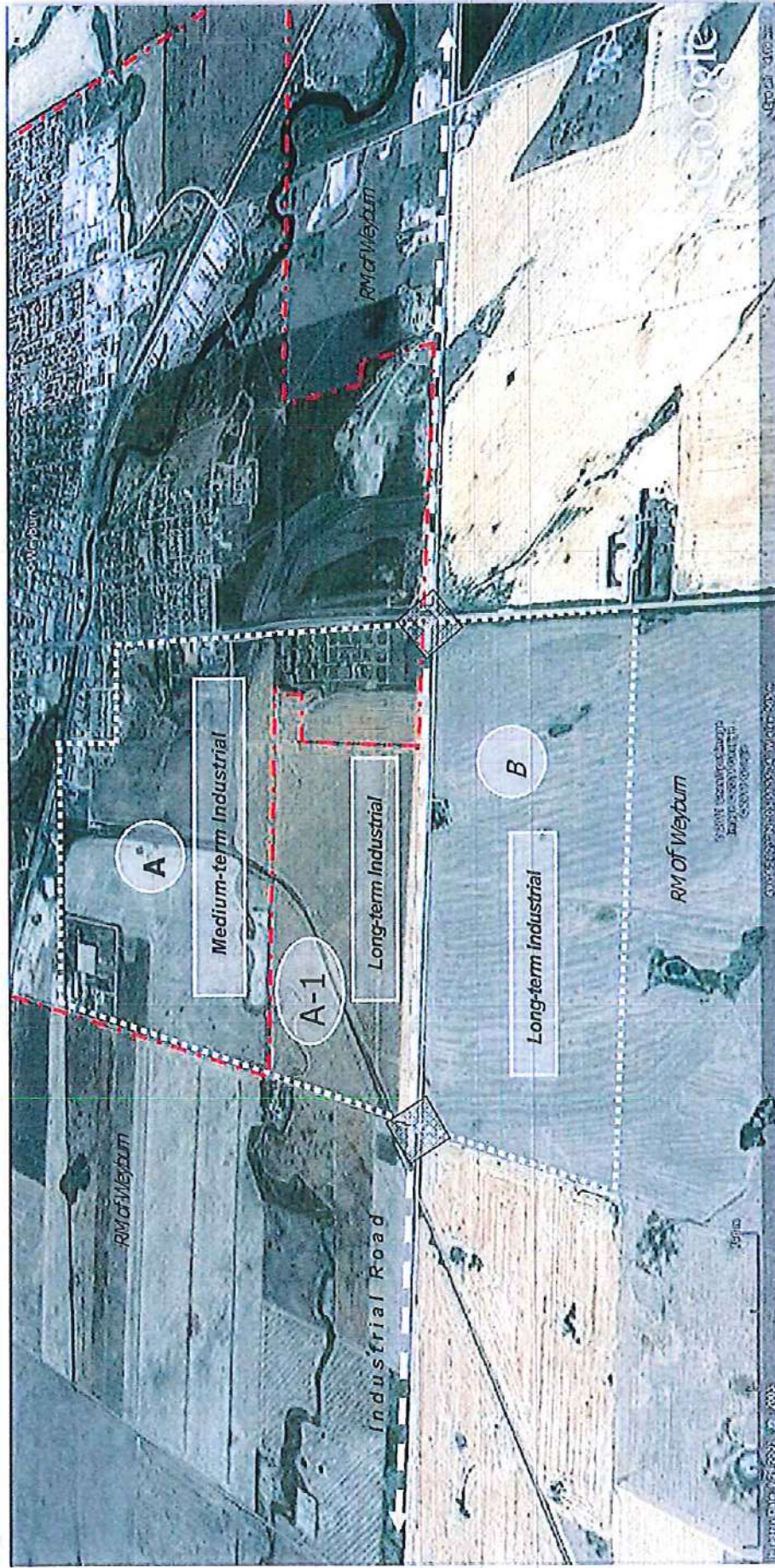
The Northwest Agricultural Highway Commercial - Sector A-2 as illustrated in Figure 4 above is recommended to be a Light Industrial development zone associated with extensive agricultural uses and developed with a reduced set of servicing standards as per the "RM of Weyburn Standard". This level of development will match extensive, low service demanding land uses to lower cost and dispersed parcels. There is one triangle-shaped development sector abutting the southern edge of Highway #39 and near the inland grain terminals.

The overall 170 acre sector is recommended to be developed to the "RM Standard". It is suggested there are 6 remaining low pressure water connections available from the original 9 connections to support low density development.

Development costs are estimated to be moderate with the developers costs being about \$8.5 million and an off-site development levy in the order of \$150,000. Amortized over the 170 acres, this amounts to approximately \$50,000 per acre in 2011 infrastructure development dollars.

* The "RM Standard" level of infrastructure servicing would be as per existing RM of Weyburn standards and generally include low pressure water service connections, a septic sewer tank with pump out, limited street lighting and a gravel road surface.

Figure 5 South-Central Industrial Railway - Sector B



- Industrial development requiring services but not higher visibility and not requiring direct access to a Highway Commercial land use zone
- City of Weyburn (A-1) is to the north - southern section south of "Industrial Road" is in the RM of Weyburn (B) - revenue sharing of southern portion?
- High pressure water and full sewer service for Sector A within the City of Weyburn and proposed for A-1 - long-term joint action area
- Low pressure water and septic sewer vaults for Sector B within the RM of Weyburn - low density industrial land use
- Contact Highways and Transportation regarding Industrial Road for becoming a heavy haul truck route to relieve Highway 39 and Government Rd.
- Drainage and floodplain management will be important elements in this development area
- Development of Concept Plans is recommended in advance of future development proposals - retain railway service for longer-term transportation

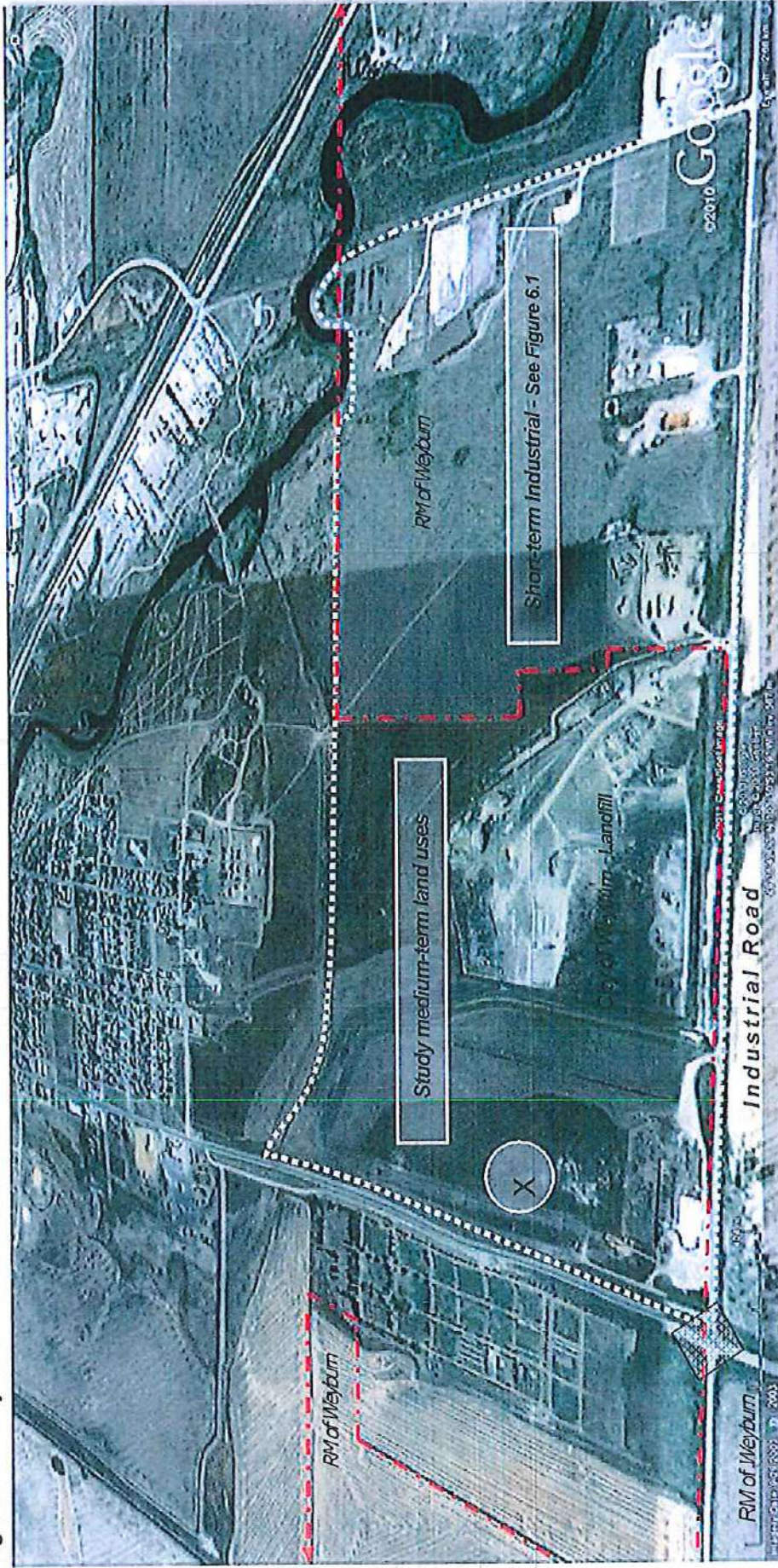
The South-Central Industrial Railway - Sector B as illustrated in Figure 5 above has been divided into three (3) sub-sectors for industrial type developments.

- Sub-sector A (N1/2 of Section 17) is a 260 acre site recommended to be developed to the "City Standard" in the medium term. This would include the requirement for a sewage lift station, a sewage force main and a 300 mm high pressure water main for both water consumption and full fire protection. It is proposed the financial finding for the servicing would be through a three way approach. The developers of the property is estimated to be responsible for \$26 million in direct infrastructure costs. The City of Weyburn would cover \$5.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$10.4 million. Amortized over the 260 acres, this amounts to approximately \$160,000 per acre in 2011 infrastructure development dollars.
- Sub-sector A-1 (S1/2 of Section 17) is a 240 acre site also recommended to be developed in the *long-term* to the "City Standard". This would include the requirement for a sewage lift station, a sewage force main and a 300 mm high pressure water main for both water consumption and full fire protection. The developers of the property is estimated to be responsible for \$24 million in direct infrastructure costs. The City of Weyburn would cover \$5.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$9.6 million. Amortized over the 240 acres, this amounts to approximately \$160,000 per acre in 2011 infrastructure development dollars.
- Sub-sector B (N1/2 of Section 8) is a 320 acre site south of the Industrial Road and is recommended to be developed in the *long-term* to the "RM Standard". This would require the upgrading of the existing low pressure waterline system in the area over the longer-term. The developers of the property is estimated to be responsible for \$16 million in direct infrastructure costs. The RM of Weyburn would cover \$300,000 in the servicing costs. Finally, an off-site development levy costs are estimated at \$800,000. Amortized over the 260 acres, this amounts to approximately \$54,000 per acre in 2011 infrastructure development dollars.

This sector would provide a long-term, heavy industrial sector for the City of Weyburn and the RM of Weyburn with access to the provincial highway, the east-west Industrial Road and railway access through or close to the subject properties.

Drainage and floodplain management issues need to be addressed.

Figure 6 Weyburn Landfill and RM Industrial Park - Sector C



- Heavy industrial development requiring services but not higher visibility and not requiring direct access to a Highway Commercial land use zone
- Located partly within City of Weyburn and includes the Weyburn Landfill; and partly in the RM of Weyburn (See Figure 6.1 on following page)
- A detailed review of the entire area should be undertaken - unhindered expansion of the Weyburn Landfill needs to be studied further
- Drainage and floodplain management will be important elements in this development area
- Contact Highways and Transportation regarding Industrial Road for becoming a heavy haul truck route to relieve Highway 39 and Government Rd.
- Development of Concept Plans is recommended for Sector C in advance of further development proposals

The Weyburn Landfill and RM Industrial Park - Sector C as illustrated in Figure 6 includes the RM of Weyburn industrial park on the eastern portion closest to the Souris River and the City of Weyburn Landfill in the centre-left position.

- The RM of Weyburn industrial lands in SE Sec. 16 have been largely developed and this is dealt with in more detail in Figure 6.1 on the following page.
- The City of Weyburn lands in SW Sec. 16 include both the existing City of Weyburn Landfill and another 40 acres of a vacant land (denoted by X) abutting the landfill on the west and fronting onto Highway #35 on the east. It is proposed that the 40 acres (X) be developed to the City Standard including high water pressure and access to piped sewage if necessary. The high pressure water could also serve a fire protection for the Weyburn Landfill and any possible recycling facility in the future. Estimated costs are \$4.0 for the developer and about \$1.6 million in off-site development levies.

Immediately south of the City of Weyburn Landfill and Industrial Road is another 320 acres of vacant land in N 1/2 Sec. 9 and within the RM of Weyburn. A long-term option would be for lower intensity industrial development to the RM Standard. Current dollar costs are roughly estimated at \$16 million for the developer with RM costs in the range of \$500,000. This is a long-term option.

Figure 6.1 Development Situation General Weyburn District - Sector C as of 2008



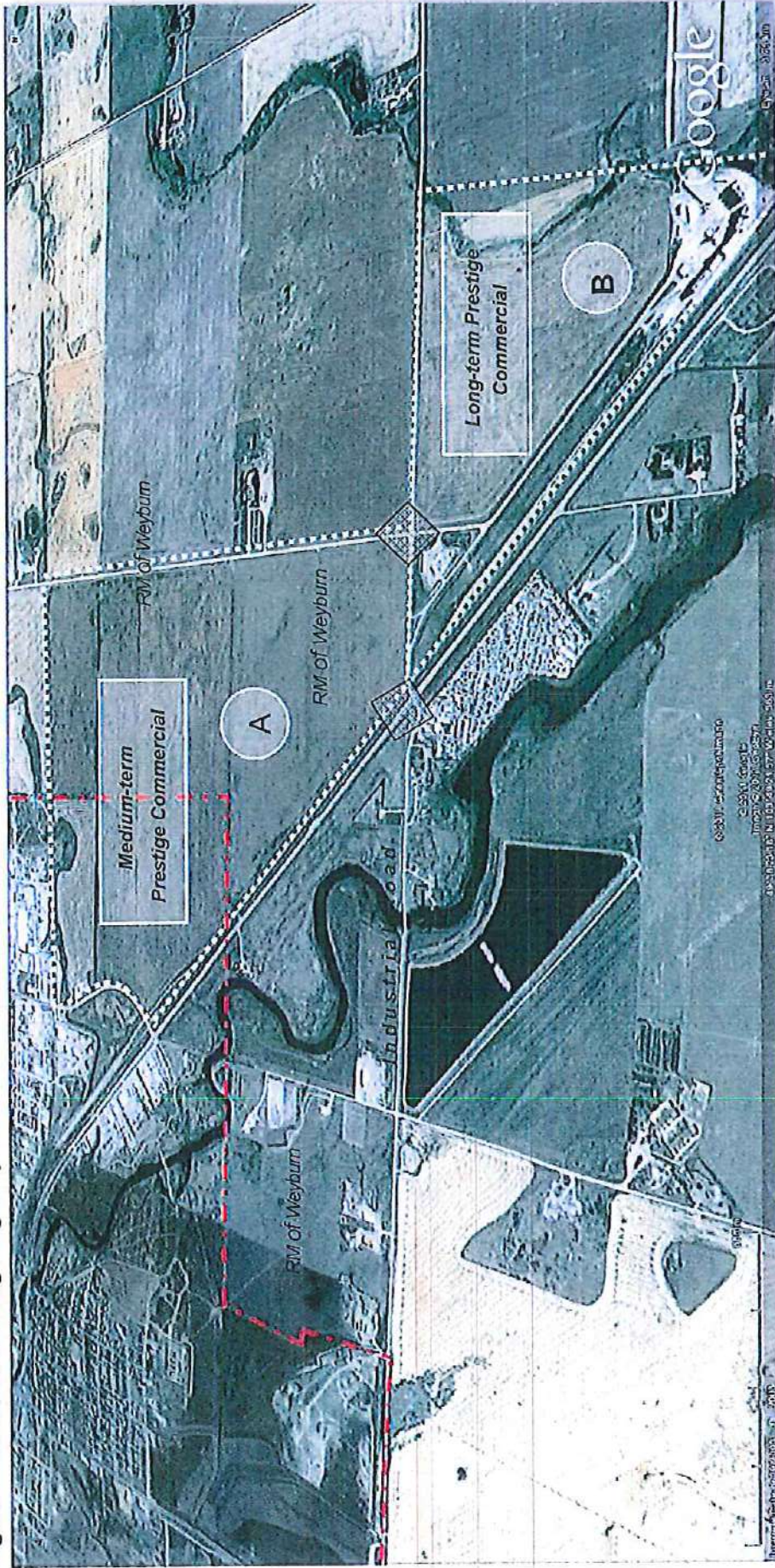
- RM of Weyburn industrial land development illustrated by white arrow - low pressure water is provided by the utility board
- Recommend Land Use Study of the City of Weyburn Landfill Area - allow for landfill expansion, possible Public Works yard and possible MURF facility
- City of Weyburn should be able to provide high pressure water and full sewage service to its lands in Sector C - engineering review of this option
- RM of Weyburn land north of Industrial Road should be studied for possible medium to long-term annexation by City of Weyburn
- A combined longer-term land use concept plan for both the City of Weyburn and the RM of Weyburn should be done for this Sector

The Development Situation General Weyburn District - Sector C as presented in the most recent aerial photograph (circa 2008) in Figure 6.1 includes SE Sec. 16 in the RM of Weyburn and has been largely been serviced and developed to RM Standards.

This land is within the RM of Weyburn and no change in its status is suggested.

Care and attention to safe building elevations and the avoidance of hazardous materials closer to the flood hazard zone is recommended to avoid contamination of the downstream drinking water reservoir. In fact, all industrial land uses should be cognisant of the downstream water storage reservoir during the handling and storage of any hazardous materials.

Figure 7 Southeast Prestige Highway Commercial - Sector D



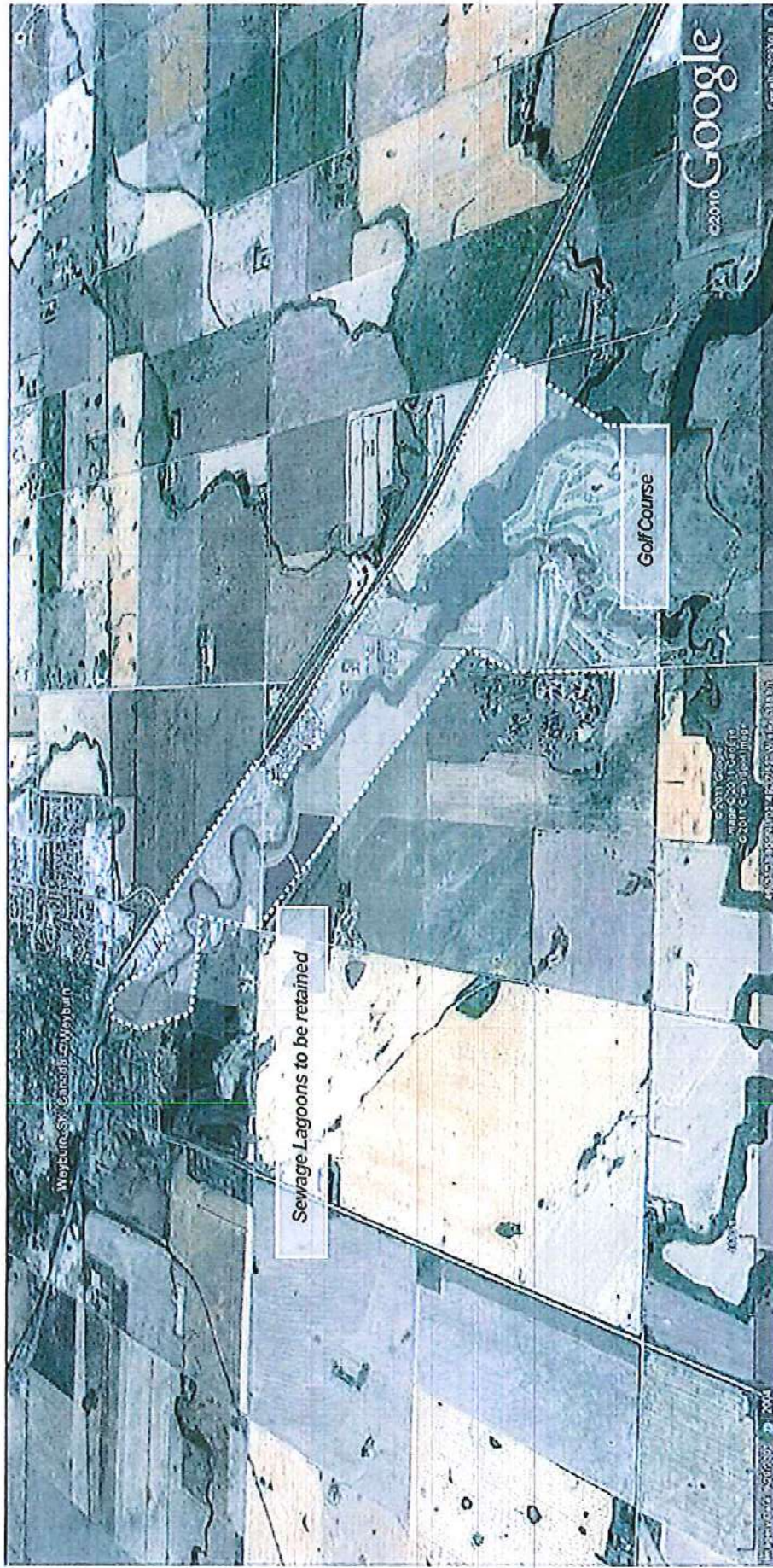
- Higher serviced prestige industrial and commercial land within the City of Weyburn - full sewer and water services to be extended into Part A
- Eastern and south-eastern portions of Part A to be considered for longer-term annexation into the City of Weyburn
- Long-term Prestige Commercial - recommend provision of lower level of services in RM of Weyburn in Part B
- Economic provision of water and sewer infrastructure possible for both Part A and Part B - recommend more detailed engineering study and plans
- Development of Concept Plans is recommended for Sector D in advance of further development proposals
- Aesthetics and landscaping standards should be promoted for this eastern gateway to the City of Weyburn

Note: See Figure 7.1 for extension of green space to the Golf Course south east of Weyburn along the Souris River

The Southeast Prestige Highway Commercial - Sector D as illustrated in Figure 7 above has been divided into two (2) sub-sectors for medium and long-term prestige commercial developments.

