CLEARWATER COUNTY COUNCIL AGENDA
February 14, 2017
9:00 AM
Council Chambers
4340 – 47 Avenue, Rocky Mountain House, AB

9:45 am Community & Protective Services: Rocky Senior Housing Council

10:30 am Delegation: Medical Equipment Lending Society

10:40 am Corporate Services: Condor Community Centre

11:00 am In Camera: Third Party Interest

A. CALL TO ORDER

B. AGENDA ADOPTION

C. CONFIRMATION OF MINUTES
1. January 24, 2017 Regular Meeting Minutes

D. PUBLIC WORKS
1. Tender Award: 2017 Northfork Grading Program
2. Policy Review: Policies Associated with the Highway Management Bylaw
3. Road Construction Request

E. PLANNING
1. Nordegg Mobile Home Park

F. COMMUNITY & PROTECTIVE SERVICES
1. 9:45 am Rocky Senior Housing Council
2. Sundre Fire Services Agreement

G. DELEGATION
1. 10:30 am Medical Equipment Lending Society

H. CORPORATE SERVICES
1. 10:40 am Condor Community Centre

I. INFORMATION

1. CAO's Report
2. Public Works Director's Report
3. Councillor's Verbal Report
4. Accounts Payable Listing

J. IN CAMERA*

1. 11:00 am Third Party Interest

* For discussions relating to and in accordance with: a) the Municipal Government Act, Section 197 (2) and b) the Freedom of Information and Protection of Privacy Act, Section 16(1)(a) to (c)

K. ADJOURNMENT

AGENDA ITEM

PROJECT: 2017 Northfork Grading Tender Award		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: Public Works	**WRITTEN BY** Brian Bilawchuk	**REVIEWED BY:** Marshall Morton/Ron Leaf
BUDGET IMPLICATION: ☐ N/A ☒ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite) Bylaw: _____ Policy: ___		
STRATEGIC PLAN THEME: Managing our Growth	**PRIORITY AREA:** **Transportation** Objective 1.5 Support a transportation network that connects and moves residents and industry.	**STRATEGY**: To effectively manage the financial and physical assets of the County in order to support the growth and development of the County while obtaining maximum value from County owned infrastructure and structures.
RECOMMENDATION: That Council approves awarding the contract to Netook Construction Ltd**.**		

Background: The Administration has tendered the proposed 2017 Northfork Grading program. This program includes grading and other work to the Northfork Road from km 8.3 to km 13.5 (5.2 Km).

A Tender Opening was held on February 2, 2017 at 2:00 p.m. for the work outlined above. We received 5 bids**,** with **Netook Construction Ltd.** being the low valid bidder. The cost for this project came in **$197,146.87** over the engineers estimated amount of **$1,156,400.00**

The administration feels that the short fall for this project can come from the 2017 Gravel Road Rehabilitation budget by cutting 1 mile of road from the 2017 program.

The following is a summary of the bid prices received:

Netook Construction Ltd.	**$1,101,360.79**
Lamb Enterprises (1996) Ltd.	$1,482,793.00
Year Round Landscaping Inc.	$1,968,951.11
Pidherney's Inc.	$2,085,994.84
Rockhard Contractors Inc.	$2,254,064.90

Netook Construction Ltd.	**Tender Pricing.**	**Estimated Amount** (rounded to nearest $100)
Construction (less Site Occupancy)	$1,051,860.79	$ 907,000.00
10 % Contingency	$ 105,186.08	$ 90,700.00
Potential Site Occ. Bonus	$ 4,500.00	$ 2,700.00
Engineering	$ 172,000.00	$ 136,000.00
Utilities	$ 20,000.00	$ 20,000.00
Total	**$1,353,546.87**	**$1,156,400.00**

AGENDA ITEM

PROJECT: Highway Management Bylaw and Associated Policy Review			
PRESENTATION DATE: February 14, 2017			
DEPARTMENT: Public Works	**WRITTEN BY:** Erik Hansen	**REVIEWED BY:** Marshall Morton/Ron Leaf	
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation			
LEGISLATIVE DIRECTION: ☐None ☐ Provincial Legislation (cite) ☒ County Bylaw or Policy (cite): Permitting of Road Allowances Policy, Isolated Access Roads Policy			
STRATEGIC PLAN THEME: Managing our Growth	**PRIORITY AREA:** Planning	**STRATEGIES:** 1.1.1 Ensure appropriate land use planning for public infrastructure, rural subdivisions, hamlets and commercial and industrial lands.	
RECOMMENDATION: That Council reviews the revised policies, recommend any changes or approve the revisions as presented.			
ATTACHMENT(S): 1. Permitting of Road Allowances Policy, Road Allowance License Agreement, Isolated Access Roads Policy			

BACKGROUND:

As Council may recall, when Council approved the Highway Management Bylaw, staff indicated that additional policy reviews would be required to be consistent with the new bylaw. Changes to the attached policies have been highlighted in red whereas items that are intended to be removed have been ~~struck through~~. The first of these policies is the Permitting of Road Allowances Policy.

Major changes include

- Changing the Permit Application to a License Application
- The CAO or his designate can authorize a license
- The requirement for insurance
- The requirement for signage for grazing livestock on undeveloped road allowance
- Licenses are required for Industrial, Commercial and Isolated Access use of a road allowance

The policy and the licence agreement have been attached for Council's review.

(See Attached)

The second policy is the Isolated Access Roads Policy.

Major Changes include

- Inclusion of definitions
- Licenses are required for Isolated Access Roads
- The CAO can authorize an Isolated Access Road License
- The requirement for insurance

(See Attached)

The last two policies affected by the Highway Management Bylaw are the Road Weights Control Policy and the Road Use Industrial / Commercial Truck Haul Policy. These two policies are not included in the agenda as there are only small administrative changes.

Changes Include

- Changing the reference from Road Use Agreements to Road Use Permits.

Upon review, staff will bring the final draft of the revised policies back to Council for approval at the next regularly scheduled Council Meeting.

CLEARWATER COUNTY

~~Permitting~~ Licensing of Municipal Road Allowances Policy

EFFECTIVE DATE: **Draft REVISED DATE:**	April 1996 February 14, 2017
SECTION:	Administration
POLICY STATEMENT:	To outline the procedure for managing the ~~permitting~~ licensing of Municipal road allowances.
DEFINITIONS:	"Undeveloped Road Allowance" means any land dedicated as a road right of way that has not been fully developed or required for vehicular traffic. The right of way may or may not be shown as a road on a plan of survey that has been filed or registered in a land titles office. "Licensee" a person to whom a license is granted or issued "Adjacent Land" Land that is next to or adjoining to the road allowance
PROCEDURE:	1. The CAO may, upon receipt of an application in an approved form and payment of the required fee set out in Schedule ''A' 'of the Highway Management Bylaw #1018/16, issue to a Person a licence for the purpose of authorizing the non-exclusive access and use of an Municipal Road Allowance. 2. In issuing a licence , the CAO may impose such terms and conditions as are determined to be necessary or beneficial in his or her sole discretion, including but not limited to insurance requirements, signage requirements, whether obstructions such as fences and gates are permissible, and the limitations on the Person's access or use. 3. The licence is for non-exclusive access and the licence holder may not prevent the public from accessing or travelling along the Municipal Road Allowance; 4. No work, development, improvement, or change to the condition of the Municipal Road Allowance is permitted without the prior written authorization of the CAO; and

POLICY

5. the County may terminate the licence with 30 days written notice to the licence holder pursuant to the *Traffic Safety Act*.

6. Applications for agricultural uses of a road allowance will only be considered on undeveloped road allowances or abandoned registered roads where the proposed use is not in conflict with adjacent uses. In addition, the applicant must have title to or use of adjacent lands.

7. Applications for Industrial, Commercial or Isolated Access use of a road allowance will only be considered where the proposed use is not in conflict with existing uses.

8. ~~A written application is first presented to Council. To cover the required advertising costs a $ 100.00 fee must accompany the application. The $ 100.00.~~ The application fee will only be refunded if ~~first reading to the By-law to permit license~~ the application is denied.

9. If ~~Council~~ the CAO accepts the application, ~~an advertisement advising of the possible lease licensing of the road allowance should be placed in the local newspapers for a two-week period.~~ notices ~~are also~~ will ~~to~~ be sent out to adjacent landowners to ensure they have no objection to the proposal.

10. ~~A Public Hearing will be held Approximately of the advertising. At the Public Hearing,~~ Any person can provide a written ~~state the~~ reason for or against the proposed ~~lease~~ license within thirty(30) days ~~one month~~ after notification.

11. Upon consideration of any written responses the CAO will make a determination on the licence at his or her own discretion. ~~After the Public Hearing, the second and third reading of the proposed by-law authorizing the permitting licensing of the road allowance will be considered.~~

12. The Municipality ~~permits~~ licences the road allowance(s) at ~~$10.00~~ $ 50.00 per year per application except for Isolated Access Roads.

13. If any conflict arises between adjacent landowners of the road allowance at any time during the process or after the road is ~~permitted~~ licensed, and if attempts by the landowners to negotiate a reasonable solution are unsuccessful, the Municipality may cancel the ~~permit~~ license upon serving thirty-days notice of its intention to do so.
14. A ~~permit~~ license holder does not have the right to bar entry to anyone wishing to travel the road allowance or use the road as access.
15. ~~Road allowance permits are non-transferable, other than to a family member, without the prior approval of Council.~~
    Road allowance agreements may be transferred to a family member, or another Industrial/ Commercial user as an administrative change, as long as the following requirements are met: There is an existing bylaw and the applicant has title to adjacent lands. If there is not an existing bylaw, the family member or other Industrial/ Commercial user will have to follow all steps of the process as a new applicant.
16. ~~No work of any kind shall be performed on the road allowance without prior approval from Public Works.~~
17. Upon final approval by the CAO, licensees using the road allowance for grazing livestock or an Isolated Access Road must provide liability insurance of no less than $2,000,000 during the term of the license and erect signage indicating the road allowance may contain livestock at large, in a form and at locations as approved by the Municipality, if applicable.
18. Upon final approval by the CAO, licensees using the road allowance for Industrial or Commercial use must provide liability insurance of no less than $5,000,000 during the term of the license.

CLEARWATER COUNTY
ROAD ALLOWANCE LICENSE AGREEMENT

Agreement made this _____ day of _____ , 20 xx

BETWEEN

Clearwater County
(hereinafter called "the Municipality")

OF THE FIRST PART

And

Insert name & address of Licensee(s)
_____
_____
_____

in the Province of Alberta
(hereinafter called "the Licensee")

OF THE SECOND PART

The Municipality hereby agrees to allow the Licensee, to use the road allowance to access your property, as of the ___ day of_____, 20___ those parcels of land as identified on the attached map and described as follows:

The Road Allowance which lies;
Between part of
_____W5M and part of _____W5M and
_____ W5M and _____ W5M
(approximately ____.00 acres more or less

(hereinafter referred to as the "Road Allowance")

The Licensee, in return for the right to utilize the Road Allowance for the purpose of access to the Licensee's property, agrees to pay the Municipality, the sum of One Hundred Fifty Dollars upon the sealing and delivery of these presents, the receipt whereof is hereby acknowledged and further agrees to pay any municipal tax levied against him in respect of the said Road Allowance. Fifty dollars shall be due and payable each January during the term of this license agreement accept for Isolated Access Roads.

In cases where the road allowance is being licensed for grazing livestock, or an Isolated Access Road the Licensee shall, at his own expense, provide and maintain in force during the term hereof comprehensive general public liability insurance (the "Liability Insurance") covering personal and bodily injury, death, and property damage on an occurrence basis with respect to the activities of the Licensee or his employees, invitees, or patrons carried on, in or from the Road Allowance of not less than $2 MILLION ($2,000,000.00) DOLLARS or for such greater amount as the Municipality may reasonably require. The Liability Insurance shall: a) Name the Municipality as an insured; b) be in a form satisfactory to the Municipality; and c) Waive subrogation against the Municipality.

The Licensee shall erect signage indicating the Road Allowance may contain livestock at large, in a form and at locations as approved by the Municipality.

In cases where the road allowance is being licensed for Industrial or Commercial access the Licensee shall, at his own expense, provide and maintain in force during the term hereof comprehensive general public liability insurance (the "Liability Insurance") covering personal and bodily injury, death, and property damage on an occurrence basis with respect to the activities of the Licensee or his employees, invitees, or patrons carried on, in or from the Road Allowance of not less than $5 MILLION ($5,000,000.00) DOLLARS or for such greater amount as the Municipality may reasonably require. The Liability Insurance shall: a) Name the Municipality as an insured; b) be in a form satisfactory to the Municipality; and c) Waive subrogation against the Municipality. Industrial, Commercial or Isolated access roads on road allowance shall be constructed and maintained to a standard as approved by the Municipality, at the Licensee's expense.

The Licensee shall immediately advise the Municipality, and promptly thereafter by written notice confirm such advice to the Municipality, of any accident to or defect of or any damage or injury which has occurred to or on the Road Allowance, or any part thereof, or howsoever caused, provided that nothing herein shall be construed so as to require repairs to be made to the license area by the Municipality, except as expressly provided in this license of occupation.

The Licensee shall indemnify and save harmless the Municipality from and against all actions and claims for damage arising from use of the Road Allowance under this License and from any improvements made by him on the Road Allowance. The Municipality shall not be liable for any bodily injury or property damage of any nature that the Licensee may suffer due to performance or non-performance of this License.

The Licensee shall not, without the consent of the Municipality assign, sublet or transfer the Road Allowance or any portion thereof, and if the Licensee ceases to be the owner or occupier of land adjoining the Road Allowance, this License shall thereupon terminate and be of no further effect.

The Licensee shall, permit a right of public access over the Road Allowance or any portion thereof, and for such purpose shall provide suitable gates as directed by the Municipality at such places as the Municipality may indicate.

The Licensee shall not cut or destroy or cause to be cut or destroy any trees on the Road Allowance without the expressed written consent of the Municipality, and no building or structure shall be erected on the Road Allowance without the prior written consent of the Municipality.

The License is subject to any rights given to any person under any other Act and to any right granted by the Municipality to any person for the use of the said land.

The Licensee acknowledges that the Freedom of Information and Protection of Privacy Act (R.S.A. 2000, c.F-25) applies to all information and records relating to, or obtained, created or collected under this license of occupation and to all information and records in the custody or control of the Municipality.

Either party may terminate this License by serving notice in writing of intent to do so on the other party not less than thirty days in advance of the termination.

IN WITNESS WHEREOF the parties have hereunto set their hands and seals the day and year first above written.

_____

~~Reeve~~

_____

Municipal Manager

_____ _____

Witness **Licensee(s)**

Clearwater County

ISOLATED ACCESS ROADS ON RIGHT-OF-WAY

EFFECTIVE DATE: June 1999
Revised: ~~**May 8, 2012**~~ **February 14, 2017**

SECTION: Public Works

POLICY STATEMENT:

The purpose of this policy is to outline the specifications and considerations required by the Municipality on Isolated Access roads that are to be constructed to a reduced Municipal standard and built on undeveloped road allowance ~~public right-of-way~~. The primary use of this type of road is to achieve economical physical access to a single parcel in isolated locations with the potential of very limited traffic volumes or where the intended use is not necessarily a benefit to the public as a whole.

DEFINITIONS:

Licensee- a person to whom a license is granted or issued

Undeveloped Road Allowance- means any land dedicated as a road right of way that has not been fully developed or required for vehicular traffic The right of way may or may not be shown as a road on a plan of survey that has been filed or registered in a land titles office.

PROCEDURE:

All reduced standard access roads must comply with the following specifications.

1. All applicants that apply for an Isolated Access Road will be required to sign a Road Allowance License Agreement with the Municipality. ~~acknowledging the aforementioned requirements.~~
2. Upon final approval by the CAO, the Licensee, using the road allowance for an Isolated Access Road, must provide liability insurance of no less than $2,000,000 during the term of the license.
3. It is the responsibility of the Licensee ~~applicants~~ to notify any prospective buyers of this property that the above-mentioned License Agreement exists.

4. The maximum grade that would be allowed on a reduced standard road will be 14%.

5. In fill sections that exceed 2m's the Municipality requires that the Licensee ~~applicants~~ ensure that the road has sufficient sideslopes or guardrails as determined by the Director of Public Works or his designate.

6. In areas where Vertical and Horizontal sight lines are less than 200m's the ~~applicants~~ Licensee will be expected to increase the width of road to a minimum of 7.3m(24feet) driving surface to accommodate for two way traffic.

7. Right-of-way on most public road allowances is 20.12m's (66feet). All access roads are to be built in the center of the right-of-way unless otherwise approved by the Director of Public Works or his designate.

8. Water drainage shall not be impeded by the road development. Sufficient culverts or crossings shall be installed to maintain natural drainage. If required, the Licensee ~~applicants~~ will be responsible to obtain all Alberta Environmental Protection permits required.

9. Posted speed for Isolated Access roads will be 50KM's per hour.

10. The Licensee ~~applicants~~ will be responsible for supplying "Max50KM/hr" and "Isolated Access Road No Municipal Maintenance" signs at their own cost. The municipality will pass necessary by-laws to implement the 50KM/hr Maximum speed.

11. All Isolated Access Roads that enter on to an existing developed "Municipal Road" must enter at a 90 degree angle and have a minimum of 150m's of sight lines in both directions from the point where it enters the municipal road**.**

12. Additional construction, reclamation, erosion mitigation or brushing requirements will be determined on a site specific basis by the Director of Public Works or his designate. All costs associated will be the responsibility of the Licensee ~~applicant~~.

13. The Maintenance of Isolated Access Roads will be the sole responsibility and cost of the Licensee ~~applicants~~.(e.g.: grading, snow removal, graveling etc.)

14. The Licensee ~~applicants~~ of Isolated Access Roads cannot restrict access to public traffic in any way.

15. The sole cost of construction of these roads will be the responsibility of the Licensee ~~applicants~~.

16. The Isolated Access Road policy is intended to compliment and work in conjunction with (but is not limited to) the Clearwater County Access Road Policy, Residential Subdivision Standards Policy, Road Standards Policy, Approach Construction Guidelines Policy, Fencing Policy and the Licensing of Municipal Road Allowances Policy

AGENDA ITEM

PROJECT: Road Construction Request		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: **Public Works**	**WRITTEN BY:** **Brian Bilawchuk**	**REVIEWED BY:** **Erik Hansen/ Marshall Morton/Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☐None ☐ Provincial Legislation (cite) ☒ County Bylaw or Policy (cite) Policy: Residential Subdivision Standards Policy/ Endeavor to Asist Policy		
STRATEGIC PLAN THEME: **Managing Our Growth**	**PRIORITY AREA:** **Transportation**	**STRATEGIES: Support a transportation network that connects and moves residents and industry.**
ATTACHMENT(S): Request Letter, County Map, Air Photo, Residential Subdivision Standards Policy, Endeavor to Assist Policy		
RECOMMENDATION: That Council reviews the request from Mr. Casey and approve the construction of the described roadway under the provisions of Clearwater County's Residential Subdivision Standards Policy.		

BACKGROUND:

Clearwater County has received a request letter from Roland Casey, the current owner of the NE-7-41-4W5. The request includes extending the undeveloped portion of Twp. Rd 41-2 east of RR 5-0 for approximately 200m. The intended use of this road is to provide additional access to the described property and to facilitate a possible subdivision in the future. Upon construction completion and acceptance of the road, Mr. Casey has requested that the municipality assume ownership and maintenance of the roadway. The construction, if approved, would commence in the spring of 2017.

See Attached Letter/ Air Photo

As the property is currently serviced with a municipally maintained gravel road, the proposed road extension would not qualify for a cost share under the County's Access Roads Policy. Therefore, all costs associated with the development would be at the developer's expense.

Typically, this type of development is subject to the provisions of Clearwater County's Residential Subdivision Standards Policy. The policy provides the framework for the required road standard, construction requirements and warranty periods. In addition, the County's Endeavor to Assist Policy would be applicable for this development in the event of additional development in the area.

See Attached Policies.

