

Amended
by Bylaw
819

**TOWN OF REDWATER
BYLAW No. 786**

**A BYLAW OF THE TOWN OF REDWATER, IN THE PROVINCE OF ALBERTA, FOR
THE PURPOSE OF ESTABLISHING AN OFF-SITE LEVY FOR LAND THAT IS TO
BE SUBDIVIDED OR DEVELOPED WITHIN THE TOWN OF REDWATER.**

WHEREAS the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time, permits a Council to impose a levy known as an Off-Site Levy in respect of land to be developed or subdivided within a municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipality has engaged in consultation with representatives of the development industry to address and define existing and future infrastructure requirements of the Municipality with respect to circumstances of the Municipality and the benefits of development;

AND WHEREAS the Council received advice and Reports respecting upgrades to Off-Site Infrastructure which set out a fair and equitable calculation of Off-Site Levies in accordance with the purpose of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

AND WHEREAS Council has advertised its intention to consider the provision of this Bylaw pursuant to the requirements of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

NOW THEREFORE the Council of the Municipality in the Province of Alberta, duly assembled, hereby enacts as follows:

1. Bylaw Title

1.1 This bylaw shall be cited as the Town of Redwater's "Off-Site Levy Bylaw."

2. Definitions

2.1 The following terms shall have the following meanings in this Bylaw:

- a) **"Bylaw"** means this off-site levy bylaw established by the Municipality;
- b) **"Chief Administrative Officer"** means the Chief Administrative Officer for the Town, regardless of the specific title that may be conferred on that Officer by Council from time to time;
- c) **"Council"** means the Council for the Town of Redwater;

- d) **“Developable Land”** shall mean all land contained within the Development Region:
 - i. upon which Development takes place after the date of passing of this Bylaw; or
 - ii. for which Subdivision approval is obtained after the date of passing of this Bylaw;
 excluding all Developed Land.
- e) **“Developed Land”** shall mean land that has been subject to Development or a Subdivision prior to the date of passing of this Bylaw, and in respect of which off-site levies for the same services have been paid.
- f) **“Development”** means “development” as defined in the *Municipal Government Act*, R.S.A. 2000, c. M-26, s. 616, as amended or repealed and replaced from time to time.
- g) **“Development Agreement”** means “development agreement” as referred to in the *Municipal Government Act*, R.S.A. 2000, c. M-26, ss. 650 and 655, as amended or repealed and replaced from time to time.
- h) **“Development Region”** includes the area of land within the municipal boundaries of the Municipality identified in Schedule “B”, attached;
- i) **“Growth”** shall mean:
 - i. the creation of new lots through Subdivision; and
 - ii. the occurrence of Development.
- j) **“Municipality”** means the Town of Redwater.
- k) **“Off-Site Infrastructure”** shall mean those components and projects referred to in the Reports, in relation sanitary sewer facilities and arterial roadways;
- l) **“Off-Site Levy”** means the off site levy imposed pursuant to this Bylaw under the authority of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;
- m) **“Reports”** means the following:
 - i. “Master Services Plan Update” prepared by Associated Engineering, dated August 2010; and
 - ii. “2011 Off-Site Levies Report” prepared by Associated Engineering, dated May 2011;

- n) **“Subdivision”** means “subdivision” as defined in the *Municipal Government Act*, R.S.A. 2000, c. M-26, s. 616, as amended or repealed and replaced from time to time.

3. **Imposition of Levy**

- 3.1 There is hereby imposed a levy which shall be known as an Off-Site Levy in respect of all Developable Land.
- 3.2 The amount of the Off-Site Levy imposed is as calculated in Schedule “A”.
- 3.3 The Off-Site Levy is comprised of the Off-Site Infrastructure, and pursuant to the calculation details contained in this Bylaw and the Reports.
- 3.4 The Off-Site Levy will be assessed on all Developable Land within the Development Region on a per hectare basis as provided in Schedule “A” of this Bylaw, excluding those portions of Developable Land that are designated pursuant to a Subdivision as:
- a) Environmental Reserve;
 - b) Municipal Reserve; and
 - c) Arterial road right-of way.
- 3.5 Unless otherwise agreed upon, the Off-Site Levy is due prior to the issuance of Subdivision approval for the Development Region or the issuance of a Development permit in relation to the subject parcel.

4. **Objects, Principles and Criteria**

- 4.1 The objects, principles and criteria of the Off-Site Levy shall be in accordance with the following:
- a) This Bylaw creates an Off-Site Levy to provide funds for the construction of Off-Site Infrastructure required for Growth.
 - b) Development in new growth areas through Off-Site Levies will provide the capital that will fund the infrastructure required for Growth. Those who benefit from the infrastructure, which is defined by all Developable Land in the Development Region, should share proportionally, on a per hectare basis, in related costs.
 - c) Provision of Off-Site Infrastructure by developers of Developable Land will not create an advantage or penalty due to the time or location of development.
 - d) Off-Site Infrastructure will be provided to maintain sustainable, cost effective and orderly Growth.
 - e) The calculation of the Off-Site Levy should be an open and transparent process.

- f) All funds collected from the Off-Site Levy will be credited to a separate and distinct, identifiable Off-Site Levy account, which may be invested as per the Municipality's Investment Policy until used for the construction of the specified Off-Site Infrastructure. The management of the Off-Site Levy account should be an audited process, with reports available to the public and industry.
- g) The Off-Site Levy will help allow the Municipality to recover the cost of infrastructure required for Growth:
 - i. Using financing strategies that remain sustainable;
 - ii. Facilitating development by reducing risk on early developers and ensuring future developers share the costs of the facilities from which they benefit; and
 - iii. Promoting cost effective and orderly development;
- h) The Off-Site Levy will help promote orderly development by:
 - i. Providing Off-Site Infrastructure, once the appropriate planning is in place, and when warranted in development; and
 - ii. Providing infrastructure for contiguous development;
- i) The Off-Site Levy will help create a transparent process by:
 - i. Providing opportunity for industry input into the levy, its definition and administration;
 - ii. Conforming with the *Municipal Government Act*, R.S.A. 2000, c. M-26, as amended or repealed and replace from time to time; and
 - iii. Providing reports on the Off-Site Levy;
- j) The Off-Site Levy will help create a clear process for calculation of the rate, levies and credits by:
 - i. Creating consistent and predictable levies and credits;
 - ii. Creating predictable and stable levies over time; and
 - iii. Documenting a process for establishing the levy rate.

5. **Development Agreements**

- 5.1 The entering into of a Development Agreement with respect to, amongst other things, the collection of an Off-Site Levy is hereby authorized.

- 5.2 Council delegates the authority to enforce and administer this Bylaw, including, but not limited to, the authority to enter into Development Agreements on behalf of the Municipality and to defer or waive collection of Off-Site Levies imposed pursuant to this Bylaw, to the Chief Administrative Officer.
- 5.3 Council may from time to time adopt policies or guidelines for the assistance and direction of the Chief Administrative Officer in determining which Development and Subdivision applications shall require a Development Agreement.
- 5.4 Where it is determined that a Development Agreement is appropriate for any application for Development or Subdivision, the applicant or the owner, as the case may be, shall enter into a Development Agreement with the Municipality and such Development Agreement shall ensure that:
- a) provision be made for the payment of Off-Site Levies as specified in this Bylaw, or that provision may be made for the deferring of payment of the Off-Site Levies to a future time certain or uncertain; and
 - b) no further Off-Site Levies shall be required to be paid under Development Agreements for lands, which are the subject of the Development or Subdivision application, that have been previously imposed Off-Site Levies and which have been collected in full.

6. Accounting

- 6.1 All funds collected pursuant to this Bylaw shall be accounted for in a special fund and expended only as permitted under the provisions of the *Municipal Government Act*, R.S.A. 2000, c. M-26, as amended or repealed and replace from time to time.