- Sub-sector A is a 560 acre site recommended to be developed to the "City Standard" in the medium term. This would include the requirement for a sewage lift station, a sewage force main and a 300 mm high pressure water main extension for both water consumption and full fire protection. In addition, a new stormwater outlet will be required to the creek to the north. It is proposed the financial funding for the servicing would be through a three way approach. The developers of the property is estimated to be responsible for \$56 million in direct infrastructure costs. The City of Weyburn would cover \$10.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$22.4 million. Amortized over the 560 acres, this amounts to approximately \$158,000 per acre in 2011 infrastructure development dollars.
- Sub-sector B is 120 acre site recommended to be developed in the long-term to the "RM Standard". This would include the upgrade to the low pressure, rural water distribution system for up to 12 users. Access would be from the existing service road with internal road networks being gravel. Highway aesthetics should be incorporated into landscaping standards to ensure the south eastern entrance to Weyburn is attractive. The developers of the property is estimated to be responsible for \$24 million in direct infrastructure costs. The City of Weyburn would cover \$5.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$9.6 million. Amortized over the 240 acres, this amounts to approximately \$160,000 per acre in 2011 infrastructure development dollars.

Figure 7.1 Extension of Signal Hills Walkway Greenspace to Golf Course



- Consideration the extension of the Signal Hills Walkways from City of Weyburn southeast to the Golf Course
- Consideration of a limited townhouse condominium residential development at the Golf Course - low pressure water line for potable water
- Summertime option to bicycle to work from the Golf Course
- Floodplain management principles need to be followed in land development along the Souris River

The Extension of Signal Hills Walkway Greenspace to Golf Course as denoted in Figure 7.1 is envisaged as primarily a linear green space parallel to both the Souris River and Highway 39 leading out of Weyburn and into the RM of Weyburn. There is an opportunity to include five (5) townhouse style condominium units on the north side of the golf course entrance. It is recommended this be developed to the "RM Standard" with low pressure water service connections, a septic sewer tank with pump out, limited street lighting and a gravel road surface.

Development costs are estimated to be moderate with the developer costs being about \$250,000 and an off-site development levy in the order of \$125,000.

Figure 8 1st Avenue NE Retail and Mixed Use - Sector E



- Medium-term to longer-term Commercial Strip - provision of high level of services and located within City of Weyburn (2016-2031-2041)
- Study re-development and in-fill options along existing commercial strip (see Star) over the short-term
- Infrastructure will have to cross this small watercourse - major up-front investments in services will be required
- Consider provision of an environmental walking corridor and/or green-space along the watercourse - green arrows represent Tatagwa Pathway
- Development of Concept Plans is recommended for Sector E in advance of future development proposals
- No further planning or engineering studies at this time - recommend review of Sector E in 5 to 10 years Note:
See Figure 8.1 for illustration of the country residential development in the RM of Weyburn

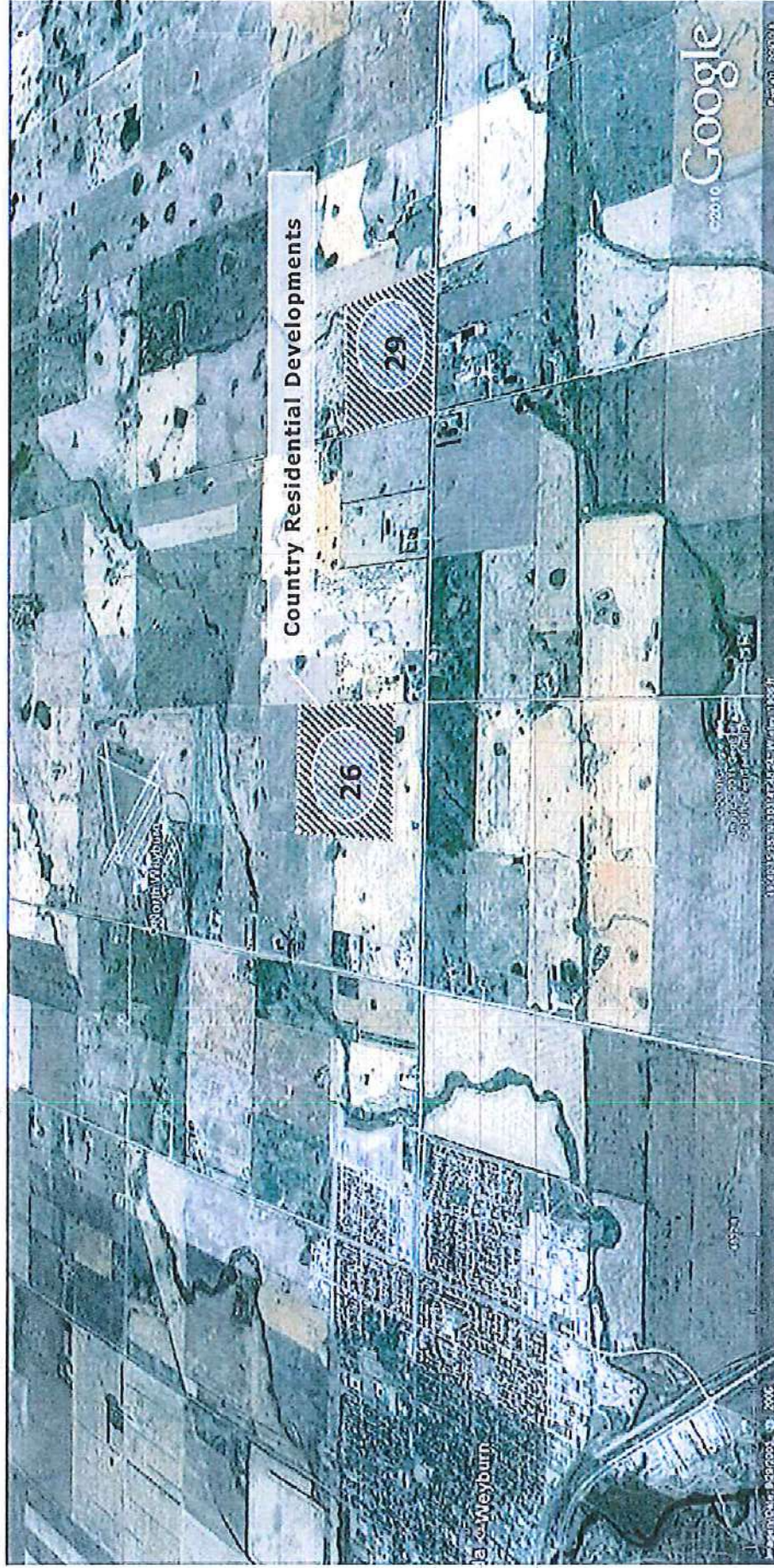
The 1st Avenue NE Retail and Mixed Use - Sector E as illustrated in Figure 7 above has been divided into two (2) sub-sectors including a commercial retail strip on 1st Avenue/Highway 13 and a mixed used apartment building complex east of the un-named creek.

- The 1st Avenue NE Commercial Strip is recommended for medium term development as a retail commercial strip extending eastward from the City of Weyburn along Highway 13 with full services developed to a City of Weyburn "City Standard". This would include the requirement for a sewage lift station, a sewage force main and a high pressure water main extension for both water consumption and full fire protection. It is proposed the financial funding for the servicing would be through a three way approach. The developers of the properties are estimated to be responsible for \$12 million in direct infrastructure costs. The City of Weyburn would cover \$2.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$4.8 million. Amortized over the 120 acres, this amounts to approximately \$157,000 per acre in 2011 infrastructure development dollars.
- The Mixed Use retail and apartment building sector in E 1/2 Section 22 is a 220 acre site recommended to be developed to the "City Standard" in the medium term. This would include the requirement for a sewage lift station, a sewage force main, a stormwater outlet to the un-named creek to the west and a high pressure water main for both water consumption and full fire protection. It is proposed the financial funding for the servicing would be through a three way approach. The developers of the property is estimated to be responsible for \$44 million in direct infrastructure costs. The City of Weyburn would cover \$5.0 million in the servicing costs. Finally, an off-site development levy costs are estimated at \$8.8 million. Amortized over the 220 acres, this amounts to approximately \$262,000 per acre in 2011 infrastructure development dollars.

Both sectors would require a medium term boundary adjustment between the City of Weyburn and the RM of Weyburn.

There is also an opportunity for the creation and preservation of a linear parkway along the un-named water tributary bisecting this sector.

Figure 8.1 Country Residential East of Weyburn - Sector G



- Low density country residential development in the RM of Weyburn
- Provides another form of housing option for the Weyburn region
- Engineering studies required on access to water and wastewater treatment - water is most likely by the low pressure water utility
- Direct access to City of Weyburn via Highway #13

The Country Residential East of Weyburn - Sector G as illustrated in Figure 8.1 above has been divided into two (2) country residential developments.

- The SE of Section 26 (denoted by 26) includes approximately 50 acres of land and is proposed to be developed into five (5) country residential lots within the RM of Weyburn. Servicing levels would be to the RM Standard. Access to Weyburn and area would be via the paved Provincial Highway #13. Developer costs are estimated at \$150,000 for services and the development levy would be about \$75,000.
- The S 1/2 of Section 29 (denoted by 29) and also known as Stellar Homes is approximately 280 acres and bisected by an un-named creek⁴. It is proposed to be developed into 95 country residential lots with services to RM Standard. Access to Weyburn and area would be via the paved Provincial Highway #13. Developer costs are estimated to be approximately \$9 million with municipality costs estimated at \$300,000. The off-site development levy charge is estimated at \$2.4 million.

⁴ The situation with the small water course provides for an outlet for drainage, however, the subdivision design will also have to account for the 1:500 year design flood event including a recommended safe building elevation. It is recommended only a one zone flood hazard zone be used in this instance.

Figure 9 North Weyburn District - Sector F



- Study current and future water and sewage handling capacity - area could be a node for moderate development
- What are the development intentions for North Weyburn - this needs to be addressed before any further actions are taken
- If feasible to upgrade water supply - then consider development of Concept Plans for Sector F, Parts A-D inclusive
- Consider aviation related land uses, light industrial, housing related to aviation, affordable housing option and district utilities for country residential
- Aircraft Approach need to be protected. In addition, consideration should be made of extending the airstrip to accommodate small business jets
- Medium-term priority for the Study Area

The North Weyburn District - Sector F as shown in Figure 9 presents a unique opportunity for the Study Area to integrate the infrastructure of former British Commonwealth Air Training airport with an expanded Mixed Use land development option.

Firstly, the northwest and southeast aircraft approaches need to be protected from obstructive vertical development within the RM of Weyburn. Secondly, preliminary study of the feasibility of an extension of the landing strip should be explored. At a minimum, no development should be permitted in the flight path areas within North Weyburn.

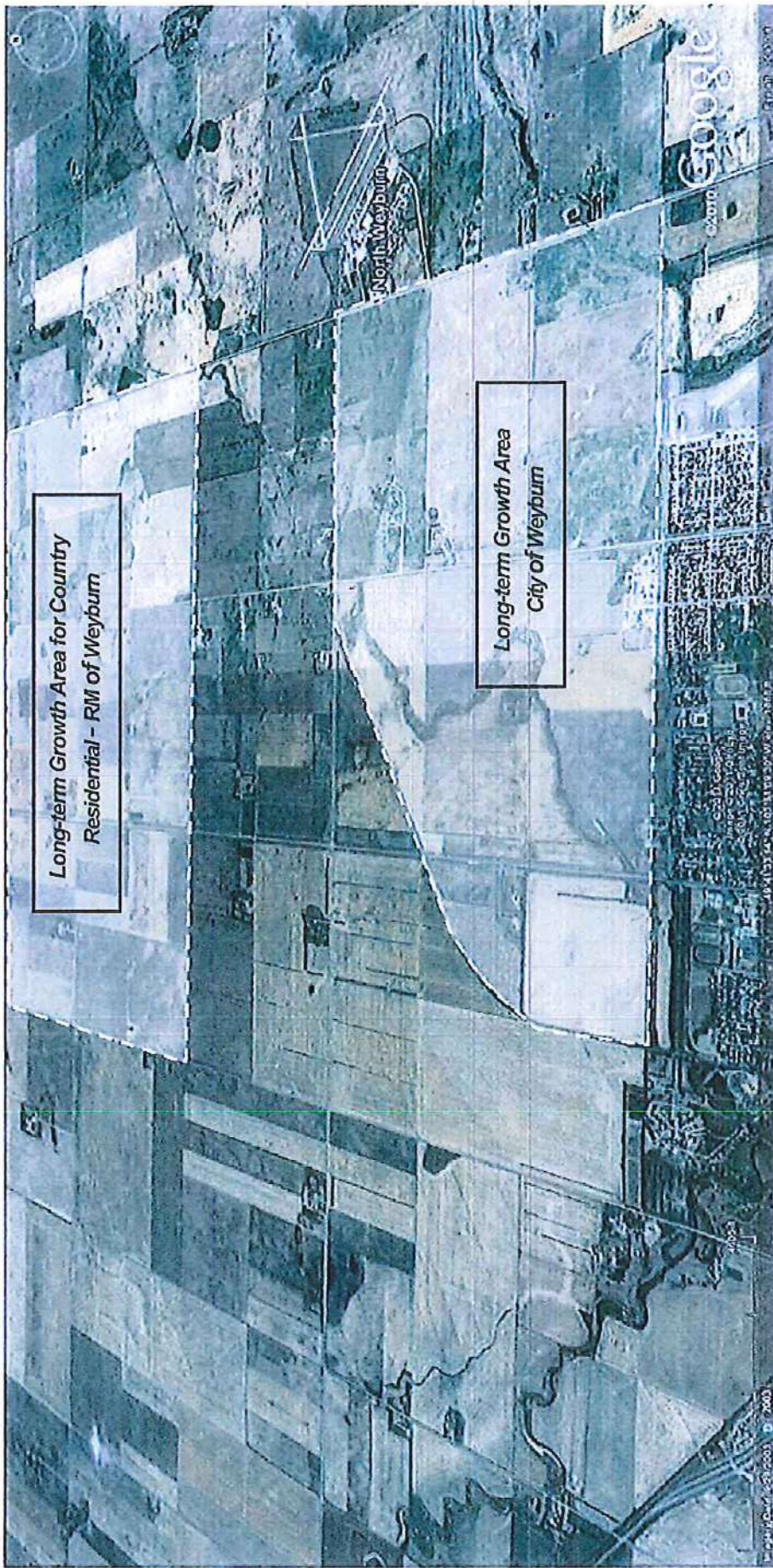
It is estimated the cost of development in the North Weyburn sector, and based on some low pressure water system upgrades could cost developers about \$750,000 and the RM of Weyburn off-site development levy would be in the range of \$450,000. This is based on an assumption of 3 development units per acre in this sector.

Some examples of development could include enhanced aircraft related uses including crop spraying, aircraft maintenance, flight training, ultra-light aircraft operations and aircraft storage. In addition, provision might be made for specialized air courier service of private, agricultural and oil industry spare parts distribution within the greater region.

Housing options might include dwelling units with an integrated aircraft hanger as part of the dwelling unit. A second housing option could be more affordable housing units for younger, first-time home buyers from the district and perhaps some "flying farmers".

A more detailed infrastructure engineering assessment followed by preliminary land use concept plans might be considered in the medium term. In the short-term, land use decisions should not compromise future land use options.

Figure 10 Country Residential Development - Region North of City of Weyburn - Sector I



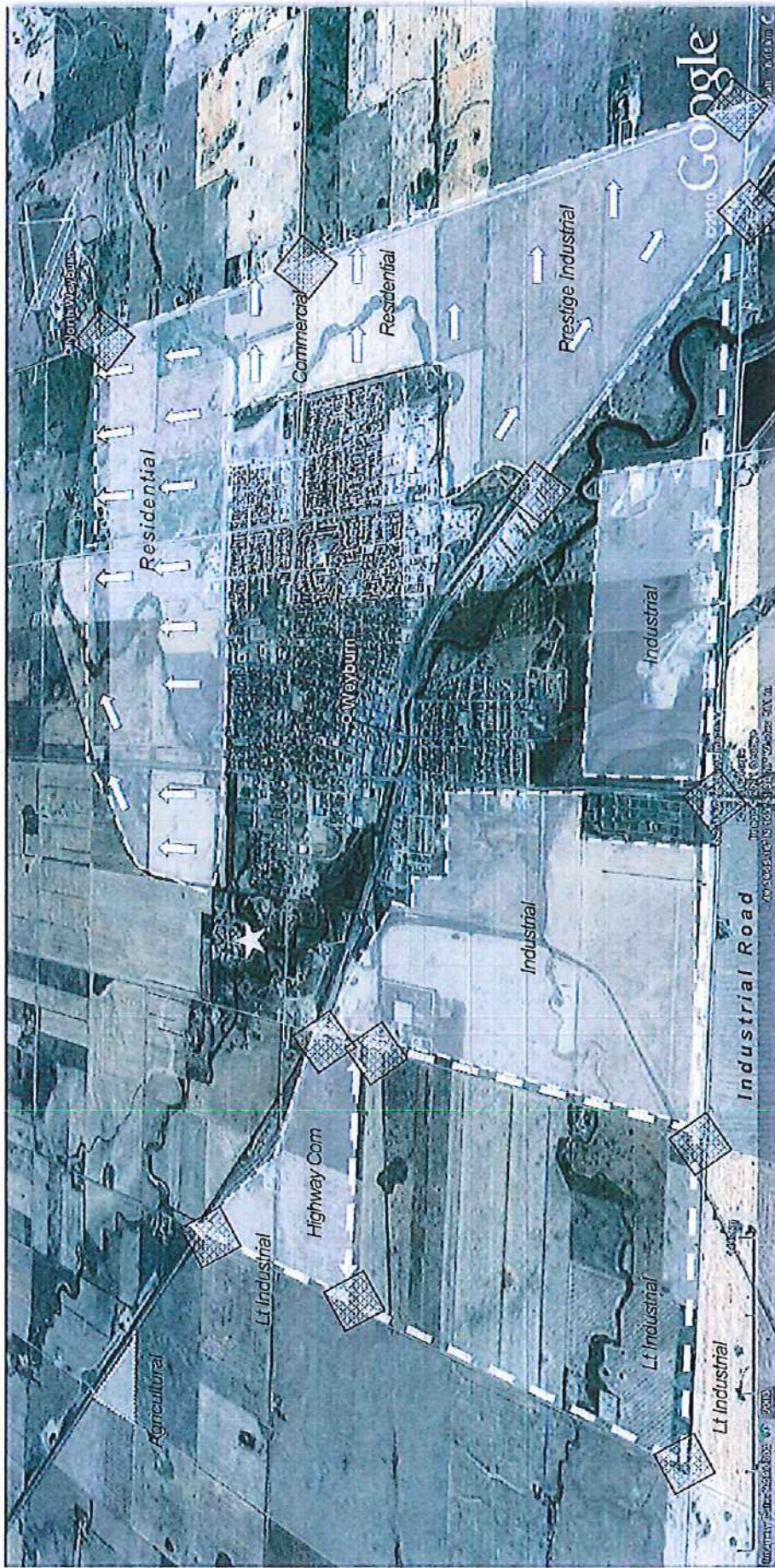
- Long-term growth area for Country Residential Development in the RM of Weyburn would be encouraged to develop north of North Weyburn
- Objective is to permit a known location for country residential development without constraining the long-term growth options of the City
- More study of the long-term servicing options for the City of Weyburn should be conducted in the medium term
- RM of Weyburn should be prudent in the review and approval on country residential development near the City of Weyburn
- Access to the low pressure water supply utility will be a source of control and direction in the development of country residential development

The Residential Development - Region North of City of Weyburn - Sector I as illustrated in Figure 10 represents two (2) long-term growth direction options for both traditional City of Weyburn residential development and a general area for the option of lower density country residential development.

- The recommended long-term growth sector for the City of Weyburn includes Section 33, 34, N1/2 of Sections 27 and 28 and NE Section 29. Estimated infrastructure requirements to the "City Standard" level of services would include four (4) water reservoirs with one required in the very near future. Four (4) sewage lift stations with storage would be required to service this 2,080 acre sector. Water distribution requirement would include 10.4 km of 400 mm water mains and 8 km of 300 mm water mains. Upgrades to the Weyburn water treatment plant would be required as the future population approaches 20,000 persons. An expansion to the Weyburn sewage lagoons when the current population approaches 13,000 persons and an upgrade to the sewage pumping station when the future population approaches 20,000 persons. The strategic long-term water source for Weyburn should also be examined - this might include consideration of raw water pipeline extension to a possible solution potash mine in the Milestone district. A preliminary summary of the engineering infrastructure is outlined in Appendix A, however, the investment in infrastructure will be substantial. The City of Weyburn should consider the creation of a "sinking fund" to accumulate capital for this long-term investment in future growth.
- The recommended long-term growth sector for the RM of Weyburn country residential development is located further to the north of Weyburn. In general, it is preferred that country residential be allocated to one specific sector so as not to interfere with established commercial farming operations. In addition, it is more cost effective and more sustainable for the RM of Weyburn to provide country residential services to one sector versus several scattered sectors. The estimated infrastructure requirements for the "RM Standard" level of services would include low pressure water lines, gravel roads, limited street lighting and sewage pump-out vaults. Newer technologies may be found for individual waste water treatment in the future. It is contemplated the country residential sector would accommodate between 270 and 290 residential dwelling units over the long-term. A preliminary summary of the engineering infrastructure is outlined in Appendix A.

These long-term residential growth sectors are located within the RM of Weyburn. Over the medium term the RM of Weyburn and the City of Weyburn should coordinate planning and development decisions in these two sectors so as not to compromise longer-term land development options. The development of the City of Weyburn lands will involve very substantial amounts of capital investment from both the City and private land developers. This is a normal requirement but this reality needs to be recognized in the short-term and carried forward into the long-term strategic planning and budgeting of the City.

Figure 11 General Weyburn District - Recommended Long-term Direction of Growth Sectors



Estimated and recommended long-term growth for the City of Weyburn - subject to their Official Community Plan and provision of basic infrastructure

In discussions with the City of Weyburn, the RM of Weyburn and Highways & Transportation - should examine the medium-term option of a truck route

- this possible enhanced truck route would remove heavy traffic from the "bottle-neck" at Government Road and Highway 39
- heavy haul truck route would also move traffic out the floodplain and away from any temporary dyking and traffic re-directions - examine the possibility of twinning of Highway 39 from Regina to Estevan in the medium-term

The General Weyburn District - Recommended Long-term Direction of Growth Sectors is collectively illustrated in Figure 11. It presents a short, medium and long-term direction for residential, commercial and industrial growth sectors for the Study Area which includes both the City of Weyburn and the RM of Weyburn.

