

## REGIONAL DISTRICT OF BULKLEY-NECHAKO



**RURAL DIRECTORS COMMITTEE  
AGENDA  
Thursday, August 18, 2016**

<u>PAGE NO.</u>		<u>ACTION</u>
	<u>AGENDA- August 18, 2016</u>	Approve
	<u>Supplementary Agenda</u>	Receive
	<u>MINUTES</u>	
2-6	Rural Directors Committee Meeting Minutes - June 9, 2016	Receive
	<u>REPORT</u>	
7-8	Kristi Rensby, Finance/Administration Coordinator - Electoral Area Allocations of Federal Gas Tax Funds – Second Quarter 2016	Receive
	<u>DISCUSSION ITEM</u>	
9-26	Rural Broadband	
	<u>SUPPLEMENTARY</u>	
	<u>NEW BUSINESS</u>	
	<u>ADJOURNMENT</u>	

**REGIONAL DISTRICT OF BULKLEY-NECHAKO****RURAL DIRECTORS COMMITTEE MEETING****Thursday, June 9, 2016**

**PRESENT:** Chair Eileen Benedict

Directors Mark Fisher  
Tom Greenaway  
Bill Miller  
Rob Newell  
Jerry Petersen

Director Absent Mark Parker, Electoral Area "D" (Fraser Lake Rural)

Staff Cheryl Anderson, Manager of Administrative Services  
Jason Llewellyn, Director of Planning  
Wendy Wainwright, Executive Assistant

**CALL TO ORDER**

Chair Benedict called the meeting to order at 1:24 p.m.

**AGENDA**Moved by Director Greenaway  
Seconded by Director Miller**RDC.2016-6-1**

"That the Rural Directors Committee Agenda for June 9, 2016 be approved."

(All/Directors/Majority)

**CARRIED UNANIMOUSLY****MINUTES****Rural Directors Committee Meeting Minutes -May 12, 2016**Moved by Director Newell  
Seconded by Director Petersen**RDC.2016-6-2**

"That the minutes of the Rural Directors Committee meeting of May 12, 2016 be received."

(All/Directors/Majority)

**CARRIED UNANIMOUSLY****REPORTS****Treehouse Housing Association -Request for Grant in Aid -Electoral Area "A" (Smithers Rural)**Moved by Director Petersen  
Seconded by Director Miller**RDC.2016-6-3**

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Treehouse Housing Association be given \$500 grant in aid monies from Electoral Area "A" (Smithers Rural) for costs associated with a Youth Action Program."

(All/Directors/Majority)

**CARRIED UNANIMOUSLY**

**REPORTS (CONT'D)**

Bulkley Valley Farmers' Market Association-Request for Grant in Aid -Electoral Area "A" (Smithers Rural) Moved by Director Petersen  
 Seconded by Director Newell

RDC.2016-6-4

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Bulkley Valley Farmers' Market Association be given \$4,000 grant in aid monies from Electoral Area "A" (Smithers Rural) for costs associated with celebrating the 25<sup>th</sup> year anniversary of the Farmers' Market."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Northern Society for Domestic Peace - Request for Grant in Aid -Electoral Area "A" (Smithers Rural) Moved by Director Miller  
 Seconded by Director Newell

RDC.2016-6-5

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Northern Society for Domestic Peace be given \$1,000 grant in aid monies from Electoral Area "A" (Smithers Rural) for costs associated with a four day workshop focusing on "Group Crisis Intervention combined with Individual Crisis Intervention, Peer Support and Post Trauma Impacts."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Burns Lake Christian Supportive Society Infant Development Program - Request for Grant in Aid -Electoral Areas "B" (Burns Lake Rural) and "E" (Francois/Ootsa Lake Rural) Moved by Director Miller  
 Seconded by Director Petersen

RDC.2016-6-6

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Burns Lake Christian Supportive Society – Infant Development Program be given \$1,500 grant in aid monies from each of Electoral Areas "B" (Burns Lake Rural) and "E" (Francois/Ootsa lake Rural) for costs associated with developing a play area at the MMPS Learning Centre."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Lakes District Arts Council - Request for Grant in Aid -Electoral Areas "B" (Burns Lake Rural) and "E" (Francois/Ootsa Lake Rural) Moved by Director Miller  
 Seconded by Director Greenaway

RDC.2016-6-7

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Lakes District Arts Council be given \$1,000 grant in aid monies from Electoral Area "B" (Burns Lake Rural) for costs associated with events during the 2016/2017 season."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

**REPORTS (CONT)**

Chair Benedict and Director Miller spoke of discussions with the Village of Burns Lake in regard to the possibility of developing an Arts and Culture Service to provide funding for such organizations as the Lakes District Arts Council.