7. General

- 7.1 Nothing in this Bylaw precludes the Municipality from:
- a) imposing further or different levies, duly enacted by bylaw, on any portion of the Developable Lands in respect of which the Municipality has not collected Off-Site Levies;
 - b) deferring collection of the Off-Site Levy for the stated objects of this Bylaw, on any portion of Developable Lands in respect of which the Municipality imposed Off-Site Levies, including requiring security for payment of such deferred Off-Site levies; or
 - c) reducing or forgiving payment of the Off-Site Levies required pursuant to this Bylaw, or otherwise providing for credits for other Off-Site or oversize infrastructure constructed by a developer in calculating and/or collecting the Off-Site Levies that become payable pursuant to this Bylaw.

- 7.2 This Bylaw shall repeal Bylaw 709 and all amendments thereto upon the passing of this bylaw.
- 7.3 This Bylaw shall take effect and come into force effective after final reading and signature thereof by the Chief Elected Official and Chief Administrative Officer, or their authorized delegates.

Read a first time, this 16th day of, August 2011.

Read a second time, this 6th day of, September 2011.

Read a third time and finally passed, this 6th day of, September 2011.



Mayor



Town Manager

SCHEDULE "A"**DEFINED OFF-SITE LEVY RATES****2011 OFF-SITE LEVY RATES**

DESCRIPTION	CURRENT OFF-SITE LEVY	
Sanitary Sewer	\$8,240/gross developable hectare	\$3,334/gross developable acre
Arterial Roads	\$14,155/gross developable hectare	\$5,729/gross developable acre
Total Off-site Levies	\$22,395/gross developable hectare	\$9,063/gross developable acre

2012 OFF-SITE LEVY RATES (RESOLUTION 12-019 NO CHANGE)

2013 OFF-SITE LEVY RATES (RESOLUTION 13-055 NO CHANGE)

SCHEDULE "B"
MAP OF DEVELOPMENT REGION



Town of
Redwater

2011 OFF-SITE LEVIES

STUDY AREA

LEGEND:

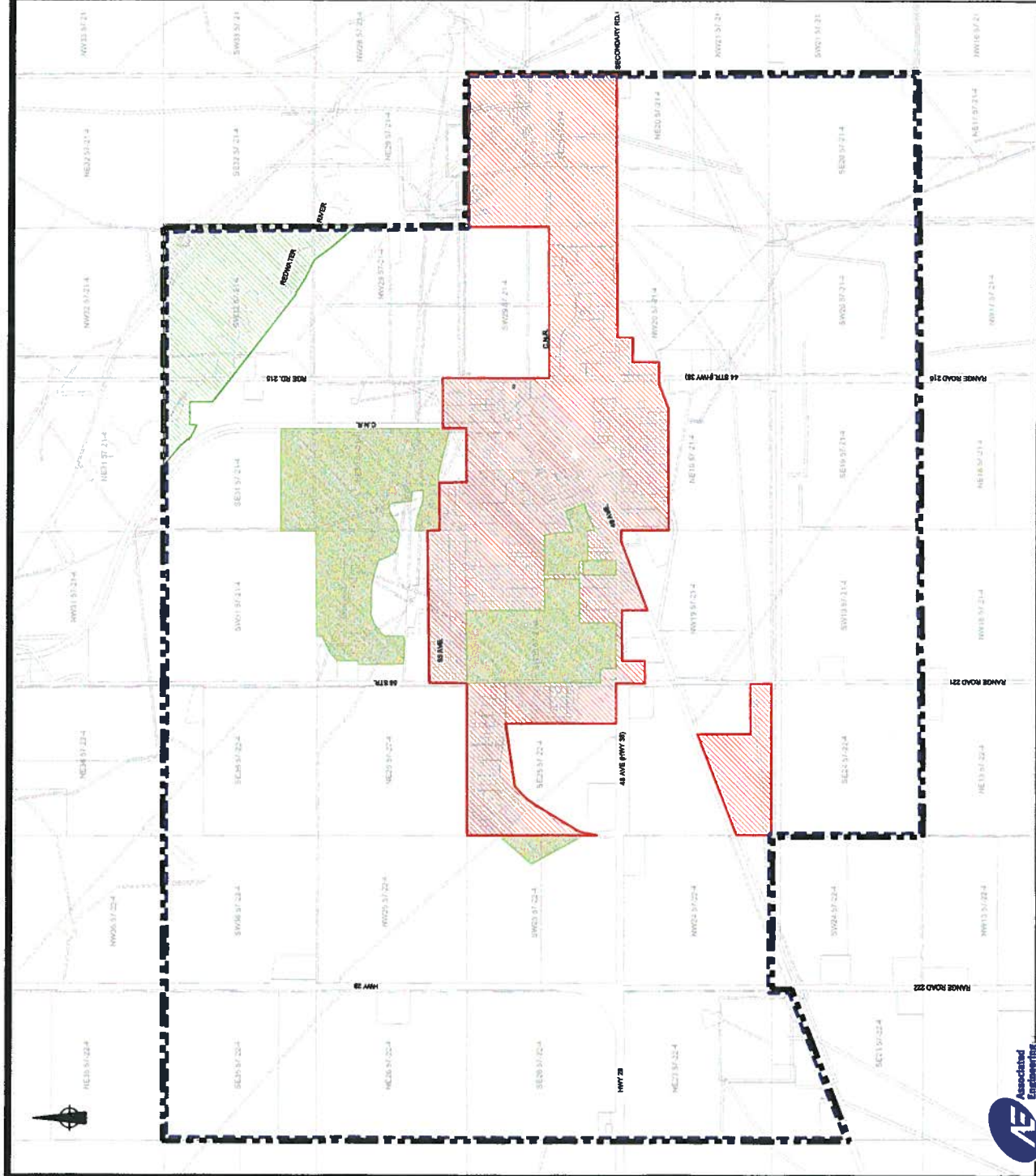
- DEVELOPED AREA
- ENVIRONMENTALLY SENSITIVE AREAS
- MAJOR RECREATION AND INSTITUTIONS CONTRIBUTING AREA
- TOWN BOUNDARY