In general, commercial and industrial land development is proposed to be south of Highway 39. The exception is the extension of commercial development eastward along Highway 13. Residential development is proposed for the eastern and northern sectors of the Study Area with a small exception for the golf course on the Souris River.

General land use planning, concept plans for proposed sectors of development and then proposed plans of subdivision in a series of phases; *has be integrated with the realities of infrastructure servicing costs* based on sound civil engineering and supplanted with realistic financial servicing costs. Further specific study is recommended on a sector by sector basis to refine both land use concept plans and associated engineering infrastructure designs and phasings.

High service levels of infrastructure (City Standard) should evolve to be within the City of Weyburn limits. Conversely, lower level serviced land (RM Standard) should remain within the RM of Weyburn. This complimentary arrangement enables the Study Area to provide a wider range of land use options and costs and results in a more competitive "portfolio" of land for economic development.

It is recommended these general concepts be included in any update to the City of Weyburn Official Community Plan (circa 2004) and also in the RM of Weyburn Official Community Plan. Collectively, these policies should also be considered for any future District Official Community Plan.

Finally, the RM of Weyburn and the City of Weyburn, collectively, provide a relatively compact and developable land use pattern which presents good opportunity for economic development and an aesthetic and pleasing area to live and work.

Appendix A

Weyburn Regional Economic Plan - Engineering Review Data Tables

Associated Engineering - Regina

14 September 2011

Sector	Parcel	Land Use	Area (Ac)	Item	Developer Cost	Municipality Cost	Development Levy	Description/Notes
A-1	NE 19	HWY Commercial	115	City Standard*	\$11.5 M	\$3.3 M	\$4.6 M	Lift Station, force main, 300 mm water main replaces existing services to truck stop
	SW 30	HWY Commercial	70	City Standard*	\$7 M		\$2.8 M	
	NW 19	Light Industrial	160	RM Standard**		\$250K (water)	\$375 K	Cross Road's Development - 15 lots at \$25K
	SE 30	Agricultural	160	n/a	\$100 K	\$600K (sewer)	\$375 K	hookup fee for water (assume same for sewer)
	SW 25	Light Industrial	160	RM Standard**	\$8 M	\$50 K	n/a	Access Road
	NE 23	HWY Comm/CR	80	RM Standard**	\$2 M	\$50 K	\$750 K	Pump upgrade to rural system
								Prospect Fields (Option 2)
								Pump upgrade to rural system
A-2	NW 35	Ag Industrial	170	RM standard**	\$8.5 M		\$150 K	6 of a possible 9 connections
B	N1/2 17	Industrial (med)	260	City Standard*	\$26 M	\$5 M	\$10.4 M	Lift Station, force main, water main req'd
	S1/2 17	Industrial (Long)	240	City Standard*	\$24 M	\$5 M	\$9.6 M	Lift Station, force main, water main req'd
	N1/2 8	Industrial (Long)	320	RM Standard**	\$16 M	\$300 K	\$800 K	Upgrades required to rural water system
C	SW 16	Industrial	40	City Standard*	\$4 M	Included in B	\$1.6 M	
	SE 16	Industrial	0	RM Standard**	n/a	n/a	n/a	Already Developed
	N1/2 9	Industrial	320	RM Standard**	\$16 M	\$500 K	\$800 K	Upgrades required to rural water system
D	Sect 15	Prestige Comm.	560	City Standard*	\$56 M	\$10 M	\$22.4 M	Lift station, forcemain, watermain ext., new
	NW 11	Prestige Comm.	120	RM Standard**	\$6 M	\$250 K	\$300 K	storm outlet to creek to north
								Upgrades required to rural water system for
								12 users
	NW 2	Townhouse Res	5	RM Standard**	\$250 K	n/a	\$125 K	5 units on north side of golf course entrance
E	E1/2 22	Mixed Use	220	City Standard*	\$44 M	\$5 M	\$8.8 M	Lift station, force main, watermain ext., new
	Hwy 13	HWY Commercial	120	City Standard*	\$12 M	\$2 M	\$4.8 M	storm outlet to creek required
	SE 26	Country Res.	50	RM Standard**	\$150 K	n/a	\$75 K	5 units
	S1/2 29	Country Res.	280	RM Standard**	\$9 M	\$300 K	\$2.4 M	Stellar Homes, 95 units
	NW 35	Mixed Use	15	n/a	\$750 K	n/a	\$450 K	Assume 3 units /ac @ N. Weyburn
Resid.	Sect. 33, 34	Residential	2080	City Standard*	\$416 M	\$24 M	\$83.2 M	4 water reservoirs (one required asap)
	N1/2 27, 28					\$32 M		4 lift stations with storage
	NE 29					\$5.2 M		10.4 km of 400 mm water main
						\$3.2 M		8 km of 300 mm water main
						\$78.4 M ***		Upgrades to WTP after pop. reaches 20,000
						\$20 M		Expansion to lagoon required after population reaches 13,100 people
						\$10 M		Upgrades to sewage pump station population reaches 20,000 people
						\$150 K		septic receiving station
Resid.	Sect. 8,9,10	Country Res.	2880	RM Standard**	\$72 M	\$5 M	\$7.2 M	288 Users
	S1/2 15,16, 17							

Notes: * water and sewer to be as per City of Weyburn's standards including paved streets with concrete curb, gutter, sidewalk.

** water and sewer to be as per RM of Weyburn's standards including low pressure water, septic tank sewer and gravel road.

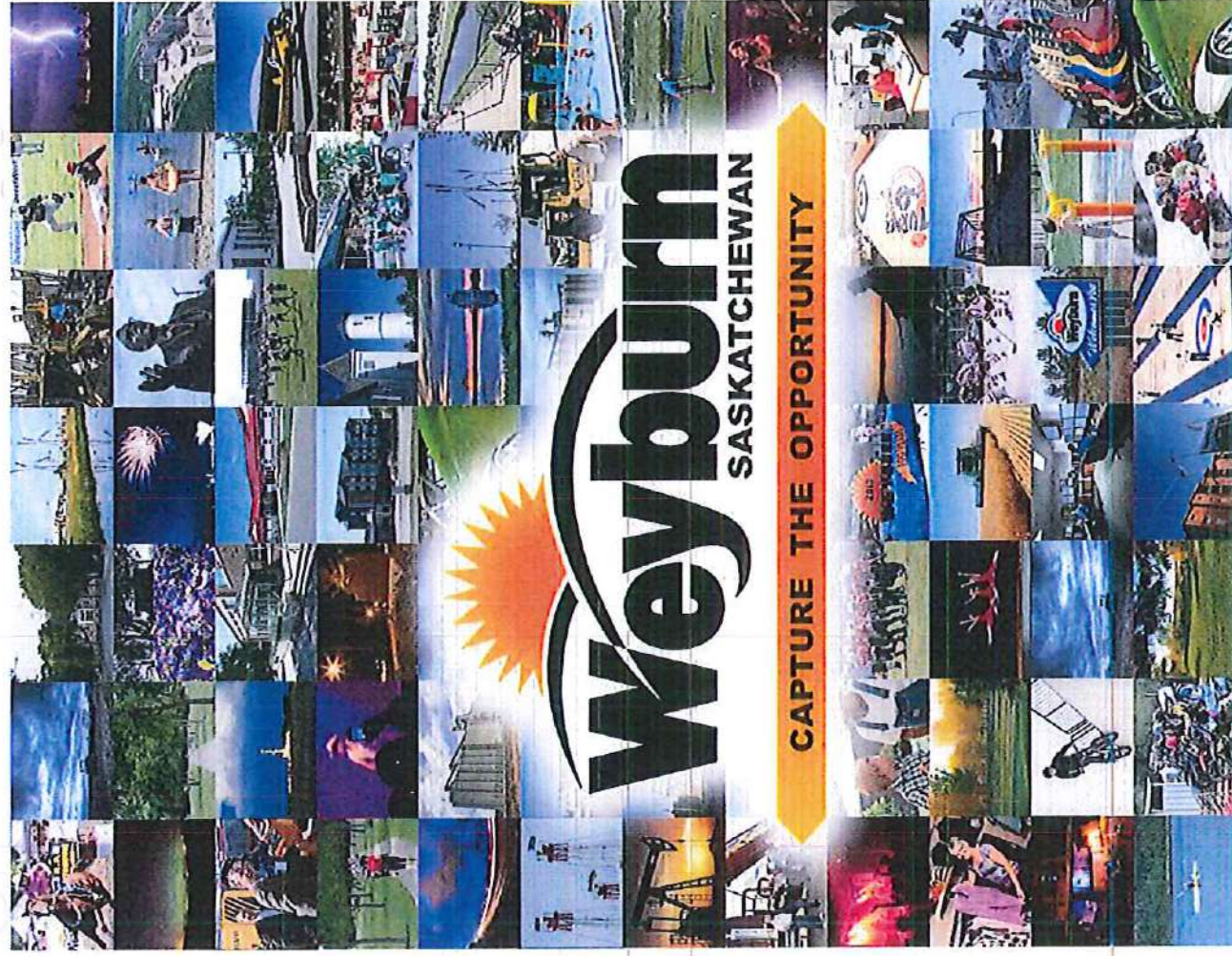
*** Estimate taken from Stantec's WSA report. No allowance for new raw water supply.

Appendix F: Revenue Sharing Agreement Examples

Appendix F: Southeast Regional Economic Development Authority Annual Report

Southeast Regional Economic
Development Authority

Annual Report **2013**

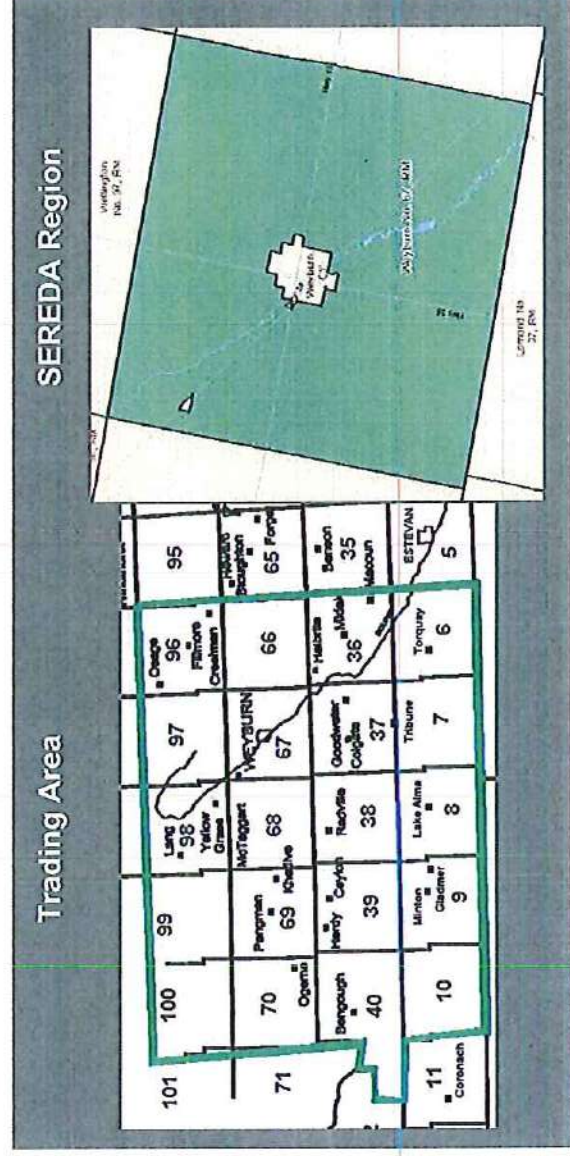


Economic Development

Economic development generally refers to the sustained, concerted actions of policymakers and communities that advance the standard of living and economic health of a specific area. Economic development differs from economic growth. Whereas economic development is a policy intervention endeavor with aims of economic and social well-being of people, economic growth is a phenomenon of market productivity and rise in GDP – a result of economic development.

The purpose of SEREDA is to facilitate economic development, including tourism, by identifying needs, coordinating resources and developing partnerships.

At this time, the South East Regional Economic Development Authority represents 2 municipalities: The City of Weyburn and the Rural Municipality of Weyburn #67. SEREDA considers the Weyburn trading area to be Census Division 2 with a population of 22,266.



SEREDA

What we do

Business Attraction

Retention & Expansion

SEREDA acts as a single point of contact for new investment interests for the Region and facilitates key connections for new business. SEREDA offers business development information along with guidance and assistance with site selection. Through collaboration with stakeholders SEREDA identifies barriers to growth and development to ensure a competitive business climate with a focus on key business sectors. SEREDA acts as a participant in many regional partnerships serving the business community.

Research & Information Services

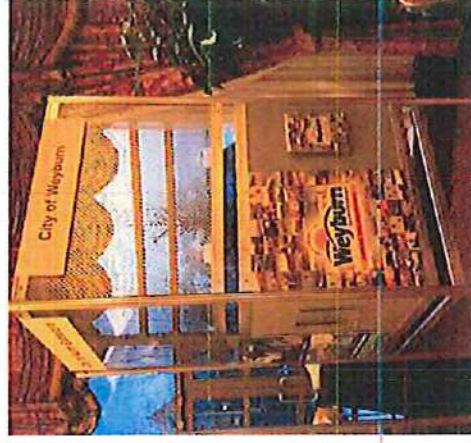
SEREDA engages in research on data for the Region including community statistics, data on key business sectors and economic reports and forecasts. SEREDA maintains an inventory of statistical data for distribution to investors and promotion of the region. SEREDA assists companies with the development of a business case to invest in the Weyburn region.

Promotions & Communication

SEREDA promotes the advantages of Weyburn as the best place to live, work, and prosper through the development of a comprehensive marketing strategy. SEREDA works to ensure that Weyburn is being actively marketed through various media in keeping with current trends. SEREDA maintains an up to date collection of marketing materials for internal use as well as for distribution to relevant stakeholders.

Tourism support & development

SEREDA works with local tourism service providers and stakeholders to support and promote tourism products in the region and further development of the industry as an economic driver. SEREDA promotes the Weyburn region as a destination and supports the development of secondary activities for visitors.



These are the building blocks for growth. It is critical that growth takes into account all facets of growth including personal wealth and opportunity.

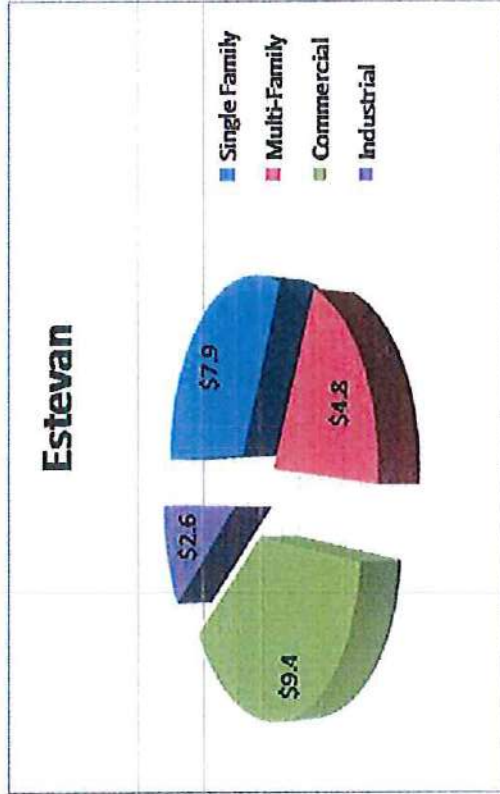
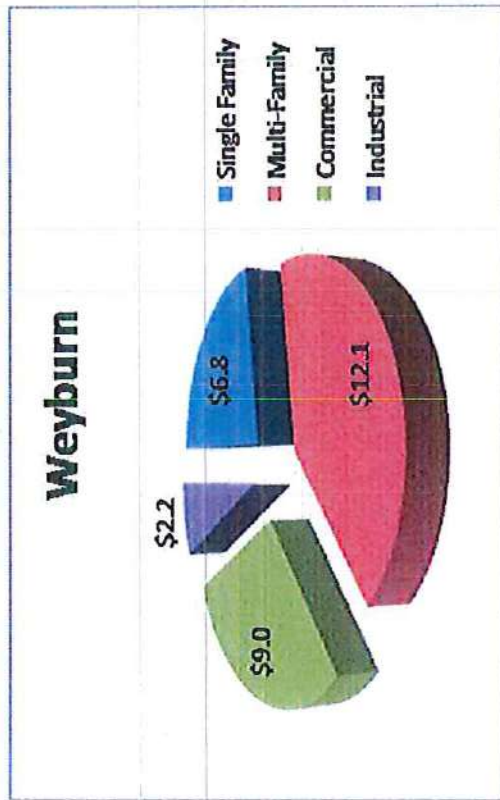
The Growth Continues

Keeping a steady pace has always been one of Weyburn's strongest characteristics. Energy sector "booms" may appear higher in some communities and lower in others, but the economy in Weyburn is very stable. Putting attention on "white collar" jobs softens the blows of dips in the economy that are often times devastating to "blue collar" communities. Although much of the intense drilling in the oilfield has subsided and oil exploration companies are now "in-fill" drilling, Weyburn is still building and in some areas, outpacing it's neighbors. Investors see Weyburn's proximity to Regina as an asset. With reference to projects such as the Western Potash mine and the Global Transportation Hub, Weyburn is a part of that infrastructure.



It is to be noted, that when the Boundary upgrade in Estevan is completed in 2014/15, it is estimated that 300-600 jobs will also be done in Estevan. This is the difference in the two economies. Weyburn has played home to many head offices - the Health Region to Crescent Point - and SEREDA firmly believes that these jobs are far superior to temporary labor positions.

Construction Statistics January - September 2013



Values in Millions of Dollars

Total Residential Units Created In 2013 (to September 30)

Weyburn: 83

Estevan: 80

Total Value of All Permits Issued In 2013 (to September 30)

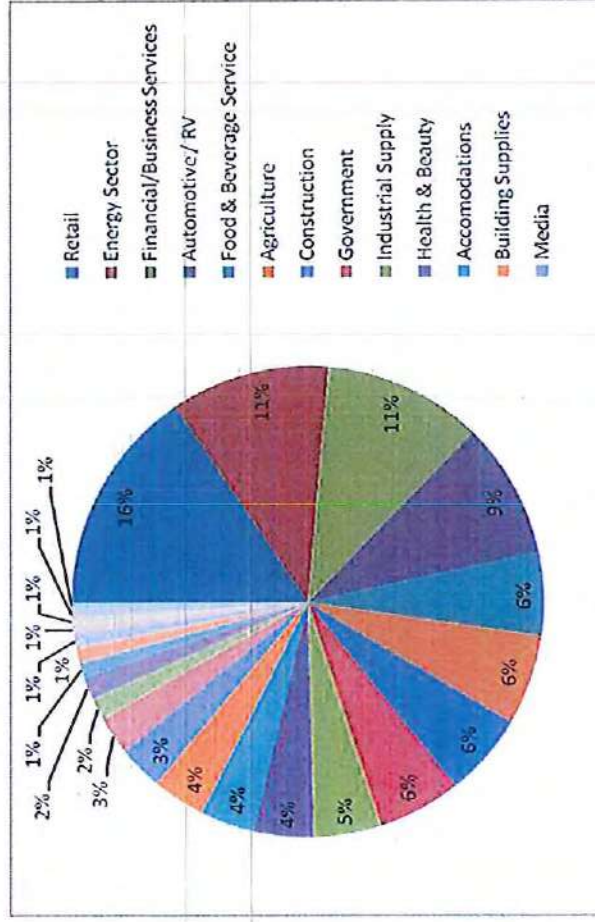
Weyburn: \$31,150,612

Estevan: \$26,576,403

A Picture of Weyburn's Business Community

Weyburn's business community is vibrant and growing. More businesses are locating in and around Weyburn. In partnership with the Weyburn Chamber of Commerce, a cross section of sectors of industry that are represented by Weyburn's business community can be identified.

Current Business Community



Business Licenses Issued in
2013

358

Increase From 2012

6.5%

Retail Trends

In 2012 SEREDA contracted Nugru Business Consulting to examine the retail landscape of the community. The study provided data that measures the potential for retail opportunities in Weyburn. From the report, direction was set with regards to the retail attraction efforts for SEREDA in 2013.

The Nugru report identified several underperforming retail categories where money is likely being spent and captured elsewhere.

Retail Category	Market Gap	Market Gap Projections 2021
Supermarkets	\$19.2 M	\$28.8M
Small Niche/Sporting Goods	\$3.2M	\$4.8M
Clothing	\$2.1M	\$3.05M
New/Used Vehicles	\$23.3M	\$32.7M
Fuel Stations	\$18.4M	\$27.6M
Home Electronics/Appliances	\$1.8M	\$2.7M



Not all of the retail sales in these sectors occur outside of

Weyburn as some will be absorbed by strong performing department stores. It is estimated that in Weyburn \$4 in every \$10 are spent in the department store sector. At 40% this is easily the highest of all comparative cities in the Nugru study.

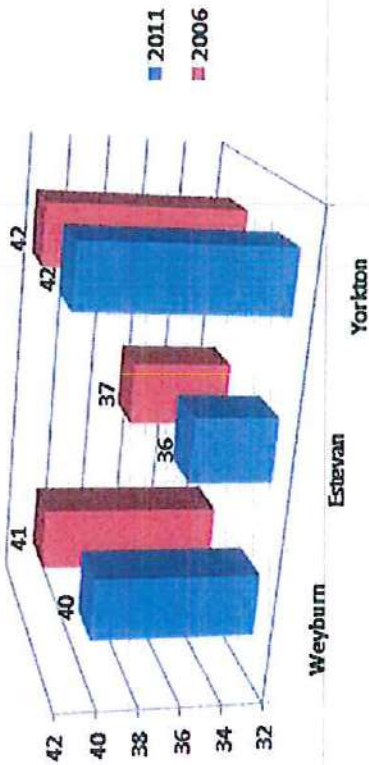
Current Annual Retail
Expenditures
\$260 million

Retail spending is forecast to increase by 50% by 2021, bringing the current retail market to \$390 M in sales. The current market gap of \$78.8 M represents the additional revenue immediately available to capture for new and expanding business. By 2021 the potential for new and expanding business is estimated at \$118.2 M in additional retail sales opportunity.

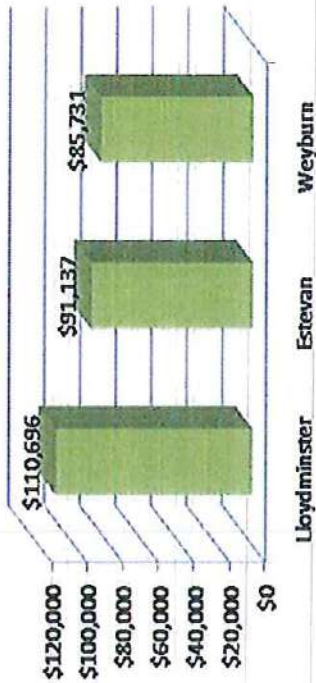
Most National retailers have proprietary software and models that they use to determine whether or not a location will be viable. The key indicators in the formula are population density, household income, and demographics. Retailers need to understand growth, wealth, and population statistics. Non-retail is looking for quality of life that will help them attract new employees to the community. This balance is being achieved in Weyburn right now.