Discussion took place in regard to the challenges of certain organizations requesting grant in aid funding frequently for community oriented projects.

Girl Guides of Canada  
-Request for Grant  
in Aid -Electoral Area "C"  
(Fort St. James Rural)

Moved by Director Greenaway  
Seconded by Director Miller

RDC.2016-6-8

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Girl Guides of Canada be given \$200 grant in aid monies from Electoral Area "C" (Fort St. James Rural) for costs associated with attending National Guide Camp."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Fort St. James Secondary  
School Mountain Bike Team  
-Request for Grant in Aid  
-Electoral Area "C" (Fort St.  
James Rural)

Moved by Director Greenaway  
Seconded by Director Miller

RDC.2016-6-9

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Fort St. James Secondary School Mountain Bike Team be given \$1,000 grant in aid monies from Electoral Area "C" (Fort St. James Rural) for costs associated with Mountain Bike Provincials in Coquitlam, B.C."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Stuart Lake Seniors'  
Association - Request for  
Grant in Aid-Electoral Area  
"C" (Fort St. James Rural)

Moved by Director Greenaway  
Seconded by Director Newell

RDC.2016-6-10

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Stuart Lake Seniors' Association be given \$450 grant in aid monies from Electoral Area "C" (Fort St. James Rural) for costs associated with its Strawberry Tea."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

## **REPORTS (CONT)**

Fraser Lake Elementary  
Secondary School-Request  
for Grant in Aid -Electoral Area "D"  
(Fraser Lake Rural)

Moved by Director Petersen  
Seconded by Director Greenaway

RDC.2016-6-11

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Fraser Lake Elementary Secondary School (School District No. 91) be given \$1,000 grant in aid monies from Electoral Area "D" (Fraser Lake Rural) for costs associated with the Boys' Golf Team attending the provincial tournament in Christina Lake, B.C."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Fraser Lake Festival of the  
Arts-Request for Grant in  
Aid -Electoral Area "D"  
(Fraser Lake Rural)

Moved by Director Petersen  
Seconded by Director Greenaway

RDC.2016-6-12

"That the Rural Directors Committee recommend to the Regional District of Bulkley-Nechako Board of Directors that the Fraser Lake Festival of the Arts be given \$2,500 grant in aid monies from Electoral Area "D" (Fraser Lake Rural) for costs associated with the Fraser Lake Festival of the Arts."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

## **DEVELOPMENT SERVICES**

### **REFERRALS**

Land Referral File No.  
0221818 Jan Carlson  
Electoral Area "D"

Moved by Director Miller  
Seconded by Director Greenaway

RDC. 2016-6-13

"That the Regional District of Bulkley-Nechako Comment Sheet on Crown Land Referral No. 0221818 be provided to the Province as the Regional District's comments on Crown Land application No. 0221818."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Land Referral File No.  
7409848 Edward Klassen &  
Laurie Cormack Electoral Area "F"

Moved by Director Petersen  
Seconded by Director Greenaway

RDC. 2016-6-14

"That the Regional District of Bulkley-Nechako Comment Sheet on Crown Land Referral 7409848 be provided to the Province as the Regional District's comments on Crown Land application 7409848."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

**REFERRALS (CONT'D)**

Land Referral File No.  
7409818 Chad Johnson  
Electoral Area "F"

Moved by Director Petersen  
Seconded by Director Miller

RDC. 2016-6-15

"That the Regional District of Bulkley-Nechako Comment Sheet on Crown Land Referral 7409818 be provided to the Province as the Regional District's comments on Crown Land application 7409818."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

Mining File No. 13880-03-587  
Morrison Copper Gold Project  
Electoral Area "G"

Moved by Director Newell  
Seconded by Director Miller

RDC. 2016-6-16

"That the Regional District of Bulkley-Nechako Board of Directors receive the Planner 1's May 31, 2016 memo in regard to Mines File No. 13880-03-587."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

**ADJOURNMENT**

Moved by Director Miller  
Seconded by Director Greenaway

RDC.2016-6-17

"That the meeting be adjourned at 1:37 p.m."