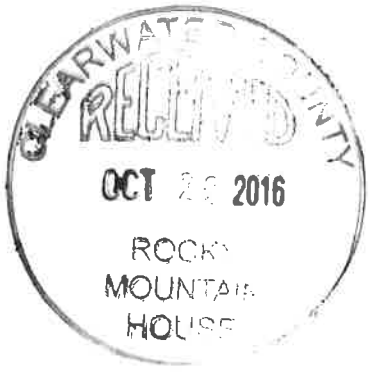
To Director of Public Works.

I would like to apply to extend the undeveloped road allowance going East on range road 41-2. I would be extending it approximately 180 meters. This would be for personal roadway and possible future subdivising on NE-7-41-4-W5 quarter section.

We would be paying for construction of said road allowance.

Development of this road allowance, if put in, would help us, and landowners on the North side of undeveloped road allowance, with accessing said land futher on to property for agriculture purposes as well.

Roland Casey



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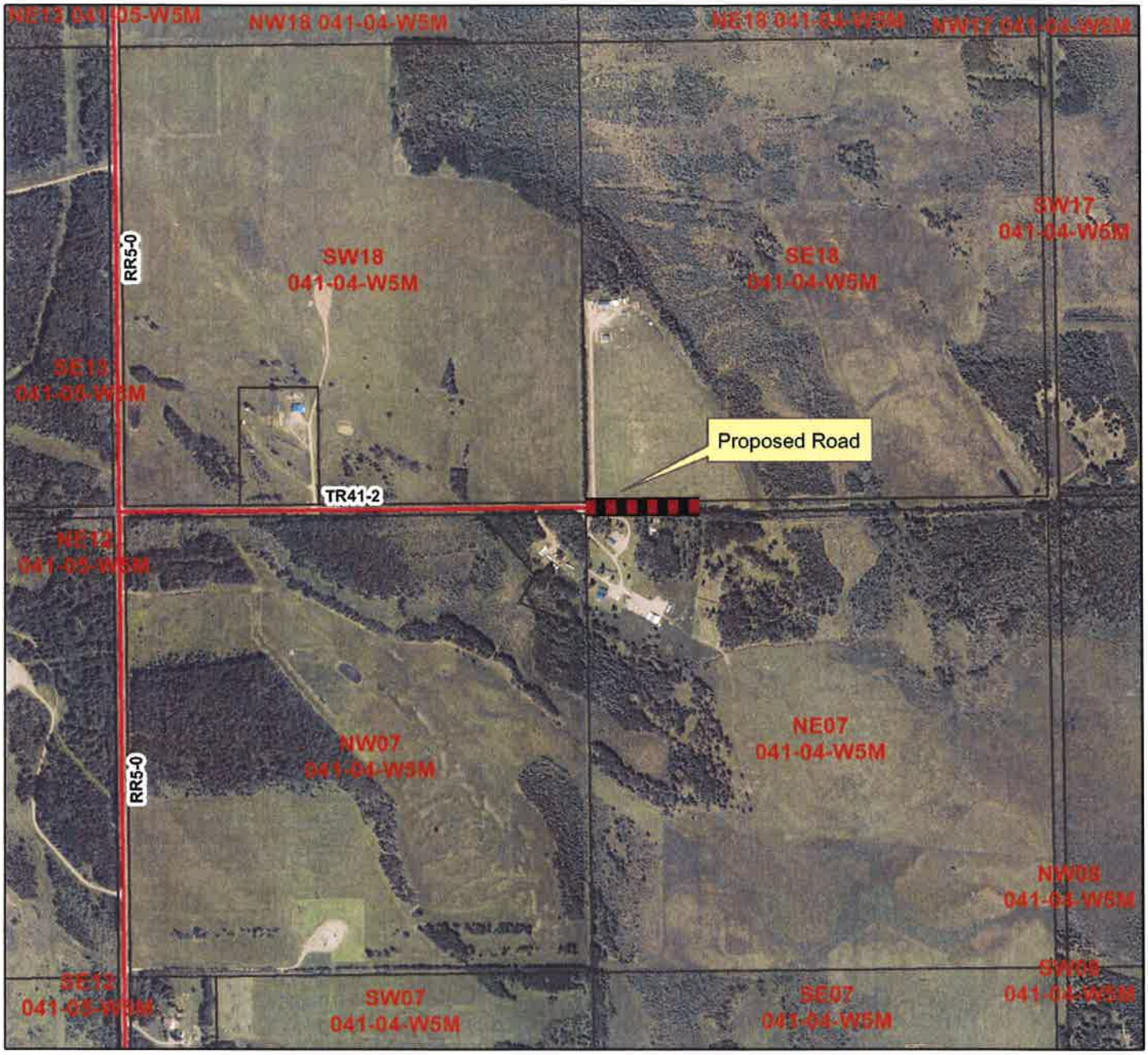

Request to Extend TWP RD 41-2
Lying Between the S.E. 18 and N.E. 7 - 41-4 W5
Approximately 200 Meters

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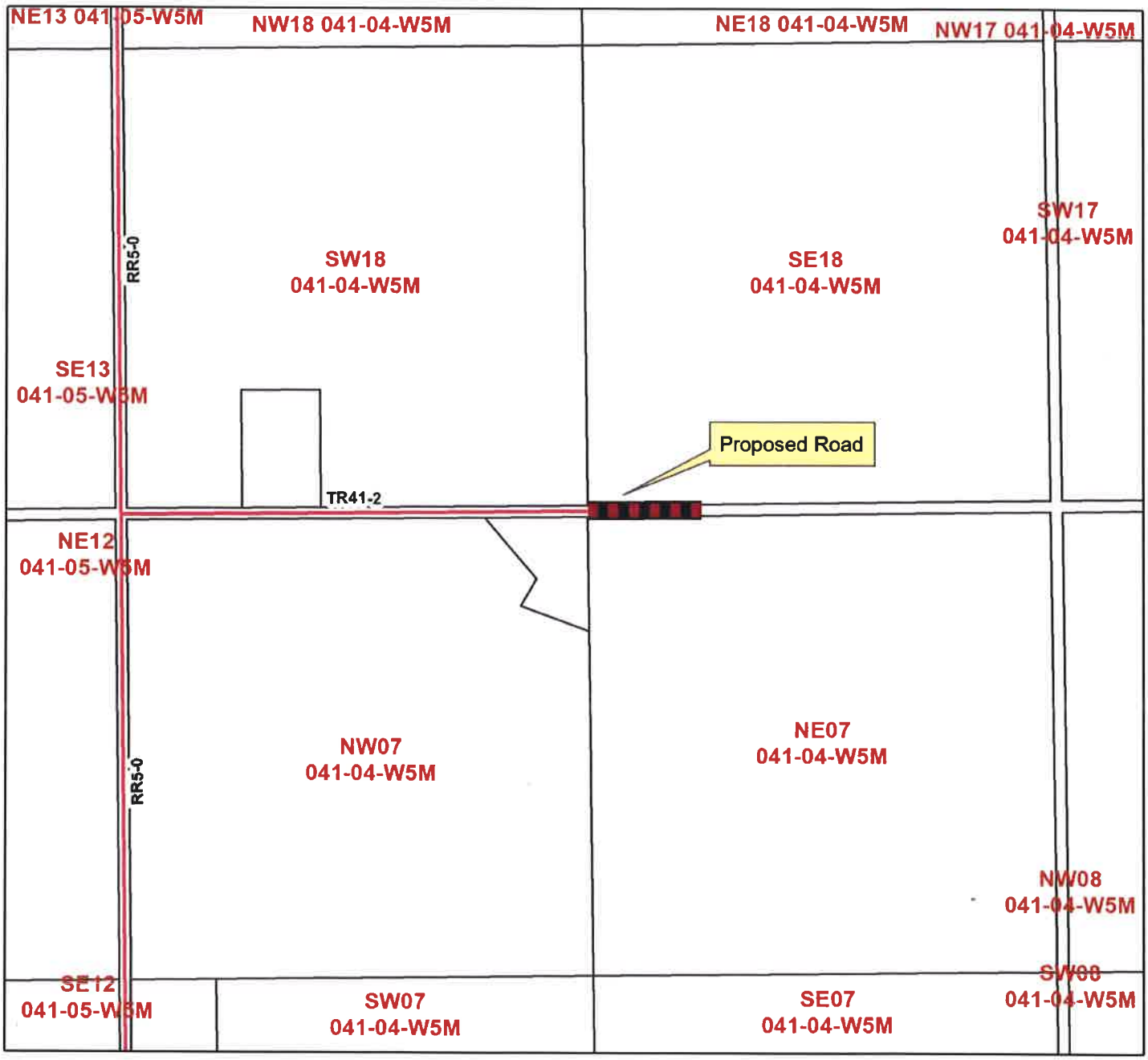
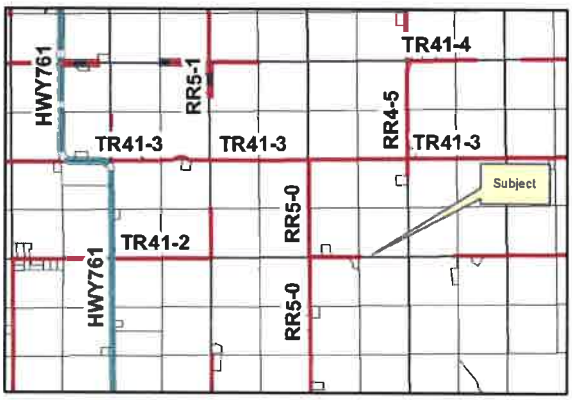
CLEARWATER COUNTY

December 2017



Request to Extend TWP RD 41-2
Lying Between the S.E. 18 and N.E. 7 - 41-4 W5
Approximately 200 Meters



December 2017

TABLE OF CONTENTS

Clearwater County

RESIDENTIAL SUBDIVISION STANDARDS

EFFECTIVE DATE: June 22, 2004
Revision date: July 29, 2010

SECTION: Public Works

POLICY STATEMENT:
This policy outlines the guidelines of the County for the design and construction of infrastructure to support the development of Residential Subdivisions, where it is intended that the County will assume ownership of the infrastructure.

PROCEDURE:

100.0 DRAWING REQUIREMENTS

All engineering plans submitted for review and approval must comply with the following specifications.

- The subdivision name as approved by the County must appear on the drawings.
- All drawings must be clear and legible.
- Plan size shall be the standard A-1 drawing (594 mm x 841 mm).
- Drawing details shall be in metric measure.
- Elevations shall be referenced to geodetic benchmarks. The location and elevation of the permanent benchmarks used must be clearly identified on the plans. Elevations shall be in metric measure.
- A north arrow shall be shown on each drawing. In general, north arrows should be directed towards the top of the plan.
- All plans shall show the legal subdivision description including lot and block numbers.
- Plans shall be drawn to the following scales:
  - Overall Plans 1:1000
  - Plan/Profile Horizontal 1:500
    Vertical 1:50
  - Cross sections and details as required
  - All plan sets shall be bound along the left-hand margin.
- All drawings must clearly show the following in the title block:
  - developer/owner's name;
  - consultant's name;
  - Clearwater County;
  - subdivision name including staging and/or phasing;
  - drawing name;
  - drawing number and job number if applicable;
  - revision number and description;
  - horizontal and vertical scales;
  - space for signature of the designer, draftsperson, checker and approving authority;
  - space for the number, date, description, designer and approving authority for all revisions and drawings issued including preliminary, approval,
  - tender, construction and record drawings;
  - space for professional stamps, permit stamps and "examined by"
  - County stamp;
  - date issued;
  - legend; and
  - notes.
  - An estimated time frame for completion.

101.0 Cover Sheet

A cover sheet and index sheet may be combined at the discretion of the developer. The information provided shall include:

- subdivision's name;
- developer/owner's name;
- consultant's name;
- Clearwater County name
- a drawing index;
- project location plan (key plan) with Legal Description
- drawing legend
- list of symbols and abbreviations

102.0 Legal Plans

The following plans shall be provided as required:

- plan of survey/or descriptive plan when applicable;
- utility right-of-way/easements;
- roadways
- public lands (M.R. or E.R.)
- drainage easement plan; and
- plan showing access easements, walkways, mutual drives, fences.

103.0 Overall Plans

103.1 Separate overall plans shall be submitted for each of the following as required:

- roads, sidewalks and walkways;
- sanitary sewer, storm sewer and water mains;
- franchise utilities;
- overland drainage plan;
- lot grading plan; and,
- County address (from the County)

103.1 (a) Roads, Sidewalks and Walkways Plan:

This plan shall include the following as required:

- base plan including easements;
- overall site and proposed roadway system;
- access onto existing roadway system;
- road names where required, existing and approved;
- approaches;
- drainage easements, utility rights-of-way; lot configuration;
- sidewalks, curbs and walkways;
- roadway and right-of-way alignment with dimensions;
- roadway traffic signing;
- easements with dimensions; and

- drainage features including waterways, lakes, ponds, canals, swales, ditches and culverts, noting directions of flow.

103.1 (b) Sanitary Sewer, Storm Sewer and Water Main

This plan shall include the following as required:

- legal base plan;
- easements/rights-of-way;
- sewer mains and water mains;
- crossings, hydrant locations, valve locations, plugs and other appurtenances;
- manhole locations;
- service to each lot;
- off-site connections; and
- service details.

103.1 (c) Franchise Utilities Plan

This plan shall include the following as required:

- Type – underground vs. overhead
- typical line assignments within utility rights-of-way;
- off-site connections; and
- easements required.

103.1 (d) Overland Drainage Plan

This plan shall include the following as required:

- legal base plan including easements;
- original ground contours at 1 m intervals;
- proposed roadway system;
- drainage easements;
- proposed retention ponds;
- culverts;
- major drainage system;
- proposed site grading contours and elevations;
- direction of proposed drainage;
- conform to the Stormwater Management Plan; and
- indication that Environment has reviewed and approved.

103.1 (e) Lot Grading Plan

This plan shall include the following as required:

- legal base plan including easements;
- original contours at 1 m intervals;
- proposed lot elevations and building grades;
- direction of proposed drainage; and
- County addresses (from the County).

104.0 Plan Profiles

The following information shall be shown on the plan portion of the drawing:

- all of the items listed for the Overall Plans (Section 103 above) are applicable with some additional details and dimensions;
- locations and dimensions of lot approaches and culverts;
- station location and dimension of road culverts;
- direction of storm drainage flow and location of control features such as ditch blocks and/or swales, etc;
- horizontal curve data including chainages of Beginning of Curve (BC) and End of Curve (EC), delta angle, radius and arc length for centerline;
- alignment and dimensions of sewer mains and water mains, lot services, manholes, hydrants, valves and water system facilities;
- indicate edge of pavement line assignment where curbs are not proposed;
- dimension all corner radii; indicate all tie-ins to exiting utilities;
- indicate all traffic signage; bench marks; right-of-way width;
- utility right-of-way/easements;
- road drainage patterns;
- existing buildings;
- road names; and
- overland drainage swales

The following information shall be shown on the profile portion of the drawing:

- a vertical scale indexing the survey datum;
- a horizontal scale of the project chainage;
- profile chainage must be aligned with the plan view;
- existing ground profiles along centerline and both property lines;
- proposed design profiles for centerline and ditches including all slope grades;
- vertical curve data including chainage and elevations of Beginning of Vertical Curve (BVC), Point of Vertical Curve (PVI) and End of Vertical Curve (EVC); length of curve; K values;
- approach locations;
- location of all culverts complete with dimensions and invert elevations;
- ditch checks;
- sewer main and water main profiles;
- size, type and class of sewer main and water main pipe as well as class of bedding;
- consistent chainage (i.e. 0+900 m); and
- Chainage should start from 0+000 for each new section of roadway.

105.0 Standard Details

Standard detail drawings shall include typical road cross-sections, trenching details, pipe bedding, valves, hydrants, pavement structure, etc. The details shall be included on a standard A-1 (594 mm x 841 mm) size sheet. The scale of individual details will be commensurate with the amount of information to be shown along with clarity and legibility.

A-1 size drawing sets shall be provided for all submissions.

106.0 Typical Cross-Sections

The plan must contain a detailed drawing of proposed construction including typical cross sections at a minimum of 50 meter intervals on tangent or 30 meter intervals on curves, a vertical profile, horizontal alignment and all curve radii. Details on the cross-sections shall include:

- width of right-of-way;
- finished width of roadway surface;
- width of subgrade;
- slope ratios of side slope and back slope;
- depth and width of ditches;
- surface crown slope; and

107.0 Record Drawings

When applying for a Construction Completion Certificate, the Developer shall include two complete sets of drawings for review, which are to be retained as part of the County's official record. The plans shall show the "as-constructed" locations, profiles and details of the constructed utilities and surface improvements. The County prior to issuance of a Construction Completion Certificate must receive all “record” drawings. Once the drawings are examined and accepted by the County, the Developer shall submit one set of reproducible Mylar drawings, and the corresponding digital files, prior to issuance of Final Acceptance Certificate.

108.0 Digital File Specifications

Digital files shall be supplied by the Developer in AutoCAD 2000 or later and NAD83 10TM, georeferenced. This method of data storage is the only method the County will accept. The County should be contacted for any further information required ensuring data storage is not compromised.

200.0 ROAD DESIGN GUIDELINES

These road guidelines generally follow the Transportation Association of Canada (TAC) and Alberta Transportation (AT) Geometric Design Guide standard cross sections and design elements. Good engineering practice and design is required for all situations. The County will consider design variations from the guidelines to accommodate site-specific variances, provided that public safety and the County are not at risk.

200.1 Design Criteria

The County requires that any road design and construction be performed under the supervision of a qualified professional engineer using industry-accepted standards and these guidelines. The following design guidelines are minimum requirements. A complete traffic analysis may dictate a requirement for additional engineering. The Developer's Engineer must certify that an adequate structure is presented to the satisfaction of the County.

External engineering costs incurred by the County for the review of design plans, storm water management, traffic studies, quality assurance testing and any other associated engineering costs that are incurred as a result of the development will be the responsibility of the developer. These costs will not exceed $5,000.00 per kilometer of internal subdivision or County network road being constructed or modified. Upon substantial completion of the development, the County will provide the developer a summary of the external engineering costs incurred in relation to the development and prior to final subdivision approval the County shall recover these costs.

Developers must provide the County with sufficient evidence that the road plan has been followed. The County can request the developer provide survey data of fieldwork during and after construction**.**

200.2 Internal Subdivision Access Roads

An ISR (Internal Subdivision Road) road is the road off of the main County Road that services the lots within each phase of the subdivision. This road is the same basic classification as a RLU50.

If a curb and gutter arrangement is contemplated, the stormwater management plan must indicate how the roadway will convey the stormwater in the case of a 1:100 year storm event. The County reserves the right to refuse this type of stormwater conveyance on the ISR roads.

Typical Geometric Design Criteria and Right-of-way Cross Section for Internal Subdivision Access Roads can be found in Figure 6 and Figure 7. Right-of-way must be a minimum of 20.12m's (66feet). Additional Right-of-way maybe required as deemed by the Public Works Manager. All Right-of-ways must be cleared of all shrubs, trees and debris. All access roads are to be built in the center of the Right- of Way.

No roadway infrastructure will be approved after October 15 of any year due to the threat of inclement weather and frozen conditions.

All access roads and approaches must enter the county road at a 90 degree angle and have 150m of site lines in both directions from the point where it enters the county road**.** Access roads and approaches entering a county road shall be setback from an intersection a minimum of 150m.

All ditches must have flattened ditch bottoms as per figures 6 and 7. The minimum ditch grade allowable is 0.2% and a positive drainage must exist throughout the entire drainage course. Road drainage should not outlet onto private property unless approved by Provincial and Municipal Authorities.

Road top must be 7.3m's(24feet) for a residential subdivision road. The minimum height of grade shall be 1m (3 feet). All roads built out of pit run shall have a minimum clay cap of 0.40m (16 in.)

Road curve radii shall be a minimum of 125m on road centerline and super elevation shall be a minimum of 4%.

Additional specifications and requirements may be added which are specific to the proposed access road development.

The Public Works Director is authorized to relax any standard in the Policy at his discretion, if circumstances merit. The minimum road top allowable however is 6.1m's (20feet).