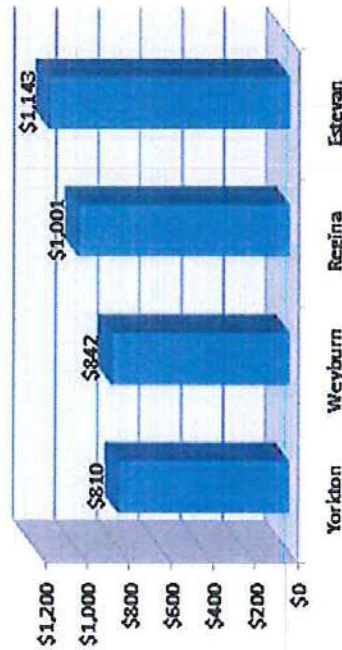
Median Age of Residents



Saskatchewan's Top 3 Cities by Household Income

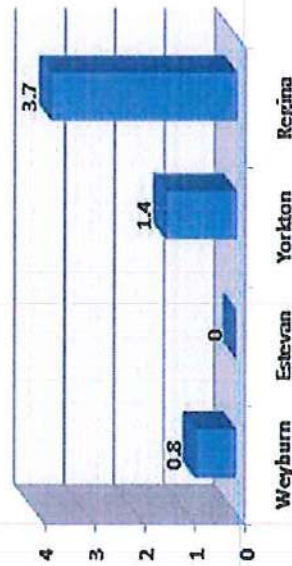


Average Monthly Rent



* Rental Figures taken from the Spring 2013 CMHC Rental Market Report

Apartment Vacancy Rate (%)



These figures illustrate just how well Weyburn is keeping up with the demand. Although our population is increasing faster, our Vacancy rates are sound and our rents are competitive. This is a very desirable set of conditions for developers and for businesses who are considering the task of moving new employees into the community.

Appendix G: Socio-Economic Profile

Appendix H: Socio-Economic Profile

WEYBURN DISTRICT PLANNING COMMISSION PROFILE
including Rural Municipality of Weyburn #67 and City of Weyburn

Selected Socio-Economic Profile Data for Study Area
2006 Canada Census

Prepared by DGMercer Eco Research
Audit Sphere
February 2011

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INTRODUCTION

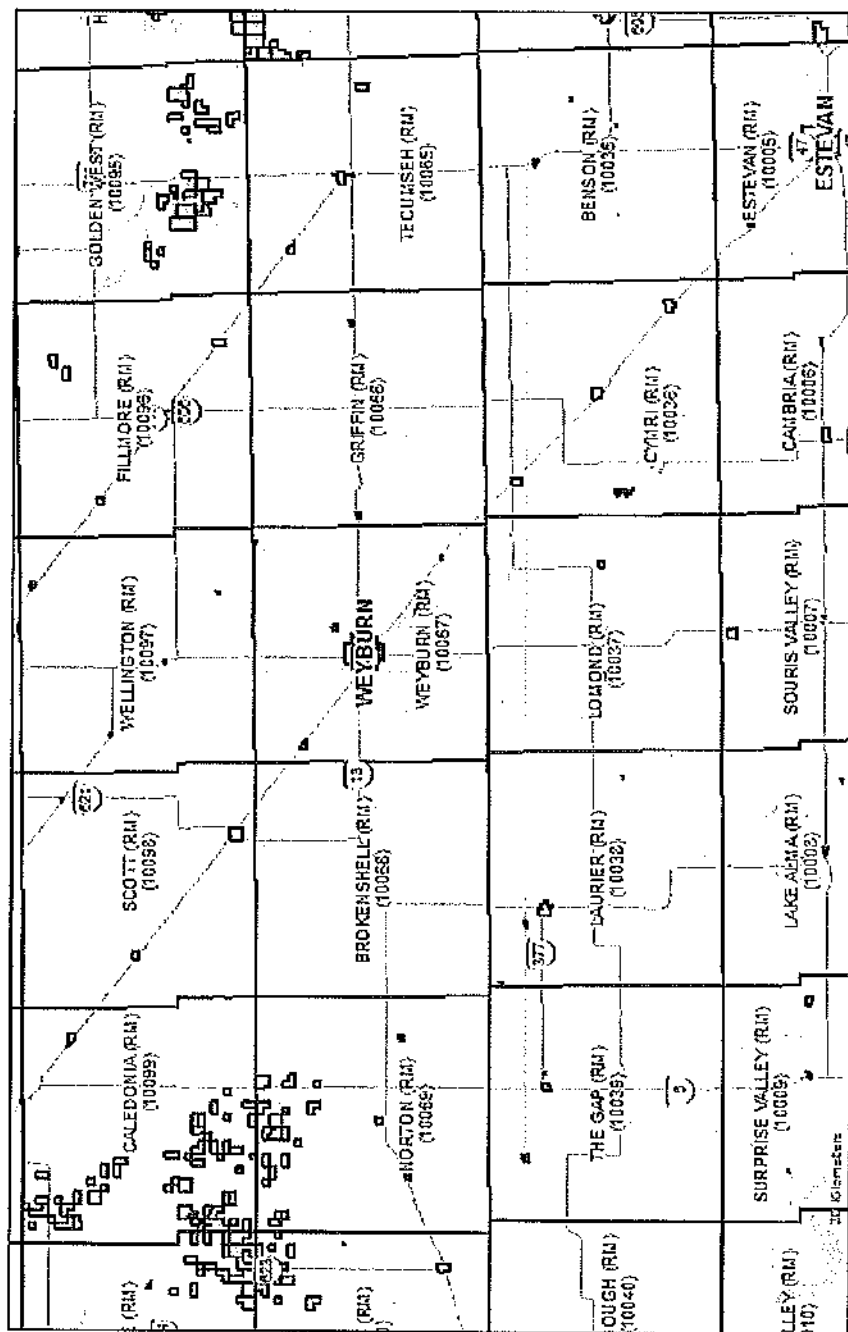
The following statistical profile information is from the 2006 Census as collected by Statistics Canada and is intended to provide a general socio-economic background for the research and development for the Weyburn District Planning Commission. Socio-economic profiles for a Study Area can provide insight into the characteristics of the general population and assist in the identification of key issues and in the development of appropriate municipal planning policy.

The Study Area includes the Rural Municipality of Weyburn No 67 and the City of Weyburn. In addition, the recent Saskatchewan Hospital Services Plan "Covered Population" statistics has also been added to extend population estimates to June 2010 and this information is included in Appendix B.

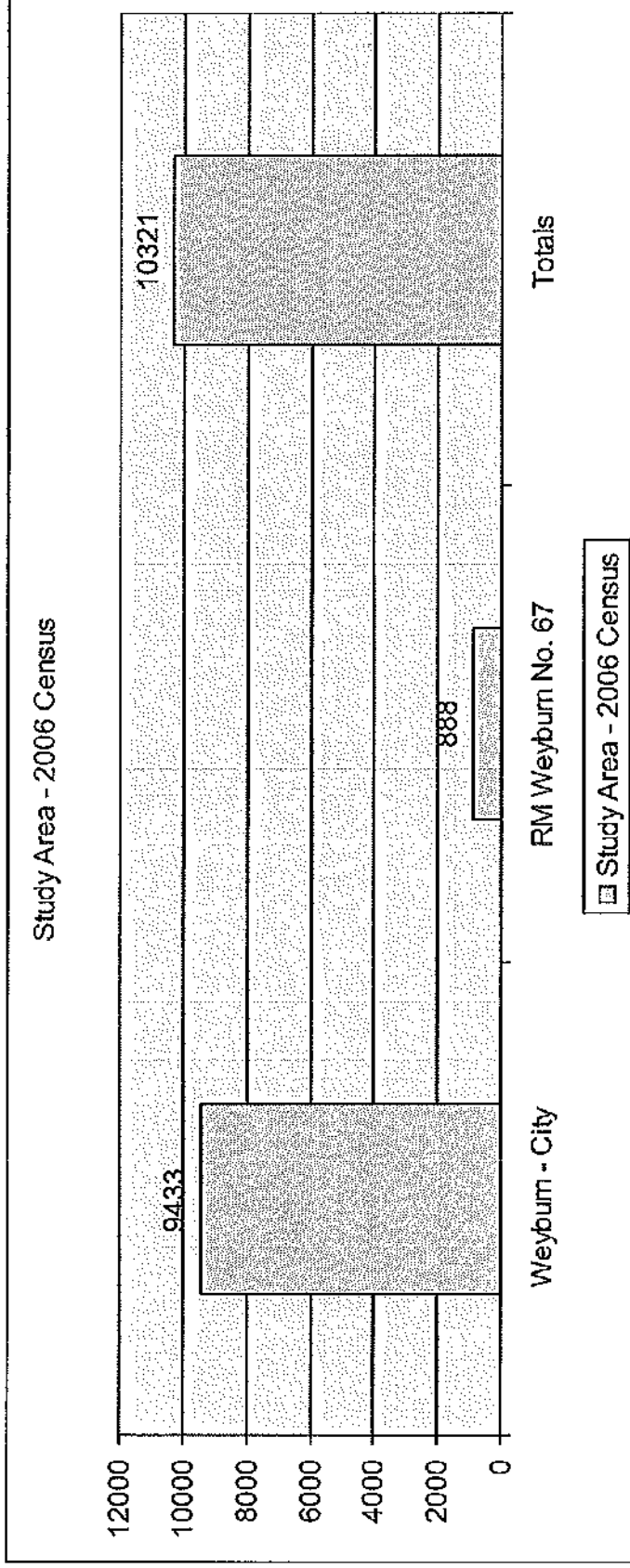
The Study Area encompasses a region of 827.5 square kilometres with a total population of 10,321 persons according to the 2006 Canada Census. Since 2006, significant economic development in both Saskatchewan and the Weyburn region has occurred and should have a significant and positive effect on population numbers, income and housing. Unfortunately, little statistical current information is immediately available - the 2006 Census still remains the best source of comprehensive data. Further, the 2010 Saskatchewan Hospital Services Plan (SHSP) population statistics for the Study Area present values that are significantly higher (*1,846 persons*) than the 2006 Census and should be researched more fully. Comments to this effect are included in the body of this research document and in Appendix B.

The following profile is intended to highlight both characteristics of the Study Area and to stimulate thought and debate leading to policy development to prevent, promote and/or modify issues and events within the jurisdiction of the Weyburn District Planning Commission. Local businesses and economic development officers may also wish to use this collective summary in general market studies and business promotion - these panels can be used for public presentations and on websites.

The Weyburn District Planning Commission profile report presents several positive social-economic indicators including income levels, housing condition, a wider range of housing options than many small cities and a diversified labour force.



MUNICIPAL POPULATIONS — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS

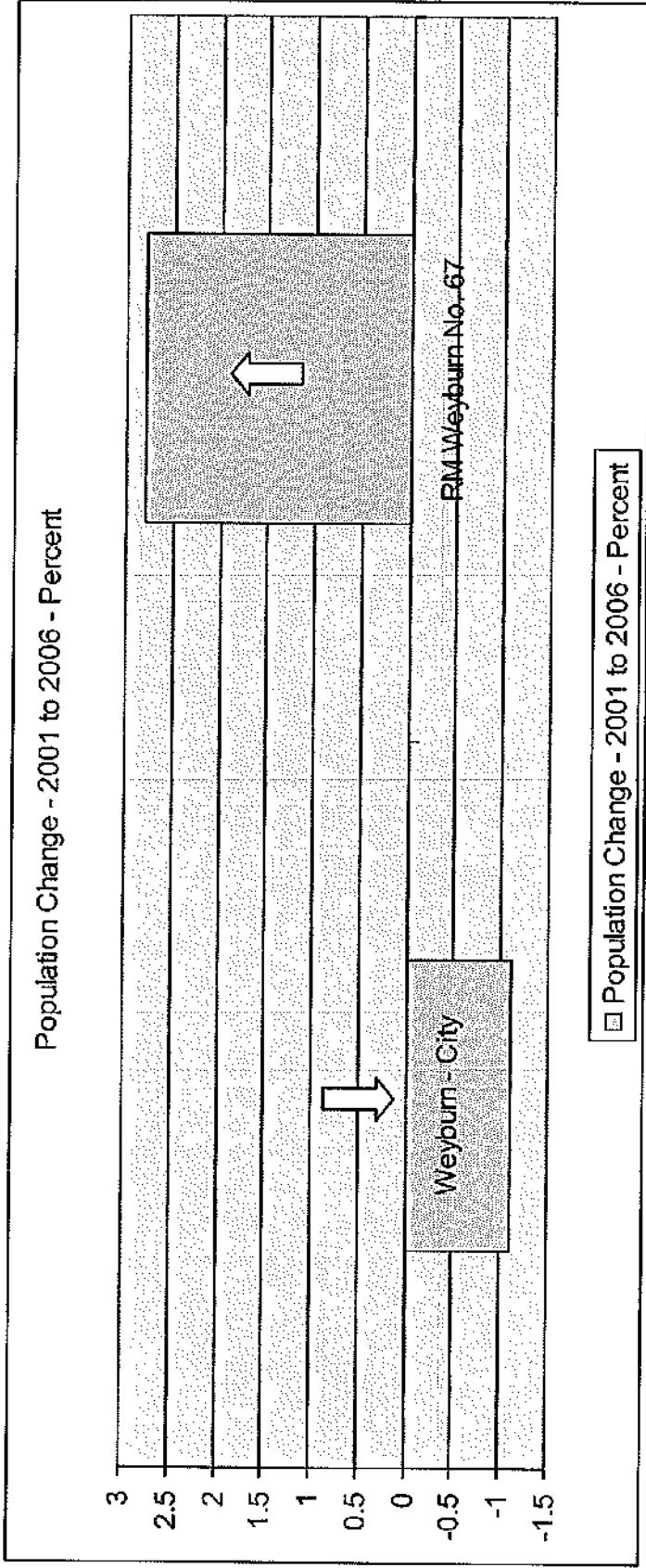


- The 2006 Study Area urban and rural municipal population was 10,321 persons
- The City of Weyburn accounts for 91 percent of the total Study Area population with 888 persons
- The RM of Weyburn, while less than 10 percent of the Study Area - did experience significant growth during 2001-2006
- Study Area includes the City of Weyburn and the Rural Municipality of Weyburn #67

Note: Appendix B, 2010 Saskatchewan Covered Population Numbers lists the City of Weyburn at 11,782 persons and RM of Weyburn at 385 persons for a total of 12,167 persons for 2011. This is a difference of 1,846 persons. There are normal differences between Census and SHSP data, however, this difference strongly suggests significant population growth and should be researched more fully.

The under-counting for the RM of Weyburn is most likely related to a large number of RM residents having a post office box in Weyburn and being counted there.

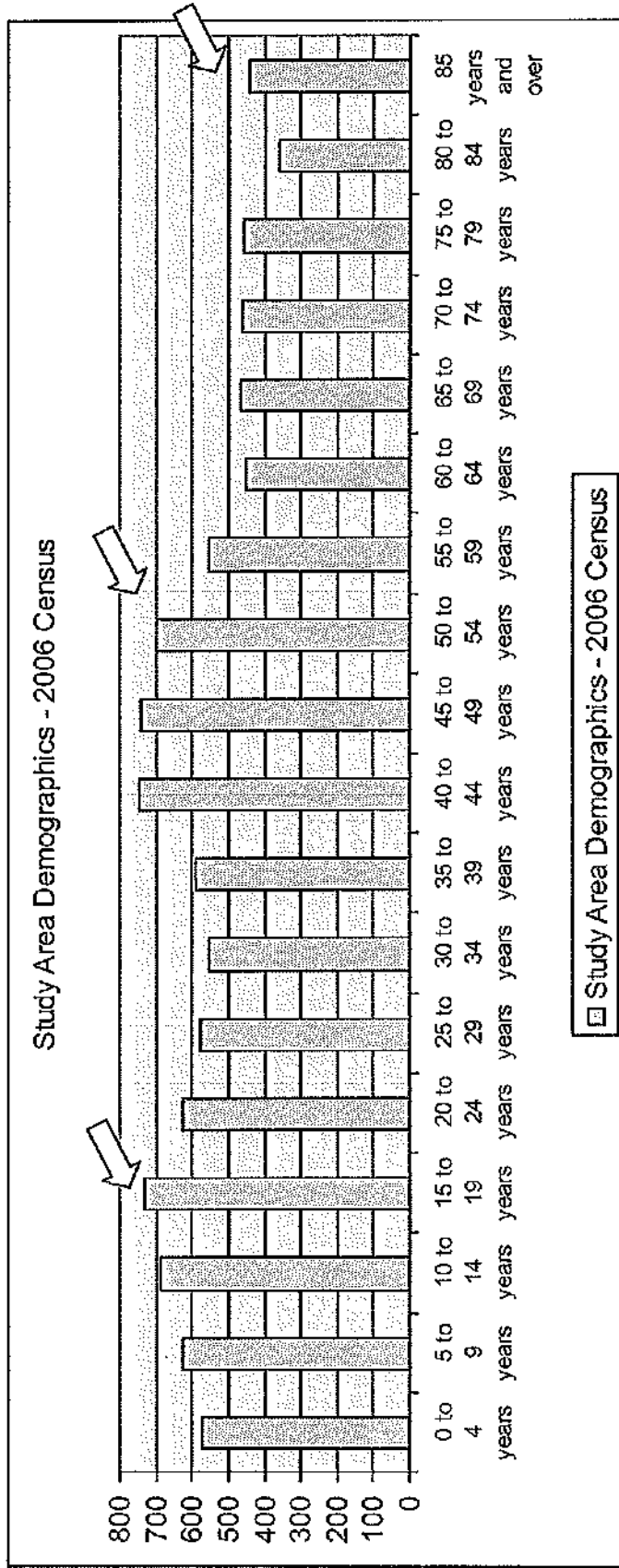
POPULATION CHANGE BY PERCENT – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS



- The City of Weyburn incurred a 1.1% population decline (101 persons) during the 2001-2006 period
- RM of Weyburn experienced a 2.8% in population increase (24 persons) between 2001 and 2006
- The post-2006 period records a population increase of (1,846) persons in the Study Area using SHSP data
- However, recent economic development across Saskatchewan has reversed population decline in many municipalities

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DEMOGRAPHIC PROFILE – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS

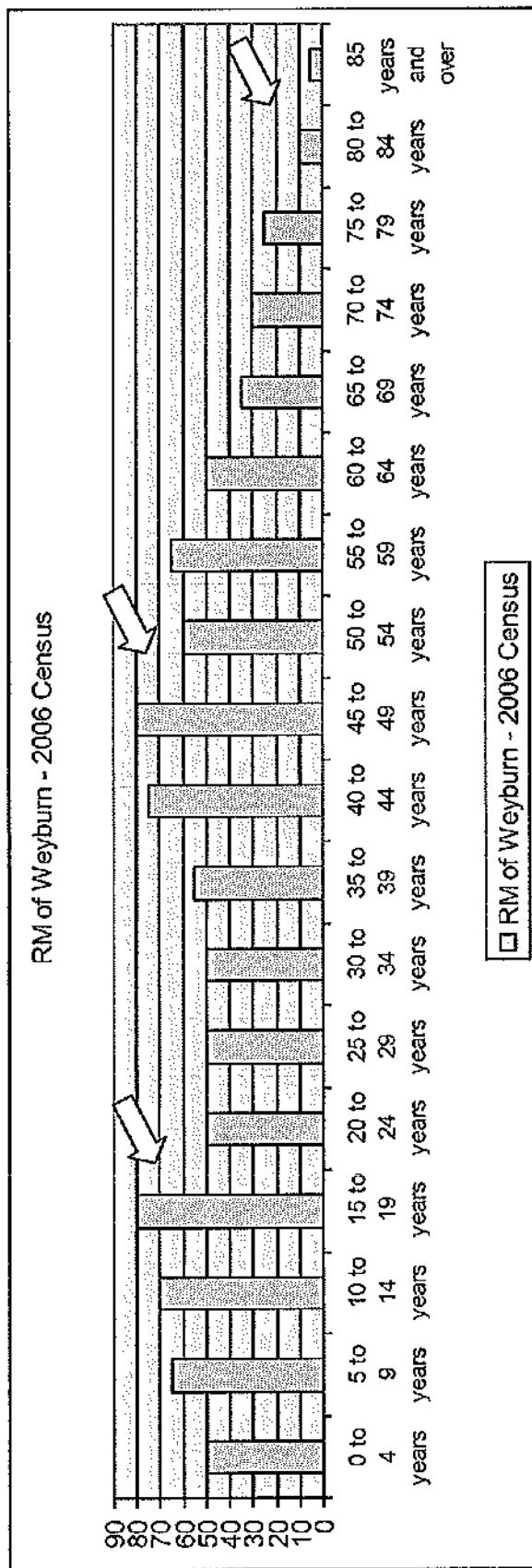


- Strong population segment is in the prime income earning years of 40-54 years of age
- Largest population age cohort in the 0-19 year age cohort, however, a decline in the youngest age group 0-9 years
- Lower number of persons in the 25-39 year age cohort - out-migration for education and jobs during this period?
- Relatively small "early-retirement" population - somewhat unusual for the smaller cities and towns in Saskatchewan
- Significant labour force retirement within next 10-15 years - will people retire in Weyburn or move?
- Moderate number of persons over 69 years of age - less than expected for a major regional centre

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The under-counting for the RM of Weyburn is most likely related to a large number of RM residents having a post office box in