(All/Directors/Majority)

CARRIED UNANIMOUSLY

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Eileen Benedict, Chair

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Wendy Wainwright, Executive Assistant



**Regional District of Bulkley-Nechako  
Rural Directors Committee Memorandum  
August 18, 2016**

**To:** Chair Benedict and Rural Directors  
**From:** Kristi Rensby, Finance/Administration Coordinator  
**Date:** August 4, 2016  
**Regarding:** Electoral Area Allocations of Federal Gas Tax Funds – Second Quarter 2016

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The Electoral Area Allocations of the Federal Gas Tax Funds have been updated for the second quarter of 2016 as per the enclosed spreadsheet.

If you have any questions, I would be pleased to discuss them further with you.

<b>RECOMMENDATION:</b>	<b>(All/Directors/Majority)</b>
That the Rural Directors Committee receive the Finance/Administration Coordinator's August 4 <sup>th</sup> memorandum titled "Electoral Area Allocations of Federal Gas Tax Funds – Second Quarter 2016".	

Updated as of: June 30, 2016

**Federal Gas Tax Community Works Fund**

**Year: 2016**

<b>Electoral Area</b>	<b>Population</b>	<b>Opening Balance 2016</b>	<b>Interest Earnings</b>	<b>Funds Spent</b>	<b>Funds Committed</b>	<b>Funding Received</b>	<b>YTD Funds Available</b>
A	5,391	1,553,034.02	11,246.92	73,950.40	374,733.43	-	1,115,597.11
B	2,102	382,089.05	2,767.05	31,500.00	266,123.00	-	87,233.10
C	1,429	441,634.75	3,198.28	-	86,980.60	-	357,852.43
D	1,734	634,129.02	4,592.30	-	450,000.00	-	188,721.32
E	1,507	182,686.31	1,323.00	-	144,396.00	-	39,613.31
F	3,702	803,069.23	5,815.75	63,618.00	500,400.00	-	244,866.98
G	975	140,041.46	1,014.17	30,000.00	20,300.00	-	90,755.63
	<b>16,840</b>	<b>4,136,683.84</b>	<b>29,957.47</b>	<b>199,068.40</b>	<b>1,842,933.03</b>	<b>-</b>	<b>2,124,639.88</b>

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- Brought forward  
from July 21 Board  
Agenda

## 2016 BC Broadband Conference

Of the presentations at this conference those that applied directly to our RD are as follows:

### *Rural Broadband Projects in Review*

\* \$27 million awarded to BC projects

17% to carriers

83% to local ISP's

90% of the Provincial Program awards were complimentary to Federal awards

Connecting BC program has only 3 Million of the original 10 million dollars

remaining. However, it has 3 times the leveraging power

Of the 17 projects in BC one was in our RD (Granisle)

Two projects of note:

The **Columbia Basin Broadband Corporation** upgraded and expanded their ISP infrastructure. Creating connection points for rural ISP's to fibre optic networks providing affordable high-speed Internet to 12,000 rural households.

**GwaiiTel** adopted a similar process finishing up with cost-effective, quality and affordable high speed.

When asked how this was achieved again their responses were similar

*"A regional approach with a common vision, utilizing a variety of local assets with existing knowledge."*

### **Facts coming out of the Conference:**

\* Canada sat in 14<sup>th</sup> position in the world of connectivity in 2006. Today it is 54<sup>th</sup>.

\* The high price of Canadian Internet service is due mainly to the lack of competition in the marketplace. Although Price is a major factor; speed, latency and bandwidth caps are also a major problem

\* Research indicates that small communities and the surrounding rural areas with high quality broadband reap both short and long term economic benefits. Even with geographic obstacles the introduction of broadband to rural BC, with its clean air and affordable housing could be the largest economic growth factor in the north.

### **Follow up:**

During the Conference I had discussions with ABC Communication, BC Government Office (CIO), BCNet, Columbia Basin Trust, NDI, City West and Shaw

I had meetings with TELUS, Xplornet and Com Com Services.

I apologize for the delay in proving this report but I was waiting for follow up from some of the companies I have mentioned above.

The one I have had the most conversations with is Com Com Services who built Lytton Systems among other successful rural installation. Their prices are affordable and their track record sound. The following is a recap of email questions and answers:

Hi Rob,

I have contacted City West to find out what options are available for backhaul internet in Houston BC, I also got an email a few days ago about the BC government offering a 3 million dollar grant for Internet service providers in rural locations. I was thinking I could apply for that and get some support from your regional district to bring high speed Fiber internet to your area. Let me know what you think.....