200.3 Residential Lot Access

Joint Approaches to Residential lots will be utilized where possible and shall have a minimum of 9.8 m wide surface, a maximum of plus or minus 2% grade, a minimum of 3:1 side slopes, and have a minimum 500mm diameter culvert. Riprap will be installed. (Fig. C-4.7a) In situations where a joint approach is not feasible, in the opinion of the County, a single width approach be utilized and shall have a minimum 7.3 m wide surface, a maximum of plus or minus 2% grade, a minimum of 3:1 side slopes, and have a minimum 500mm diameter culvert. Riprap will be installed. (Fig. C-4.7a) on all approaches.

200.4 Intersections

All intersections of Internal Subdivision Access roads to existing County roads shall be designed for the largest vehicle size turning radius, structural integrity, acceleration capability, safety of the motoring public and in accordance with good engineering practices and the Manual of Geometric Design Standards for Canadian Roads. A traffic analysis report, as outlined in Section 201.11, may be required in order to properly address upgrades of intersections of Internal Subdivision Access Roads with existing County roads.

200.5 County Network Roads

The County Roads include all of the grid roads within the County. The majority of these developed roads are generally gravel surfaced, on a 20 or 30 meter Right Of Way. These roads are generally capable of adequately servicing the existing development in the various areas “as is”. Additional residential and industrial/commercial development may require that these roads be upgraded by the Developer to a higher standard as determined by the County.

Road construction to service a subdivision shall meet the requirements set out in Typical Geometric Design Criteria.

200.6 **Subgrade and Grading Design**

The subgrade and grading design shall give prime consideration to the existing surface drainage and shall be an integral part of the storm water management plan. The subgrade and grading shall address any drainage work and diversions as approved in writing by Alberta Environment and the County. The Developer shall submit a storm water management study as outlined in Section 400.0. Refer to Section 201.4 for general culvert installation.

The subgrade and grading design shall also address the location and construction of lot approaches. These approaches shall be located to service the most desirable building site and be constructed according to Section 200.3. The approaches, once finalized, shall not be relocated without prior written County approval.

Cul-de-sac requirements shall be in accordance with Figure 400.2 and 400.2A.

200.7 **Snow, Ice or Frozen Material**

Road grade material shall not be placed on frozen earth, snow or ice, nor shall frozen soils, ice or snow be placed in any embankment. However, on approval of the County, embankment material may be placed on the existing ground surface if frozen penetration is 0.10 m or less. Any frozen material in the embankment shall be removed and disposed of before proceeding with further embankment construction.

200.8 **Road Grade Settlement**

Road grade shall be constructed so that after settlement is complete, the required grade and cross-section is attained at all points. If at any time before final inspection of the work the road grade settles below the required grade, it shall be brought back to the required grade by the Developer.

200.9 **Layer and Density Requirements**

Unless otherwise specifically permitted by the County, all material placed in road grade shall be spread and bladed smooth in successive layers, not to exceed 0.15 m in depth when compacted and to the full width of the cross-section. Each layer shall be compacted by means approved by the County to a minimum of 95% of the maximum density established by the Moisture-Density Relation tests using Standard Compaction, with the exception of the upper 0.30 m, which shall

be compacted in 0.15 m layers to a minimum of 100%. The material in each layer shall be compacted at the optimum moisture content, unless otherwise required by the County. In case of controversy, the degree of compaction and/or moisture content will be determined by a moisture-density test before the succeeding layer is placed.

200.10 Test Methods

The County or his representative will from time to time take samples and carry out testing and inspection of the materials incorporated or being incorporated into the work. The Contractor shall cooperate with the County or their representative for such sampling, testing and inspection. Such inspection shall not relieve the Contractor from any obligation to perform all the work strictly in accordance with the requirements of the County.

Various alternative test methods may be used by the County or his representative to confirm that specification requirements are being met.

In cases of dispute regarding the degree of compaction and/or moisture contents, all testing to confirm specification requirements will be carried out by the County, using the most recent edition of the Alberta Transportation standard test methods.

200.11 Embankment

Embankment shall be constructed by depositing, shaping and compacting suitable excavation materials. The embankments shall be constructed in conformity with the lines, grades, and cross-sections shown on the plans, or staked on the ground by the County.

200.12 Fill Sections

Topsoil and subsoil shall be salvaged to the extent required by the County or as as approved on design drawings. The exposed surface shall then be bladed and compacted, as directed by the County.

Following the excavation and salvage of topsoil and subsoil material and prior to blading and compaction operations where the exposed surface is less than 0.6 m below the design subgrade surface, excavation shall be carried out to 0.6 m below the design subgrade surface, or to the elevation as directed by the County. The exposed surface shall then be bladed and compacted, and the excavated material shall be utilized or disposed of as directed by the County.

200.13 Cut Sections

Where the design subgrade surface is in cut and following the excavation and salvage of topsoil and subsoil material, excavation shall be carried out to a depth of 0.6 m below the design subgrade surface, and the excavated material shall be utilized or disposed of as directed by the County. The exposed surface shall be bladed and compacted, as directed by the County.

200.14 Hillside Benching

When embankments are to be made on a hillside of a nature that will, in the opinion of the County, preclude a proper bond between the existing and the newly placed materials, the existing ground on which the embankment is to be placed shall be benched before embankment construction is commenced. Otherwise, before any embankment is placed on a smooth, firm surface, the existing ground shall be scarified to obtain a bonding of the new material with the existing ground.

200.15 Grade Widening

Where existing roadbeds are being widened or the existing embankments extended, the sideslopes shall be denuded of all vegetation and benched one level at a time (starting at the ditch bottom) in order to obtain bonding between the existing grade and the new embankment as directed by the County. Attempts to obtain bonding by the use of vertical cuts for the full depth of the embankment will not be permitted. In all cases, cuts shall not be steeper than 0.5 horizontal to 1 vertical.

Where directed by the County, unsuitable material shall be excavated from the existing grade and replaced with material approved by the County. The unsuitable material shall be utilized or disposed of as directed by the County.

200.16 Gravel Surfacing

Gravel surfaced roads will be designed in accordance with Section 200.0 and Section 200.16 at the discretion of the County. The road will be constructed in accordance with Section 201.0 to 201.11.

Gravel must be spread at a rate of 350 cubic meters per kilometer (450yards/mile) on a 7.3m road top and 400 cubic meters/km (500yards/mile) on an 8.0m road top**.** The gravel application shall be done in the following manner: 175 cubic meter per kilometer of 1.5” crushed gravel as a travelling course and to be followed with the remainder of gravel, which shall be ¾” to 7/8” minus crushed gravel finish course.
Sieve analyses may be required and are to be supplied to the County at the Developer’s expense.

As the first application of gravel is not expected to last, the developer shall pay for the second application. This second application will be performed by the County at an appropriate time, in their sole discretion.

The developer will be required to supply the County with security as outlined in section 204.0 for the next required application of gravel. The amount of security taken for the future application of gravel shall not exceed 150% the cost associated to apply 350 cubic meters per km.

201.0 <u>Road Construction</u>

At all times, good construction industry standard practices and techniques shall be used in every aspect of road construction.

The Developer is responsible for locating all underground utilities within the development area and offsite locates.
The County reserves the right to select a testing firm on its own to conduct visual inspections and physical testing, and compile its own data during or after the construction period. Any costs associated with inspections and testing conducted by the County shall be borne by the Developer. Test results will be made available to the Developer and Engineer. This quality assurance testing does not relieve Developers of their responsibility to conduct their own quality control testing program.

201.1 Subgrade and Grading Construction

Organic soils, tree stumps and other deleterious materials are not acceptable as subgrade materials, and shall be stripped within the roadway, ditch and backslope portion of the new construction. Organic soils may be used in the loaming of the ditches and backslopes after completion of the construction.

When embankments are to be placed on a hillside or existing roads are to be widened, proper benching and bonding construction techniques shall be used and documented.

All culverts used shall be in accordance with Section 203.0 culvert and riprap installation.

Large rocks shall be carefully distributed and located within the embankment or removed from the embankment so as not to constitute a hazard to traffic due to size or protrusion from the finished embankment.

Any fill/cut settlement in the construction shall be rectified at the Developer's sole cost.

Unless otherwise specifically permitted by the County in writing, all material placed in embankments shall be spread and bladed smooth in successive layers, not to exceed 0.15 m in depth when compacted, and to the full width of the cross section. Each layer shall be compacted to a minimum of 95% standard Moisture Density Relationship and the material in each layer shall be compacted at the optimum moisture content.

Where moisture content tests indicate that the material being used for embankment is above optimum moisture, the material shall be thoroughly worked until its optimum moisture content is reached.

Where moisture content tests indicate the material for embankment is below optimum moisture, water shall be added until the optimum moisture content is reached. The material shall be thoroughly worked to mix the water uniformly throughout the soil prior to commencing compaction operations.

Construction testing shall confirm that specification requirements have been met. All testing shall be carried out under the direction of the Developer's Engineer. A

qualified testing firm is to be employed to conduct all inspections and testing as outlined in Table 400A. Co-ordination of all activities in regards to scheduling of inspections and materials testing is a prime responsibility of the Developer and/or his Engineer.

Sample locations for routine quality testing shall be randomly selected as far as it is practical to do so. This will not limit the Developer's Engineer and the County from testing at any additional locations, as they deem necessary.

It is the responsibility of the Developer and his Engineer to interpret test results and alter construction operations if necessary, so that the product meets all required specifications.

Density tests shall be taken separately on each lift placed. Reports shall indicate the dates when fill was placed, the testing was done, and the location, both horizontally and vertically, of test locations.

Once the Developer's Engineer has established his compaction procedures by means of continuous initial onsite testing, a minimum of one soil density and moisture content test shall be taken on the subgrade for each specified minimal lift and on every 100 metres of road, as specified in Table 400A.

The tests shall be distributed across the road section with a minimum of 25% of the tests conducted on or near the road shoulder.

The Developer, at his own cost, shall have his engineer review certify and submit copies of the field test results and any other tests to the County within 5 working days of completing the subgrade construction.

201.2 Right-of-way Cleanup

As a condition requisite for acceptance of the project, the Developer shall ensure that the entire project area and right-of way is loamed, seeded and left in a neat and tidy condition, to the satisfaction of the County.

The entire width of the right-of-way shall be free of trees and shrubs. The right-of-way shall be left clean, smooth and uniform over its entire width. The surface shall be free from ruts, ridges and have firm, uniform ditches, sideslopes and backslopes. The surface shall be left in a dressed condition suitable for mowing operations.
All projecting boulders which would interfere with mowing operations shall be removed and the resultant cavities, if any, backfilled with local material.

201.3 Seeding and Fertilizing

Approved Grass seed, Fall Rye and fertilizer shall be uniformly mixed and distributed over the area designated for seeding by one of the following methods:

- Use of an approved type of hydraulic seeder which utilizes water as the carrying medium and maintains a continuous agitator which will keep seed and fertilizer mixed in uniform distribution until pumped from the tank. The

pump pressure must maintain a continuous non-fluctuating stream of solution; or

- Use of an approved type of drill seeder which is capable of being calibrated to distribute seed and fertilizer into the soil at not less that specified minimum rates of application; or
- Areas inaccessible to the above methods of application shall be seeded and fertilized by an approved cyclone seeder or hand methods.

Distribution of the seed and fertilizer is to be at a uniform rate and at not less than the minimum specified rate of application.
The Contractor shall measure the quantities of all material to be charged into the seeder either by weight or by a system of volume measurement as approved by the County and shall provide all equipment for this purpose.
The following application rates are the minimum required:

Grass Seed Mix	25 kg/hectare
Fertilizer	75 kg/hectare
Fall Rye	5 kg/hectare
Mulch	1150 kg/hectare (where applicable)

201.4 Cross Grade and Approach Culverts

This section of the design guidelines covers the supply and installation of pipe culverts less than 1,500 mm equivalent diameter. The Storm Water Management Study (Section 400) may dictate additional culverts or an increase in culvert sizes. In all cases, cross grade and approach culverts shall not be less than 500mm in diameter.

Culverts of equivalent diameter of 1500 mm or greater will require approvals from the County, Alberta Transportation, Alberta Environment and the Department of Fisheries and Oceans.

Unless otherwise specified, pipe culvert material shall be either CSP or SPCSP, have a minimum 1.6 mm wall thickness for 500mm and 600mm as per design specifications regarding weight requirements and cover conditions and shall be supplied by the Developer. Culverts that are larger than 600mm require a minimum wall thickness of 2.0mm. Thicker culvert walls maybe required dependent on the above factors.

Excavation and installation for the culvert shall be according to the manufacture's specifications.

Where an existing culvert is to be extended, the removal, salvage and reinstallation of the existing sloped end sections may be required as shown on the examined drawings or as directed by the Developer's Engineer and approved by the County in writing.

Where the existing pipe was manufactured to imperial dimensions and the new pipe is manufactured to metric dimensions and a mismatch occurs at the joint, the joints shall be caulked with oakum to obtain a water-resistant joint.

All backfill material shall be placed in layers not exceeding 0.15 m in depth. Each layer shall be thoroughly compacted at optimum moisture content to a minimum of 98% standard Proctor density. Backfill and compaction layers shall be brought up simultaneously and evenly on both sides of the pipe. This compaction procedure shall be continued until the backfill reaches a minimum elevation of 0.3 m above the top of the pipe, or greater if necessary to carry the weight of construction equipment without damage to the pipe.

Where removal and salvage of existing culverts or drainage structures from the roadbed, ditches, or other waterways is specified, removal shall proceed carefully and the material stored at locations designated by the Developer's Engineer and approved by the County in writing.

201.5 Riprap for Culverts

This section of the guidelines covers the supply and placement of riprap. Riprap is a protective covering consisting of hand-laid or randomly deposited rock, which is placed around culvert inlets and outlets, and along slopes, embankments and ditches.

All riprap material shall be supplied and installed by the Developer. Where sources of rock riprap material exist within the right-of-way limits of the project, the materials may, with the approval of the Developer's Engineer and the County, be made available for use to the Developer.

Random rock riprap shall consist of a graded mixture of sound, durable stone or pit-run gravel. The gradation of the mixture shall be such that 50% of the riprap consists of material having at least a minimum dimension of 250 mm. Hand-laid riprap material shall consist of sound, durable stones having at least minimum dimension of 200 mm.

Random and hand-laid riprap shall be placed at all culvert inlets and extend a minimum of 1.0 m beyond the end of the culvert outlets and at other locations as directed by the Developer's Engineer and approved by the County.

201.6 Approval of Rock Riprap

A representative sample of 70 kg minimum is required for each type and source of rock to be tested, and shall contain a number of pieces ranging up to 25 kg mass.

The approval of rock samples from a particular source or quarry site shall not necessarily be construed as constituting approval of all materials from that location.

The material provided for each class specified shall have a gradation that conforms to the following:

		CLASS			
		1M	1	2	3
Nominal Mass Nominal Diameter	kg mm	7 175	40 300	200 500	700 800
None heavier than:	kg or mm	40 300	130 450	700 800	1800 1100
No less than 20% or more Than 50% heavier than:	kg or mm	10 200	70 350	300 600	1100 900
No less than 50% or more Than 80% heavier than:	kg or mm	7 175	40 300	200 500	700 800
100% heavier than:	kg or mm	3 125	10 200	40 300	200 500

Percentages quoted are by mass.
Sizes quoted are equivalent spherical diameters, and are for guidance only.

201.7 Geotextile Filter Fabric

Where geotextile filter fabric is specified, the slope shall be graded to provide a smooth, uniform surface. All stumps, large rocks, brush or other debris that could damage the fabric shall be removed. All holes and depressions shall be filled so that the fabric does not bridge them. Loose or unstable soils shall be replaced. Non-woven geotextile filter fabric shall be used under all riprap.

201.8 Ditch Checks

Ditch checks are required for any ditch that has a 3% or greater grade or is prone to erosion. This ditch check shall be considered as part of the design of the subdivision and addressed in the storm water management plan.

Ditch checks shall be of a permanent nature and shall be maintained by the Developer until final acceptance of the subdivision by the County.
The minimum acceptable ditch check detail is as per Figure 400.4.

A qualified professional engineer employed by the developer, shall determine the distance between ditch checks. Ditch checks shall be a minimum of 5m from any culvert invert; and have a maximum spacing of 20 metres.

201.9 Road Approaches

Road approaches shall be located and designed to access the parcels' most desirable building location. These specifications are the minimum standards to be followed. The final location and construction must be approved by the Public Works Director or his designate. Clearwater County Policy “Approach Construction Guidelines” will be the guide for road approaches.

201.10 Road Approaches as a Condition of Subdivision

When weather conditions or other extenuating circumstances impair the ability to construct a required road approach(s), the applicant may apply to the County for deferral of the required road approach construction. In all instances where the County considers deferral to be appropriate, the registered owner of the parcel(s) proposed for subdivision shall enter into an agreement with the County for the construction of the required approaches and the agreement shall be registered against the benefiting lots by Caveat concurrent with the final plan of survey or similar endorsable instrument. The terms of this agreement shall require a provision of security, satisfactory to the County, at 1.5 times the estimated value of construction necessary to complete this condition of subdivision. The registered owner or the successors shall have one (1) year from the date of the agreement is signed to complete the required construction. Failure to complete the construction will result in the forfeiture of the security. In the event of such forfeiture, the County may, at its discretion; construct the approach, arrange for the construction of the approach, or refund any portion of the money to the lot owner to assist in the construction of an approach. Any security funds remaining following construction by the County may be refunded at the sole discretion of the County to the registered owner appearing on the titles of the benefiting lots at the time of construction completion by the County.

One mutual road approach may service two lots if the road approach is centered in line with the property line between the two lots, and if an easement is registered on both lots to protect the mutual driveway to the point where it separates to access the individual residences. The finished width of mutual approaches shall be 9.8 m.

An acceptable road approach will meet the following criteria:

a) Minimum site distance from where the approach intersects the road shall be 150m, and further to this, no road approaches shall be located less than 150m (492ft) from a bridge or 35m from an at-grade railway crossing.
b) Approaches on curves are not desirable and are only allowed with the written permission of the Public Works Director.
c) All road approaches that are to be located on or within 150m (by road distance) of a Provincial Highway or Right of Way shall be referred directly to Alberta Transportation for consideration. Upon approval by Alberta Transportation, the County will then consider the road approach installation.
d) The finished surface of the approach will be the same as the internal subdivision road.

The road approach will be built according to good construction practices. The requirements are found in the Approach Construction Guidelines Policy and Figure 400.1.

201.11 Traffic Analysis/Traffic Assessments

The Developer is responsible to provide a traffic assessment conducted by a qualified professional when required by the County.
This traffic assessment should include but is not limited to the following:

a) Amount of daily traffic generated by the development at the full development stage, and if the planned development is staged, then at the end of each consecutive development stage.
b) Layout of the internal road system of the proposed development with the access clearly marked.
c) Location of the proposed access points.
d) Sight distance assessments at the proposed access points.
e) 3R/4R review of the proposed access points using Alberta Transportation Design Guidelines establishing whether or not intersectional improvements are required.
f) Growth rates shall be addressed.

This traffic assessment will be used by the Developer's Engineer in conjunction with the County's minimum guidelines to establish a safe, viable accesses and road system within County right-of-ways. Approval of these accesses and road systems will be subject to written approval from the County

202.0 Signage

All traffic control signs shall be as per TAC Standards and UTCD standards to the satisfaction of the County. Any and all appropriate signage must be installed in the subdivision after consultation with the Director of Public Works or his designate.

203.0 Mail Box Turnouts

Mailbox turnouts will be positioned to allow the safest vehicle access while ensuring postal service. In no case should the mailbox turnout be within 75 meters of an intersection. Good sight lines shall be maintained at all times.

204.0 Security

The County will consider accepting security for items of construction that are not complete or require a warranty period.

Acceptable securities are;
a) Irrevocable letter of credit
b) Cash

All securities (irrevocable letter of credit) required for more than one year shall include the auto renewal option, at the sole discretion of the County.
All securities (irrevocable letter of credit) requiring renewal shall be received by the County seven (7) days in advance of the expiration date. The County reserves the right to call any letter of credit not renewed seventy two hours in advance of expiration date.