SCHEDULE B

SCALE: 1 : 20,000

AUGUST, 2011

FIGURE 1.1



Report



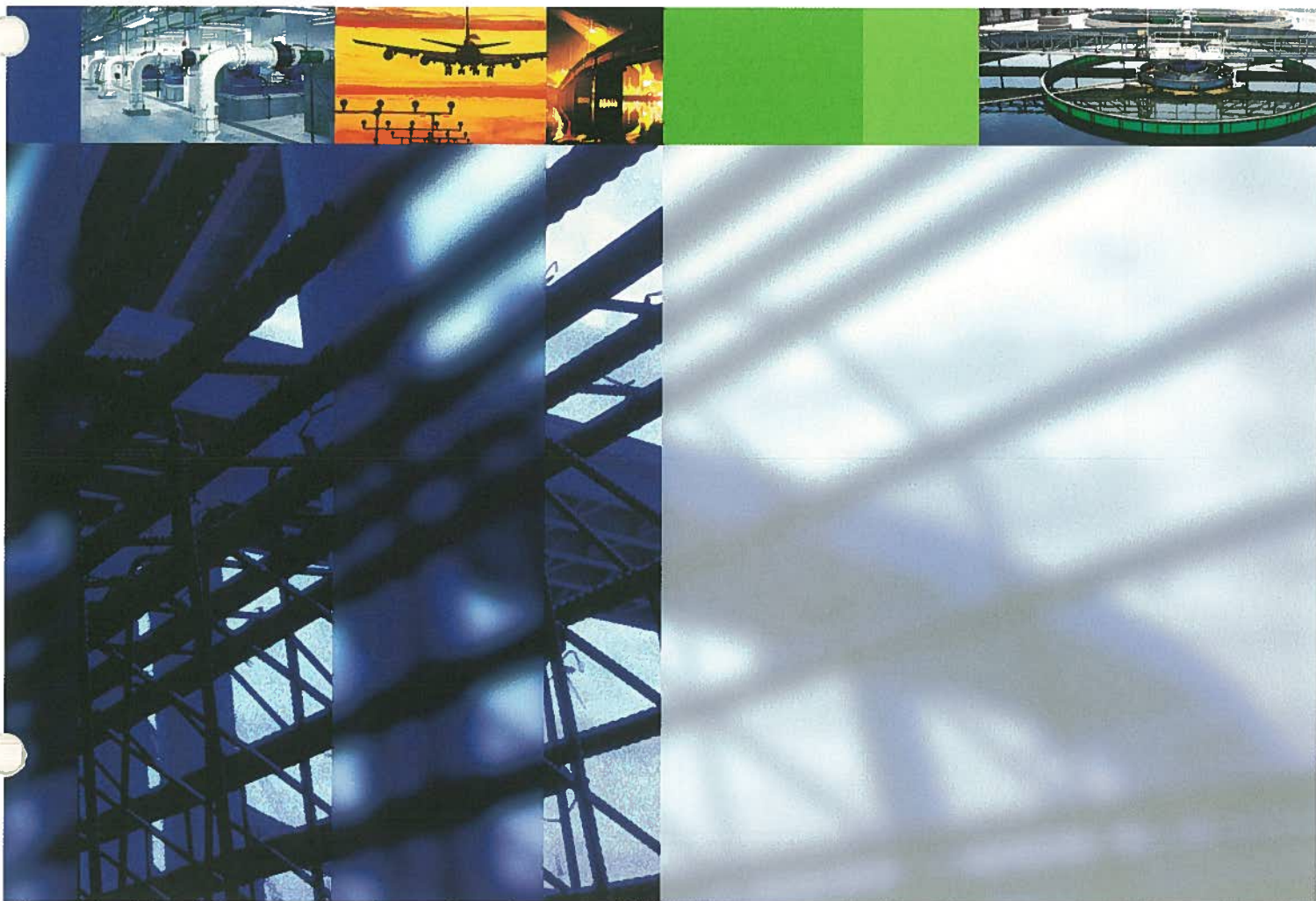
**Associated
Engineering**

*GLOBAL PERSPECTIVE.
LOCAL FOCUS.*

Town of Redwater

2011 Off-Site Levies

August 2011



REPORT

CONFIDENTIALITY AND © COPYRIGHT

This document is for the sole use of the addressee and Associated Engineering Alberta Ltd. The document contains proprietary and confidential information that shall not be reproduced in any manner or disclosed to or discussed with any other parties without the express written permission of Associated Engineering Alberta Ltd. Information in this document is to be considered the intellectual property of Associated Engineering Alberta Ltd. in accordance with Canadian copyright law.

This report was prepared by Associated Engineering Alberta Ltd. for the account of Town of Redwater. The material in it reflects Associated Engineering Alberta Ltd.'s best judgement, in light of the information available to it, at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Associated Engineering Alberta Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Table of Contents

SECTION	PAGE NO.
Table of Contents	i
1 Introduction	1-1
1.1 General	1-1
1.2 Off-Site Levies	1-1
1.3 General Procedure	1-1
1.4 Expansion and Financing of Municipal Infrastructure Systems	1-3
2 Waterworks System	2-1
2.1 General	2-1
2.2 Expansion and Financing of Waterworks System	2-1
3 Sanitary Sewerage System	3-1
3.1 General	3-1
3.2 Expansion and Financing of Sanitary Sewer Systems	3-1
3.3 Sanitary Off-Site Levy	3-1
4 Roadway Systems	4-1
4.1 General	4-1
4.2 Roadway Off-Site Levy	4-1
5 Stormwater Drainage System	5-1
5.1 General	5-1
5.2 Expansion and Financial of Storm Sewers	5-1
6 Recommendations	6-1



1 Introduction

1.1 GENERAL

The growth and development of a community will generally create some impact on the municipal infrastructure systems. Minimally, development requires an extension of municipal services such as water and sewer, roadways, etc.; more extensive and continued growth and development of a community will require the municipal infrastructure systems to be expanded to satisfactorily accommodate such growth.

It is the philosophy of the Town of Redwater that development will be responsible for its proportionate share of the costs of municipal infrastructure systems expansion to minimize the financial burden that would otherwise be placed on existing developed areas of the Town. This is achieved through the assessment of Off-Site Levies against the individual developers.

With the completion of the Town of Redwater, Master Services Plan Update, August 2010 (Master Services Plan Update), the Town has requested that Associated Engineering update the Town of Redwater, Development Charges, July 2006, using the recommendations from the Master Plan.

1.2 OFF-SITE LEVIES

In the context of this report, Off-Site Levies are defined as those costs assessed by the Town of Redwater against land developers for their proportionate share of the costs of municipal infrastructure systems constructed by the Town which benefit the Town's core infrastructure. The Town's core infrastructure is that which benefits the Town as a whole. This includes water treatment and storage, wastewater treatment, stormwater drainage, and roads.

In the Town of Redwater, Development Charges, July 2006, Development Contributions and Off-Site Levies were included as a cost to development. As an update to the July 2006 report, the Town has decided to implement a Recreation Capital Contribution to be collected at the development application stage. Therefore, this report will only include Off-Site Levies.

Under authority of the Municipal Government Act, the Town is permitted to impose Off-Site Levies against development to cover the costs of any or all of the following:

- a) New or expanded facilities for the storage, transmission, treatment or supplying of water.
- b) New or expanded facilities for the treatment, movement or disposal of sanitary sewage.
- c) New or expanded storm sewer drainage facilities.
- d) New or expanded roads required for, or impacted by, a subdivision or development.
- e) Lands required for or in connection with any facilities described in (a) to (d) above.

1.3 GENERAL PROCEDURE

In undertaking the analysis, it was necessary to identify the areas within the corporate limits of the Town against which off-site levies would be assessed. Figure 1.1 identifies each of the quarter sections of land



within the Town. Table 1.1 provides a legal description of each quarter along with its gross area in hectares. The gross area is then divided into developed/recreational/environmentally sensitive areas and gross undeveloped areas. For the purposes of this report, the developed / recreational / environmentally sensitive areas will not be used in the calculations of the off-site levies.

Table 1.1
Town of Redwater - Development Charges Contributing Areas

DESCRIPTION	GROSS AREA (ha)	DEVELOPED AREA (ha)	NET UNDEVELOPED AREA (ha)
SE 35-57-22-4	64.7	0.0	64.7
NE 26-57-22-4	64.7	0.0	64.7
SE 26-57-22-4	64.7	0.0	64.7
NE 23-57-22-4	64.7	0.0	64.7
SE 23-57-22-4	21.9	0.0	21.9
SW 36-57-22-4	64.7	0.0	64.7
SE 36-57-22-4	64.7	0.0	64.7
NW 25-57-22-4	64.7	0.0	64.7
NE 25-57-22-4	64.7	0.0	64.7
SW 25-57-22-4	64.7	3.5	61.2
SE 25-57-22-4	64.7	36.5	28.2
NW 24-57-22-4	64.7	0.0	64.7
NE 24-57-22-4	64.7	17.7	47.0
SE 24-57-22-4	64.7	0.0	64.7
SW 31-57-21-4	64.7	0.0	64.7
SE-31-57-21-4	64.7	17.1	47.6
NW 30-57-21-4	64.7	41.6	23.1
NE 30-57-21-4	64.7	41.6	23.1
SW 30-57-21-4	64.7	64.7	0.0
SE 30-57-21-4	64.7	64.7	0.0
NW 19-57-21-4	64.7	18.0	46.7
NE 19-57-21-4	64.7	21.5	43.2
SW 19-57-21-4	64.7	0.0	64.7
SE 19-57-21-4	64.7	0.0	64.7
SW 32-57-21-4	64.7	51.5	13.2
NW 29-57-21-4	64.7	2.3	62.4
SW 29-57-21-4	64.7	28.1	36.6
SE 29-57-21-4	64.7	64.7	0.0
NW 20-57-21-4	64.7	8.3	56.4
NE 20-57-21-4	64.7	0.0	64.7
SW 20-57-21-4	64.7	0.0	64.7
SE 20-57-21-4	64.7	0.0	64.7
TOTALS	2027.6	481.8	1545.8