DEMOGRAPHIC PROFILE — RM OF WEYBURN — 2006 CENSUS

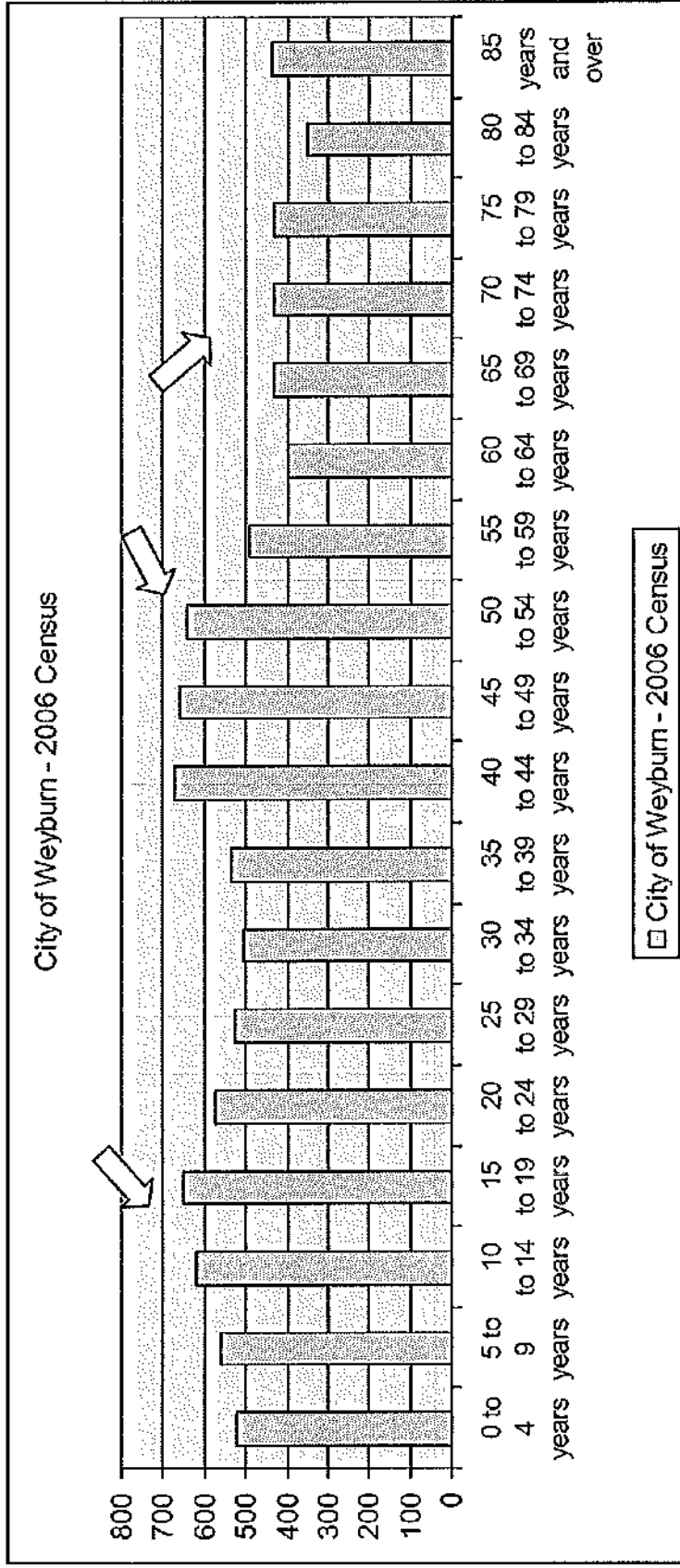


- RM of Weyburn profile - similar to the City of Weyburn - uncommon but positive feature in Saskatchewan
- Strong age cohort in the prime income earning years of 35-59 years of age - younger than expected for an RM
- Strong youth population in the 0-19 year age cohort - positive and unusual for an RM in Saskatchewan
- Lower number of persons in the 20-34 year age cohort: migration, education and waiting to farm?
- Population over 70 years is smaller than normal - migration into Weyburn from the farm is most logical reason
- RM of Weyburn population displays similar characteristics to "bedroom" communities around larger cities

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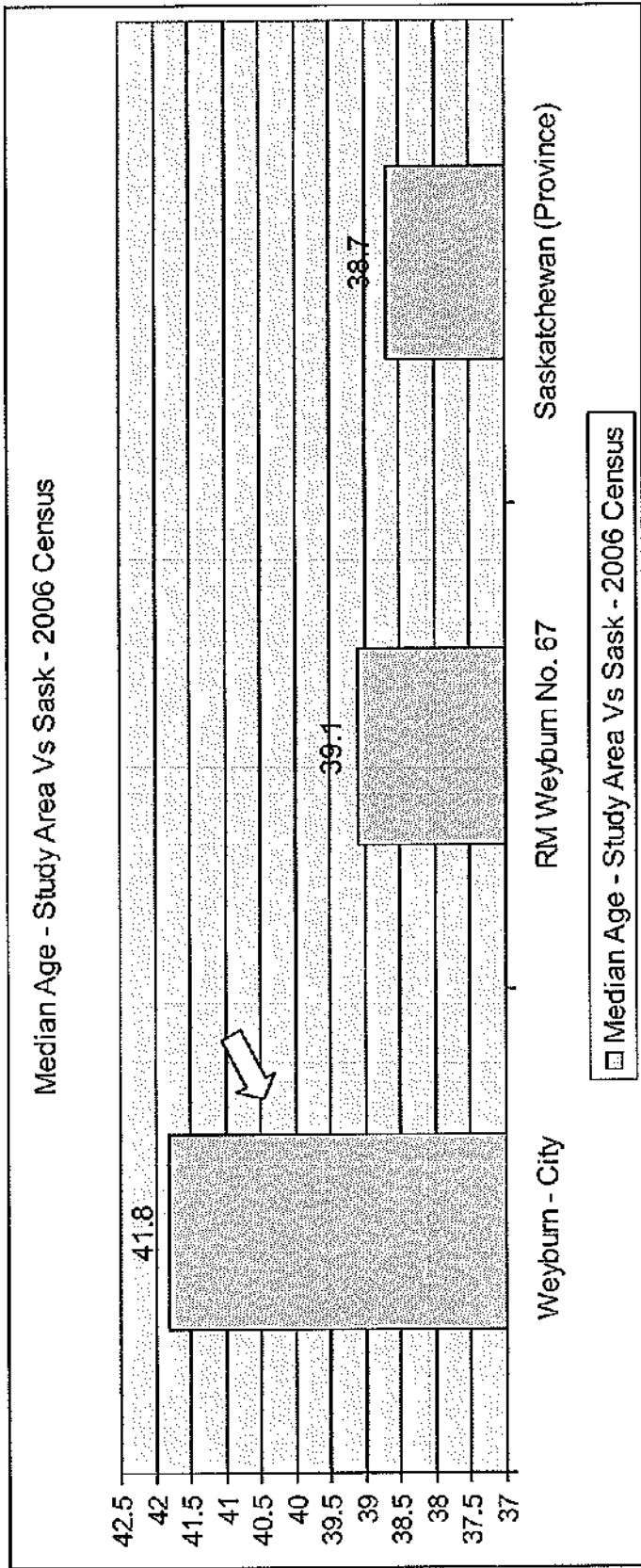
DEMOGRAPHIC PROFILE — CITY OF WEYBURN — 2006 CENSUS



- Large population age cohort in the prime income earning years of 40-54 years of age
- Strong youth population in 0-19 year age cohort with decline in numbers for younger age cohorts - watch enrolments
- Lower number of persons in the 20-24 year age cohort: migration for jobs and education and lack of new job creation?
- Growing aged population; normal community aging and possible in-migration of seniors from the greater region
- Pressure for more senior's housing over the next 15 years
- Lower than expected number in the 60-74 age cohort - may require more research
- Post 2006 economic development era may introduce changes in demographic profile - more research

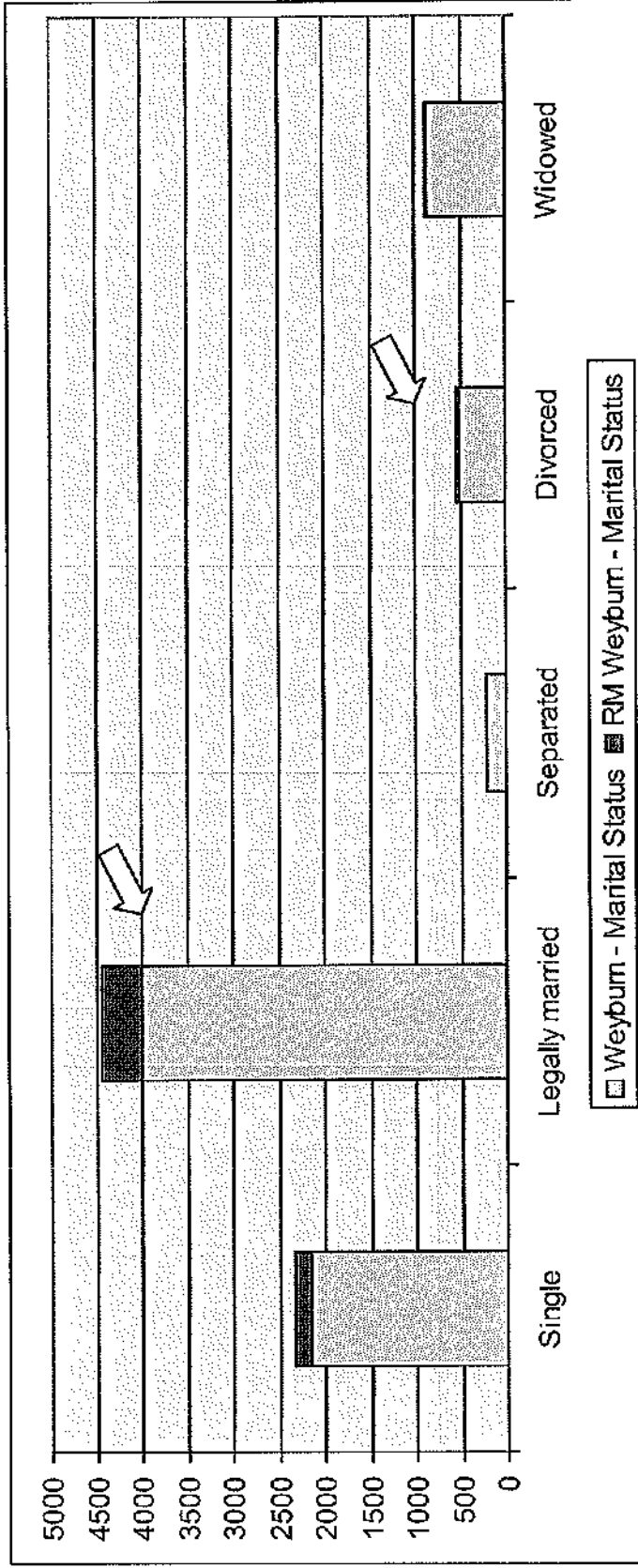
Note: Appendix B, 2010 Saskatchewan Covered Population Numbers lists the City of Weyburn at 11,782 persons and RM of Weyburn at 385 persons for a total of 12,167 persons for 2011. This is a difference of 1,846 persons. There are normal differences between Census and SHSP data, however, this difference strongly suggests significant population growth and should be researched more fully.

MEDIAN AGE OF POPULATIONS – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS



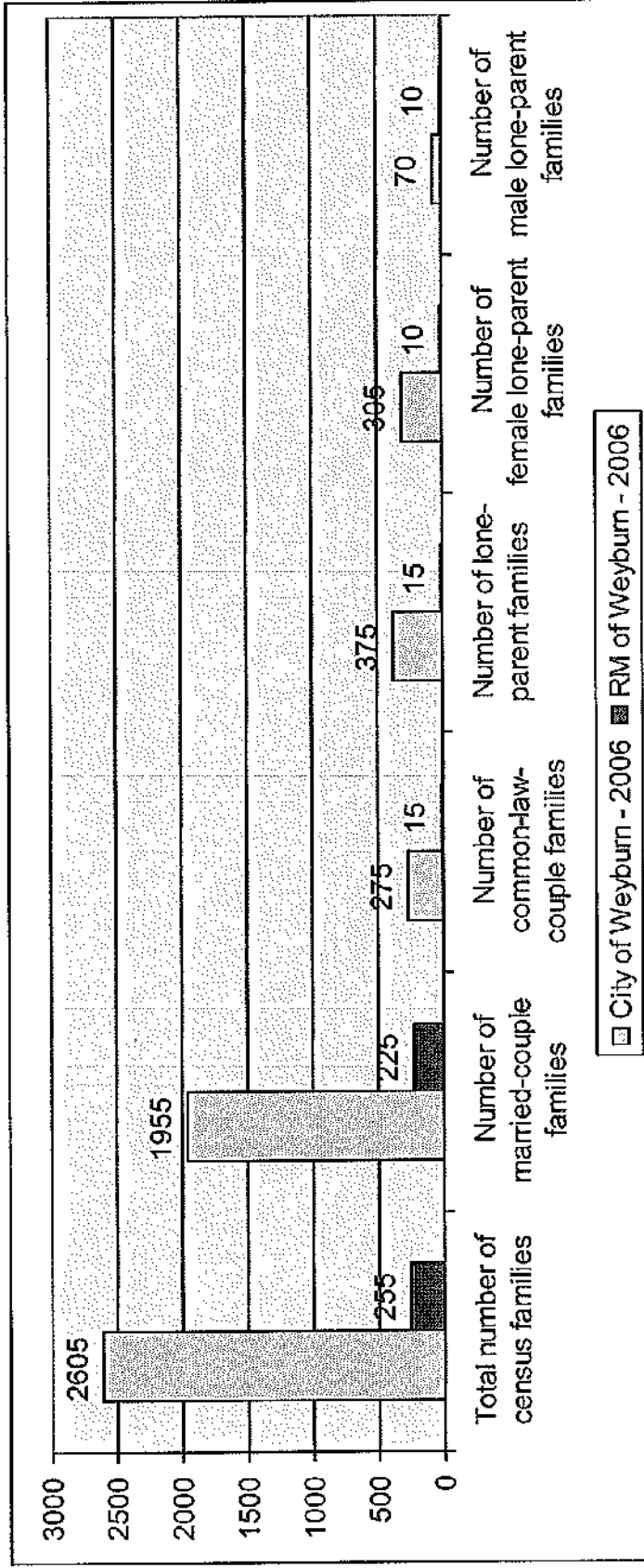
- Median age for City of Weyburn – 3 years older than provincial median of 38.7 years - indicates aging population
- Lower median age in RM of Weyburn indicative of larger number of persons under 19 years and fewer people over 55 years
- Most likely in-migration of seniors from the RM of Weyburn and from the greater district to the City of Weyburn
- Possible future requirement for more senior housing in the City of Weyburn over next 15-20 years

MARITAL STATUS — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



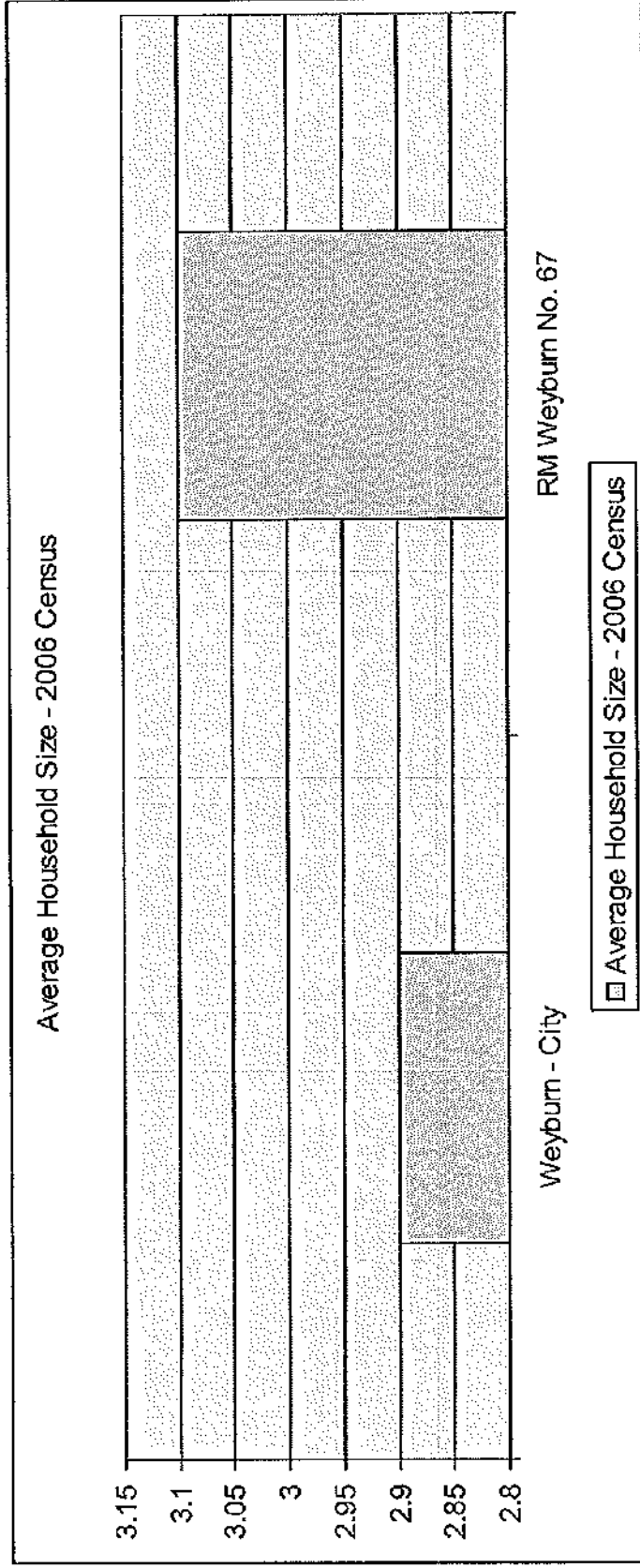
- Married households very predominate throughout Study Area - normal in rural and small town Saskatchewan
- Separated persons and divorced persons not significant in the RM of Weyburn
- Divorced person is slightly significant for the City of Weyburn
- Older widowed persons have moved to the City of Weyburn rather than stay in the rural district - age factor
- No significant changes are expected in marital status in the short-term

HOUSEHOLD COMPOSITION — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



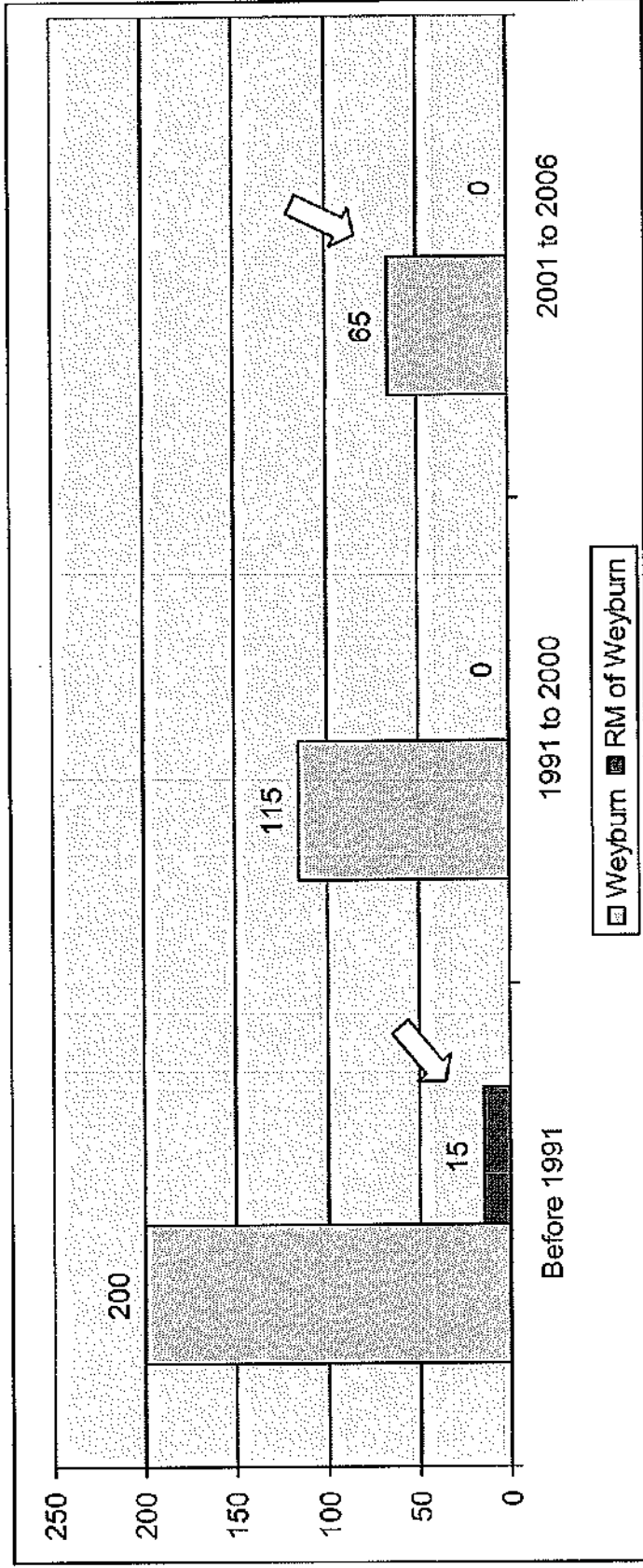
- Married households couple families predominate throughout Study Area - normal in "small town" Saskatchewan
- High ratio of married couples in RM of Weyburn - more common in both farming house households and commuters
- Common-law couples is lower than expected - not significant
- Lone-parent families in City of Weyburn - cause for mild concern owing to high number of female lone parents and poverty
- Male lone-parent families larger than expected in City of Weyburn