All renewals shall be for a minimum of 6 months. It is the obligation of the applicant to ensure that the have continual security.

Securities will be for 150 % of the estimated costs as approved by the County at its sole discretion.

205.0 Inspections

Before any inspections are done, a request must come from a development officer to the Public Works Department. This will ensure that all necessary approvals are in place and proper co-ordination has occurred between the Planning office and the Public Works office.

A list of deficiencies will be prepared after inspection and acceptance will not occur until deficiencies have been corrected by the developer.

300.0 SANITARY SEWERAGE

The Alberta Government regulates the disposal of septic waste. Provincial Authorities have regulations and published guidelines, which outline acceptable treatment options and wastewater quality. For consistency, the County is utilizing applicable Alberta Environment Guidelines when reviewing sanitary sewerage requirements.

The County requires that the disposal of sewage on each newly created lot is feasible, is not a public health danger, is not a concern for public safety and does not cause environmental damage. This requires investigation by the developer's engineer to ensure that not only is the proposed method viable but is also economical. When reviewing options for sanitary sewage disposal, the developer and engineer should identify the most onerous criteria for sewage disposal and design for those conditions on site.

Clearwater County reserves the right to utilize outside engineering services in the review of all plans, test results and designs being submitted. The cost of these outside engineering services shall be the responsibility of the developer as outlined in clause 201.0.

This section includes a summary review for septic field sewage disposal criteria. It also reviews briefly the Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Facilities for County wastewater design criteria, operation and maintenance. For more information regarding the design criteria for wastewater collection and treatment systems, please refer to the Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Facilities published by the Alberta Government.

Construction techniques, backfill requirements, hookups and miscellaneous requirements shall conform to good industry standard construction and engineering techniques.

This section does not cover alternative sewage disposal methods, which may be acceptable to the Alberta Government on a site-specific basis. Site-specific considerations should include a discussion on adjacent uses, terrain, nearby watercourses, slopes and slope stability and other relevant attributes.

In developing portions of this section, the following publications were referenced. Except where stated otherwise, all design criteria, materials, installation and testing shall be in accordance with the most recent editions of the following:

- Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Facilities.
- Alberta Environment’s Environmental Reference Manual for Review of Subdivisions in Alberta.
- Alberta Private Sewage Systems Standard of Practice by Alberta Human Resources and Employment.
- Environmental Guidelines for the Review of Subdivisions in Alberta, Alberta Environment.

301.0 Septic Fields

With the exception of residential estate subdivisions, septic fields are the sewage disposal method of choice for most subdivisions in the County. This form of sewage disposal method is relatively low in cost. The operation and maintenance is relatively straightforward and the responsibility of the septic field lies with the landowner. The septic sewage disposal and treatment capability of the lands is an important factor in land development. It is a requirement that the developer prove that the lands can sustain a method of sewage disposal that is satisfactory to public health, public safety and to environmental concerns. When considering septic field design, alternate technologies should be investigated where public health, public safety and sensitive environmental concerns may arise and are not readily addressed by this standard form of residential sewage disposal. Septic field design shall be governed by the regulations, legislation and/or Alberta Safety Codes. A qualified professional engineer, accredited by APEGGA, shall perform all relevant testing.

The septic field method of sewage disposal must be fully investigated and justified for all commercial/institutional and industrial developments. The use of septic fields for other than normal domestic sewage requires approvals from the Alberta Government.

A primary consideration in septic field design is that of the near surface water table. If the proposed development area has a high near surface water table, then an alternative to the septic field design will have to be considered. Septic fields are not allowed in areas of high near surface water tables. It is the responsibility of the developer to prove the viability of a proposed system for the subject lands that will meet all sewage disposal requirements.

Alberta Environment defines a high water table as any area where the water table is within 1.8 metres (6 feet) of the ground surface during the frost-free period up until the end of August, and within 2.4 metres (8 feet) of the ground surface during the remainder of the year. They also recognize that the water table will probably be elevated in the spring due to the infiltration of snowmelt and during the spring/summer rainy season. A high water table can:

i) Adversely affect the functioning of a sewage disposal system, which could 'lead to shallow groundwater and/or surface water contamination;
ii) Render the area unsuitable for residential basement construction, interfere with the construction of roads, etc.

Alberta Environment defines the Suitable Development Area as well drained and not including a high water table area.

To estimate areas where a high groundwater table exists, prior to determining the scope of water table test hole program, experienced persons refer to relevant reports, maps and aerial photos. They couple this with a site inspection to look at the existing site topography; water courses/water bodies and vegetation type. The use of previously existing information can be used to draw a map showing the preliminary delineation of suspected high water table areas.

To determine the water table level for the design of a Private Sewage Disposal System, Alberta Environment provides instruction on how to carry out a Water Table Test Hole drilling, sampling and monitoring program. The optimal time for water level measurements is during the spring, after the frost is out of the ground and when the water table is generally at its peak annual level.

Each lot should have a near surface water evaluation test hole at or near the best possible building site and possible septic field location. This data should be made available to the future landowners. Locating septic fields in low areas or possible runoff drainage courses where seasonal runoff of water may impact the operation of the septic field should be identified and avoided for septic field installation.
Another important consideration for septic field installation is the percolation rate of the soils in the proposed area of installation. Soils that allow the effluent to travel too fast through the soils do not treat the effluent and can cause contamination of the groundwater, possible water well contamination and a threat to public health. Soils that allow the effluent to travel too slowly allow the effluent to become septic and pose a threat to public health. The acceptable percolation rates are outlined by Alberta Environment in their guidelines.

Percolation testing should not be done without first determining the depth to the near surface water table, as per the guidelines. The guidelines relevant to percolation testing are fully explained in the Environmental Guidelines for the Review of Subdivisions in Alberta, Alberta Environment.

The County requires that one complete, acceptable percolation test per lot is performed within 3 metres of a near surface water test hole. Additional tests may be required if conditions warrant, at the discretion of the County. The capability of the proposed lots to accept a septic field may vary over the site as well as the available building sites; however the developer and engineer must address the location of these tests in accordance with the best suitable building site at the time. The location and results of these test results should be made available to the future landowners for their consideration.
Caution is advised when interpreting results after conducting percolation tests in fine-grained soils. Evaluation of the suitability of the soils for on-site sewage disposal will require professional assistance.

Another important consideration for septic field installations is the sodium adsorption ratio (SAR). This is a necessary and an intrinsic component of any septic field design. Any SAR values greater than the recommended must be addressed by the engineer and developer. The Alberta Government can be contacted to recommend possible solutions to SAR criteria that exceed the maximum permissible. The results of the proposed potable water analysis is required to address this requirement. SAR values that cannot be reconciled must lead the developer to investigate another form of septic disposal. This information should be made available to future landowners. The use of water softeners and other salts can be detrimental to the septic field's ability to operate effectively.

When reporting the near surface water and soil percolation test results to the County, the reports are to be typed, signed and sealed by a qualified professional engineer, accredited by APEGGA. Each report shall include all pertinent information and recommendations of the qualified professional engineer. This report will contain the following:

- site location;
- proposed septic field sites;
- accurate location of the above;
- location of any existing septic fields;
- any water wells and their locations;
- SAR values;
- methodology;
- results;
- conclusions & recommendations.

It is important that reports address each aspect of the sanitary sewage disposal issue. Unconfirmed or omitted references to any of the above may cause processing delays. The County is not responsible if submitted information is incomplete.

Additional information may be required by the installer of any system that is approved by the Alberta Government.

302.0 Wastewater Collection, Treatment and Disposal Systems

For general purpose, when a sanitary sewage gathering and treatment system is being considered, the Alberta Environment Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems is used for minimum design requirements. It should be noted that these minimum guidelines may not be applicable to every situation and good engineering design practices are required to ensure the proper treatment and disposal of the wastewater. All designs of wastewater collection, treatment and disposal systems will require Alberta Environment permits and licenses to construct and operate as well as County approvals. The developer and engineer are responsible to ensure that the design meets all requirements of all Provincial and Local Authorities.

400.0 Stormwater Management

Stormwater management is the conceptualization, planning, design, construction and maintenance of stormwater control facilities in developing drainage basins. This involves construction of such facilities as open channels, curbs and gutters, storm sewers, detention/retention ponds and associated structures, water enhancement measures and special structures.

The management of stormwater is a most important component in the process of County development and growth. It is recognized that there is no single practice or method for stormwater management that is preferred and that site-specific conditions govern. A system that implements Best Management Practices (BMP's) and provides for low cost maintenance should be tailored for each development.

The goals of a stormwater management plan are to implement a drainage system to control and properly manage stormwater runoff in terms of both, water quantity and quality. A well planned, designed and implemented system safeguards the downstream receivers of stormwater from potential impacts of all development within the subject lands and the upstream portion of the drainage area. Stormwater management has been considered a liability, but properly carried out, can add value to the properties involved.

A stormwater management study must be undertaken by a qualified professional engineer who must use sound engineering practices and these guidelines as well as incorporating site-specific issues in their design. Implementation of the design shall be under the supervision of a qualified professional engineer so that site-specific needs are met.

This section includes the storm water drainage engineering design criteria. Stormwater management studies are required on all subdivisions. At Council's direction, a site specific and/or Master Drainage Plan study, encompassing the boundaries of a watershed may be required.

Except where stated otherwise, all design criteria, materials, installation and testing shall be in accordance with the most recent editions of the following:

- Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Facilities by Alberta Environment.
- Environmental Reference Manual for Review of Subdivisions in Alberta published by Alberta Environment.
- Stormwater Management Guidelines for the Province of Alberta.
- Alberta Environment Standards and Guidelines for the Approval and Design of Natural and Constructed Treatment Wetlands for Water Quality Improvement.
- Plumbing Code Regulations.

401.0 General Design Criteria

At the discretion of the County, a stormwater management plan is required for all subdivisions. The plan shall be prepared by a qualified professional engineer,

accredited by APEGGA, at the Developer's cost and examined and/or approved by the County and Alberta Environment.
In general, a stormwater management plan shall conform to the following criteria:

- Post development runoff to adjacent lands will be no greater than predevelopment quantities.
- Post development runoff to adjacent lands will be of best quality possible.
- Best management technical practices will be used to quantify and qualify the stormwater runoff.
- The performance of the stormwater management infrastructure is the responsibility of the developer and engineer until final acceptance by the County
- The overall maintenance of the stormwater management system should accommodate the nature of the subdivision and the rural context of the County.
- BMP's will be used to estimate quantity and quality of the stormwater runoff.

Stormwater management design and construction costs form a portion of the security requirements to enter into a Development Agreement or a Development Permit.

A failure to properly assess, design, construct and maintain a stormwater management system will result in long-term problems for the development. Consequently, independent engineering review of the proposed plan and or remedial works may be required for which the cost shall be borne by the owner/developer as per clause 201.0.

401.1 Overland Drainage Plan - System Design

In general, the following criteria shall be included in an Overland Drainage Plan system design:

- Preparation of plans that identify and delineate the watershed area, subcatchment areas and construction phases.
- Preparation of proper documentation detailing:
  - How the surface runoff due to snow melt and/or rainfall will be conveyed through the development,
  - The hydraulic characteristics of on-site drainage courses and storage facilities in both pre- and post development conditions, while noting that all surface runoff conveyance systems and retention/detention facilities shall be designed to manage runoff from a storm event with a return period of 100 years,
  - Normally the “minor” drainage system – ditches, culverts, etc. are required to handle the 5 year storm. Clearwater County reserves the right to vary the return period for “minor” facilities at its discretion.
  - The “major” system – storm pond, wet pond, etc. are required to handle the 100 year storm.
  - How potential improvement of runoff quality is implemented in the design,

- The measures proposed which are to protect existing downstream drainage systems and/or receiving water bodies (natural and constructed) from releases of post-development runoff,
- the stormwater detention/retention facilities,
- the water quality enhancement facilities,
- the recommended measures that will protect the drainage as designed,
- the mitigation of the effects of stormwater on the proposed sewage disposal and on existing systems,
- the mitigative measures of potential effects of stormwater on the proposed method of water supply and existing water supplies.
- ensure that the lot grading is in place to ensure that the building site is set at an elevation above the 100-year storm.

The County will require an Overland Drainage Plan for each subdivision where surface runoff is leaving the lands and impacting other adjacent lands, where natural drainage courses are altered in some manner, or where deemed appropriate by the County.

In the case of all types of commercial or industrial subdivisions, the stormwater system shall comprise of an Overland Drainage Plan and a Site Drainage Plan. (See Section 401.2 - Site Drainage Plan.)

401.2 Site Drainage Plan

In general, and for County purposes, a Site Drainage Plan is limited to on-site conveyance, storage and treatment of the stormwater. This may also include setting of lot grades; re-sizing of culverts, protection of drainage courses and design of detention/retention facilities that meet the general design criteria to properly manage the runoff from a storm event (see above).

- A Site Drainage Plan for any residential subdivisions should include, but is not limited to, address the following points:
- A drainage system on a lot by lot basis and properly incorporated in the overall Overland Drainage Plan system and that the on-site drainage system is capable of handling the runoff due to a storm event with a return period of 5 years,
- The orderly growth of the development is not compromised,
- Adjacent landowners are not adversely affected,
- The mitigation of potential impacts of stormwater on proposed method of sewage disposal and on existing sewage disposal systems,
- The mitigation of the potential impacts of stormwater on the proposed method of water supply and existing water supplies,
- Drainage swales at less than 2% horizontal grade shall be permanently fixed in concrete.

A Site Drainage Plan will be required for each commercial and industrial lot within the County. Additional consideration should be given to:

- The mitigation of potential pollutants from the site,
- The use of the stormwater drainage and retention/detention infrastructure as a possible component to an emergency response plan for spillage of contaminated runoff,
- Incorporating enhancement techniques for runoff quality improvement.

A minor underground piped stormwater drainage system does not constitute a viable option at this time. The limitations of an underground piped system, the normal lot sizes, density of the lots and high associated maintenance costs makes this type of option undesirable.

402.0 Construction of Stormwater Facilities

Approved Overland Drainage Plans and/or Site Drainage Plans will be implemented to provide the most appropriate drainage systems in the County. The construction of all of stormwater facilities must use good industry standard techniques and practices. The supervision of the works by a qualified professional engineer is required to ensure compliance with the drainage plans. Any adjustments or omissions to the design must be approved by the engineer, examined by the County and/or Alberta Environment for compliance and reflected in the `asbuilt drawings' and any other documents that are required to process the final acceptance by the County.

The topsoil and seeding of disturbed areas of the stormwater infrastructure must be carried out as part of the construction phases of the system. Failure to adequately protect the infrastructure from effects due to erosion will result in non-acceptance of the infrastructure and resulting delays in security releases.

403.0 Erosion and Sedimentation Control

During site preparation and/or construction of roads and buildings, care shall be taken to mitigate potential impact from erosion and sedimentation. Prior to undertaking any site preparation, the developer of the works shall submit to the County as part of the stormwater management plan an erosion and sedimentation control plan that includes:

- Map showing topography, overland flow routes, soils, drainage, final grading, stockpiles, zones of erosion potential, stream dimensions and stream flow data, any special feature, and the sensitivity of the downstream environment where flows could leave the site;
- Details and extracts of objectives and conditions in any Overland Drainage Plan and/or Site Drainage Plan;
- Dust control measures and location, height and removal of stockpiles;
- An indication of the degree of erosion and sediment control measures anticipated, based on the site erosion potential and downstream impact;
- Details of "good housekeeping" practices to be implemented;

- Procedures for monitoring and maintaining the erosion and sedimentation controls, including methods of removing and disposing of sediment from any sediment traps;
- Details of contingency plan for failure of control elements during extreme runoff events.

404.0 Maintenance of Stormwater Facilities

The performance and maintenance of any stormwater management system component is the responsibility of the developer. Maintenance is required for a minimum of two years after Construction Completion Certificate issuance. It will provide an opportunity to observe the performance of the as-constructed system in performing as designed. If the system fails to perform satisfactory under actual conditions, the maintenance period may be extended at the discretion of the County.

The overall maintenance of the stormwater infrastructure shall accommodate the rural nature of the County. An easily maintained stormwater infrastructure is a significant benefit to the County and to the community as a whole.

500.0 PRIVATE WATER WELLS

Developer shall satisfy the County that sufficient water is available to supply the intended use and meet the requirements of the Alberta Provincial Water Act.

Clearwater County reserves the right to utilize outside engineering services in the review of all plans, test results and designs being submitted. The cost of these outside engineering services shall be the responsibility of the developer as outlined in clause 201.0.

600.0 GEOTECHNICAL

A proper site review by a knowledgeable geotechnical engineer can identify and address many concerns. Such concerns may have an economic impact on the serviceability and development potential of the lands. A proper geotechnical investigation shall be carried out to address these concerns prior to redesignation or subdivision.

The geotechnical report should address issues such as sewage disposal; slope stability, if applicable; stormwater concerns, with regard to low lying areas and drainage courses; flooding potential; groundwater issues for construction of utilities and septic fields; potable water sources; soil conditions for construction of roads and utilities; and can identify other issues that may impact the viability of the development.

The geotechnical evaluation must address any features, which may cause geotechnical concerns for development. These features should include, but not be limited to slopes, bedrock outcrops, bogs, streams, springs, ponds, and soft areas.

The geotechnical report must include, but not be limited to: terms of reference; scope of investigation; topography, surface vegetation, and other features; recommendations regarding geotechnical suitability of site for development; and a site plan showing contours, slope distributions, areas of instability and areas of potential development.

A geotechnical report can be structured to support a redesignation application or a subdivision application. Each report type reviews the same information but in different detail.

In general, the County follows Alberta Environment guidelines for geotechnical requirements. The County has, however, additional specific requirements to augment the Alberta Environment guidelines. The County also recognizes that each site may be unique and require different geotechnical approach. The most recent and pertinent guidelines and standards referred by the County are:

- Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Facilities by Alberta Environment.
- Alberta Private Sewage Systems Standard of Practice by Alberta Labour.
- Alberta Private Sewage Systems Standard of Practice Handbook by Alberta Labour.
- Environmental Guidelines for the Review of Subdivisions in Alberta by Alberta Environment.
- Clearwater County Land Use By-law as amended from time to time.
- Site and development specific guidelines or requirements as issued by the County.

601.0 Land Use/ Redesignation Geotechnical Investigation

The following geotechnical investigation information is a general outline of what is required for a redesignation or land use change application. Further detail may

be required, at the County's discretion, based on this initial geotechnical review of the site.

The County requires the developer to prove that the subject lands have an acceptable level of serviceability to support the land use application. A properly completed geotechnical report will identify and address the following technical issues:

- slopes and slope stability
- water table
- sewage disposal methods
- water sources
- stormwater or flooding issues
- environmental concerns
- traffic impact

Follow up reports to address each of the above in more detail will be required to finalize the servicing of the lands. Conceptual servicing of the lands is not adequate to support a redesignation application; there must be more detail for a land use decision. Council may require more information than outlined above.
Additional detail required for sewage disposal, water servicing and stormwater management are such items as Provincial permits and licensing requirements. Details of maintenance issues and how functional the systems are should also be addressed.

In higher density scenarios, the suitability of the lands to assimilate the higher density will require a higher degree of servicing and consequently more detailed reports.

602.0 Subdivision Geotechnical Investigation

The geotechnical investigation for a subdivision application requires further detail of the items that may have been addressed in the redesignation geotechnical investigation. The geotechnical report may include information from the previously discussed reports, but must confirm the adequate servicing of each lot.

Each lot should be confirmed as having adequate water supply, sewage disposal, drainage, access and slope stability.

The geotechnical report for subdivision must verify that the servicing of the subdivided lands is feasible. The County will review each application and will recommend whether a geotechnical or other type of report is warranted. All other subdivisions will require geotechnical or other reports at the discretion of the County.

Follow up reports may be required if the report information is incomplete or unclear. Development Services Staff will review the above reports for content and clarity.