We would also like to suggest that we could subsidize 50% of the cost for part ownership in the network. We also have over 10 years of experience in running and maintaining an Internet network so this is something we could arrange for the network we install in your area.....

**Speed:**

We would be able to offer 25Mbps Download and 10Mbps upload if we use a TELUS connection. If we can work something out with the city of Prince Rupert to use their Fiber that runs through the towns we could offer 100Mbps speeds.

**Cost:**

Fibre to the Home would be around \$2000 per house for fully installed service. LTE would be around \$30,000 per a tower site for 100-250 customers, and \$600 per customer installed.

**Timeframe:**

We should start right away if we want to get something done this year before winter. If this is something your district wants to pursue then let me know and I can schedule a time to come up and meet with a few people and do a site survey of the area. It would be good if you could convince your colleagues that Houston BC is the place to start our pilot project this year.

Thanks.

**Robert Richards**

**Com Com Services LTD.**

**Work:** 1-877-825-1530 ex103

**Cell:** 250-256-8710

<http://comcomservices.com>

Fixed LTE for Rural Broadband Emerges



### **Richard Bennett 1**

For several years it's been apparent that the ever-increasing performance of 4G/LTE wireless networks would make them a practical option for rural broadband. The specifications for LTE span the range from tens of megabits per second to hundreds, and with 5G the range extends from hundreds of megabits to thousands (gigabits.) Wireless performance is constrained by the number of users per unit of spectrum because it's a shared medium network, like Wi-Fi and most of the Internet. But users are less concentrated in rural areas than in urban ones, and there are also fewer candidates for spectrum assignments.

The math is so compelling that Australia's National Broadband Plan stressed fixed LTE for regions too remote for its high-flying optical fiber network, and even incorporated plans to use satellite broadband for the final two percent.

Purists like Susan Crawford have always poo-pooed LTE as a second rate technology, claiming that the data caps on current mobile plans would never be good enough for residential broadband services meant to be used by consumers of video streaming. The counter-argument holds that fixed LTE will be offered with higher data limits than mobile plans, especially in low-density areas.

While I've made that argument in the past, until recently there wasn't much evidence that such data plans would emerge or that anyone saw rural residential LTE as an interesting market. But that has started to change with the rise of small, subsidized carriers such as Starry, Infiniti Broadband, and Rise Broadband.

Nokia and Huawei are touting basestations designed for the rural market already, and others are bound to follow. LTE is a global technology and there are lots and lots of rural people in the world who are clamoring for high performance broadband to the farm.

Rise Broadband is particularly aggressive:

Until recently, Rise Broadband was known as JAB Broadband, but the company, which has acquired multiple broadband wireless businesses in recent years, recently changed its name and began using the Rise brand to replace the various brand names that it has acquired. The FCC made the rural broadband experiment awards under a previous JAB brand name Skybeam. The [FCC] announced last week that it had released Skybeam funding for parts of Illinois, Kansas and Texas after receiving required paperwork. The FCC is sitting on a mountain of cash for universal service, a good portion of which can be used to support high cost and price-capped carriers, and the Farm Bill contains rural broadband funds as well.

la

Once a few companies demonstrate that fixed LTE is a viable technology for rural broadband, the flood gates will open and the country folk will catch up the city-slickers, or at least get close enough that the remaining gap is not a big deal.

# **Regional District of Bulkley-Nechako – Fibre to the Home, and LTE Internet Service Upgrade**

Attn: Rob Newell  
37 3rd Ave / PO Box 820  
Burns Lake, BC V0J1E0  
[www.rdbn.bc.ca](http://www.rdbn.bc.ca)

Phone: (250) 845-2464  
Email: [rob.newell@rdbn.bc.ca](mailto:rob.newell@rdbn.bc.ca)

June 8, 2016

By:

Com Com Services Ltd.  
Box 277  
281 Main Street (upstairs)  
Lytton, BC V0K 1Z0

877-825-1530  
[info@comcomservices.com](mailto:info@comcomservices.com)

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## **Company Overview:**

Com Com Services is a relatively young company based in the BC Interior. We have a proven reputation with fibre projects and wireless networks, especially in remote areas.

Com Com Services has a unique perspective among contractors doing fibre optic installations. Since 2006 many of our key staff have been directly involved in the development, and management of a community owned network in the BC interior serving over 100km of the Fraser Canyon through "Lyttonnet," a trade name of Lytton Area Wireless Society.