AVERAGE HOUSEHOLD SIZE — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



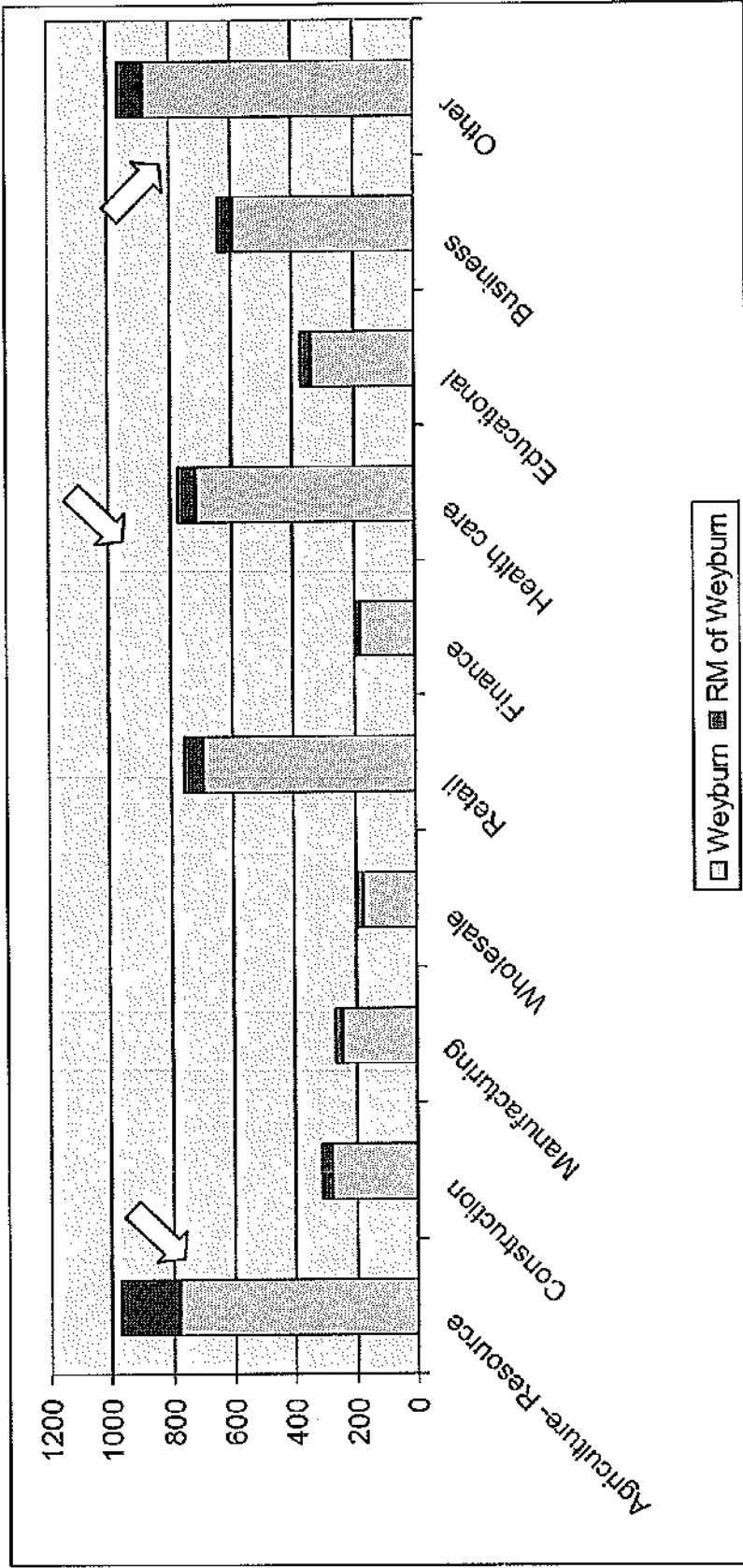
- RM of Weyburn has an average of 3.1 persons per dwelling (Provincial average is 2.9 persons)
- City of Weyburn average household size equal to Provincial average
- Household statistics for Study Area are within the normally expected range
- Household size will likely remain static for City of Weyburn and may begin to decline slowly for the RM of Weyburn
- Household size is often used in housing projections and in municipal sewer and water use estimates

IMMIGRATION — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



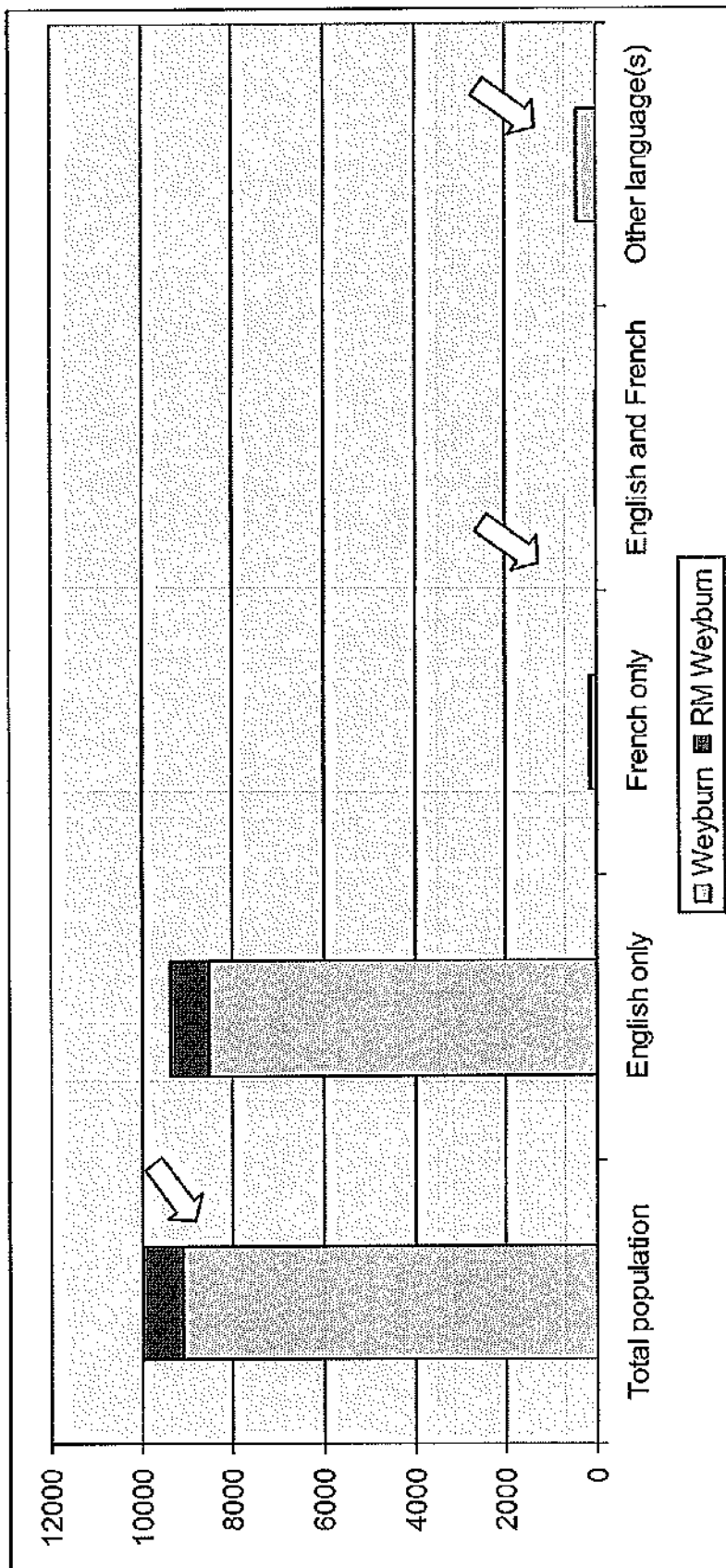
- Immigration into Study Area is very insignificant - Study Area has not experienced any post 1991 immigration
- Limited immigration into Study Area prior to 1991
- Possible oil and gas development in the region may result in some modest immigration but not likely
- Immigration not considered to be significant factor for population growth; in-migration from other areas more important

LABOUR FORCE OVER 15 YEARS – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS



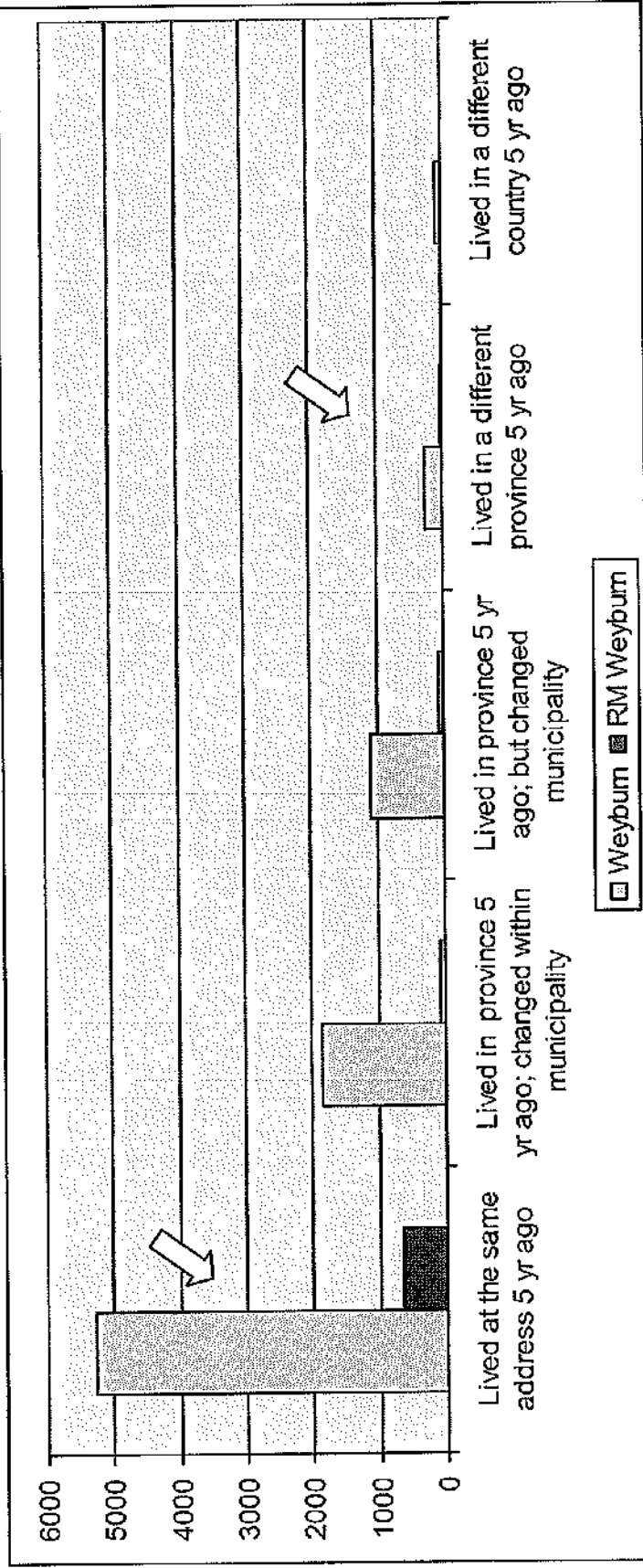
- Agriculture and resource-based oil exploration are the dominant employers in the Study Area
- Other labour force activities is a strong second - includes a wide range of categories
- Retail, wholesale, finance and business are associated with a local service centre
- Construction and Manufacturing present healthy numbers for Study Area
- Strong and stable labour force market characteristics for Study Area

LANGUAGES – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS



- Most residents of region are now third generation Canadians with English language being very dominant
- French and bilingual speakers is low - may be associated with both teachers and older residents from the region
- Other languages (Chinese and Filipino) may be both small immigrant population and long-time second generation residents
- Language profile unlikely to change - French only is expected to decline further over time

MIGRATION CHARACTERISTICS — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS

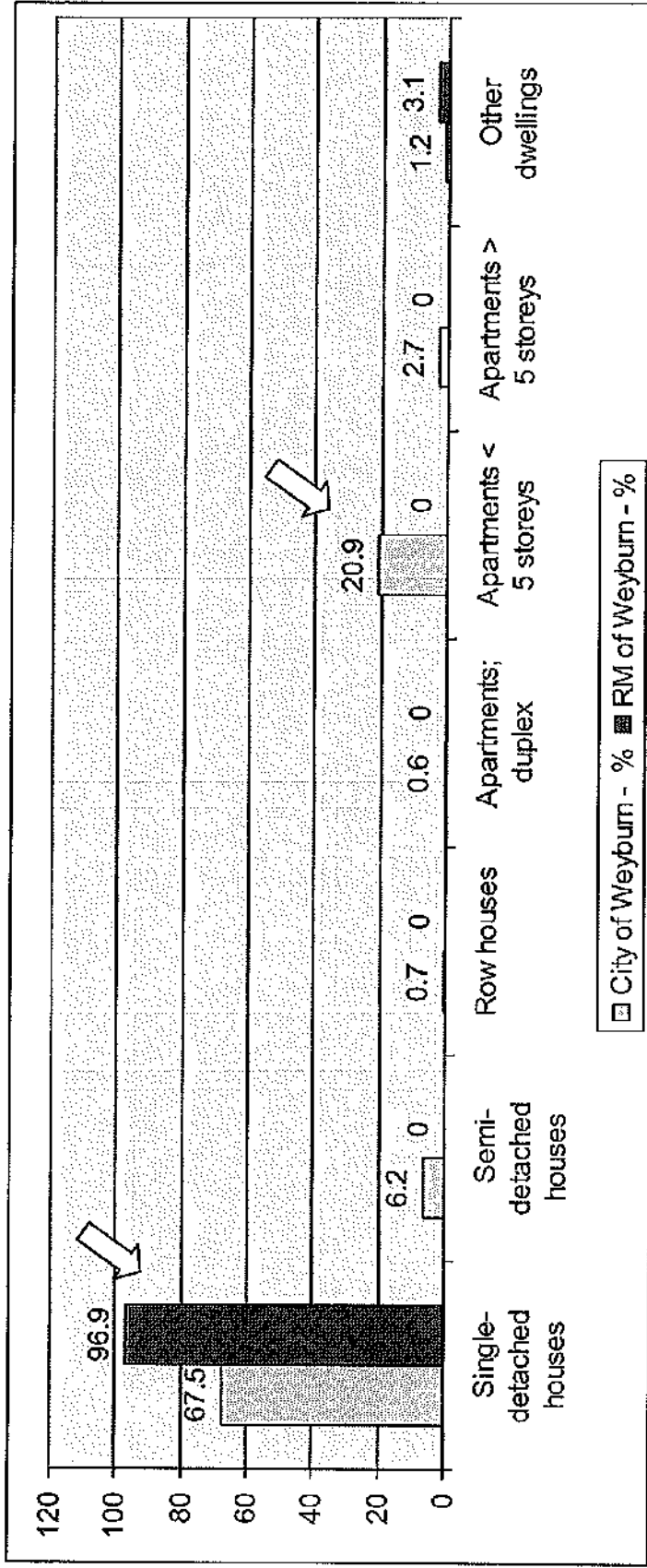


- Migration pattern for region is stable — modest percentage of both local and provincial origin between 2001 and 2006
- Very modest in-migration from elsewhere in province during 2001-2006 Census
- Expansion in oil and gas exploration in the region could have a significant impact on migration characteristics
- Post 2006 economic expansion should influence migration patterns for the Study Area - more research

Note: Appendix B, 2010 Saskatchewan Covered Population Numbers lists the City of Weyburn at 11,782 persons and RM of Weyburn at 385 persons for a total of 12,167 persons for 2011. This is a difference of 1,846 persons. There are normal differences between Census and SHSP data, however, this difference strongly suggests significant population growth and should be researched more fully.

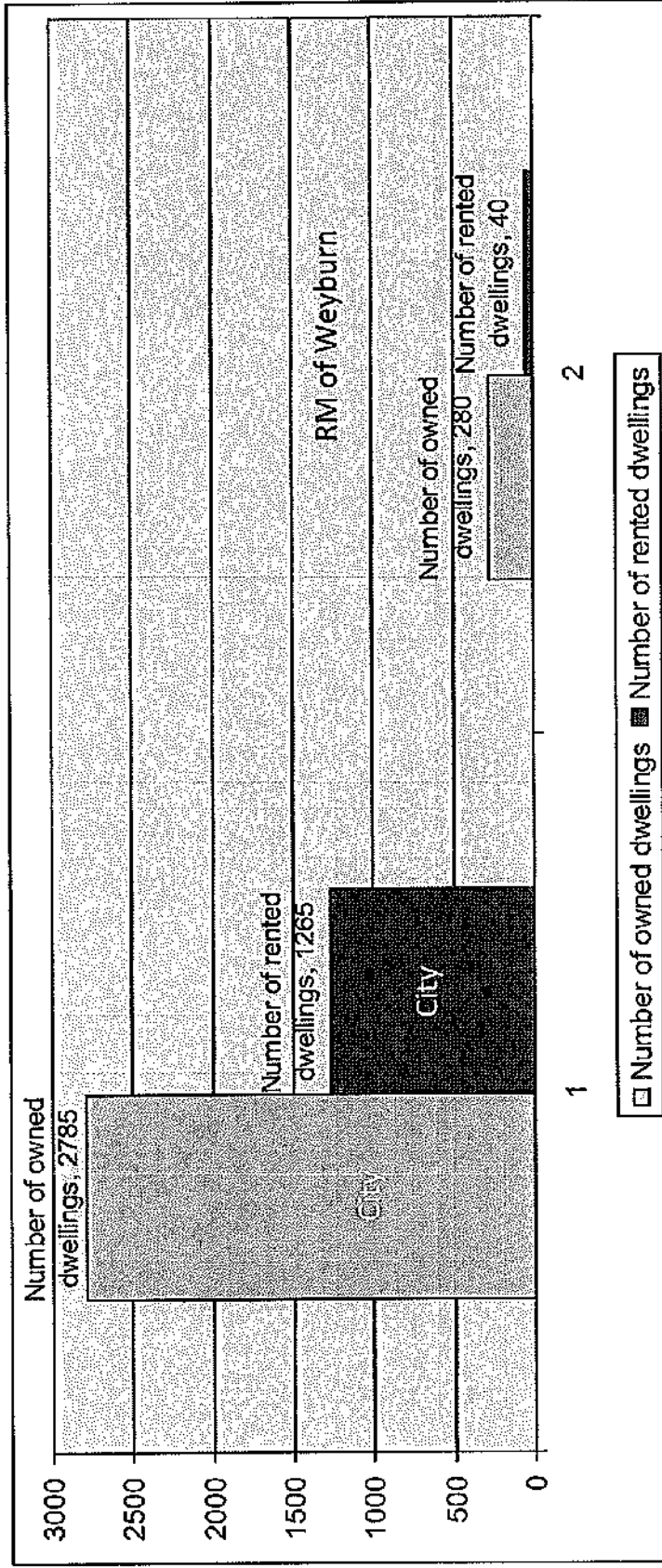
The under-counting for the RM of Weyburn is most likely related to a large number of RM residents having a post office box in Weyburn and being counted there.

HOUSING TYPES – CITY OF WEYBURN AND RM OF WEYBURN – 2006 CENSUS (PERCENTAGE)



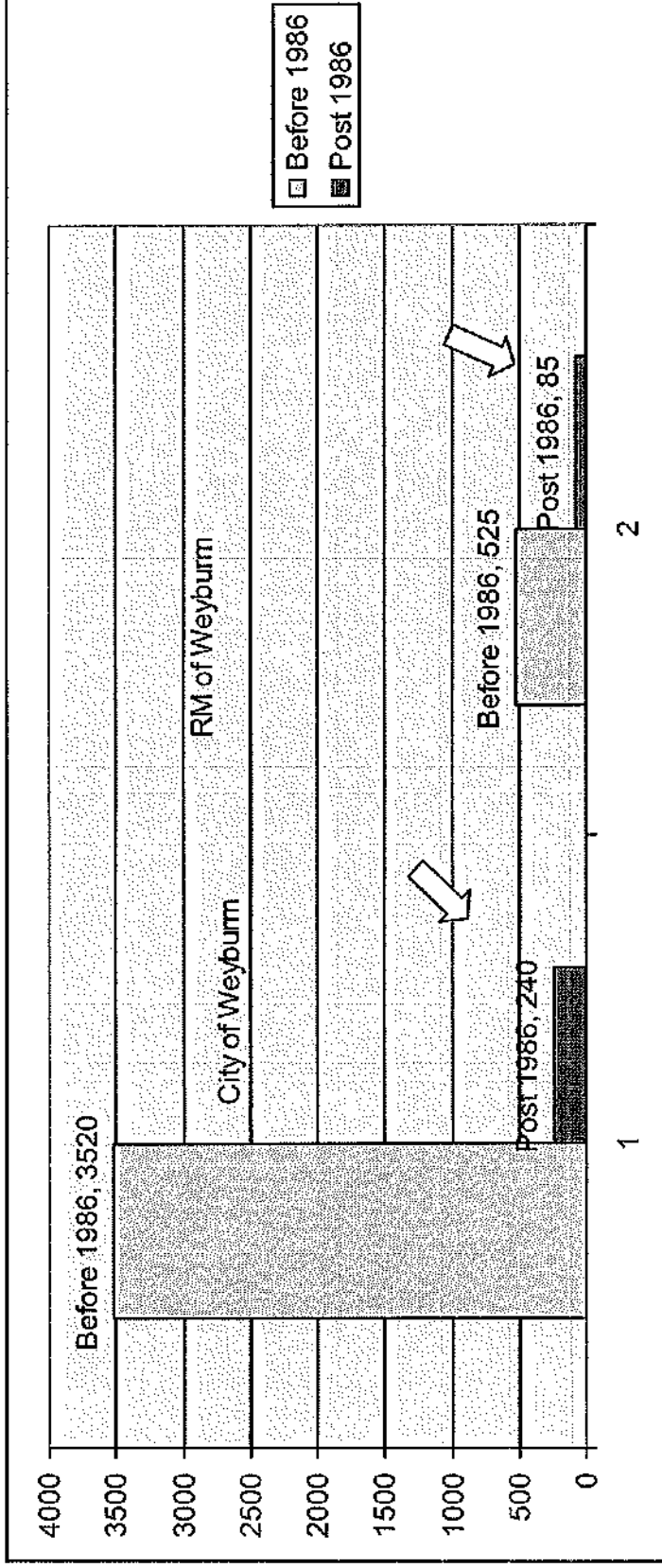
- RM of Weyburn - very high percentage of single detached housing - normal for rural municipalities
- City of Weyburn - slightly lower than expected percentage of single detached dwellings
- City of Weyburn has a significant percentage of apartment buildings under 5 stories - positive for attracting employees
- Provincial average for single detached dwellings is 74.3 percent of all dwelling units
- Rental accommodation is important in attracting younger households during an economic growth period
- Vacancy rates should be researched - especially with economic activity in the 2006-2011 era

DWELLING OWNERSHIP PROFILE - CITY OF WEYBURN - 2006 CENSUS



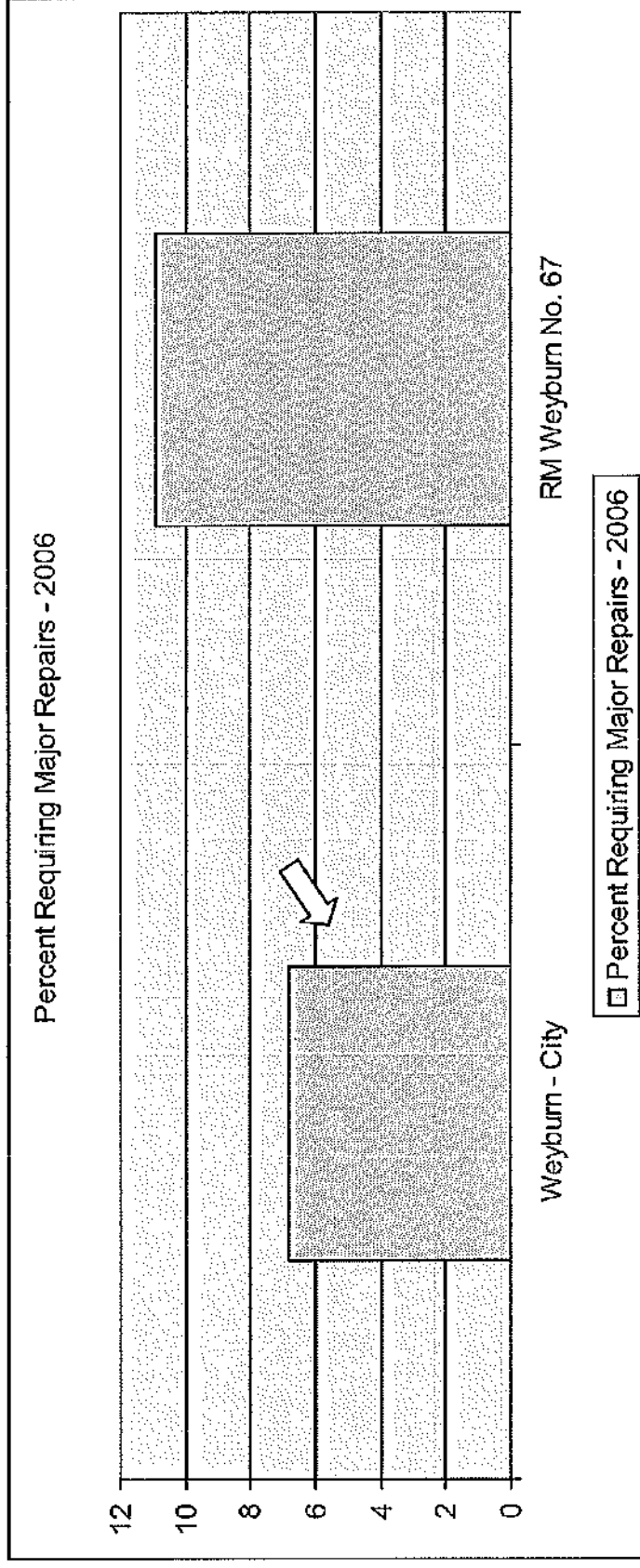
- Rented dwellings represent a very significant portion of the housing stock in the City of Weyburn - more research on details
- Rented dwellings in the RM of Weyburn is less pronounced
- Rental accommodation is important in attracting younger households during an economic growth period
- Has there been any change in rental to ownership during the 2006-2011 economic boom in the Weyburn district?