It is necessary to establish some general assumptions respecting this review as well as off-site levy calculation criteria:

- The Town will continue to assume responsibility for the provision of those infrastructure systems and facilities, which they deem to be a benefit to the Town at large.
- The Off-Site Levies are based on constructing municipal improvements consistent with the requirements identified in the respective Master Plans to serve the lands within the present corporate limits of the Town.
- The Off-Site Levies are expressed on a gross developable hectare basis where gross developable hectare is described as the total area of parcel(s) of land minus land identified as already developed, major recreation, institutions and environmentally sensitive areas.
- All costs are estimated in 2011 dollars. These cost estimates should be reviewed regularly (maximum 5 years) to reflect annual construction costs.
- Conditional grants are grants that are given to a municipality for specific projects. We determined that there are no existing conditional grants available, nor have any conditional grants been secured by the Town. Therefore there will be no reduction to the project costs due to conditional grants at this time. The availability of conditional grants should be reviewed regularly (maximum 5 years).
- Unconditional grants are not deducted from the final project costs, as it can be rationalized that such funding could have been used for other projects.

Assumptions and/or calculation criteria specific to each off-site levy are further highlighted in more detail within each respective section of this report.

1.4 EXPANSION AND FINANCING OF MUNICIPAL INFRASTRUCTURE SYSTEMS

It must be clarified what is intended when it is stated that the Town will continue to assume the responsibility for certain infrastructure systems and facilities. Historically, the Town has designed and constructed water reservoirs and transmission mains, sanitary trunk sewers and facilities, arterial roadways, and major trunk sewers and drainage channels which serve more than a single development area (Municipality front-end costs). Although the Town accepts this responsibility, each development agreement can define whether the Town or the developer designs and constructs these major facilities. If the development agreement establishes that the developer will undertake this work, then presumably it will also establish the formula and schedule for recovery from other benefiting developments (Developer front-end costs).

The impetus for expanding municipal infrastructure systems is, to a large degree, provided by the urbanization of current undeveloped lands.

The Town's philosophy regarding the municipal infrastructure system is that development shall be fully responsible for the construction of the systems that benefit their land only, at their entire cost.

With respect to municipal infrastructure systems that will benefit the entire Town, two different approaches regarding the construction and financial responsibilities for these municipal infrastructure systems can be employed.



1.4.1 Developers Front-End Costs

In this approach, a Developer is totally responsible for constructing the municipal infrastructure systems that will benefit the entire Town. The Developer would subsequently recover portions of the costs incurred from other benefitting lands within the Town as those lands develop. The cost recovery approach will be negotiated through the development agreement. The Developer would still be required to pay their share of Off-Site Levies.

1.4.2 Municipality Front-End Costs

In this approach, the Town is responsible for providing the municipal infrastructure systems that will benefit the entire Town. Through the establishment of Off-Site Levies, the Town then recovers, on a benefitting land basis, the costs it has incurred or may incur in constructing these infrastructure systems. The report assumes that the Municipality will front end the costs for infrastructure which benefits the entire Town.





Town of
Redwater

2011 OFF - SITE LEVIES

STUDY AREA

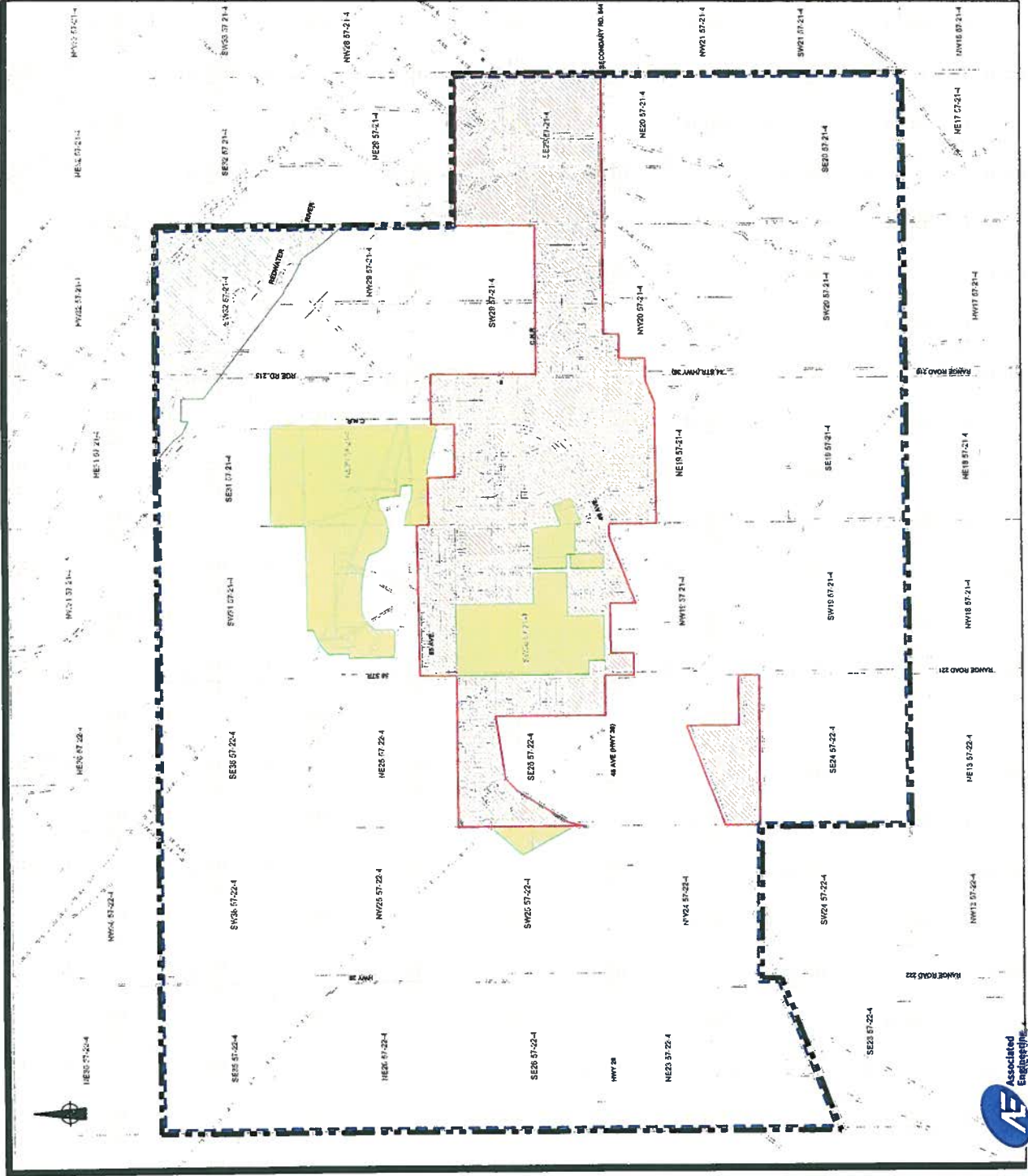
LEGEND:

- DEVELOPED AREA
- ENVIRONMENTALLY SENSITIVE AREAS
- MAJOR RECREATION AND INSTITUTIONS
- CONTRIBUTING AREA
- TOWN BOUNDARY

SCALE: 1 : 20,000

AUGUST, 2011

FIGURE 1.1



Time: 4:17pm
Date: Aug 15, 2011
User: 3177-R101-BASE-3TM-GRP-2008
File: 3177-R101-BASE-3TM-GRP-2008
3177-R101-TIF-AC-RPT
100-C:\W\REPORT\3177-FD-11.dwg by

2 Waterworks System

2.1 GENERAL

The Town's water supply is treated water purchased from EPCOR through the Capital Region Northeast Water Services Commission. The treated water is then distributed by the Town to its customers through its waterworks system consisting of a water reservoir and pumping facility, primary feeder mains and distribution mains.