603.0 Slope Stability

The County requires a full slope stability analysis by a qualified professional geotechnical engineer, for slopes 15% or greater than 2 meters in vertical height. A full slope stability analysis is required for any slope greater than 10%, greater than 1 meter in vertical height with a water body at or near the toe of the slope. These areas can be considered as part of the developable acre if a qualified professional geotechnical engineer can certify the stability of the slopes prior to, during development and after development.

Slopes of greater than 15% and less than 2 meters in vertical height that have been identified by a qualified professional engineer, through a full slope stability assessment, can be considered as part of the developable acre if the engineer can certify the stability of the slopes prior to, during and after development.

The County requires a full slope stability assessment by a qualified professional geotechnical engineer, for slopes of less than 10% and greater than 5% where there are water bodies at of near the development area.

The County requires a full slope stability analysis by a qualified professional geotechnical engineer, for any major erosion area or area of previous slope failure.

603.1 Slope Stability Analysis

A slope stability analysis shall consist of a field program designed by a qualified professional geotechnical engineer. Slope stability analysis reports must give a clear and concise recommendation on the suitability of slopes for the intended use, and the recommended building setback distances. The report must also address post development conditions and recommend means and methods of mitigating any potential problems. The potential for a slope failure caused by septic fields, irrigation, access construction, stormwater erosion and other like considerations must be investigated and discussed. The report should clearly state whether the site is suitable prior to, during and post development phases. The report shall contain analytical methodology, test hole logs, pertinent calculations and other relevant available information for County review.

603.2 Slope Stability Assessments

A slope stability assessment shall have, as a minimum, a field site assessment that includes a survey as part of the field program to be designed by a qualified professional geotechnical engineer. Slope stability assessments shall give clear and concise recommendations on the suitability of slopes for the intended use and on the setback distances if required. The report shall also address the post development conditions and recommend means and methods of mitigating any potential problems. The potential for a slope failure caused by septic fields, irrigation, access construction, stormwater erosion and other like conditions must be investigated and commented on. The report shall contain analytical

methodology, test hole logs if any, pertinent calculations and other relevant available information for County review.

603.3 Fill

Potential fill areas must be identified as part of the development approval application. Following development approval, all fill placement for roadway subgrades and building foundations must have a record of compaction testing.
Fill for building foundations must be compacted to a minimum of 98% of Standard Proctor density. Specifications for fill for roadway subgrades are addressed in Section 200.0.

For any foundation placed on fill, a soil-bearing certificate must be issued.

604.0 Water Table Analysis

The identification of the water table level is important to the servicing of the lands. This information will set limits or guides for future reports that will deal with issues of the water, sewer and other servicing requirements.

The following is a suggested outline of a water analysis. Site-specific situations may require additional detail and expansion of the scope of the outline to address other identified constraints.

Water table test holes should be placed both in suspected high and low water table areas, but more importantly in transitional areas and areas which have been difficult to interpret in the preliminary estimate.

There shall be a minimum of one test hole per lot. The test hole should be located at or near the proposed building location. The test holes must be drilled to a minimum depth of 3 m or to refusal in bedrock, whichever is shallower. Slotted standpipe piezometers must be installed to measure the water table. A minimum of one set of water level readings must be obtained at least two weeks after installation of the wells.

Guidelines for test hole excavation and logging soil textures are published in the Alberta Environment Standards and Guidelines Branch, “Environment Guidelines for the Review of Subdivisions in Alberta”. These test holes are to be excavated to a minimum depth of 3 metres. All test holes must be logged. There must be sufficient sampling and testing of the soils to determine soil classifications.

A perforated plastic pipe is to be inserted in the test hole to reach the bottom and protrude at least 30 cm above the ground surface. The pipe should be capped and excavated soil used as backfill, lightly tamped down. Soil should be mounded at ground level around the standpipe to prevent entry of surface water.

A minimum period of 24 hours in sand soils, and 96 hours in clay soils, is required to allow the water level to stabilize in the hole before measuring its distance from the ground surface. A long-term water table evaluation may be required, in which case a program will be reviewed and implemented.

Based upon the preliminary evaluation supplemented by the water table test hole program, the high water table areas should be delineated on a Base Map. This map should also outline major vegetation types and show the location of all water table and percolation holes. In addition, the stabilized water table level within each water table test hole should be included. If bedrock is encountered within 2.4 metres of the ground surface, it should be delineated on the Base Map and its lithology described.

Elevations are required on all test holes in order to evaluate the water table location. Locations of test hole locations are also required. Where possible, the test holes should extend beyond the limits of the subject lands.

These water table test holes may be performed in conjunction with the soil percolation rate test, but the requirement for one near surface water test per percolation test must be observed.

Clearwater County reserves the right to utilize outside engineering services in the review of all plans, test results and designs being submitted. The cost of these outside engineering services shall be the responsibility of the developer as outlined in clause 201.0.

700.0 ENVIRONMENTAL AND HISTORICAL STUDIES

In any subdivision development activity, the concern for environmental and culturally sensitive areas must be addressed by the developer prior to redesignation, and during any subsequent subdivision development activity. The studies used to define significant areas and concerns must be conducted by a qualified professional under the guidelines and standards imposed by the respective Provincial authorities and at the cost of the developer.

Environmental and significant area studies address issues such as wildlife management, sensitive ecological areas, sensitive rivers and creeks, agricultural concerns, noise pollution, light pollution, previous site contamination, sewage disposal, solid waste disposal and others as necessary.

Historical and archaeological studies address issues such as heritage sites, teepee rings and other such concerns.

This section includes the requirements relating to the Environmental Studies and Historical Studies. All development and related activities submitted to the County shall comply with the requirements as set out in the most recent editions of Provincial Regulations and Guidelines that may pertain to that application and activity.

The most recent editions of the following are pertinent:

- Alberta Environmental Protection and Enhancement Act and Regulations
- Guidelines for Archaeological Permit Holders in Alberta
- Cultural Facilities and Historical Resources Division of Alberta Community Development
- Historical Resources Act Water Act
- Public Lands Act
- Alberta Weed Control Act
- Conservation and Reclamation Regulation Act
- Environmental Reference Manual For The Review of Subdivisions In Alberta Standards and Guidelines For County Waterworks, Wastewater and Storm Drainage Systems
- Interim Guidelines For The Evaluation Of Water Table Conditions And Soil Percolation Rate For Unserviced Residential Subdivisions
- Alberta Private Sewage Treatment and Disposal Regulations

701.0 Environmental Guidelines and Studies

This section outlines some of the County's general technical concerns with regards to soil conservation, reclamation, environmental and County reserves, general construction practices and environmental studies.

701.1 Conservation and Reclamation

The objective of soil conservation and reclamation of specified lands is to return the endangered or disturbed lands to equivalent capable land or better.

In all subdivision and road construction, the County supports AEP's Conservation and Reclamation Regulation by encouraging best available practices in stripping, stockpiling and reuse of the topsoil affected by construction.

All gravel pits must be reclaimed according to relevant Provincial Regulations.

701.2 Roads and Road Construction

A disposal plan will be required for the removal of existing vegetation from road allowances. This plan should address the relocation and/or harvesting of trees and brush chipping where feasible.

Under no circumstances will topsoil be removed from a road allowance and used elsewhere by a developer. Permission from the County is required for the stockpiling of topsoil on unused road allowances.

Under a Development Agreement, the developer is responsible for the control of weeds and the cutting of grass along the newly constructed roads until issuance of the Final Acceptance Certificate by the County.

701.3 Municipal and Environmental Reserves

Under no circumstances will topsoil be removed from Municipal or Environmental Reserves.
Permission from County Council is required for the stockpiling of topsoil or any other material/items on County Reserves.

Under no circumstances will Environmental Reserves be used to stockpile topsoil or any other material/items prior to, during or after construction.

Under the Development Agreement, the developer is responsible for maintaining existing vegetation and controlling noxious weeds within the County Reserves until final acceptance by the County.

Environmental Reserves shall remain in their natural state, shall not be impacted by construction or be subjected to any surface disturbance in any manner without prior written consent of Council.

702.0 Historically Sensitive Sites

In areas considered historically sensitive by the Alberta Government, the County will require a Historical Resources Impact Assessment Report be submitted with the application for the proposed redesignation, subdivision or development.

The Historical Resources Impact Assessment shall be in accordance with the Guidelines for Archaeological Permit Holders in Alberta. The study shall be conducted by a qualified archaeologist with a valid Archaeological Research Permit from the Province of Alberta.

703.0 Environmental Studies

Alberta Environment is the regulatory body for all environmental studies. There are several different forms that an environmental study can take. This section outlines some of the more common studies that may be required. These general outlines may result in site-specific studies that require further in-depth investigation prior to acceptance. All requirements under the Alberta Environmental Protection and Enhancement Act must be satisfied.

The County may require any one or combination of environmental studies for any anticipated project. The developer will bear the full cost of the studies required.

703.1 Environmental Site Assessment (ESA)

At the discretion of the County an ESA maybe required.

An ESA is an evaluation of available information that outlines the nature of any hazards to determine if any adverse effects have occurred.

It determines the presence and extent of known contaminants. The assessment may determine the relative level of risk i.e.: low, medium or high as outlined in the Guidelines, so that priorities may be established for subsequent action.

There are three levels of ESA's:

ESA Phase 1 - typically a historical and operational review of the lands.
ESA Phase II - generally involves a reconnaissance sampling/ analytical program to confirm the findings of an ESA Phase 1.

ESA Phase III -a detailed sampling/analytical program to determine contaminant extent and remedial parameters.

703.2 Risk Assessment

At the discretion of the County a Risk Assessment maybe required.

This type of study uses available information to determine the probability and severity of effects that may occur as a result of some activity or condition on the property.

This assessment calculates the risk associated with contaminants and determines acceptable minimum levels of remediation. It is used to develop emergency response plans and to allocate resources to deal with emergencies. This type of study is often expressed mathematically, in the form of "product of probability X its consequences."

703.3 Toxicity Identification and Evaluation

At the discretion of the County a Toxicity Identification Study maybe required.

This type of study is a laboratory process to identify toxic compounds released from a site 'or facility. The process combines chemical manipulation of samples with toxicity testing and chemical analysis.

The study is used to identify toxic compounds that are not priority pollutants and may define new regulated monitoring requirements. It establishes a toxicity level that is independent of numerical criteria and may be used to establish acceptable remediation levels. The study may determine an effective and possibly new remediation process for identified toxic compounds.

Clearwater County reserves the right to utilize outside engineering services in the review of all plans, test results and designs being submitted. The cost of these outside engineering services shall be the responsibility of the developer as outlined in clause 201.0.

800.0 Warranty Periods

The Developer is responsible to warrant all work to be free from any defect or failure and to withstand climatic, maintenance and normal operational conditions.

The developer shall repair at his own expense any such defect or failure, which occurs in the work prior to the expiry of the warranty period. The County will notify the developer in writing during the warranty period or during Final Acceptance inspection of the required repairs and the developer shall promptly undertake these repairs.

The length of the Warranty Period may vary depending on the warranty item, however a one year minimum warranty term will be placed on all phases of the work unless otherwise specified or approved by the Director of Public Works.

Table 400A

QUALITY CONTROL TESTING REQUIREMENTS BY DEVELOPERS

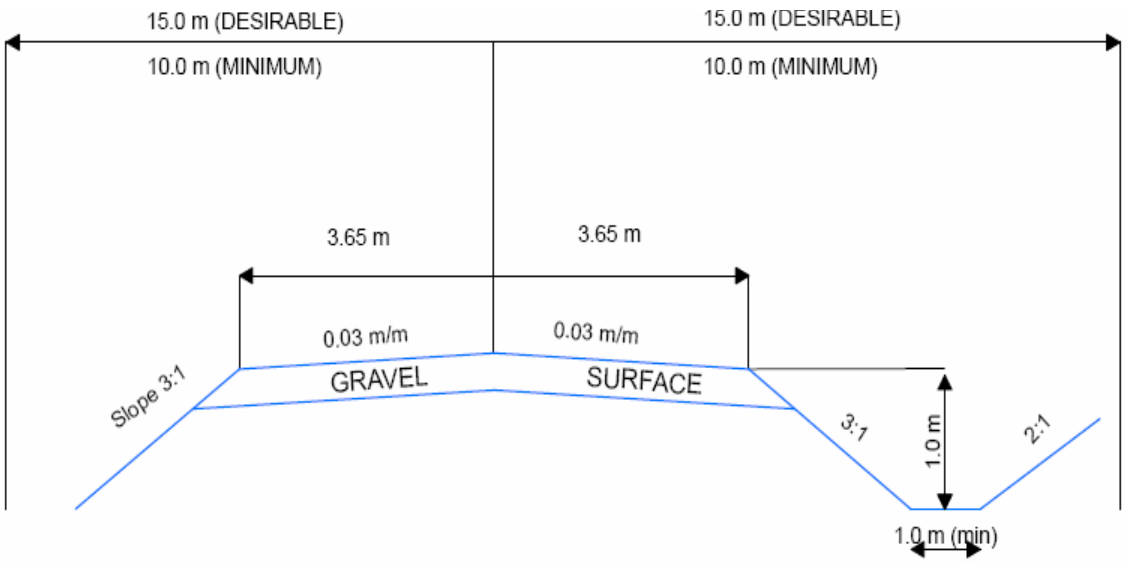
Clearwater County

Series	Reference to County Section	ASTM Standard or as indicated	Material Description	Test Description	Minimum Frequency	Comments
A	201.1 – Grading	D-698 D-1557	Silts-Clays	Standard Proctor	One per soil type	Additional Proctor required should soil type change
B	201.1 – Grading	D-1556 D-2167 D-2922	Silts-Clays	In Place Density % Moisture In Place Density % Moisture In Place Density % Moisture	One per 100 linear meter, per 150 mm lift (minimum of 5 tests per 150 mm lift)	Density Tests on all lifts
C	202.2 – Granular Base	C-136 C-117	Crushed Aggregate	Sieve Analysis	One washed sieve analysis per 1,000 tonne	Certified copy of suppliers quality control results required
D	202.2 – Granular Base	D-698 D-1557	Crushed Aggregate	Control Strip Method	One per 150 mm lift per aggregate class	
E	202.2 – Granular Base	D-3017	Crushed Aggregate	In Place Density, Nuclear Method	One per 50 linear meter, per 150 mm lift (minimum of 5 tests per 150 mm lift)	For 25 mm and 40 mm crushed aggregate a control strip method will be required to establish % compaction, as per AT&U Specification ATT-58

CLEARWATER COUNTY ROAD CLASSIFICATION AND GEOMETRIC GUIDELINES – CHART 400B

		CROSS-SECTION ELEMENTS							ALIGNMENT				
Classification	Description	Design Speed (km/hr)	Posted Speed (km/hr)	Min. R.O.W. (m)	Min. Surface Width (m)	Side Slope Ratio	Min. Ditch Width (m)	Min. Ditch Depth (m)	Back Slope Ratio (hor/vert)	Min. Curve Radius (m)	Min. Sag (K)	Min. Crest (K)	Max. Gradient (%)
COLLECTOR													
UCU50 SAR(I/C)	Service Access Road Ind./Comm.	50	50	30	7.3	4:1	2.5	1.0	4:1	130	12	11	4

Clearwater County



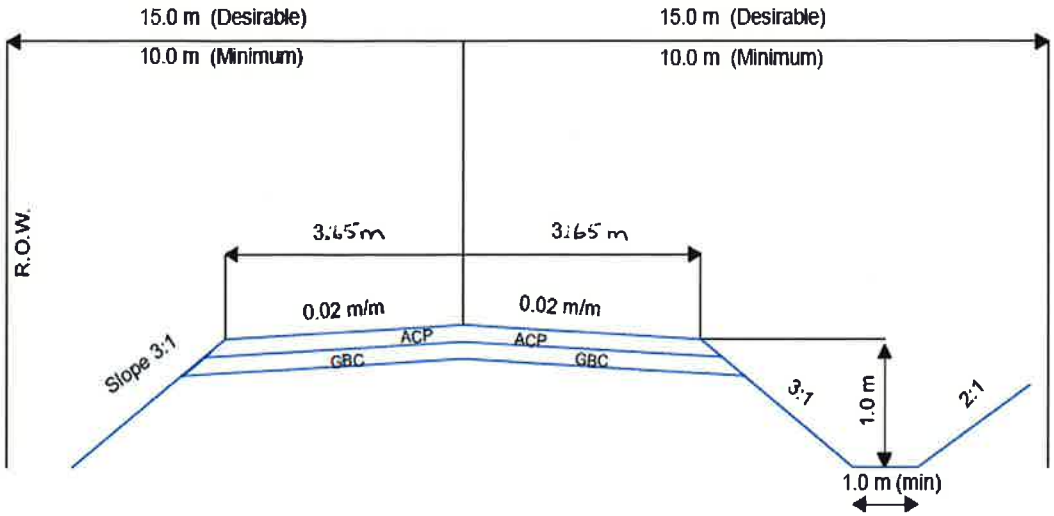
Surface Width	R.O.W. Required	Max. Side slope	Max. Back slope	Min. Curve Radius m.	Max. Super Elev. m/m
7.3	20.0	3:1	2:1	125	0.06

Max. Gradient %	Posted Speed
6%	50

Figure 6
Residential Subdivision Gravel
Standard Cross-section

Scale: NTS

Clearwater County



Surface Width	R.O.W. Required	Max. Side slope	Max. Back slope	Min. Curve Radius m.	Max. Super Elev. m/m
7.3	20.0	3:1	2:1	125	0.06

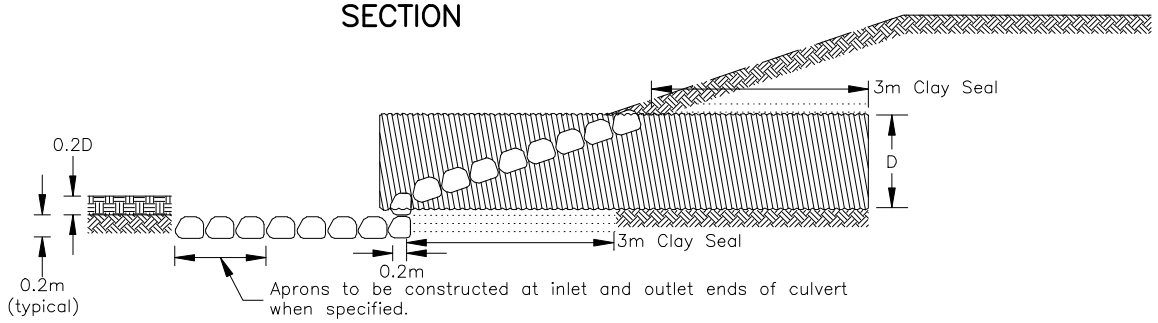
Max. Gradient %	Granular Base	Ashpalt Thickness	Posted Speed
6%	300 mm	125 mm	50

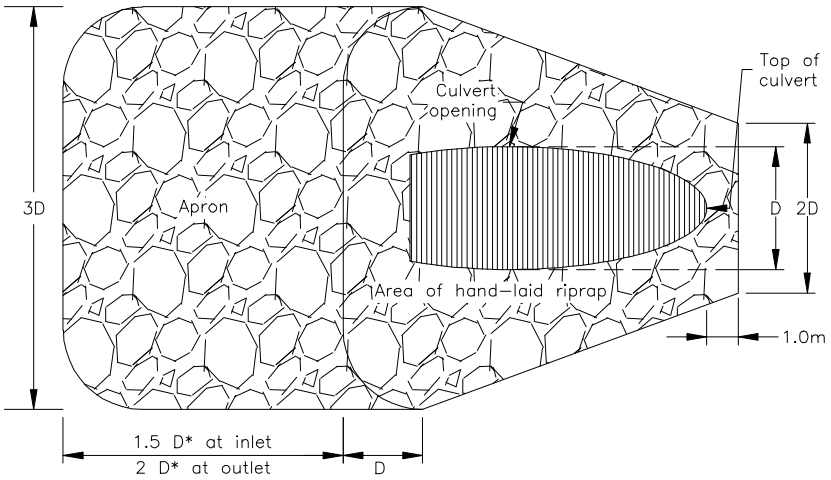
Figure 7
Residential Subdivision Paved
Standard Cross-section

Scale: NTS

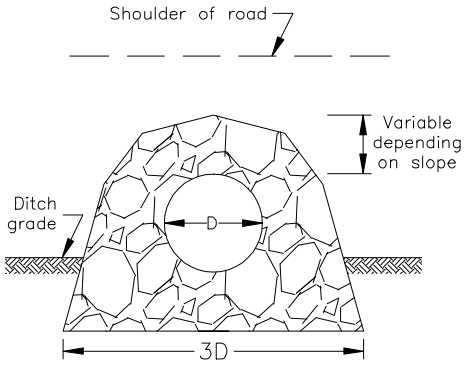
FIGURE C–4.7a HAND LAID RIPRAP

SECTION





* These are typical minimum dimensions.