PERIOD OF HOUSE CONSTRUCTION — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



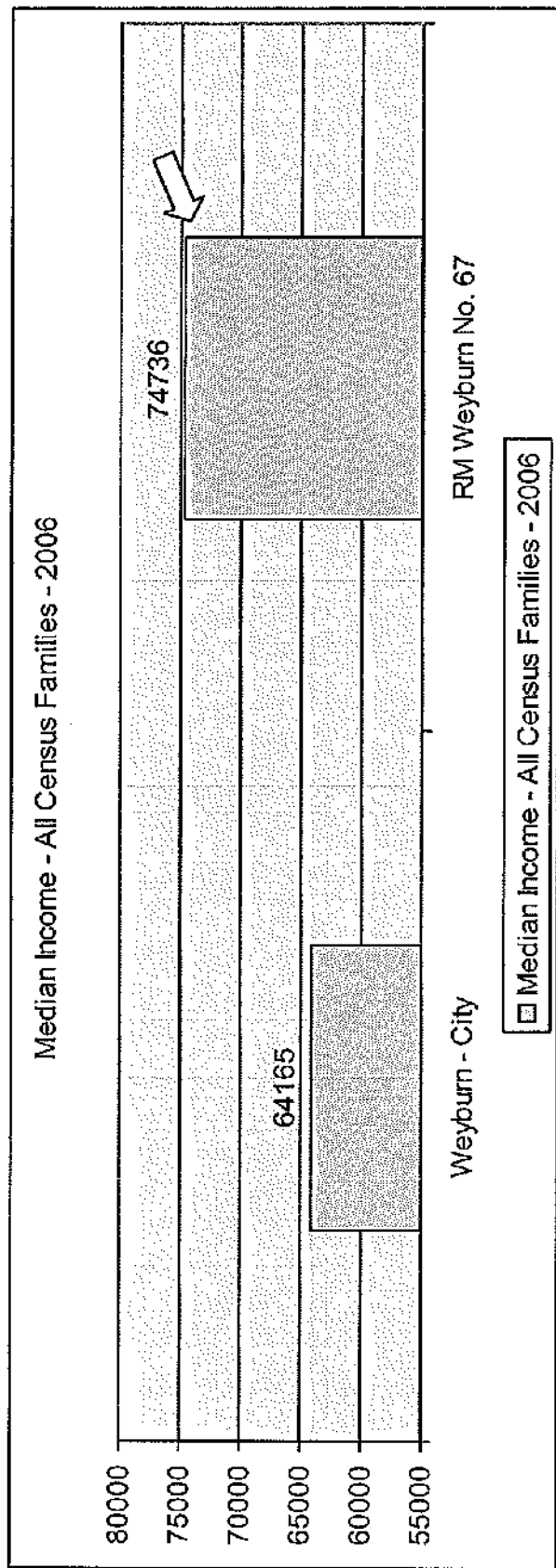
- City of Weyburn is largely pre-1986 - only 240 dwelling units constructed during the 1986-2006 period
- Economic growth in the post-2006 era should present an increased level of construction and should be documented
- RM of Weyburn has seen moderately more percentage growth in the post 1986 period
- Influence of rural water distribution pipeline systems needs to be researched more fully
- Housing stock is beginning to age in Study Area - needs to be monitored
- Energy efficiency of housing stock may also be an emerging issue - older housing becoming expensive to heat
- The 2006-2010 period population SHSP population statistics indicate major pressure for new house construction
- Housing starts for this period should be researched

DWELLINGS REQUIRING MAJOR REPAIR — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



- Housing stock conditions in City of Weyburn is significantly better than Provincial average of 10.5 percent
- RM of Weyburn - almost equal to Provincial average - well above RM averages across Saskatchewan
- Positive indicator for property maintenance in the Study Area - even with higher percentage of rental properties

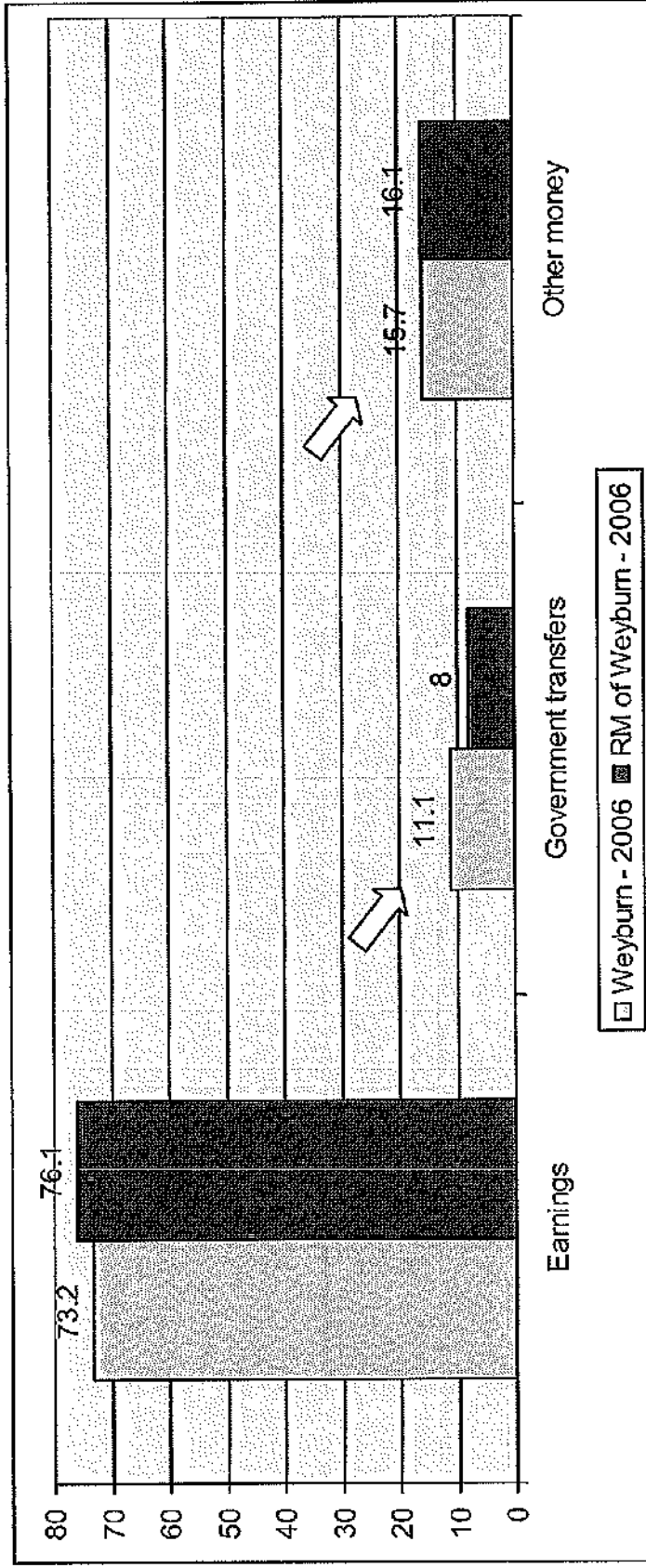
MEDIAN INCOME – CITY OF WEYBURN, RM OF WEYBURN AND SASKATCHEWAN— 2006 CENSUS



- Median income for RM of Weyburn (\$74,736) exceeds Saskatchewan median value of \$58,563 - high income area
- Median income for City of Weyburn (\$64,165) also exceeds Saskatchewan value - somewhat lower than RM of Weyburn
- Median income in RM of Weyburn - associated with larger farming operations, off-farm employment and oil royalties
- Higher percentage of retired seniors and single parent households will affect City of Weyburn median income
- High median income before the 2006-2011 economic growth period
- Oil and gas exploration in district should increase the median income somewhat

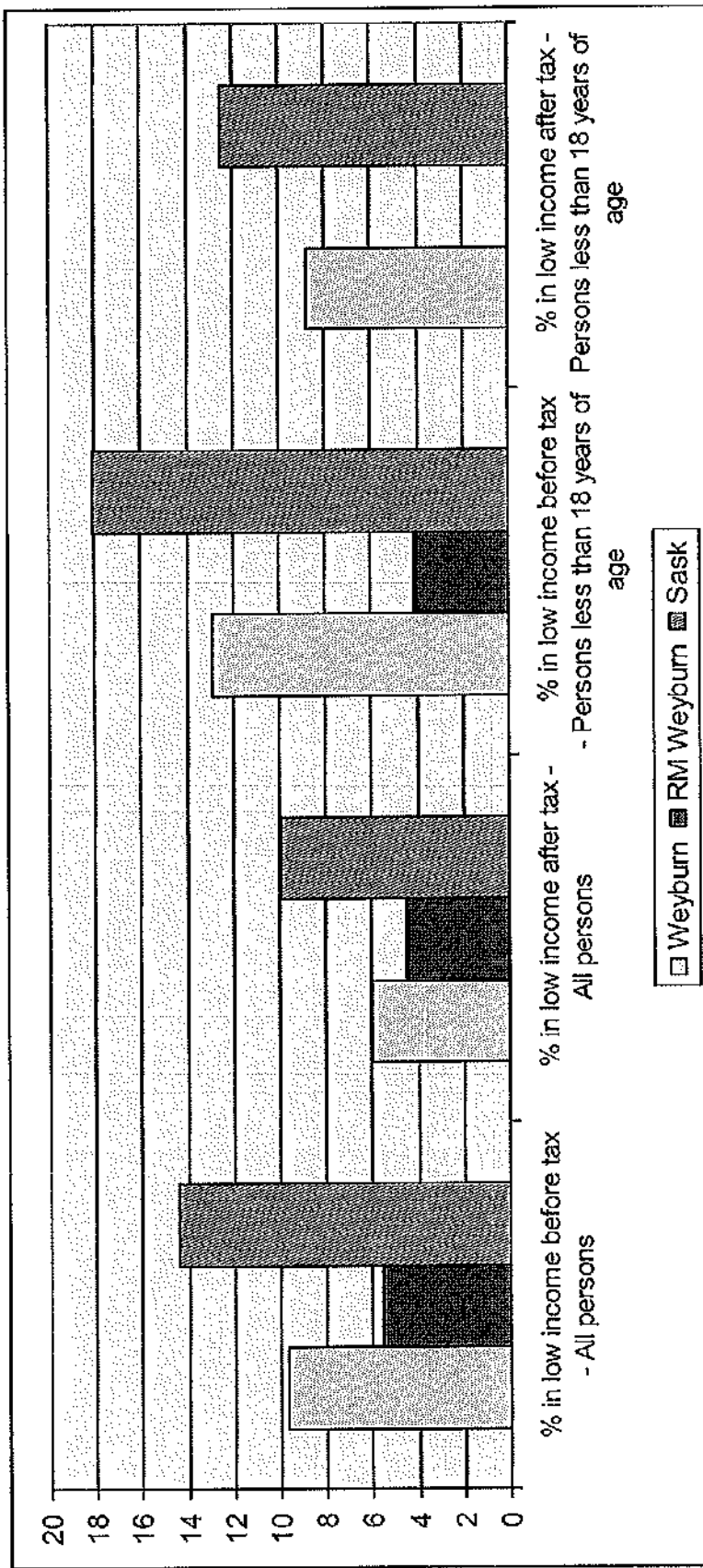
NOTE: City of Regina median income for married couples is only \$70,353

INCOME SOURCES — CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



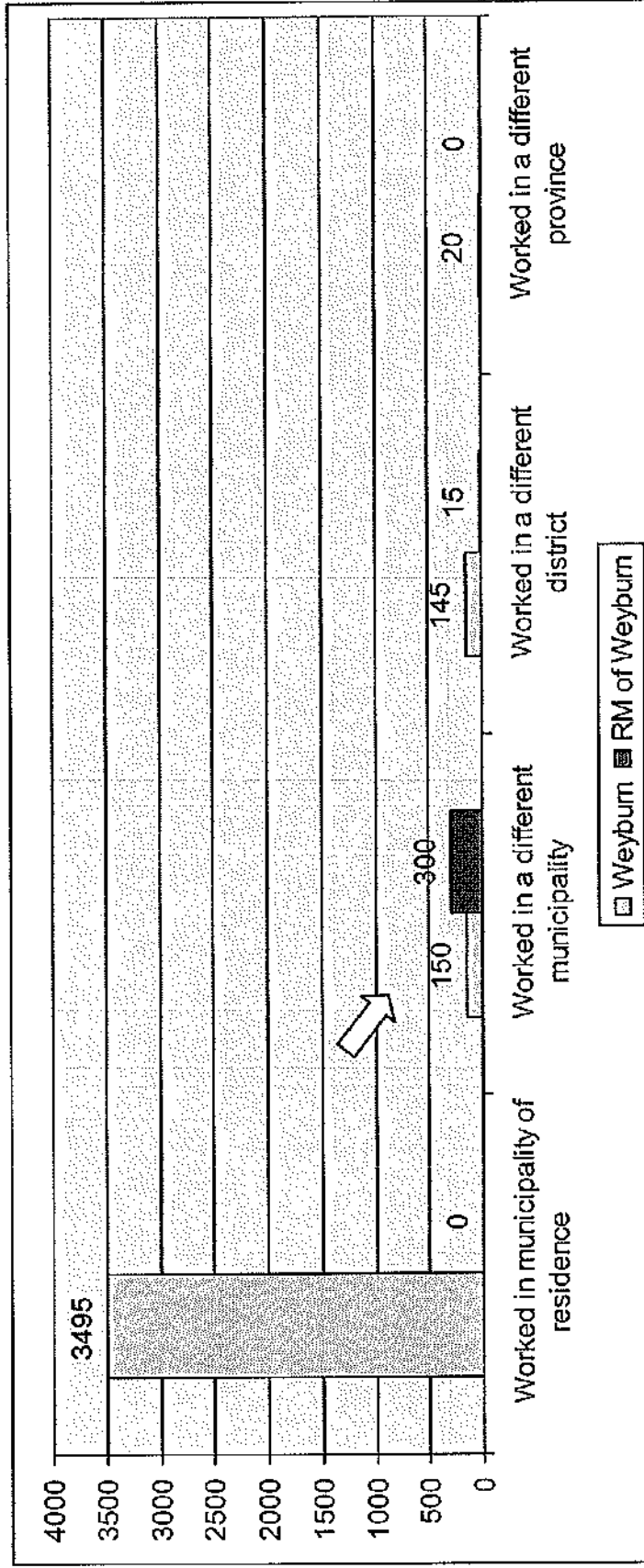
- Income earning sources for the Study Area at or slightly above the Provincial average of 73.9 percent
- Largest percentage of population is still in the Work Force in the Study Area - Study Area has increased disposable income
- Government Transfer - lower than Provincial average of 12.8 percent - transfer payments linked to pensions and UIC
- Government transfers include old age security and some social assistance
- Other Money (investment income/oil royalties) is higher than Provincial rate of 13.3 percent
- Earnings income expected to increase slightly owing to the new economic development in the Study Area

INCIDENCE OF LOW INCOME— CITY OF WEYBURN AND RM OF WEYBURN — 2006 CENSUS



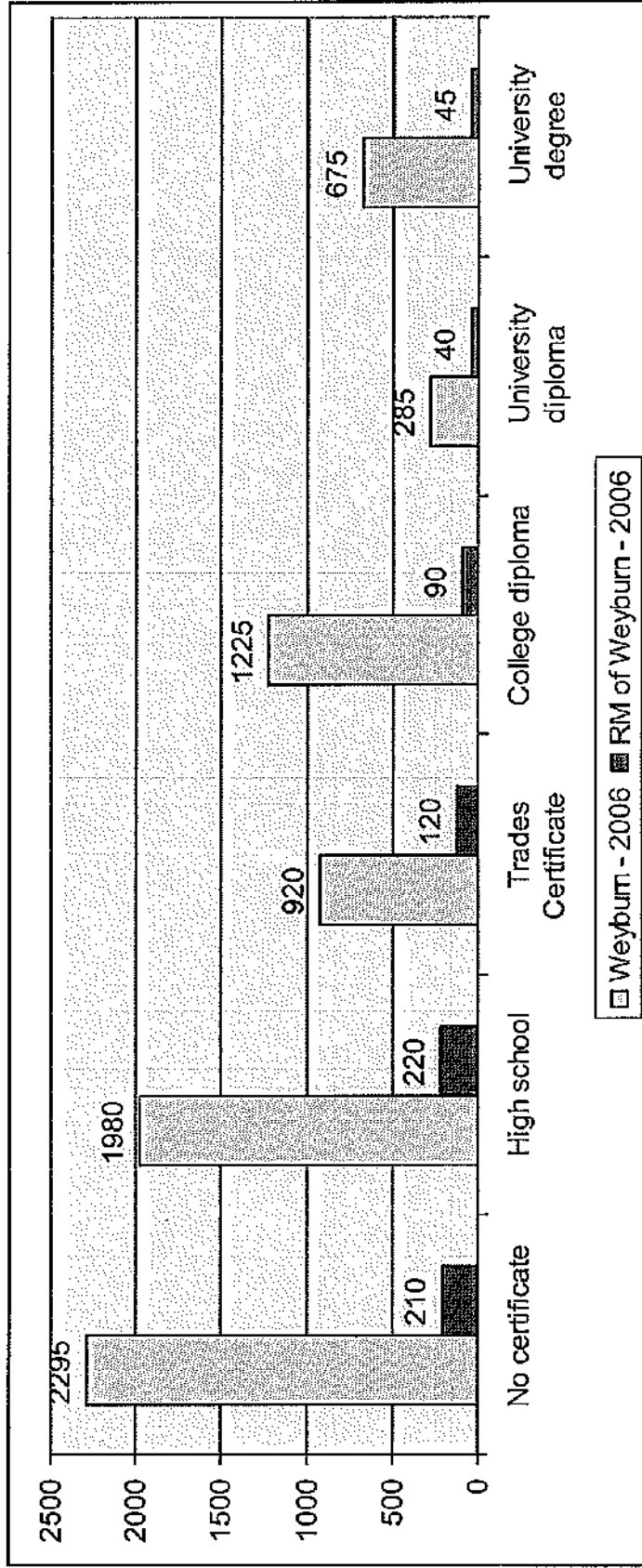
- Incidence of low income in Weyburn is lower than provincial average - older citizens and lone parent families may contribute
- RM of Weyburn has a very low incidence of low income in all categories
- General indication of relative wealth in community as compared to Saskatchewan average

PLACE OF WORK - CITY OF WEYBURN AND RM OF WEYBURN - 2006 CENSUS



- Vast majority of City of Weyburn live and work in Weyburn - major service centre in the greater region
- Vast majority of RM of Weyburn residents (300 out total of 888) worked in different municipality (City of Weyburn?)
- Place of work is tightly clustered around the City of Weyburn
- Oil and gas exploration may change the place of work percentages in a modest way over the next few years

EDUCATION LEVELS COMPLETED — CITY OF WEYBURN — 2006 CENSUS



- General education attainment is quite positive for the Study Area
- Education attainment is proportionally higher in the RM of Weyburn - may be associated with fewer elderly
- Significant numbers of persons with Trades Certificates and College diplomas
- No high school certificate is generally related to older population which tend to have lower historic education attainments

APPENDIX A

2006 CANADA CENSUS SOURCE DATA WEYBURN DISTRICT PLANNING COMMISSION – STUDY AREA

Weyburn District Study Area - 2006 Census Data Information				Weyburn - City			RM Weyburn No. 67			Totals		Saskatchewan Total
Characteristics	Total	Male	Female	Total	Male	Female	Total	Male	Female			
Population in 2006	9433			888			10321					968157
Population in 2001	9534			884			10398					978933
2001 to 2006 population change (%)	-1.1			2.8								-1.1
Total private dwellings	4267			338			4805					438621
Private dwellings occupied by usual residents	4046			322			4368					387160
Population density per square kilometre	597.7			1.1								1.6
Land area (square km)	15.78			811.7			827.48					588,276.0
				0								9
Total population	9430	4510	4925	890	465	425	10320					968160
0 to 4 years	520	275	250	50	30	20	570					57495
5 to 9 years	560	285	275	65	25	40	625					61070
10 to 14 years	620	295	330	70	40	30	690					69130
15 to 19 years	650	335	315	80	45	35	730					74900
20 to 24 years	575	295	280	50	30	20	625					67245
25 to 29 years	525	275	250	50	25	25	575					58245
30 to 34 years	505	260	245	50	20	25	555					54935
35 to 39 years	535	260	275	55	25	25	590					56555
40 to 44 years	670	330	340	75	40	30	745					71320
45 to 49 years	660	325	340	80	40	35	740					75785
50 to 54 years	640	330	315	60	30	25	700					70230
55 to 59 years	490	245	245	65	30	40	555					58230
60 to 64 years	400	175	225	50	25	25	450					43710
65 to 69 years	430	190	235	35	25	15	465					37110
70 to 74 years	430	170	265	30	15	10	460					33780
75 to 79 years	430	190	245	25	15	10	455					30505
80 to 84 years	350	145	210	10	10	0	360					24100
85 years and over	435	125	310	5	0	0	440					23820
Median age of the population	41.8	39.5	43.9	39.1	39.7	38						38.7
% of the population aged 15 and over	82	81	82.8	79.2	79.6	77.6						80.6
Total population 15 years and over	7730	3655	4080	705	370	335	8435					780460
Not in a common-law relationship	7185	3380	3805	650	345	305	7835					722930
In a common-law relationship	545	270	275	55	30	30	600					57535
Total population 15 years and over	7730	3655	4080	705	375	335	8435					780460
Single	2150	1210	940	185	110	70	2335					256450