The Master Services Plan Update completed for the Town of Redwater by Associated Engineering Alberta Ltd. in 2010, provides the framework for the growth and development of the Town's waterworks system to meet the domestic and fire flow requirements of its customers. This Master Plan also forms the basis for the development and implementation of the Water Off-Site Levy.

2.2 EXPANSION AND FINANCING OF WATERWORKS SYSTEM

Expansion and/or improvements to the Town's waterworks system is, to a large degree, driven by the urbanization of current undeveloped lands within the Town.

Capital improvements to the water supply system are the responsibility of the Capital Region Northeast Water Services Commission of which the Town of Redwater is a member. The costs of such improvements are assessed proportionately against the Town through the Commission's water utility rate structure and hence these costs are not included in the Town's Water Off-Site Levy.

The Town's philosophy is that off-site levies be assessed against core infrastructure that benefits the Town as a whole. The Master Plan states that there is sufficient water storage in the reservoir equivalent to a population of 7,900. There is enough water storage to satisfy the Town's requirements in the near future. Therefore, a Water Off-Site Levy will not be included in the study.

Each development will be responsible for its own internal waterworks system as well as proportionate share of the primary feeder mains (watermains larger than 300 mm diameter), treated water storage reservoirs, and pumping facilities that benefit its development. This will be negotiated at the Development Agreement stage.



3 Sanitary Sewerage System

3.1 GENERAL

The sanitary sewerage collection system in the Town of Redwater is comprised of a series of lateral (local), collector and trunk underground conduits intercepting wastewater from the various individual contributors and conveying this wastewater to a point(s) of discharge for treatment and ultimate disposal. The point of discharge for the Town sanitary sewage system is two sewage lagoons located north of the Town.

Taking advantage of the overall topography of the Town, which generally slopes downward from southwest to northeast, the Town's existing sanitary sewer systems have been developed as gravity systems. Based on the Master Services Plan Update completed for the Town by Associated Engineering in 2010, the majority of the Town's sanitary sewerage systems can be developed as gravity systems. The future north trunk sewer will require a lift station to convey sewage to the existing mechanically aerated sewage lagoon.

3.2 EXPANSION AND FINANCING OF SANITARY SEWER SYSTEMS

The impetus for expanding sanitary sewer systems is, to a large degree, provided by the urbanization of current undeveloped lands.

The Town's philosophy is that off-site levies be assessed against core infrastructure that benefits the Town as a whole. The sewage lagoons benefit the Town as a whole and thus, the Town has assumed responsibility for any upgrades or expansion required. The cost for the upgrades and expansion is then assessed proportionately against all benefitting lands through a Sanitary Off-Site Levy.

Each development will be responsible for its own internal sanitary sewerage system as well as a proportionate share of the trunk sanitary sewers (375 mm and greater), forcemains and lift stations that benefit the development. This will be negotiated at the Development Agreement stage.

3.3 SANITARY OFF-SITE LEVY

The Master Plan Update states that retention times in the complete mix cell, partial mix cells, and storage lagoons are inadequate. With the volume of the water reservoir being adequate to a population of 7,900, it is the Town's philosophy that the volume of the lagoons should be adequate to the same population. The following additional volumes are required to meet the current Alberta Environment Standards and Guidelines for a population of 7,900:

- Aerated Lagoons:
 - Cells 1 – 16,300 m³
 - Cells 2 and 3 – 225,000 m³ (112,500 m³/cell)



- An Aerobic Cell:
 - 37,600 m³ (9,410 m³/cell)
- Storage Cells:
 - 786,000 m³ (262,000 m³/cell) assuming release twice per year

The Master Plan Update recommends that the existing outfall sewer be upsized or twinned as part of the ultimate system upgrades. The report also recommends that further analysis be done to establish the estimated outfall sewer discharge rate. We recommend that this work be done, and the outfall sewer be upsized/twinned based on the work. Once this analysis is complete, we recommend that costs associated with this work be added to the Sanitary Off-Site Levy.

In addition to and in conjunction with the above, a Sewage Treatment Expansion Study is required to determine Sewage Treatment and/or Regional Sewage System options.

Using an expansion cost for the lagoons of approximately \$12/m³ provides a total cost of \$12,735,000.00. The resulting sanitary sewer off-site levy is calculated as follows:

- Sanitary Off-Site Levy:

= $\frac{\text{Total Lagoon Upgrade Costs}}{\text{Gross Developable Area}}$

= $\frac{\$12,735,000.00}{1,545.8 \text{ ha}}$

= \$8,240/ha (\$3,334/acre)



4 Roadway Systems

4.1 GENERAL

The Town of Redwater maintains a roadway classification system generally consistent with the definitions for arterial, collector and local roads contained in the "Geometric Design Standards for Canadian Roads and Streets," a manual published by the Transportation Association of Canada.

In the hierarchy of roadway classifications, the principle function of arterial roads is to provide for the efficient movement of people, goods and services between the primary traffic generation areas of a community. Typically, arterial roadways are designed as relatively free-flowing facilities, intersected by other arterial or major collector type roadways, and provide no direct access to individual properties. Arterial roadways are generally considered to be a greater benefit to the Town at large than directly to individual development. This does not however negate the responsibility of the individual developers to contribute their proportionate share towards the cost of these arterials.

4.2 ROADWAY OFF-SITE LEVY

In undertaking an assessment of the roadway contributions against development, it was necessary to make certain assumptions:

- All local and collector roadways, and their resulting impact on Highway intersections, are the responsibility of the Developer.
- The arterial roadways included in the Roadway Off-Site Levy calculations are those highlighted in Figure 4.1.
- There are three (3) types of arterial roadways to be constructed; five (5) lane undivided, four (4) lane undivided, and two (2) lane undivided. The arterial roadways are to be constructed to an urban, paved structure including stormwater drainage requirements, and street lighting. These are the standards upon which the cost estimates are based.
- Arterial roadways will typically be constructed in two stages with the first or initial stage being a two-lane urban roadway complete with the stormwater drainage system and street lighting.
- Development will be responsible for funding the first stage arterial roadway construction; the Town assumes responsibility for constructing and funding the future lanes as the Town deems such construction is warranted. Therefore, costs for two lane undivided arterial construction will not be used for the calculation of the Roadway Off-Site Levy.
- As development occurs within the Town, it will be the responsibility of Developers to construct the new roadways required for development. However, these developments will also increase traffic. Volumes on existing roadways will increase, resulting in additional delays and the need for roadway upgrades. Therefore, we recommend development contribute to any upgrades required on existing roadways.



- A blanket assessment levy (developer contribution) for roads has been calculated against all development irrespective of land use
- The cost estimates outlined in Table 4.1 do not allow for the acquisition of additional rights-of-ways to facilitate construction of the arterial roadways; it has been assumed that any additional rights-of-ways will be acquired through the subdivision development process.

Table 4.1 outlines a cost estimate for each arterial roadway in 2011 dollars.