Some recent Com Com Services fibre projects include:

- Lytton, BC – Fibre to the Home (FTTH) to over 250 houses (currently under construction, scheduled completion is July 31<sup>st</sup> 2016)
- Siska, BC-Fibre to the Home (FTTH) Project Phase I,(phase II is underway).
- Lytton, BC - Botanie Mt. remote repeater facility, fibre link.
- Lillooet, BC - Campus fibre deployment.
- Lillooet ,BC - Camels Foot Mt. remote repeater facility, fibre link.
- Kanaka Bar, BC – Kwoiek Creek Hydroelectric Plant fibre link.
- Abbotsford, BC – Industrial facility fibre deployment.
- Hope, BC – Campus fibre installation.

**Project Overview:**

During the British Columbia Broadband Association conference in Vancouver last month, Rob Newell approached Com Com Services and requested that we put together a plan on how to serve the residents of the Regional District of Bulkley-Nechako. Rob Newell expressed how the regional district feels the need to improve internet service in the area, Smithers BC has been upgraded to Fibre optic service and is very happy with the service. The Regional District of Bulkley-Nechako would like to pursue the option of installing FTTH and to other communities in the region.

Com Com Services has a desire to make it possible for rural Canadians to have the same or better service than that of larger cities. We believe that when super high-speed internet is available in rural areas new job opportunities will emerge. People unable to live in the country before because of the lack of job options will be able to move to the country once FTTH or LTE is available.

Com Com Services has invested heavily in developing solutions to provide quality high-speed internet solutions to rural communities. We believe that we are well-positioned to work with the Regional District of Bulkley-Nechako to offer the residents of the area much-improved internet service. We also believe that once these services are installed the district will see a real boost in the economy.

The following pages provide a brief overview of how we propose to make FTTH and LTE a reality for the Regional District of Bulkley-Nechako.





# Why High-Speed?



## Essential Service

In a 2016 survey of low-income families, over half of the participants said they regularly take money from rent, food, or other essentials to pay for the internet.

Roughly two-thirds (69%) of Americans indicate that not having a home high-speed internet connection would be a major disadvantage to finding a job, getting health information, or accessing other key information.



## eHealth

Providing high-speed internet is critical strategy for early detection, telehealth technologies, remote video conferencing (with a doctor or specialist) and general medical knowledge. Access to timely information and self-assessment allows Canadians the freedom to make more informed decisions for the health and wellness of their families.



## Distance Learning

Bridging the divide with high-speed internet allows individuals to enjoy the benefits of rural areas while still participating in the education so key to our knowledge-driven economy.

In many cases rural students find online education a better fit for a variety of reasons ranging from cost to family connections.



## The Checklist

Over the last decade there has been a large shift in the way individuals and businesses view internet. Often times ISPs are one of the first to be contacted by potential business or home owners confirming that they will have access to high-speed. In many cases the absence of good internet means these people will look elsewhere.





## Connected Agriculture

The Ontario Federation of Agriculture sees the value:

"Lack of access to reliable Internet has become a bigger issue now because Internet use on farms has expanded exponentially! Farmers use the Internet for a variety of functions, such as accessing market and weather information, taking training courses, participating in e-commerce, researching crop or livestock production tips on various websites, or for social media purposes."



## Telecommuting

Best Buy, British Telecom, Dow Chemical, and many others show that teleworkers are 35-40% more productive. Not only are teleworkers more productive they also avoid wasting time sitting in traffic and statistics show less sick days. For many, telecommuting is preferred where access to good Internet exists.



## Entertainment

Whether it's streaming the next big hockey game or just enjoying some late-night Netflix, high-speed Internet allows rural areas to experience front row entertainment without leaving the living room. With the ever increasing demand for mobility, TV is quickly being replaced by the Internet. In addition to entertainment, Internet allows rural Canadians to stay connected with current news and is by many the preferred delivery method.

So whether you are looking for a great place to retire, somewhere to grow a business idea, or simply great place to get away from the rush of the city, high-speed Internet makes it all possible.