Legally married	3995	1995	2000	455	225	225	4450	396500
Separated	215	100	115	10	5	5	225	19385
Divorced	515	220	300	35	20	20	550	51170
Widowed	855	130	730	25	10	10	880	56955
Total private dwellings occupied by usual residents	4045			320			4365	387140
Single-detached houses	67.5			96.9				74.3
Semi-detached houses	6.2			0				2.8
Row houses	0.7			0				3.3
Apartments; duplex	0.6			0				1.8
Apartments < 5 storeys	20.9			0				12.9
Apartments > 5 storeys	2.7			0				2.8
Other dwellings	1.2			3.1				2
Number of owned dwellings	2785			280			3065	277860
Number of rented dwellings	1265			40			1305	99125
Number of dwellings constructed before 1986	3520			240			3760	312460
Number of dwellings constructed between 1986 and 2006	525			85			610	74680
Dwellings requiring major repair - %	6.8			10.9				10.5
Average number of rooms per dwelling	6.8			8			14.8	6.8
Dwellings with more than one person per room - as a % of total occupied private dwellings	0.5			0				1.4
Average value of owned dwelling (\$)	114882			16631			281196	132111
Total number of census families	2605			4			2860	267455
Number of married-couple families	1955			225			2180	194165
Number of common-law-couple families	275			15			290	28855
Number of lone-parent families	375			15			390	44445
Number of female lone-parent families	305			10			315	35170
Number of male lone-parent families	70			10			80	9265
Average number of persons in all census families	2.9			3.1				2.9
Average number of persons in married-couple families	2.9			3				3
Average number of persons in common-law-couple families	2.8			3				2.9
Average number of persons in lone-parent families	2.9			0				2.7
Average number of persons in female lone-parent families	2.9			0				2.7
Average number of persons in male lone-parent families	2.3			0				2.5
Median income in 2005 - All census families (\$)	64165			74736				58563
Median income in 2005 - Married-couple families (\$)	69233			83776				67369
Median income in 2005 - Common-law-couple families (\$)	70904			52655				51865
Median income in 2005 - Lone-parent families (\$)	34180			0				29547
Median income in 2005 - Female lone-parent families (\$)	32907			0				28067

Median income in 2005 - Male lone-parent families (\$)	47842				0			37217
Median after-tax income in 2005 - All census families (\$)	54767				64760			50875
Median after-tax income in 2005 - Married-couple families (\$)	58399				70248			57535
Median after-tax income in 2005 - Common-law-couple families (\$)	58850				48815			45530
Median after-tax income in 2005 - Lone-parent families (\$)	32599				0			28577
Median after-tax income in 2005 - Female lone-parent families (\$)	30448				0			27384
Median after-tax income in 2005 - Male lone-parent families (\$)	41968				0			33845
Total private households	4045				320		4365	387140
Households containing a couple (married or common-law) with children	940				110		1050	102350
Households containing a couple (married or common-law) without children	1240				115		1355	115630
One-person households	1390				65		1455	111315
Other household types	470				25		495	57845
Average household size	2.2				2.8			2.4
Median income in 2005 - All private households (\$)	49793				67209			46705
Median income in 2005 - Couple households with children (\$)	83766				89938			76194
Median income in 2005 - Couple households without children (\$)	63428				65489			57994
Median income in 2005 - One-person households (\$)	24349				32988			23122
Median income in 2005 - Other household types (\$)	38631				37093			38113
Median after-tax income in 2005 - All private households (\$)	42883				56698			41084
Median after-tax income in 2005 - Couple households with children (\$)	69732				74609			65210
Median after-tax income in 2005 - Couple households without children (\$)	53838				56612			49942
Median after-tax income in 2005 - One-person households (\$)	21863				32835			21107
Median after-tax income in 2005 - Other household types (\$)	37708				37093			35421
Median monthly payments for rented dwellings (\$)	491				0			568
Median monthly payments for owner-occupied dwellings (\$)	600				600			614
Total population	9090	4390	4705		885	455	435	9975
English only	8535	4160	4370		845	440	405	9380
French only	130	40	90		15	0	10	145
English and French	10	0	10		10	0	0	20
Other language(s)	420	185	235		25	10	15	445
Total population	9095	4390	4700		885	455	435	9980
English only	8825	4275	4555		855	445	410	9680
French only	0	0	0		0	0	0	0
English and French	245	105	140		30	10	20	275
Neither English nor French	25	10	10		0	0	0	25
Total population	9090	4390	4705		890	450	435	9980
English	9000	4340	4655		890	450	435	9890

[illegible]

High school	1980	935	1040	220	125	90	2200	205495
Trades Certificate	920	540	380	120	85	35	1040	86310
College diploma	1225	440	785	90	25	65	1315	111770
University diploma	285	90	195	40	10	30	325	32180
University degree	675	300	380	45	10	30	720	98755
Total population aged 15 to 24	1205	605	595	145	80	65	1350	141690
No certificate	590	365	225	90	50	40	680	67545
High school certificate	410	195	220	40	20	20	450	50555
Trades certificate	75	10	60	10	0	10	85	5790
College diploma	80	25	55	0	0	0	80	9285
University diploma	10	0	0	10	0	0	20	1910
University degree	40	0	35	0	0	0	40	6600
Total population aged 25 to 34	1025	515	510	105	40	65	1130	112080
No certificate	155	105	45	10	0	0	165	17800
High school certificate	370	225	150	35	20	15	405	31785
Trades certificate	105	65	40	15	0	15	120	12920
College diploma	225	50	170	20	0	15	245	22180
University diploma	40	0	35	0	0	0	40	3950
University degree	135	60	70	25	10	15	160	23440
Total population aged 35 to 64	3365	1650	1715	355	180	180	3720	373475
No certificate	655	370	285	85	40	45	740	76295
High school certificate	850	425	425	100	55	45	950	97775
Trades certificate	535	320	215	60	50	10	595	53420
College diploma	725	290	430	55	20	40	780	67445
University diploma	155	60	95	30	0	20	185	19190
University degree	445	180	260	20	10	15	465	59355
Total population 15 years and over	7385	3535	3850	730	385	345	8115	766235
No postsecondary certificate; diploma or degree	4275	2160	2115	430	250	180	4705	437225
Education	515	90	420	45	0	40	560	42225
Visual and performing arts; and communications technologies	55	25	30	0	0	0	55	7390
Humanities	75	45	30	10	0	10	85	12795
Social and behavioural sciences and law	110	40	65	0	0	0	110	20800
Business; management and public administration	580	140	445	40	10	35	620	66305
Physical and life sciences and technologies	35	30	10	0	0	0	35	7970
Mathematics; computer and information sciences	50	25	25	10	0	10	60	9440
Architecture; engineering; and related technologies	715	665	55	95	95	0	810	69145
Agriculture; natural resources and conservation	85	70	15	25	10	10	110	13030
Health; parks; recreation and fitness	600	125	475	55	15	40	655	56910
Personal, protective and transportation services	270	110	165	15	0	15	285	22945

Population 15 years and over reporting hours looking after children without pay	2625	1170	1455	280	125	155	2905	294980
Population 15 years and over reporting hours of unpaid care or assistance to seniors	1625	645	980	125	45	85	1750	156810
Total population 15 years and over who worked since 2005	5370	2835	2535	595	305	290	5965	565595
English	5350	2825	2525	595	310	290	5945	555430
French	10	0	0	0	0	0	10	1930
Non-official language	15	10	10	0	0	0	15	5945
English and French	0	0	0	0	0	0	0	595
English and non-official language	0	0	0	0	0	0	0	1695
French and non-official language	0	0	0	0	0	0	0	10
English, French and non-official language	0	0	0	0	0	0	0	0
Total employed labour force 15 years and over	4675	2500	2175	550	285	265	5225	494900
Worked at home	320	210	110	175	125	50	495	69650
Worked outside Canada	0	0	0	0	0	0	0	1040
No fixed workplace address	540	440	100	60	35	25	600	49025
Worked at usual place	3815	1845	1960	320	130	190	4135	375185
Worked in municipality of residence	3495	1640	1855	0	0	0	3495	265680
Worked in a different municipality	150	105	45	300	120	185	450	75250
Worked in a different district	145	90	55	15	10	10	160	24305
Worked in a different province	20	10	10	0	0	0	20	9955
Total employed labour force 15 years and over with a usual place of work or no fixed workplace address	4350	2285	2065	375	165	215	4725	424210
Car, truck; van; as driver	3630	1955	1670	335	150	190	3965	336325
Car, truck; van; as passenger	285	140	145	25	10	20	310	30760
Public transit	10	0	10	10	0	10	20	9300
Walked or bicycled	400	180	220	0	10	0	400	40755
All other modes	20	10	15	0	0	0	20	7070
Total population	9090	4390	4705	885	450	435	9975	953845
Total visible minority population	170	80	95	0	0	0	170	33900
Chinese	65	30	35	0	0	0	65	9505
South Asian	0	0	0	0	0	0	0	5130
Black	80	45	35	0	0	0	80	5090
Filipino	15	0	15	0	0	0	15	3770
Latin American	0	0	0	0	0	0	0	2520
Southeast Asian	10	0	10	0	0	0	10	2555
Arab	0	0	0	0	0	0	0	1710
West Asian	10	0	0	0	0	0	10	1020
Korean	0	0	0	0	0	0	0	740

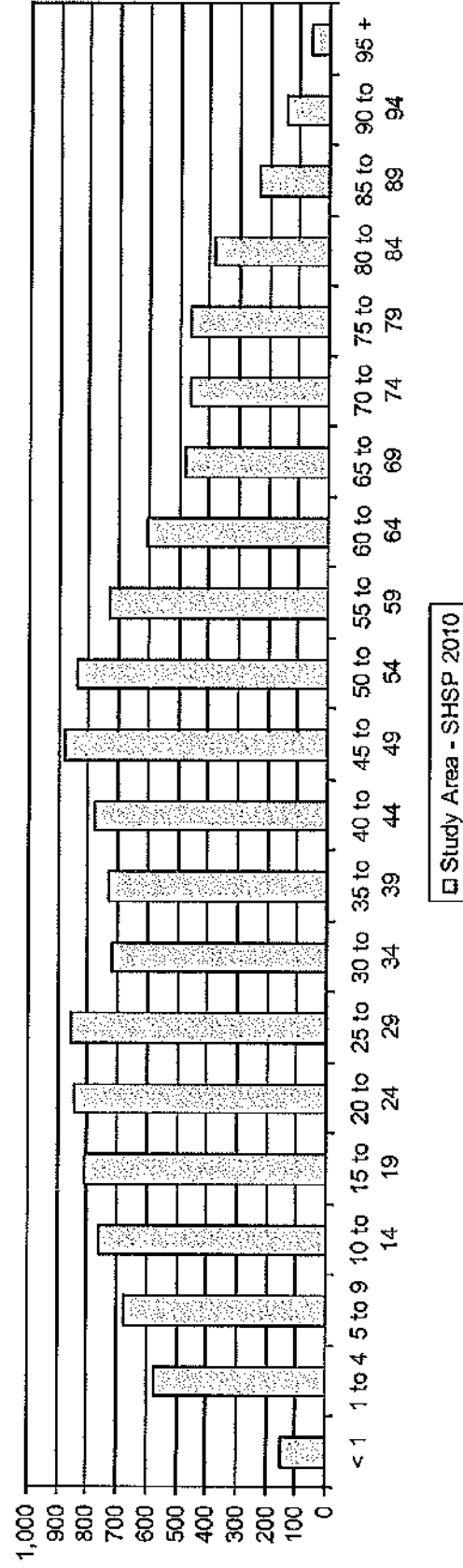
Japanese	0	0	0	0	0	0	0	0	645
Visible minority; n.i.e.	0	0	0	0	0	0	0	0	405
Multiple visible minority	0	0	0	0	0	0	0	0	810
Not a visible minority	8920	4310	4610	890	450	440	9810	919950	
Persons 15 years and over with earnings (counts)	5385	2815	2570	630	320	305	6015	553655	
Median earnings - Persons 15 years and over (\$)	24087	3391	1806	20701	299	182		23025	
		5	7		85	33			
Persons 15 years and over with earnings who worked full year, full time (counts)	2830	1685	1145	295	165	130	3125	286895	
Median earnings - Persons 15 years and over who worked full year, full time (\$)	38975	4538	3048	37655	490	324		35948	
		8	6		02	48			
Persons 15 years and over with income (counts)	7155	3425	3730	705	375	340	7860	728960	
Median income - Persons 15 years and over (\$)	26938	3422	2168	27603	375	220		23755	
		1	0		61	44			
Median income after tax - Persons 15 years and over (\$)	24048	2945	2010	25458	318	206		21679	
		8	7		59	36			
Composition of total income (100%)	100	100	100	100	100	100		100	
Earnings	73.2	79.4	61.4	76.1	77.5	72.6		73.9	
Government transfers	11.1	6.8	19.5	8	6.9	10.5		12.8	
Other money	15.7	13.9	19.1	16.1	15.8	17.4		13.3	
Income status of all persons in private households (counts)	9085	4385	4700	885	450	435	9970	897575	
% in low income before tax - All persons	9.7	6.6	12.8	5.6	5.6	5.7		14.4	
% in low income after tax - All persons	6	4.2	7.7	4.5	4.4	4.6		9.9	
% in low income before tax - Persons less than 18 years of age	12.9	10.1	16.3	4.1	0	0		18.1	
% in low income after tax - Persons less than 18 years of age	8.8	5.5	11.9	0	0	0		12.5	

APPENDIX B

SASKATCHEWAN COVERED POPULATION NUMBERS - 2010 CITY OF WEYBURN AND RM OF WEYBURN STUDY AREA

		Age Groupings																					
Residence Code		<1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 44	45 to 49	50 to 54	55 to 59	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 +	Total
06710	RM Weyburn																						
	Male	7	18	9	3	11	16	12	14	11	15	12	13	12	6	3	2	6	4	2	0	0	0
	Female	1	20	25	25	27	27	11	19	19	9	10	10	6	16	2	5	5	3	0	0	0	0
	Total	8	38	34	33	38	43	23	33	30	22	22	23	18	22	10	7	11	7	2	0	0	0
06726	Weyburn																						
	Male	47	270	331	360	398	416	423	348	369	378	434	387	376	251	217	191	191	144	93	31	17	5,723
	Female	79	263	312	379	392	402	413	337	333	378	427	435	354	301	250	262	258	212	148	112	43	8,058
	Total	126	533	643	739	790	818	836	685	702	754	861	821	730	552	467	453	449	356	241	143	60	11,781

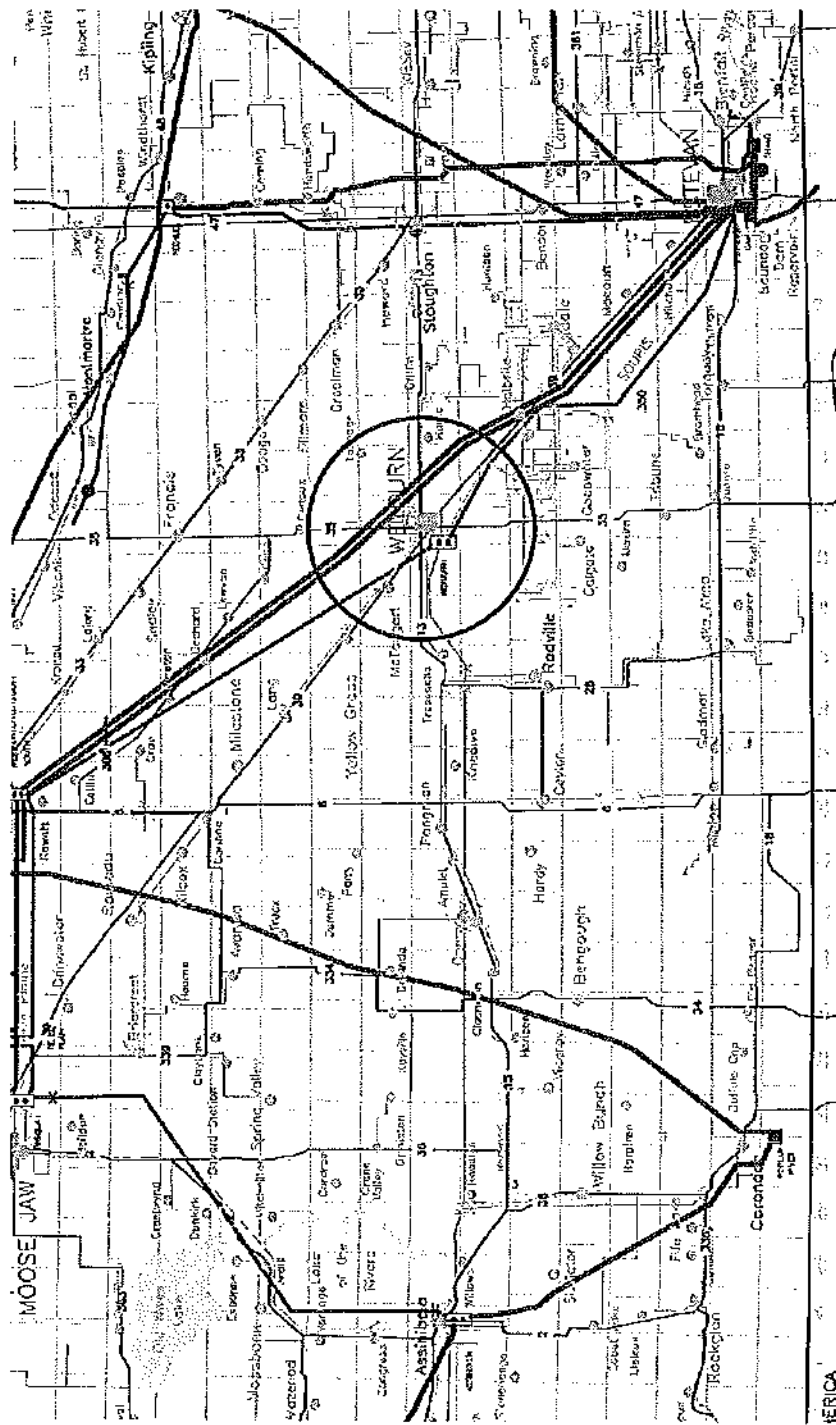
Study Area - SHSP 2010



2010 SHSP Study Area Population = 12,167

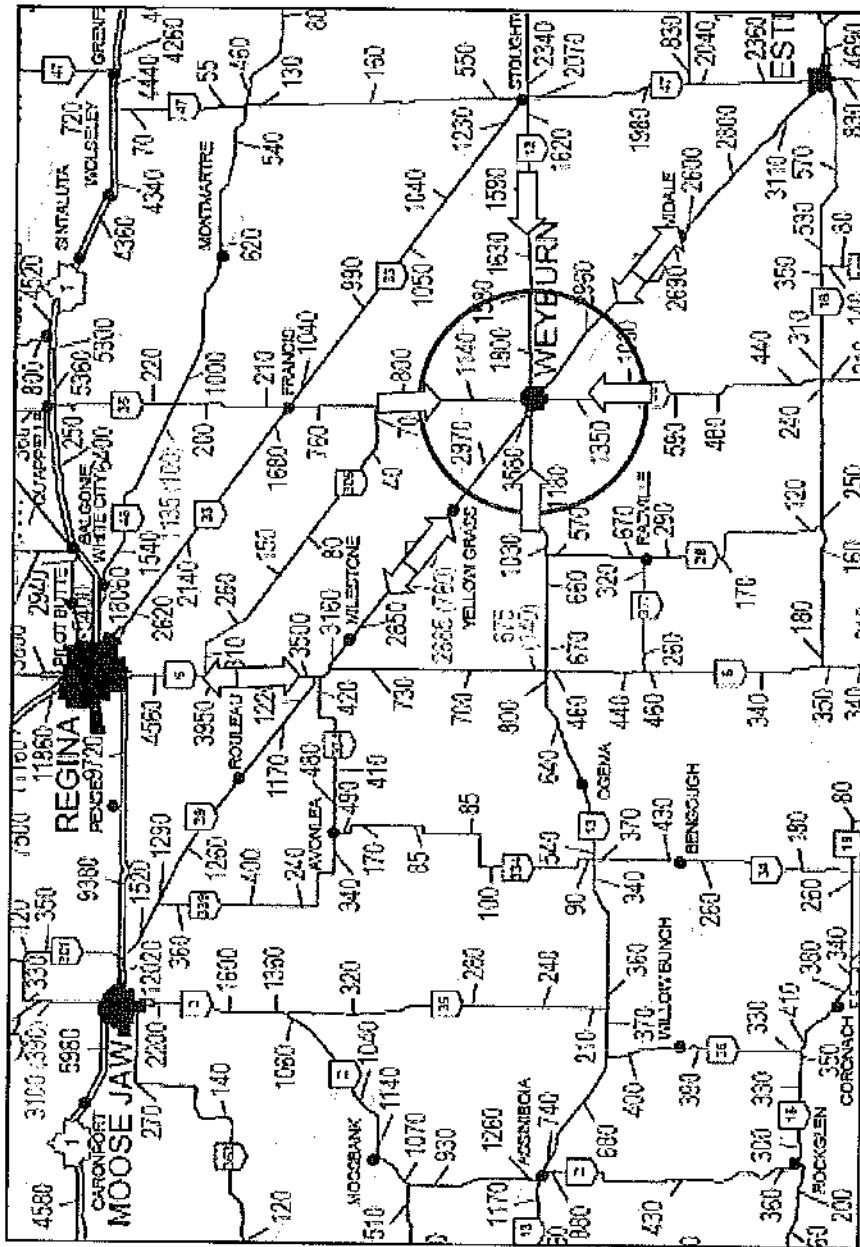
APPENDIX C

SASKPOWER GRID (WEYBURN AREA) - 2006



APPENDIX D

WEYBURN AREA - AVERAGE ANNUAL DAILY TRAFFIC 2008



- Regional traffic (2008) tends towards Weyburn
- Regina and Estevan generate a strong "flow-through" volume