Table 4.1
Roadway Improvements

ITEM	LENGTH (m)	UNIT COST (\$)	EST. COST (\$)
4.1 East-West Arterials			
.1 Road A-B	410	\$995.00	\$407,950.00
.2 Road B-C	1630	\$995.00	\$1,621,850.00
.3 Road C-D	1740	\$995.00	\$1,731,300.00
.4 Road E-F	820	\$995.00	\$815,900.00
.5 Road F-G	3260	\$1,150.00	\$3,749,000.00
.6 Road G-H	1290	\$995.00	\$1,283,550.00
.7 Road I-J	3100	\$995.00	\$3,084,500.00
TOTAL EAST-WEST ARTERIALS			\$12,694,050.00
4.2 North-South Arterials			
.1 Road F-K	820	\$995.00	\$815,900.00
.3 Road L-M	3260	\$995.00	\$3,243,700.00
.7 Road N-O	630	\$995.00	\$626,850.00
.8 Road O-G	610	\$1,150.00	\$701,500.00
.9 Road G-D	1440	\$995.00	\$1,432,800.00
.11 Road J-H	1310	\$995.00	\$1,303,450.00
TOTAL NORTH-SOUTH ARTERIALS			\$8,124,200.00
4.3 Existing Intersection Improvements			
.1 48 Avenue and 44 Street			
.1 Left turn lane northbound traffic			\$86,000.00
.2 Left turn lane southbound traffic			\$86,000.00
.2 48 Avenue and 48 Street			
.1 Installation of traffic signals			\$230,000.00
.3 48 Avenue and 55 Street			
.1 Installation of traffic signals			\$230,000.00
.2 Left turn lane for westbound traffic			\$86,000.00
.3 Channelization of all right turns			\$115,000.00
.4 Highway 28 and 48 Avenue			
.1 Installation of traffic signals			\$230,000.00
TOTAL EXISTING INTERSECTION IMPROVEMENTS			\$1,063,000.00
TOTAL ROADWAYS			\$21,881,250.00



Based on our cost estimates and the above noted assumptions, we have developed a Roadway Off-Site Levy for application on a Town-wide basis calculated as follows:

- Roadway Off-Site Levy =
$$\frac{\text{Total Cost to Construct Future Arterial Lanes}}{\text{Gross Developable Area}}$$
$$= \frac{\$21,881,250}{1,545.8 \text{ ha}} = \$14,155/\text{ha} (\$5,729/\text{acre})$$





2011 OFF - SITE LEVIES

ROAD NETWORK

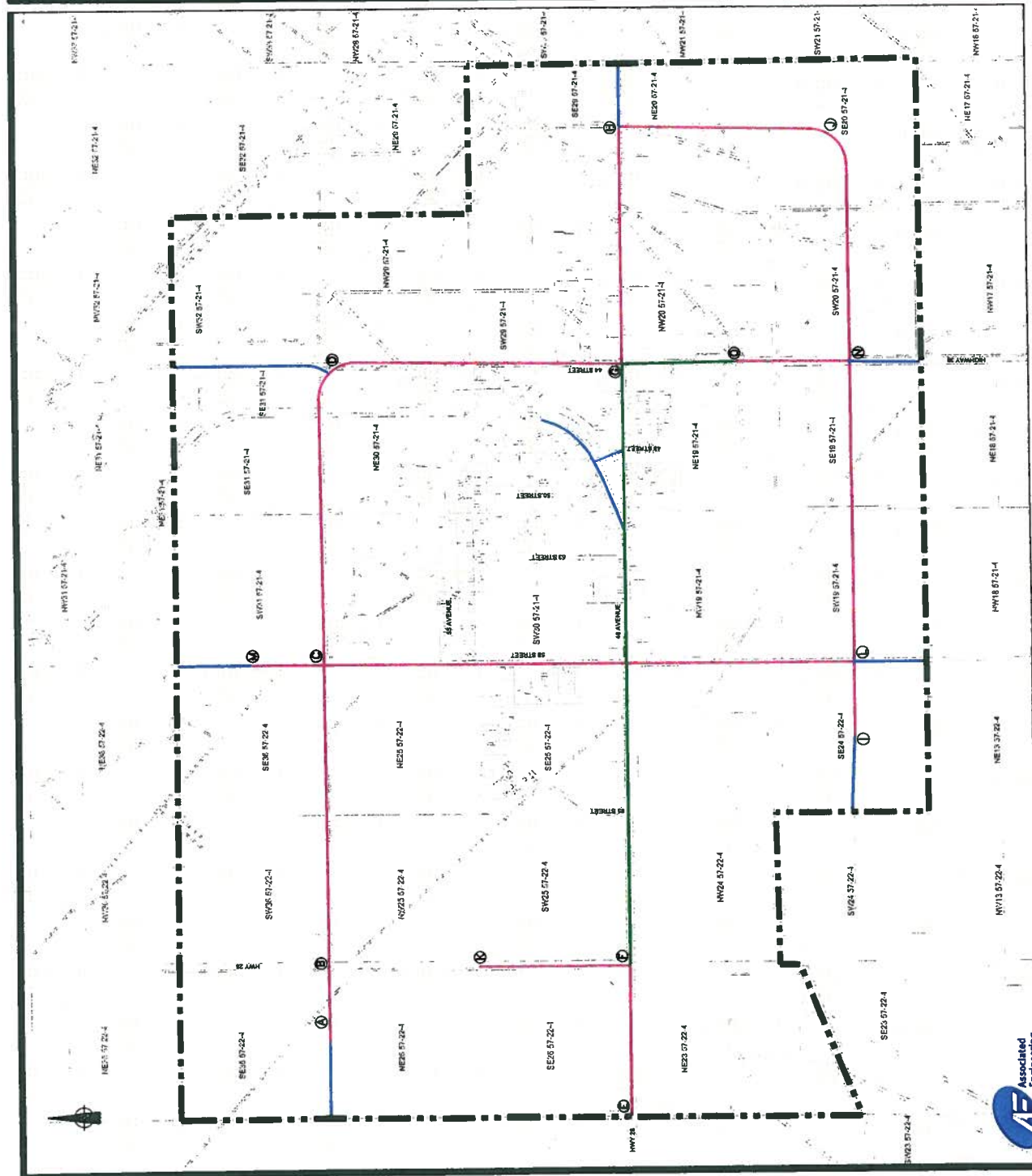
LEGEND:

- ARTERIAL - 2 LANE UNDIVIDED (URBAN)
ARTERIAL - 4 LANE UNDIVIDED (URBAN)
ARTERIAL - 5 LANE UNDIVIDED (URBAN)
TOWN BOUNDARY

SCALE: 1 : 20,500

AUGUST, 2011

FIGURE 4.1



5 Stormwater Drainage System

5.1 GENERAL

Management of stormwater is an important component in the development of a community and must be handled effectively to preserve and promote the general health, welfare, security and economic well being of the public. Traditionally, in urban centres, stormwater is handled in keeping with the minor/major drainage concept wherein:

- Minor systems are designed and implemented to accommodate drainage to avoid property damage and flooding and to minimize inconvenience to the public from 1 in 5 year rainfall events.
- Major systems are designed and implemented for flood control to avoid loss of life, injuries, and significant damage to property from events greater than 1 in 5 year return, producing unusual high intensity rainfall and/or large volume runoff.

Minor systems are typically comprised of underground piping, manholes, catch basins, and outfall structures but can also be designed as a rural-type drainage system consisting of ditches and culverts.

Major systems can be large diameter underground piping, open channels, stormwater detention/retention ponds, natural streams, or any combination thereof, capable of conveying runoff, from events up to and including a 1 in 100 year return period, to the ultimate receiving stream or water body.

Based on The Master Services Plan Update, completed by Associated Engineering in 2010, the existing drainage is primarily overland with the exception of a small amount of storm sewer pipe in the east area of Town. The drainage generally flows to the north-east discharging into nearby ditches and sloughs which eventually flow into the Redwater River.