ELEVATION

PLAN VIEW

Notes:

1. ROCKS AND BOULDERS SHALL BE SELECTED AS NEARLY CUBICAL IN FORM AS PRACTICAL AND SHALL HAVE A LEAST MINIMUM DEMENSION OF 200mm. THE STONES SHALL BE PLACED WITH THEIR BEDS AT RIGHT ANGLES TO THE SLOPE, THE LARGER STONES BEING USED IN THE BOTTOM COURSES AND THE SMALLER STONES AT TOP. THEY SHALL BE LAID IN CLOSE CONTACT SO AS TO BREAK JOINTS AND IN SUCH MANNER THAT THE WEIGHT OF THE STONE IS CARRIED BY THE EARTH AND NOT BY THE ADJACENT STONES. THE FINISHED WORK SHALL PRESENT AN EVEN, TIGHT, AND REASONABLY PLANE SURFACE, VARYING NOT MORE THAN 75mm FROM THE REQUIRED CONTOUR.

2. WHERE NO SPECIAL TREATMENT IS REQUIRED, CULVERT INVERT ELEVATIONS ARE TYPICALLY SET ABOUT 0.20 X DIAMETER BELOW THE DRAINAGE COURSE ELEVATION.

3. A CLAY SEAL IS TO BE PLACED AT BOTH ENDS OF THE CULVERT FOR A LENGTH OF 3m TO CUT OFF SEEPAGE. THE CLAY SEAL SHALL EXTEND FROM THE BOTTOM OF THE EXCAVATION TO 300mm ABOVE THE CROWN OF THE IPE, AND FROM THE FULL WIDTH OF THE EXCAVATION.

4. WHERE APRONS ARE REQURIED DUE TO HIGH VELOCITY FLOW OR EROSION PRONE SOIL, TYPICALLY THE MINIMUM INLET APRON IS 1.5 X DIAMETER LONG WHILE THE MINIMUM OUTLET APRON (WHERE WATER VELOCITY IS HIGHER) IS TWO DIAMETRES LONG.

PIPE DIAMETER (mm)	AREA OF ONE END EXCLUDING APRON (m^2)	AREA OF ONE END INCLUDING INLET APRON (m^2)	AREA OF ONE END INCLUDING OUTLET APRON (m^2)
500	2	3	4
600	3	5	6
700	4	6	7
800	5	8	9
900	6	10	11
1000	7	12	13
1100	9	14	16
1200	10	16	19
1400	13	22	25

* THE ESTIMATED RIPRAP SURFACE AREAS SHOWN IN THE TABLE ARE BASED ON A 4:1 SIDESLOPE.

CLEARWATER

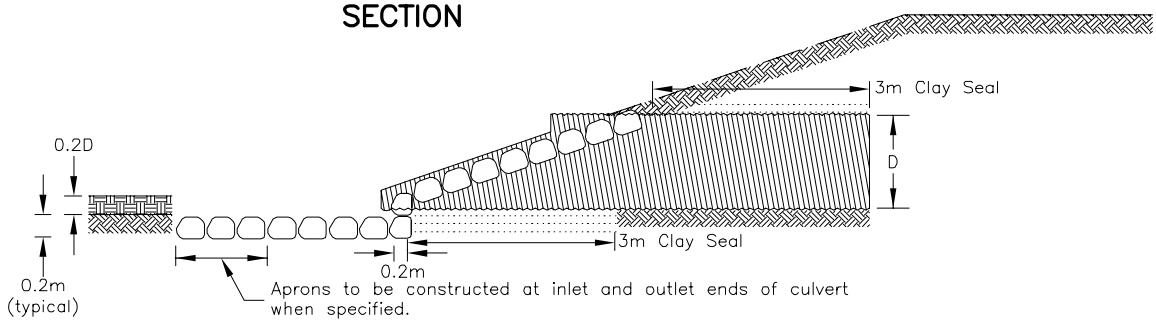
GENIVAR

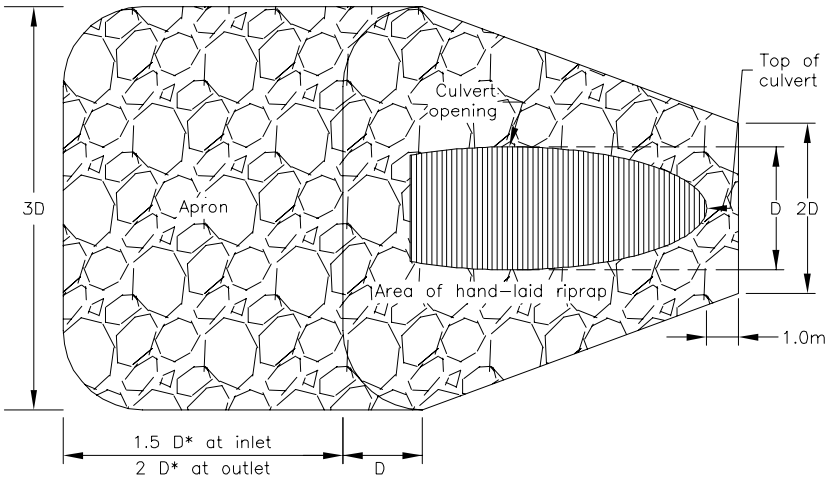
	DATE: 01/27/2010
PROJECT NO.: 1009074	DRAWN: TH
	CHECKED: PM
	SCALE: N.T.S.

FIGURE C–4.7a
HAND LAID ROCK RIPRAP

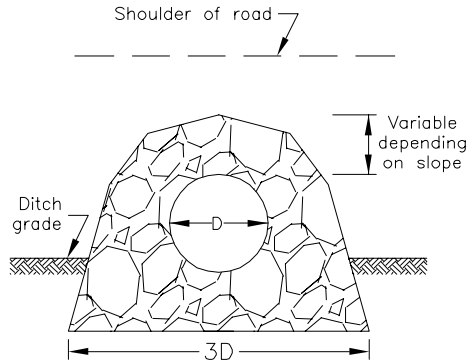
FIGURE C–4.7b HAND LAID RIPRAP

SECTION





* These are typical minimum dimensions.



ELEVATION

PLAN VIEW

Notes:

1. ROCKS AND BOULDERS SHALL BE SELECTED AS NEARLY CUBICAL IN FORM AS PRACTICAL AND SHALL HAVE A LEAST MINIMUM DEMENSION OF 200mm. THE STONES SHALL BE PLACED WITH THEIR BEDS AT RIGHT ANGLES TO THE SLOPE, THE LARGER STONES BEING USED IN THE BOTTOM COURSES AND THE SMALLER STONES AT TOP. THEY SHALL BE LAID IN CLOSE CONTACT SO AS TO BREAK JOINTS AND IN SUCH MANNER THAT THE WEIGHT OF THE STONE IS CARRIED BY THE EARTH AND NOT BY THE ADJACENT STONES. THE FINISHED WORK SHALL PRESENT AN EVEN, TIGHT, AND REASONABLY PLANE SURFACE, VARYING NOT MORE THAN 75mm FROM THE REQUIRED CONTOUR.

2. WHERE NO SPECIAL TREATMENT IS REQUIRED, CULVERT INVERT ELEVATIONS ARE TYPICALLY SET ABOUT 0.20 X DIAMETER BELOW THE DRAINAGE COURSE ELEVATION.

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4. WHERE APRONS ARE REQURIED DUE TO HIGH VELOCITY FLOW OR EROSION PRONE SOIL, TYPICALLY THE MINIMUM INLET APRON IS 1.5 X DIAMETER LONG WHILE THE MINIMUM OUTLET APRON (WHERE WATER VELOCITY IS HIGHER) IS TWO DIAMETRES LONG.

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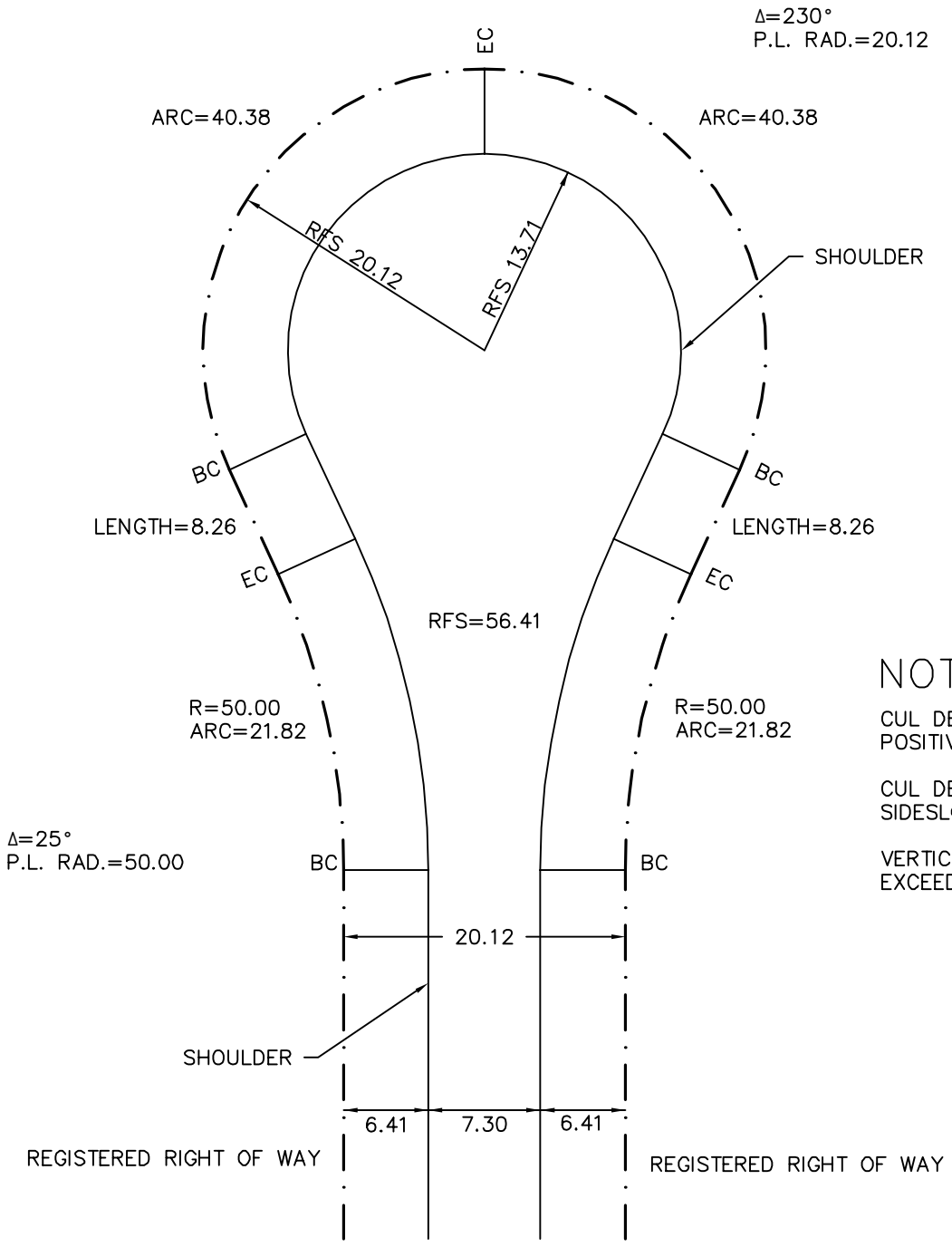
500	2	3	4
600	3	5	6
700	4	6	7
800	5	8	9
900	6	10	11
1000	7	12	13
1100	9	14	16
1200	10	16	19
1400	13	22	25

* THE ESTIMATED RIPRAP SURFACE AREAS SHOWN IN THE TABLE ARE BASED ON A 4:1 SIDESLOPE.

	DATE: 05/26/2014	
PROJECT NO.: 1009074	DRAWN: TH	
WSP	CHECKED: KB	
	SCALE: N.T.S.	

FIGURE C–4.7b
HAND LAID ROCK RIPRAP

FIGURE 400.2



NOTES:

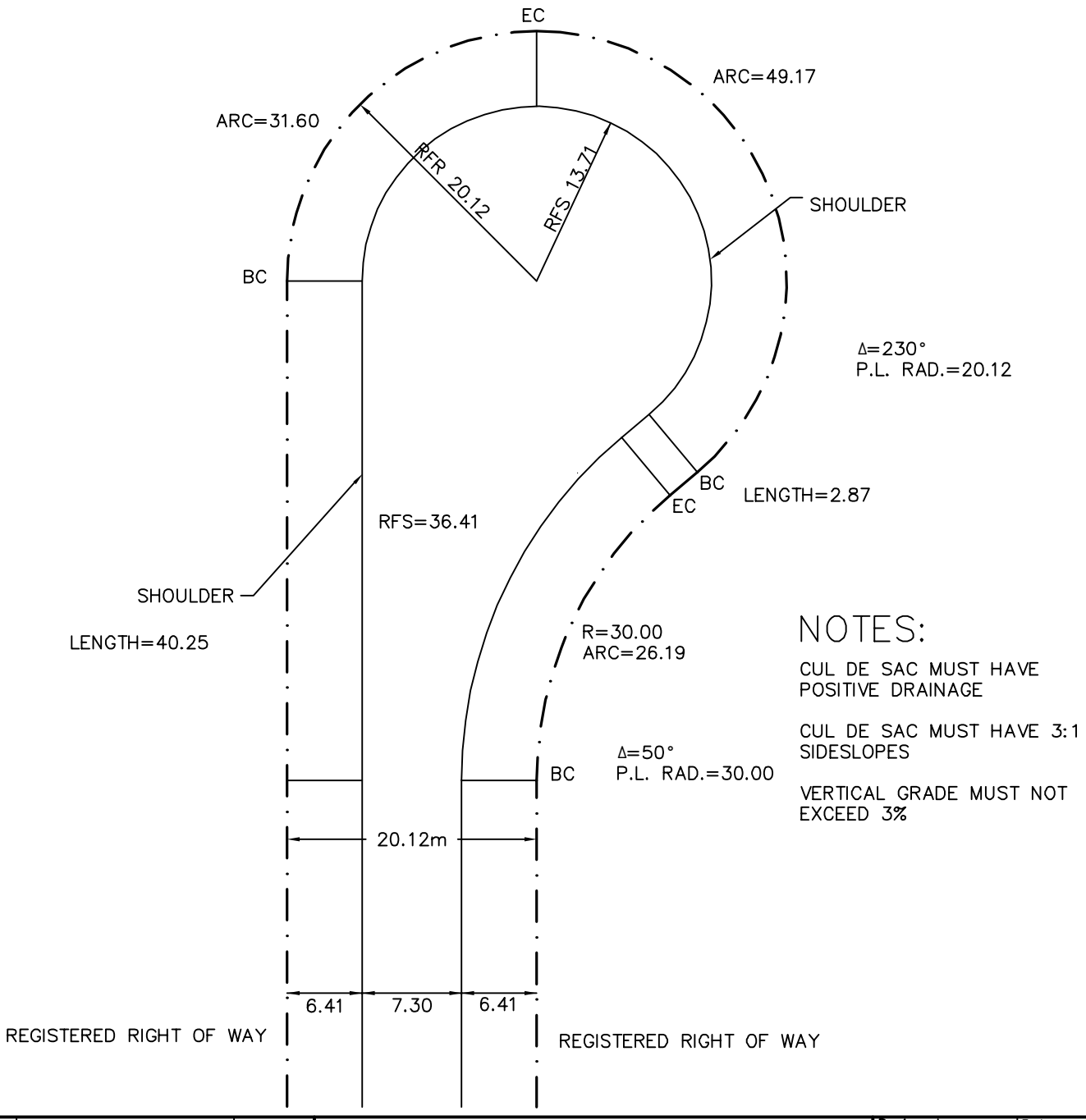
CUL DE SAC MUST HAVE POSITIVE DRAINAGE

CUL DE SAC MUST HAVE 3:1 SIDESLOPES

VERTICAL GRADE MUST NOT EXCEED 3%

			ACCESS ROADS TO SUBDIVISIONS	Designed	Date MAY–22–2014
				Drawn T.H.	Project No.
				Checked K.B.	Contract No.
				Approved	Revision
				Scale N.T.S	
DATE	REVISIONS	APP	CLEARWATER COUNTY	DWG. No. CC–400.2	

FIGURE 400.2A



NOTES:

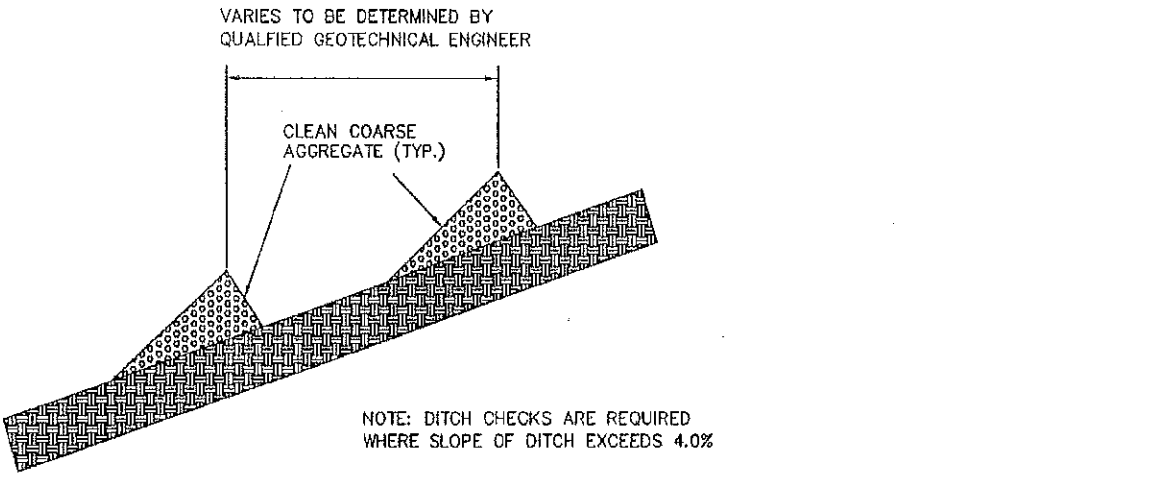
CUL DE SAC MUST HAVE POSITIVE DRAINAGE

CUL DE SAC MUST HAVE 3:1 SIDESLOPES

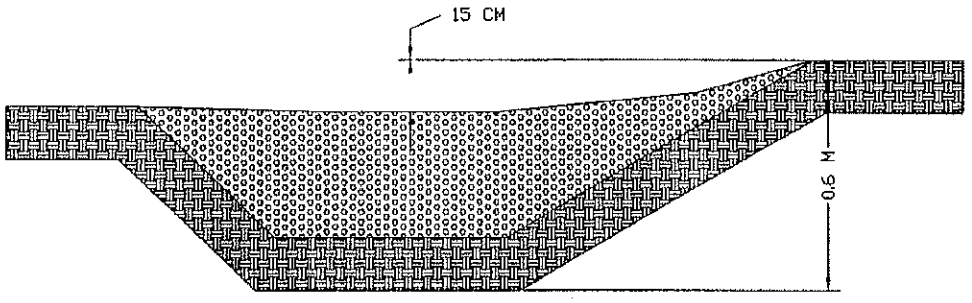
VERTICAL GRADE MUST NOT EXCEED 3%

			ACCESS ROADS TO SUBDIVISIONS	Designed	Date MAY–26–2014
				Drawn T.H.	Project No.
				Checked K.B.	Contract No.
				Approved	Revision
				Scale N.T.S	
DATE	REVISIONS	APP	CLEARWATER COUNTY	DWG. No. CC–400.2A	

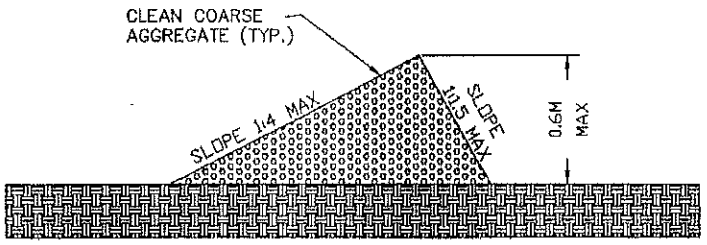
FIGURE 400.4



NOTE: DITCH CHECKS ARE REQUIRED
WHERE SLOPE OF DITCH EXCEEDS 4.0%



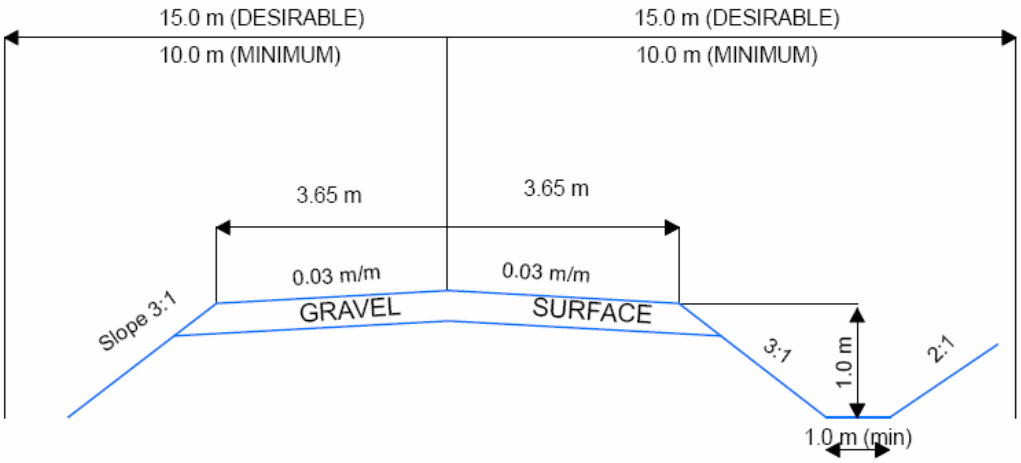
SECTION



DETAIL

			CLEARWATER COUNTY			
			TYPICAL ROCK DITCH CHECK			
			Date: 01-8-22	Scale: N.T.S.	Drawn By: C.J.	Page 1 OF 1
No.	Date	Revision	Checked By: M.G.	Approved:	Drawing No. CC-400.4	

Clearwater County



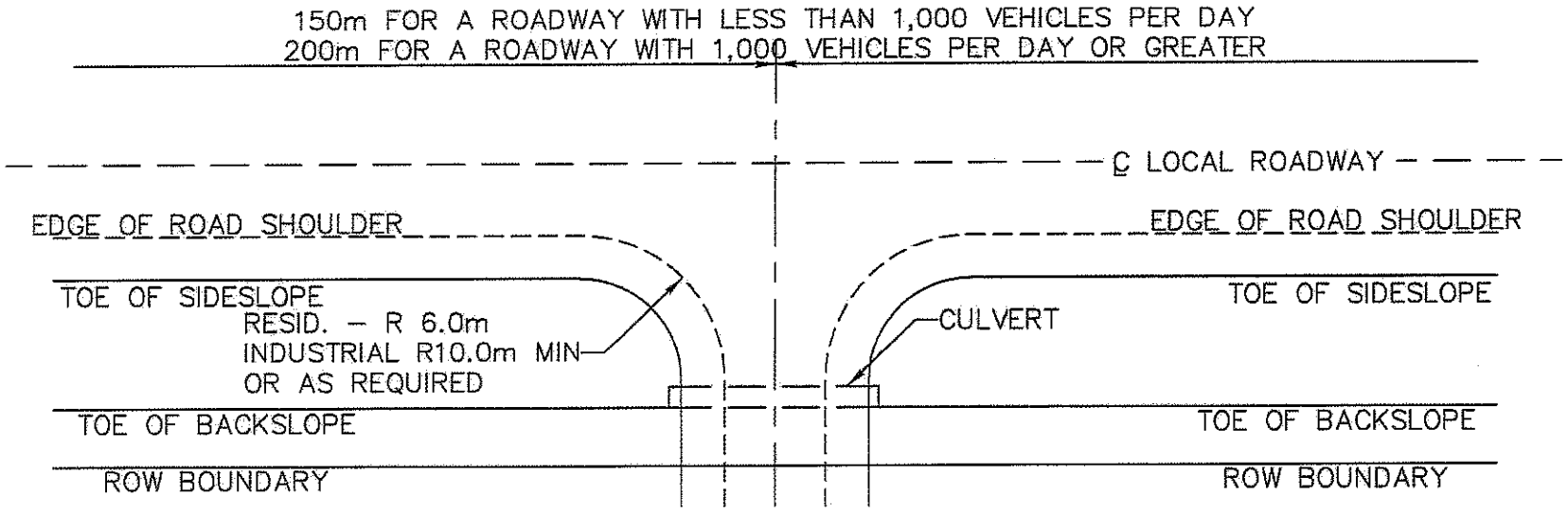
Surface Width	R.O.W. Required	Max. Side slope	Max. Back slope	Min. Curve Radius m.	Max. Super Elev. m/m
7.3	20.0	3:1	2:1	300	0.06

Max. Gradient %	Posted Speed
6%	80

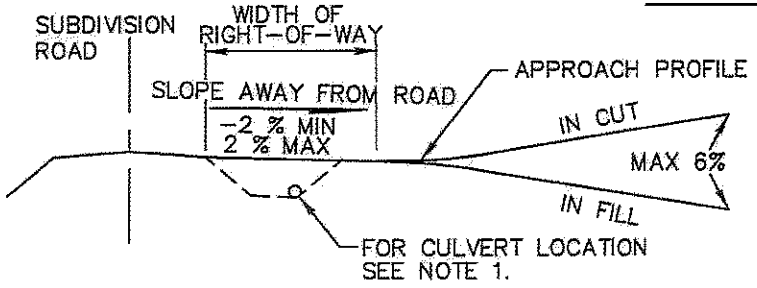
Figure 1
Local Road Gravel
Standard Cross-section

Scale: NTS

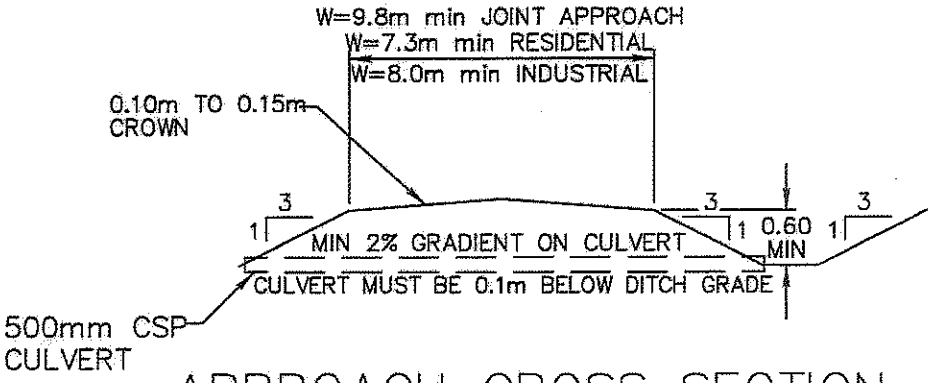
D3



APPROACH PLAN



DITCH AND CULVERT LOCATION



APPROACH CROSS SECTION

NOTES:

1.) WHEN CULVERTS ARE REQUIRED THEY MUST BE NEW C.S.P. CULVERTS AND THE FOLLOWING MINIMUM DIAMETERS.
RESIDENTIAL – 0.500m
INDUSTRIAL – 0.500m
– CULVERT LENGTH WILL VARY WITH DEPTH OF FILL.
– CULVERT TO BE PLACED AT TOE OF BACKSLOPE.
2.) ALL DIMENSIONS SHOWN ARE IN METERS
3.) MINIMUM APPROACH LENGTH IS FROM EDGE OF ROAD SHOULDER TO ROW BOUNDARY.
4.) GRAVEL MUST BE APPLIED AT A RATE OF 300 TONNES PER KILOMETER (12 TONNES PER SINGLE APPROACH)

CLEARWATER COUNTY

TYPICAL RESIDENTIAL & INDUSTRIAL APPROACHES

Date:	Scale:	Drawn By:	Page
00–10–27	N.T.S.	CL	1 OF 1
Checked By:	Approved:	Drawing No.	

CLEARWATER COUNTY
ENDEAVOUR TO ASSIST PROGRAM

POLICY

EFFECTIVE DATE: **REVISED DATE:**	February 24, 2015
SECTION:	Public Works
POLICY STATEMENT:	To provide a mechanism for a developer to recover a portion of a capital investment into publicly owned infrastructure that was required as a condition of development by Clearwater County or the Province of Alberta. This mechanism will be referred to as the Clearwater County Endeavour to Assist Program.
DEFINITIONS:	• **Publicly Owned Infrastructure –** This includes but is not limited to, any municipal road, municipally owned water and wastewater systems, municipally owned fire ponds, municipally owned storm water management ponds and, Provincial Highways and associated infrastructure. • **Capital Investment –** The quantifiable amount a Developer was required to pay to construct or enhance Public Infrastructure. • **Developer –** An individual, group of individuals, company, corporation or organization that has made a quantifiable capital investment into Public Infrastructure.
PROCEDURE:	1. A Developer that has paid in full or in part for the construction of or enhancement to Publicly Owned Infrastructure may be eligible for the Endeavor to Assist Program. The terms and conditions of the Endeavor to Assist Program are as follows: a) When a development is approved and the project is eligible for the Endeavor to Assist Program, the developer may submit an application form indicating the description of the project, construction completion and acceptance date and the costs associated. A detailed cost breakdown and verification may be required depending on the complexity of the project. b) The eligibility of a project, for consideration, will commence upon the final completion and acceptance of a development by the Municipal or Provincial Authority. c) As additional development is applied for, utilizing in whole or part of an approved Endeavour to Assist project, the County will determine, in its sole discretion, the derived measurable benefit and the value of a reasonable cost contribution. The cost contribution amount shall be

determined by the Director, Public Works or his designate, in their sole discretion.

d) The determined amount will be payable to Clearwater County as a condition of development then dispersed to the appropriate parties.

e) Eligible projects include, but are not limited to, any property, lands, systems, or infrastructure that is owned by government.

Examples:

- Municipal road construction including Industry Access Roads on road allowance, Isolated Access Roads on road allowance, Forced Municipal roads, Residential /Commercial/ Industrial Subdivision Roads and Resource Roads
- Municipally owned water and wastewater systems
- Municipally owned fire ponds/storm water management ponds and associated infrastructure.
- Intersectional treatments or improvements to Municipal or Provincial Highways asphalt surfacing, road widening, or,
- Any project deemed eligible by Clearwater County

f) Ineligible projects include, but are not limited to:

- Dust suppression
- Road Maintenance or additional gravel
- Gravel road construction or improvements more than (5) five years after construction completion and acceptance.
- Surfaced road construction or improvements, asphalt overlay and intersectional treatments more than (10) ten years after construction completion and acceptance.
- Water treatment systems, wastewater treatment systems, fire ponds, storm water management ponds more than (15) fifteen years after construction completion and acceptance.
- Clearwater County, will evaluate, in their sole discretion, any other projects that may be considered ineligible under this policy.

g) Development that is excluded from contributing to an Endeavour to Assist project include, but are not limited to, the following:

- All development by Clearwater County
- All development by the Province of Alberta
- Any development that does not require a Development Agreement or permit
- Access to a field or agricultural purpose approach
- Residential development not associated with subdivision

h) This program will be made available only to the original applicant(s) or their spouse. This program is not transferable to subsequent land owners, family members or other assigns.

AGENDA ITEM

PROJECT: Nordegg Mobile Home Park		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: Planning & Development	**WRITTEN BY:** Rick Emmons	**REVIEWED BY:** Ron Leaf
BUDGET IMPLICATION: ☐ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☐None ☐ Provincial Legislation (cite) ☒ County Bylaw or Policy (cite) Bylaw: ___ Policy: Nordegg Development Plan, MDP, & the MGA		
STRATEGIC PLAN THEME #1: Managing Our Growth	**PRIORITY AREA:** Objective – 1.1 Plan for a well designed and built community.	**STRATEGY #1.1.1:** Ensure appropriate land use planning for public infrastructure, rural subdivisions, hamlets and commercial and industrial lands.
RECOMMENDATION: For Council to approve the $2.55 million for the engineering and construction of the mobile home park, thereby approving the capital projects for 2017 in Nordegg.		

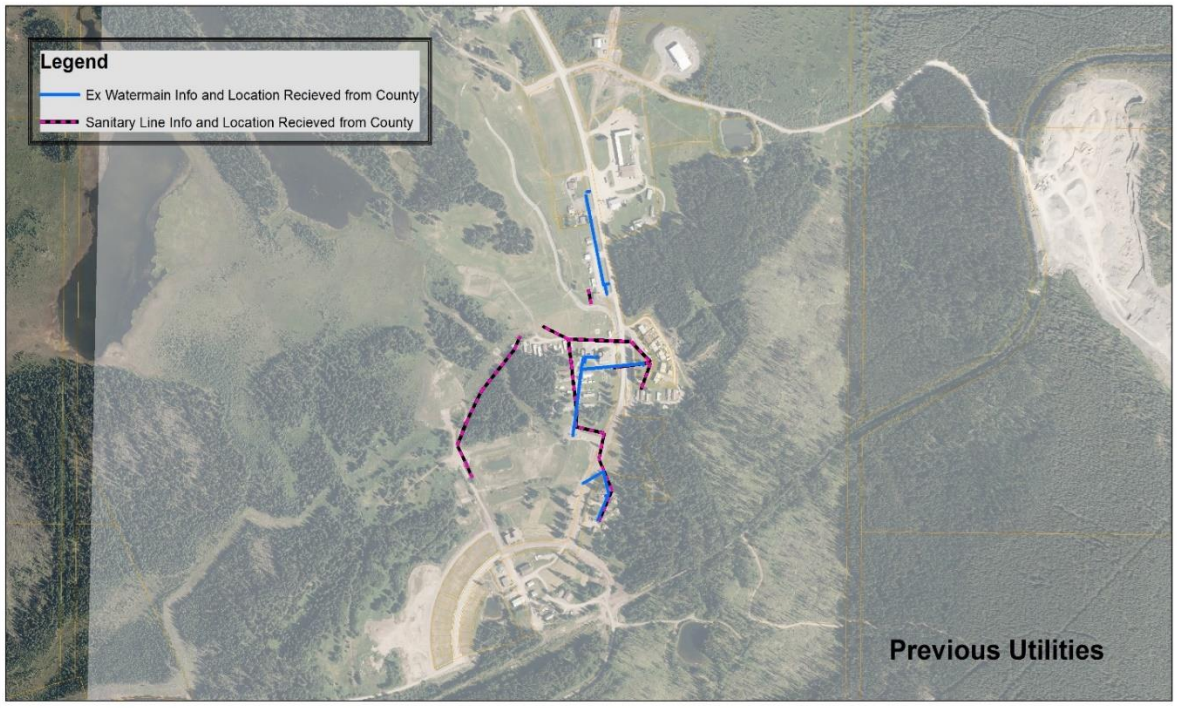
BACKGROUND:

Over the past three years Council has discussed through its strategic planning processes and budget reviews Council has been considering the development of a mobile home park and the "commercial core" in Nordegg. These projects were again discussed during Council's 2017 budget deliberations, at which time Council deferred approving Nordegg capital projects pending an update of Nordegg policies and development plans. More recently Council challenged Administration with analyzing and prioritizing projects and bringing forward recommendations to expedite Nordegg development. Based on Council's direction Administration has reviewed the requirements of the mobile home park, and the "Commercial Core".

Based on its analysis, Administration recommends that Council approve $2.55M for expenditure for the design, tender and construction of the Mobile Home Park. While both projects are critical to the development of Nordegg, the construction of the Mobile Home Park involves fewer issues relating to existing infrastructure and once the Park is in place, the opportunity to advancing the Commercial Core and development areas adjacent to Stewart Street will involve fewer complications relating to residential leases.

The mobile home park will also offer a faster rate of return of the two reviewed projects.

The proposed project would accommodate 29 trailer lots with the ability to expand to 41 lots.



N
W
E
S

Nordegg South Utilities

CLEARWATER COUNTY

AGENDA ITEM

PROJECT: Rocky Senior Housing Council o/a Westview Lodge		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: Community Services / C&PS Division	**WRITTEN BY: Ted Hickey**	**REVIEWED BY: Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite) Bylaw: _____ Policy:		
STRATEGIC PLAN THEME: **2. Well Governed Leading Organization**	**PRIORITY AREA:** **2.2**	**STRATEGIES:** **2.2.1, 2.2.2, 2.2.3**
RECOMMENDATION: **That Council receives the information as presented.**		

BACKGROUND:

Kathy Snyder, Administrator for the Rocky Senior Housing Council (RSHC) has agreed to present to Council the RSHC's current state of seniors housing demands within Clearwater County, Rocky Mountain House and the Village of Caroline.

The mandate of Rocky Senior Housing Council o/a Westview Lodge is to provide affordable room and board for senior citizens who are functionally independent with the assistance available through existing community-based services and who would not otherwise be more appropriately provided for in a health care facility. RSHC's portfolio is made up of two program types:

- Westview Lodge has 72 rooms, with capability of 88 residents, as we have 16 one-bedroom rooms that could be suitable for couple. At the moment we have 82 residents (10 couples).
- Our self-contained portfolio consists of five self-contained projects, for a total of 76 one-bedroom units for independent seniors.

This opportunity is to connect with Council and provide current information regarding community programming is meeting the needs through community services that are effective and cost-efficient (types, levels of service and assets) as provided by Council.

AGENDA ITEM

PROJECT: Sundre Fire Services Agreement		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: **Community & Protective Services - Regional Fire**	**WRITTEN BY:** **Jesse Kurtz**	**REVIEWED BY:** **Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME:	**PRIORITY AREA:**	**STRATEGIES:**
ATTACHMENT(S): Council Agenda Item J4, December 13, 2016 Sundre Round Up February 6, 2017 News Article Citizen letter to Councillor Graham		
RECOMMENDATION: That Council receives the following report as information.		

BACKGROUND:

Following Council's December 13, 2016 decision to amend the Sundre Fire Agreement, on January 19, 2017 Clearwater Regional Fire Rescue Services (CRFRS) staff held a teleconference with the Sundre Fire Chief Marty Butts. The purpose of the call was to advise him of Council's motion and discuss how to coordinate the service transition and communication with the community. During that discussion Chief Butts expressed concern with Council's decision and indicated that he wished to discuss his concerns with his CAO. Subsequently, during the January 30th week Chief Kurtz was contacted by the Sundre Roundup and was interviewed about Clearwater County Council's decision and the attached article appeared in the February 6, 2017 edition of the Roundup (attached). Subsequent to the article, community members from the southern area of the County contacted Councillors Graham and Vandermeer inquiring about the change and their concerns that there has been a change in service coverage. It is staff's view that there has been misunderstanding between CRFRS and the Sundre Fire Service regarding Council's direction and the implications regarding fire/rescue service in the current Sundre response area. The purpose of this report is to provide clarification on what has occurred, what is intended and with respect to the messaging that the community need to hear. The specific key messages are:

Key Message Points:

1. The Sundre Fire Department continues to be the fire service provider in the area south of #587 and west of Sundre.

2. There is no intent to cancel the service agreement that sets out the cost sharing arrangement between the Town of Sundre and Clearwater County, nor to cancel the mutual aid agreement between Clearwater County and the Town of Sundre.
3. The implementation of Council's decision will result in the CRFRS (Station 30 located in Caroline) being the initial station to respond into the south portion of the County. The opportunity remains for a Battalion Chief, the Duty Officer for CRFRS or other emergency agencies (i.e. RCMP, EMS) to involve Sundre Fire through mutual aid.
4. The Level of Fire & Rescue service remains unchanged.
5. Public education and messaging was to be part of this transition. This will be a jointly coordinated communication strategy between the Town of Sundre and Clearwater County.
6. The specific date of the change was not set by Council and is yet to be determined, recognizing that there are formal notifications required within the agreement with Sundre.