5.2 EXPANSION AND FINANCIAL OF STORM SEWERS

The Town's philosophy is that off-site levies be assessed against core infrastructure that benefits the Town as a whole. Storm infrastructure identified in the Master Plan does not benefit the Town as a whole. Therefore, a Storm Water Off-Site Levy will not be included in the study. Each development will be responsible for its own internal storm drainage system as well as a proportionate share of the storm drainage system(s) that benefits its development. This will be negotiated at the Development Agreement stage.



6 Recommendations

For our analysis of the Off-Site Levies for the Town of Redwater, we recommend that:

- The Town of Redwater continues to assume the responsibility for the construction of the municipal infrastructure systems which they deem to be of benefit to the Town at large.
- The Town adopt the philosophy that development will be responsible for its proportionate share of the cost of municipal infrastructure systems expansion through the assessment of off-site levies against all benefiting lands.
- Further analysis be done to establish the estimated sanitary outfall sewer discharge rate. Once the sanitary outfall sewer discharge rate is established, the outfall sewer be upsized/twinned based on the discharge rate. Costs related to this work should then be added to the Sanitary Off-Site Levy.
- The Town undertake a Sewage Treatment Expansion Study to determine Sewage Treatment and/or Regional Sewage System options. Adjustments to the sanitary off-site levy will be made following the study.
- The Town adopt the Sanitary Off-Site Levy as per Table 6.1.
- Developments contribute to any upgrades required on existing roadways as a result of increased traffic due to developments.
- The Town adopt the Roadway Off-Site Levy as per Table 6.1.
- The Town adopt the philosophy regarding stormwater drainage systems wherein the development industry is required to manage stormwater in accordance with the Alberta Environment Guidelines respecting stormwater release rates.

Based on the above, we recommend that the Town consider the following:

- Establish Off-Site Levies as per Table 6.1, based on 2011 dollars.
- Adopt the Off-Site Levy by-law.
- Reviewing the Off-Site Levies on a regular (annual) basis to ensure that the rates are consistent with the overall Town funding requirements and updated development plans.

Table 6.1
Proposed Off-Site Levies

Development Charge	\$ Per Gross Developable Hectare	\$ Per Gross Developable Acre
Sanitary Off-Site Levy:	\$ 8,240	\$ 3,334
Roadway Off-Site Levy:	\$14,155	\$ 5,729



REPORT

Closure

This report was prepared for the Town of Redwater to assess Off-Site Levies against land developers for their proportionate share of the costs of municipal infrastructure systems constructed by the Town which benefit the development areas.

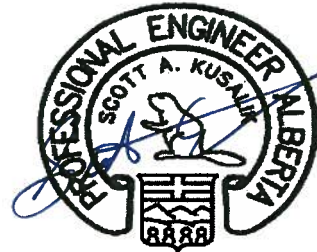
The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,
Associated Engineering Alberta Ltd.



Aug 17, 2011

Patrick D. Mastromatteo, P.Eng.
Project Manager



August 17, 2011

Scott Kusalik, P. Eng.
Project Engineer

ASSOCIATED ENGINEERING QUALITY MANAGEMENT SIGN-OFF

Signature: Scott Kusalik

Date: Aug. 17, 2011

APEGGA Permit to Practice P 3979



Associated
Engineering

GLOBAL PERSPECTIVE.
LOCAL FOCUS.

**TOWN OF REDWATER
BYLAW 819**

Amended by
Bylaw 838

A BYLAW OF THE TOWN OF REDWATER, IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF AMENDING THE OFF-SITE LEVY BYLAW 786, BY INCREASING THE OFF-SITE RATES FOR SANITARY SEWER AND ARTERIAL ROADS WITHIN THE TOWN OF REDWATER.

WHEREAS the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time, permits a Council to impose a levy known as an Off-Site Levy in respect of land to be developed or subdivided within a municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipality has engaged in consultation with representatives of the development industry to address and define existing and future infrastructure requirements of the Municipality with respect to circumstances of the Municipality and the benefits of development;

AND WHEREAS the Council received advice and Reports respecting upgrades to Off-Site Infrastructure which set out a fair and equitable calculation of Off-Site Levies in accordance with the purpose of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

AND WHEREAS pursuant to the *Municipal Government Act*, RSA 2000, as amended, repealed and replaced from time to time, the Municipal Council for the Municipality has imposed by Bylaw No. 786, as amended, a levy, known as an Off-Site Levy, in respect of land to be developed or subdivided within the Municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipal Council has the general authority pursuant to Section 191 of the *Municipal Government Act* to amend the Municipality's Bylaw No. 786;

AND WHEREAS the Municipal Council deems it to be in the public interest to amend the Municipality's Bylaw No. 786 in order to update the levies imposed based on the current costs to recover the cost of infrastructure required for development;

AND WHEREAS Council has advertised its intention to consider the provision of this Bylaw pursuant to the requirements of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

NOW THEREFORE the Council of the Municipality in the Province of Alberta, duly assembled, hereby enacts as follows:

That the Off-Site Levy Bylaw 786 is hereby amended as follows:

Adding Section 2.1. (m) iii) "2014 Off-Site Levy Rate Review letter" prepared by Associated Engineering, dated January 30, 2014;"

Replacing Schedule "A" Defined Off-Site Levy Rates in its entirety with the following:

DEFINED OFF-SITE LEVY RATES


2014 OFF-SITE LEVY RATES

DESCRIPTION	CURRENT OFF-SITE LEVY	
Sanitary Sewer	\$10,186/gross developable hectare	\$4,122/gross developable acre
Arterial Roads	\$26,910/gross developable hectare	\$10,890/gross developable acre
Total Off-site Levies	\$37,096/gross developable hectare	\$15,012/gross developable acre

Read a first time, this 18th day of March, 2014.

Read a second time, this 15th day of April, 2014.

Read a third time and finally passed, this 20th day of May, 2014.


Mayor


Town Manager



**Associated
Engineering**

GLOBAL PERSPECTIVE
LOCAL FOCUS

Associated Engineering Alberta Ltd.
1000, 10909 Jasper Avenue
Edmonton, Alberta, Canada T5J 5B9

TEL 780.451.7666

FAX 780.454.7698

WWW.AE.CA

January 30, 2014

File: 2013 3731 A.01.00

Debbie Hamilton
Town Manager
Town of Redwater
P.O. Box 397
4924 - 47 Street
Redwater, AB T0A 2W0

Re: 2014 OFF-SITE LEVY RATE REVIEW

Dear Debbie:

As requested, Associated Engineering completed a rate review of the Town's Off-Site Levies. From our review, we recommend that the current levies be increased due to the increase in construction costs.

We calculated the levies, based on 2014 construction costs, to be as follows:

2014 Sanitary Off-Site Levy = \$10,186/ha (\$4,122/acre)

2014 Roadway Off-Site Levy = \$26,910/ha (\$10,890/acre)

Total 2014 Levy = \$37,096/ha (\$15,012/acre)

If you have any questions, please contact the undersigned.

Yours truly,

Patrick Mastromatteo, P. Eng
Manager, Municipal

PDM/

**TOWN OF REDWATER
BYLAW 838**

**A BYLAW OF THE TOWN OF REDWATER, IN THE PROVINCE OF ALBERTA, FOR
THE PURPOSE OF AMENDING THE OFF-SITE LEVY BYLAW 786 AND 819 BY
INCREASING THE OFF-SITE RATES FOR SANITARY SEWER AND ARTERIAL
ROADS WITHIN THE TOWN OF REDWATER.**

WHEREAS the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time, permits a Council to impose a levy known as an Off-Site Levy in respect of land to be developed or subdivided within a municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipality has engaged in consultation with representatives of the development industry to address and define existing and future infrastructure requirements of the Municipality with respect to circumstances of the Municipality and the benefits of development;

AND WHEREAS the Council received advice and Reports respecting upgrades to Off-Site Infrastructure which set out a fair and equitable calculation of Off-Site Levies in accordance with the purpose of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

AND WHEREAS pursuant to the *Municipal Government Act*, RSA 2000, as amended, repealed and replaced from time to time, the Municipal Council for the Municipality has imposed by Bylaw No. 786, as amended, a levy, known as an Off-Site Levy, in respect of land to be developed or subdivided within the Municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipal Council has the general authority pursuant to Section 191 of the *Municipal Government Act* to amend the Municipality's Bylaw No. 786 and Bylaw No. 819;

AND WHEREAS the Municipal Council deems it to be in the public interest to amend the Municipality's Bylaw No. 786 and Bylaw No. 819 in order to update the levies imposed based on the current costs to recover the cost of infrastructure required for development;

AND WHEREAS Council has advertised its intention to consider the provision of this Bylaw pursuant to the requirements of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

NOW THEREFORE the Council of the Municipality in the Province of Alberta, duly assembled, hereby enacts as follows:

That the Off-Site Levy Bylaw 786 is hereby amended as follows:

Adding Section 2.1. (m) iv) "2016 Off-Site Levy Rate Review letter" prepared by Associated Engineering, dated March 31, 2016;"

And further that Off-Site Levy Bylaw 819 is hereby amended as follows:

Replacing Schedule "A" Defined Off-Site Levy Rates in Bylaw 819 in its entirety with the following:

DEFINED OFF-SITE LEVY RATES

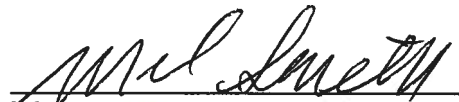
2016 OFF-SITE LEVY RATES


DESCRIPTION	CURRENT OFF-SITE LEVY	
Sanitary Sewer	\$11.023/gross developable hectare	\$4,461/gross developable acre
Arterial Roads	\$32,282/gross developable hectare	\$13,064/gross developable acre
Total Off-site Levies	\$43,305/gross developable hectare	\$17,525/gross developable acre

Read a first time, this 4th day of April, 2016.

Read a second time, this 7th day of June, 2016.

Read a third time and finally passed, this 7th day of June, 2016.


Mayor


Town Manager



**Associated
Engineering**

GLOBAL PERSPECTIVE
LOCAL FOCUS

Associated Engineering Alberta Ltd.
500, 9888 Jasper Avenue
Edmonton, Alberta, Canada, T5J 5C6

TEL: 780.451.7666
FAX: 780.454.7698
www.ae.ca

March 30, 2016

File: 2016 3634 A.01.00

Debbie Hamilton
Town Manager
Town of Redwater
P.O. Box 397
4924 - 47 Street
Redwater, AB T0A 2W0

Re: 2016 OFF-SITE LEVY RATE REVIEW

Dear Debbie:

As requested, Associated Engineering completed a rate review of the Town's Off-Site Levies. From our review, we recommend that the current levies be increased due to the increase in construction costs.

We calculated the levies, based on 2016 construction costs, to be as follows:

2016 Sanitary Off-Site Levy = \$11,023/ha (\$4,461/acre)

2016 Roadway Off-Site Levy = \$32,282/ha (\$13,064/acre)

Total 2016 Levy = \$43,305/ha (\$17,525/acre)

If you have any questions, please contact the undersigned.

Yours truly,

Patrick Mastromatteo, P.Eng.
Manager, Municipal

PDM/



**TOWN OF REDWATER
BYLAW 873**

A BYLAW OF THE TOWN OF REDWATER, IN THE PROVINCE OF ALBERTA, FOR THE PURPOSE OF AMENDING THE OFF-SITE LEVY BYLAW 786 AND 838 BY INCREASING THE OFF-SITE RATES FOR SANITARY SEWER AND ARTERIAL ROADS WITHIN THE TOWN OF REDWATER.

WHEREAS the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time, permits a Council to impose a levy known as an Off-Site Levy in respect of land to be developed or subdivided within a municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipality has engaged in consultation with representatives of the development industry to address and define existing and future infrastructure requirements of the Municipality with respect to circumstances of the Municipality and the benefits of development;

AND WHEREAS the Council received advice and Reports respecting upgrades to Off-Site Infrastructure which set out a fair and equitable calculation of Off-Site Levies in accordance with the purpose of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

AND WHEREAS pursuant to the *Municipal Government Act*, RSA 2000, as amended, repealed and replaced from time to time, the Municipal Council for the Municipality has imposed by Bylaw No. 786, as amended, a levy, known as an Off-Site Levy, in respect of land to be developed or subdivided within the Municipality's limits, and to authorize an Agreement to be entered into for payment of the levy;

AND WHEREAS the Municipal Council has the general authority pursuant to Section 191 of the *Municipal Government Act* to amend the Municipality's Bylaw No. 786 and Bylaw No. 838;

AND WHEREAS the Municipal Council deems it to be in the public interest to amend the Municipality's Bylaw No. 786 and Bylaw No. 838 in order to update the levies imposed based on the current costs to recover the cost of infrastructure required for development;

AND WHEREAS Council has advertised its intention to consider the provision of this Bylaw pursuant to the requirements of the *Municipal Government Act*, RSA 2000, c. M-26, as amended or repealed and replaced from time to time;

NOW THEREFORE the Council of the Municipality in the Province of Alberta, duly assembled, hereby enacts as follows:

That the Off-Site Levy Bylaw 786 is hereby amended as follows:

Adding Section 2.1. (m) v) "2019 Off-Site Levy Rate Review letter" prepared by Associated Engineering, dated June 10, 2019;"

And further that Off-Site Levy Bylaw 838 is hereby amended as follows:

Replacing Schedule "A" Defined Off-Site Levy Rates in Bylaw 838 in its entirety with the following:

DEFINED OFF-SITE LEVY RATES


2019 OFF-SITE LEVY RATES

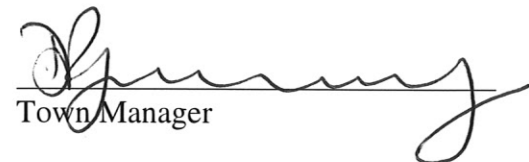
DESCRIPTION	CURRENT OFF-SITE LEVY	
Sanitary Sewer	\$12,045/gross developable hectare	\$4,875/gross developable acre
Arterial Roads	\$35,275/gross developable hectare	\$14,275/gross developable acre
Total Off-site Levies	\$47,320/gross developable hectare	\$19,150/gross developable acre

Read a first time, this 18th day of June, 2019.

Read a second time, this 20th day of August, 2019.

Read a third time and finally passed, this 20th day of August, 2019.


Mayor


Town Manager



Associated
Engineering

GLOBAL PERSPECTIVE
LOCAL FOCUS.

Associated Engineering Alberta Ltd.
500, 9888 Jasper Avenue
Edmonton, Alberta, Canada, T5J 5C6

TEL: 780.451.7666

FAX: 780.454.7698

www.ae.ca

June 10, 2019

File: 2019 3392.A.01.00

Debbie Hamilton
Town Manager
Town of Redwater
P.O. Box 397
4924 - 47 Street
Redwater, AB T0A 2W0

Re: 2019 OFF-SITE LEVY RATE REVIEW

Dear Debbie:

As requested, Associated Engineering completed a rate review of the Town's Off-Site Levies. From our review, we recommend that the current levies be increased due to the increase in construction costs.

We calculated the levies, based on 2019 construction costs, to be as follows:

2019 Sanitary Off-Site Levy = \$12,045/ha (\$4,875/acre)

2019 Roadway Off-Site Levy = \$35,275/ha (\$14,275/acre)

Total 2019 Levy = \$47,320/ha (\$19,150/acre)

If you have any questions, please contact Diego Mejia or the undersigned.

Yours truly,

Patrick Mastromatteo, P.Eng.
Manager, Northern Region

Cc: Diego Mejia - Associated Engineering