CAO Leaf has contacted the Sundre CAO and a meeting is planned in the coming weeks to determine how to address community concerns and to ensure consistency of messaging.

AGENDA ITEM

PROJECT: Sundre Fire Services Agreement		
PRESENTATION DATE: December 13, 2016		
DEPARTMENT: **Regional Fire**	**WRITTEN BY:** **Ivan Dijkstra**	**REVIEWED BY:** **Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite)		
STRATEGIC PLAN THEME:	**PRIORITY AREA:**	**STRATEGIES:**
ATTACHMENT(S): Sundre Fire Area within Clearwater County		
RECOMMENDATION: That Council accepts the Regional Fire Committee's recommendation to transfer Sundre First Due area to Clearwater Regional Fire & Rescue Service (CRFRS) – Caroline station		

BACKGROUND:

Sundre Fire currently is contracted to provide fire suppression and rescues in the southern portion of Clearwater County (see attached map). Sundre Fire has provided this service to Clearwater County for many years. The James River area serviced by Sundre Fire used be easier accessed from Sundre by using the James River Bridge. Since the bridge was weight restricted this is no longer applicable, and Sundre Fire has to access this area from Highway 22. The Clearwater County section west of Mountain View County continues to have better access from Sundre.

Clearwater County entered into a formal agreement with the Town of Sundre in early 2015 to provide this service, including setting out specific billing rates. During the past year-and-a-half invoices have ranged from $400 to $10,888 per incident, with an average of $2,635 per incident. For 2014 4 incidents occurred, in 2015 12 incidents occurred, and in 2016, so far, 4 incidents have been invoiced.

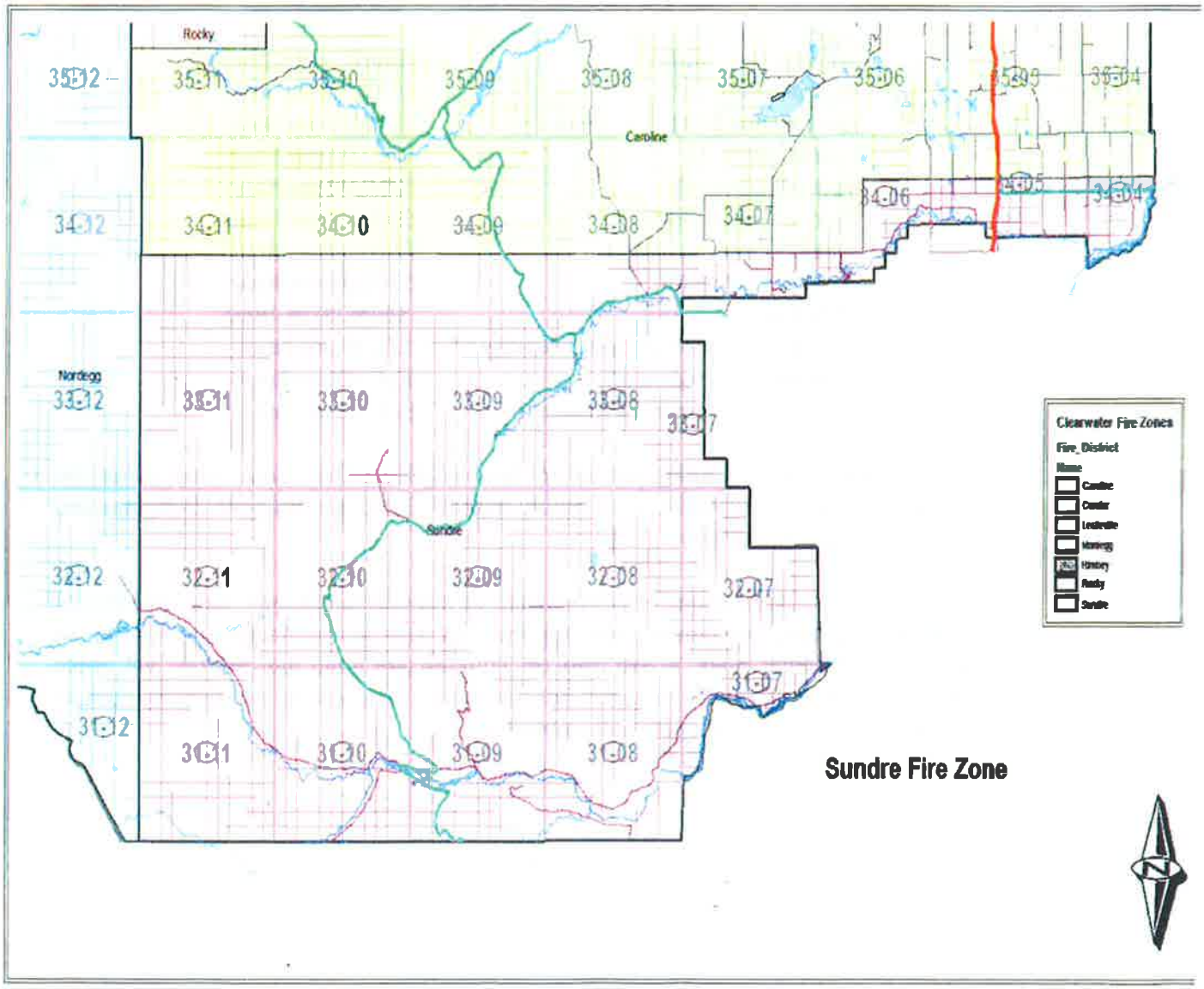
To meet the Regional Fire Committee's goal of a 0% cost increase for the 2017 budget Regional Fire staff have identified the Sundre Fire Service agreement as a potential cost reduction. Staff believes that the James River area can be serviced from the CRFRS – Caroline station without significant impact to the rate payers of Clearwater

County as the distance to the highway 22 & 587 intersection from Caroline is 2 miles longer than from Sundre.

The Clearwater County area west of Mountain View County will see an increased response time when serviced from CRFRS – Caroline station, however the outcome of such incidents in the area is not significantly impacted. Given the extended travel time from either Sundre or Caroline the outcome of a suppression incident would be practically equal; for a MVC/rescue incident the wait time for service would be longer, but not significantly affect the outcome.
Staff is recommending that the first due area currently serviced by Sundre Fire for Clearwater County be transferred to CRFRS – Caroline station, resulting in a $25,000 budget reduction. The increased response costs, mainly honorarium, from CRFRS – Caroline station can be absorbed through the existing budget.

Should Council agree to change response departments Staff recommends that a transition period of 3-4 months be anticipated to allow for public education, notification of 911 and Red Deer dispatch and coordination with Sundre.

SCHEDULE A


Rocky
Caroline
Nordegg
Sundre
Clearwater Fire Zones
Fire_District
Caroline
Condor
Leslieville
Nordegg
Rocky
Sundre
Sundre Fire Zone

Politics

Sundre chief critical of Clearwater County fire agreement cancellation

Marty Butts concerned cost saving measure could result in loss of life

Monday, Feb 06, 2017 06:00 am **By: Simon Ducatel**

Sundre's fire chief has expressed serious reservations about Clearwater County council's recent decision not to renew an agreement with the local department.

Marty Butts told the Round Up last week that he "totally disagrees" with Clearwater County council's position and has been critical of what in the end amounted to a cost-saving measure.

"Somebody's going to pay the ultimate price to save a little bit of money."

Before the new year, Clearwater County council accepted a recommendation from the county's Regional Fire Committee not to renew a contract with Sundre Fire Department for fire suppression and rescues in the southern portion of the county. The move, Clearwater County council heard, will save Clearwater Regional Fire Rescue Services (CRFRS) about $25,000 per year while allowing the service to keep this year's budget at 2016 levels.

However, Butts told the Round Up Sundre Fire Department has on average only billed the county anywhere from $12,000 to $15,000 over the past several years.

“That is a good investment,” the fire chief said, adding his goal is not to profit off of responding to emergencies in Clearwater County.

“Some calls aren’t even billed if they’re really close to the local boundary.”

Clearwater County officials also heard from CRFRS Deputy Chief Ivan Dijkstra that James River area residents would still get the same coverage with a negligible difference in response times. He also reported that although Sundre’s department would have faster response times west of town in areas such as Forestry Trunk Road, the distance is still too great that a structure on fire could not be saved anyway.

“In terms of fire response, the reality is that we know that in order to get to an active structure fire, we need to get there in less than 10 minutes or it’ll burn to the ground,” CRFRS interim fire Chief Jesse Kurtz told the Round Up.

Considering some responses further west can take even Sundre Fire Department upwards of half an hour to an hour to reach, an additional 20 minutes would not make much difference for an active structure fire, he said.

As for medical emergencies in the West Country, he said a critical patient who has held on long enough for a response that would take Sundre upwards of an hour would likely be able to hold on a bit longer.

But in such a scenario, the option to request mutual aid from Sundre’s fire department remains on the table, he said.

“If we truly feel Sundre is the best department to send, then we would consider still sending them as a mutual aid partner.”

Those situations are fairly infrequent, he added.

However, sifting through the details from an emergency call to determine whether the Sundre department’s assistance is required represents another hoop to jump through that will merely serve to further delay the overall response time, said Butts.

As those seconds and minutes slip away in the event of, for example, a catastrophic vehicle collision, the suffering is ultimately passed on to the person(s) needing assistance, he said.

“All of our outcomes won’t always be perfect but our chances of success are better simply because we can get there faster.”

Throughout his roughly 30 years of service, Butts said Sundre’s department has always responded to calls west of town. The way the Clearwater County boundary line falls, it jogs far west of Sundre and as close as James River. That means there are instances when Sundre’s department is better situated to respond simply because of its proximity.

Since every moment matters during a medical emergency such as a heart attack or deadly bleeding and other traumatic injuries, there’s no way to confidently assert a patient’s outcome won’t be different if there’s a delayed response time, he said.

Additionally, Sundre has more than 30 volunteer firefighters on its roster, as compared with about 10 in Caroline, leaving that community more vulnerable in the event of an emergency if its available members have already been dispatched elsewhere, he said.

“It doesn’t make any sense,” he said about Clearwater County council’s decision to abandon the fire agreement.

“I can’t believe that they would support it — there’s no good thing to come out of this.”

In terms of medical responses in 2016, Kurtz said Sundre’s department was dispatched four times in the southern part of Clearwater County.

“You have to weigh the risk versus benefit. There is a dollar savings on the part of the county.”

Sundre’s fire chief said he understands volunteer departments and their respective municipalities have budget restrictions to work within.

“I know everything comes down to dollars and cents. But we’re talking about $25,000 — that’s peanuts for what you’re putting on the line.”

In the end, Kurtz said the decision was Clearwater County council’s directive. If the county’s residents have concerns or questions, “they need to bring it to their councillor — they’re the ones who made the decision.”

For the meantime, the interim fire chief said his department would manage and work around the change.

Clearwater County council’s decision also included a several-month transition period to raise awareness, coordinate with Sundre as well as notification of 911 and Red Deer dispatch.

“At this point I feel comfortable with it. We’ll make the best decisions we can as they come in,” said Kurtz, adding the new system will need to be reviewed and reassessed at the end of the year.

Previous Story
Back alley now officially one way

Next Story
Numbers indicate Sundre is sustainable

F2

Mr. Earl Graham
Councillor 6th District
Clearwater County, Alberta

February 7, 2017

Re: Non-Renewal of the Fire Suppression Contract between Sundre Fire Department and Clearwater County

Dear Mr. Graham,

Thank you for accepting this letter listing our concerns regarding the Non-Renewal of the Fire Suppression Contract between the Sundre Fire Department and Clearwater County. We live on 10 acres in Clearwater County, a little over a mile north of the James River. Our 911 address is 55076 Twp Rd 344 and our Legal Land description is SW30-34-5W5.

Our concerns are as follows:

1. There was no consultation with the affected residents on this matter.
2. There was no notification from the County to the affected residents on this matter. We found out about it on Social Media
3. There has been no statement as to how the study into the response times was conducted. How were response times compared? What time of year was the study conducted (road conditions matter)?
4. The consequences of this decision are not just in response times, for example insurance rates could be affected.
5. Residents were told that there would be no impact due to the closure and/or downgrading of the James River Bridge but it does appear to be one of the factors used to make the decision.
6. The size of the Caroline Fire Department in terms of both manpower and equipment. I have been unable to find this information myself but have been told it is a 10 man department and have only seen one Fire Department Vehicle at the Caroline Fire Station.
7. That the Sundre Fire Department has, on average, billed Clearwater County $12,000 to $15, 000 over the past several years – not the $25,000 that was claimed.

It is understandable that Council and the County have opted to make this decision with the apparent cost savings as justification. However, the methods used and the apparent disregard for those affected does not inspire confidence in the process.

Regards

Douglas & Lori Slack

AGENDA ITEM

PROJECT: Delegation - Medical Equipment Lending Society of West Central Alberta		
PRESENTATION DATE: February 14, 2017		
DEPARTMENT: Community & Protective Services	**WRITTEN BY: Jerry Pratt**	**REVIEWED BY: Ted Hickey/Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☒None ☐ Provincial Legislation (cite) ☐ County Bylaw or Policy (cite) Bylaw: _____ Policy:_____		
STRATEGIC PLAN THEME: 3. Community Well-Being	**PRIORITY AREA: Objective 3.4 Advocate for a dependable, modern and accessible health services.**	**STRATEGIES: 3.4.4**
ATTACHMENT(S): Medical Equipment Lending Society of West Central Alberta Information		
RECOMMENDATION: That Council receives the information as presented.		

BACKGROUND:

The Medical Equipment Lending (M.E.L.) Society of West Central Alberta has requested a delegation session with Council to update Council on their activities and services within the community.

The Medical Equipment Lending Society of West Central Alberta started as a non-profit in 2016 and receives funding through Family and Community Support Services (FCSS). The Society helps all those who need access to medical equipment.

The current Executive Director of The M.E.L. Society is Melanie Broadway.

ABOUT THE MEDICAL EQUIPMENT LENDING SOCIETY OF WEST CENTRAL ALBERTA

Purpose Statement

The M.E.L. Society meets an identified, essential community need by lending medical equipment at no cost to the people of West Central Alberta. It is loaned to those who need it, regardless of their age and income. Through this medical equipment lending service, our Society seeks to promote health and safety by providing such equipment and support to the aged, to persons facing end of life care and to persons recovering from illness, surgery, or injury.

Facts about The M.E.L. Society:

- The plan to establish a local Medical Equipment Lending Society was initiated in 2015 when it became known that the people of Rocky Mountain House and surrounding area would soon have to travel to Red Deer to obtain the equipment they needed. Instead, Alberta Health Services agreed to give the equipment stored at the Rocky Health Centre to The M.E.L. Society for the community's continued use.

- The demand for medical equipment exists for people of all ages when health concerns arise or the unexpected happens. Demand for medical equipment becomes greater every year, particularly with the local aged population and during uncertain economic times.

- This not-for-profit Society serves the citizens of Rocky Mountain House, Clearwater County, Leslieville, Caroline, Eckville, Condor, Alhambra and Nordegg.

- Our facility houses approximately 3,500 pieces of equipment including walkers, raised toilet seats, bath seats, walkers, medical braces, floor-to-ceiling poles, wheelchairs, patient lifters, hospital beds and many other items.

- The Society is operating out of a local bay in Rocky that is easily accessible to the public.

- We are open Tuesdays and Thursdays for 5 hours (10 am – 3pm).

- Customers of the Society are able to sign out any equipment they require when it is available, and are encouraged to make a donation.

Additional Information about The M.E.L. Society

- We wish to be a community owned charitable organization. Not interested in Alberta Health Services involvement.
- Annual budget outside of employee wages is approximately $40,000.00. Over half of this budget goes towards rental of space and utilities.
- Currently there are 2 paid employee positions – Manager of Administration and Finance and Director of Maintenance
- The Executive Director presently works as a volunteer and the Program Director position is currently vacant.
- There is a Public Relations Manager working with us at this time under a 3 month contract.
- We are awaiting approval of our application to become a recognized Society under the Societies Act and then we will be able to submit our application to the CRA to be able to issue charitable tax receipts.
- Presently looking for more volunteer Board Members.

The current Executive Director of The M.E.L. Society is Melanie Broadway. She is an Occupational Therapist and Designated Capacity Assessor for the provincial government. She works for Alberta Health Services part time at the Rocky Community Health Centre and she also has a part time private practice.

AGENDA ITEM

PROJECT: Condor Community Center		
PRESENTATION DATE: February 14,2017		
DEPARTMENT: **Corporate Services** **Assessment and Revenue**	**WRITTEN BY:** **Denniece Crout**	**REVIEWED BY:** **Rodney Boyko/Ron Leaf**
BUDGET IMPLICATION: ☒ N/A ☐ Funded by Dept. ☐ Reallocation		
LEGISLATIVE DIRECTION: ☐None ☒ Provincial Legislation (cite) ☒ County Bylaw or Policy (cite) MGA 364 (1) and 347 (1) & Capital Grant funding for Community Halls Policy		
STRATEGIC PLAN THEME: **N/A**	**PRIORITY AREA:**	**STRATEGIES:**
ATTACHMENT(S): Ratepayer Letter		
RECOMMENDATION: That Council advises administration which option or options to implement		

BACKGROUND:

A review of all exempt properties was conducted by the Assessment Department in 2016 and the determination was made that a portion of one of the three properties owned by Condor Community Centre does not qualify for exemption. The community center and the land associated with it does qualify and is exempt under S362 (1)(n)(ii) and parts 1 and 2 of AR281/98.

The property that a partial exemption was granted, is for a house and the land associated with it. The tenant of the house rents at lower than market rent because they are the caretakers for the 3 parcels the Community Center owns. There is no legislation in place that allows the Assessment Department to grant a full exemption.

The owner of the property is asking Council for exemption under MGA s364 (1)" A council may by bylaw exempt from taxation under this Division property held by a non-profit organization." for the 2017 and future years.

The request that has come forward by the organization is outside of County Policy, nor is it contemplated in the MGA. As staff considered this request, it was noted that the funding hall policy funds only capital projects and operating costs are not funded in our policy, nor have they been considered in past practices.

The request is also for tax reduction and or complete forgiveness of the 2016 taxes $743.81. Since the taxes have gone unpaid there is also a penalty applied of $91.63. The municipal portion of the tax is $377.91.

The options open to Council are:

A) Leave as is
B) Prepare an exemption bylaw under MGA 364 for 2017 and future years
C) Reduce the tax under s347(1) for 2016
D) Provide a partial or full grant by approving out of budget expenditure for “Grants to other Organizations”

H1

January 25,2017

Clearwater County Council
4340-47 Avenue
Rocky Mountain House
T4T 1A4

Dear Clearwater County Council:

Over the past couple of years the Condor Community Centre has seen a decline in booking and the building is need of repair. With a shortage of funds the taxes that are levied on a house that the community center owns, have gone unpaid. The house is rented and the tenant is the grounds caretaker and also assists in basic care of the center.

My request, on behalf of the Condor Community Centre is to have tax forgiveness for the 2016 taxes and the penalties that have since been applied. Going forward I also request that the house be exempt from taxation, during these difficult economic years. When the revenue returns to levels that the community center is sustainable, we would be more than willing to have the exemption for the house removed.

I appreciate Council's consideration of this request.

Sincerely,

J. A. (Fred) Blair, President

Cc D .Crout