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**COM COM**  
SERVICES



# Phase I

## pilot community project



select  
**pilot community**



make a  
**site survey**



**decide** on construction  
overhead/underground



**engineer plans,**  
**submit permits,**  
and bring online  
**backhaul connection**



agree on the **terms**  
and  
secure **funding**



Create  
**the proposal**



**advertise**  
the amazing  
lifestyle of having  
great internet in a  
fantastic location



**order supplies,**  
**mobilize team,**  
and  
**start construction**



final testing and  
**ribbon cutting**



**pilot community loves it**  
and the great news  
spreads, phase II  
services additional  
communities

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## Phase 1 – Selecting the pilot Community

- **Select pilot community**

Selecting the pilot community for the first deployment of Fibre to the home (FTTH) or LTE Wireless or a combination of LTE and FTTH. The community could be selected based on the following criteria:

- Greatest need of improved internet service
- Most likely of successful adoption of service (highest take rate)
- Funding secured quickest

The pilot community will be an example for what will be done in the remaining communities.

Because of the large scale of this project we are proposing to start with 1 community this year and then complete the remaining communities in the following 1-2 years. The advantage of this approach is it will require less funding to start and we will have a completed project much sooner.

- **Site survey**

A site survey will be conducted to determine the best approach to take for each section of the community.

- **Decide on Overhead/Underground**

Once the site survey is completed we will be able to determine the best solution. The options will include: micro-trenching, full depth trenching, and the use of TELUS poles.

- **Create proposal/agreement**

With the site survey and the best approach completed, we will create a proposal for the regional district to assess. We will revise the proposal as needed until we can come to agreeable terms.

- **Secure funding**

After coming to an agreement on the proposal we will work with the regional district to secure funding to complete the project.

- **Mapping/Design**

Project design can start as soon as we come to an agreement on the approach that will be used to serve FTTH. This will enable us to have everything ready for when the funding is available.

- **Permits**

Permits will be applied for once we have the project design completed. The permits will include permits to the ministry of transportation for underground and P408s to TELUS for the use of sections of the project that will be overhead.

- **Local advertising with date of when service will be available**

Once we have the necessary permits in place we can then begin local advertising on when service will be available. Advertising will help keep residents aware of what is going to be available in the future and it will also help with adoption of the service.

- **Order Supplies**

Once we have secured the funding we can begin ordering supplies for the project so it can complete in a timely manner.

- **Mobilize team and commence construction**

When the supplies have arrived we will mobilize our team and begin construction.

- **Test completed network**

Testing will be conducted as each section of cable is completed, this will enable us to start connecting customers as we complete each section of the community. A final test will be conducted once the network is completed.

- **System goes live, Ribbon Cutting**

When the network construction is completed we would like to put on a ribbon cutting event, this will help with community adoption of the service and it will give great publicity.

### **Phase 2-4 – Approach for remaining phases**

The following phases would follow a similar approach as phase 1. If the Rural areas are in need of improved internet more urgently than the more urban communities Phase 3 - Rural areas served by LTE could be started first.

The rural areas will be assessed and if there are small groups of houses of 50-100 in a stretch of road of about 5km or less; we would propose to install FTTH instead of LTE for better service to those homes.



# Phase II

additional communities served



select **order**  
of additional  
**communities**



make a  
**site survey**



**decide** on construction  
overhead/underground



**engineer plans,**  
**submit permits,**  
and bring online  
**backhaul connection**



agree on the **terms**  
and  
secure **funding**



Create  
**the proposal**



**advertise**  
the amazing  
lifestyle of having  
great internet in a  
fantastic location



**order supplies,**  
**mobilize team,**  
and  
**start construction**



final testing and  
**ribbon cutting**

brought to you by :



**local economy is loving it**  
in each community,  
and phase III follows  
building on the existing  
network to service the  
rural areas

# Phase III

rural areas served by LTE



select **outlying areas** to be serviced

assess the **best location** to service the most households

agree on the **terms** and secure **funding**



**order supplies, mobilize team, and start construction**

**advertise** the amazing lifestyle of having great internet in a fantastic location

**engineer plans, submit permits, and apply for spectrum licenses**



final testing and **ribbon cutting**

installation of **customer antennas**

brought to you by :



**local economy thrives**

as people realize they can live in an amazing location with great connectivity and phase IV follows allowing for continued growth and stability



# Phase IV

## backhaul bridging communities



make a **site survey** along road corridor



**decide** on construction overhead/underground



Create the **proposal**



**order supplies, mobilize team, and start construction**



**engineer plans and submit permits**



agree on the **terms and secure funding**



final testing and **backhaul goes live**



**internet speeds soar and operating costs drop**



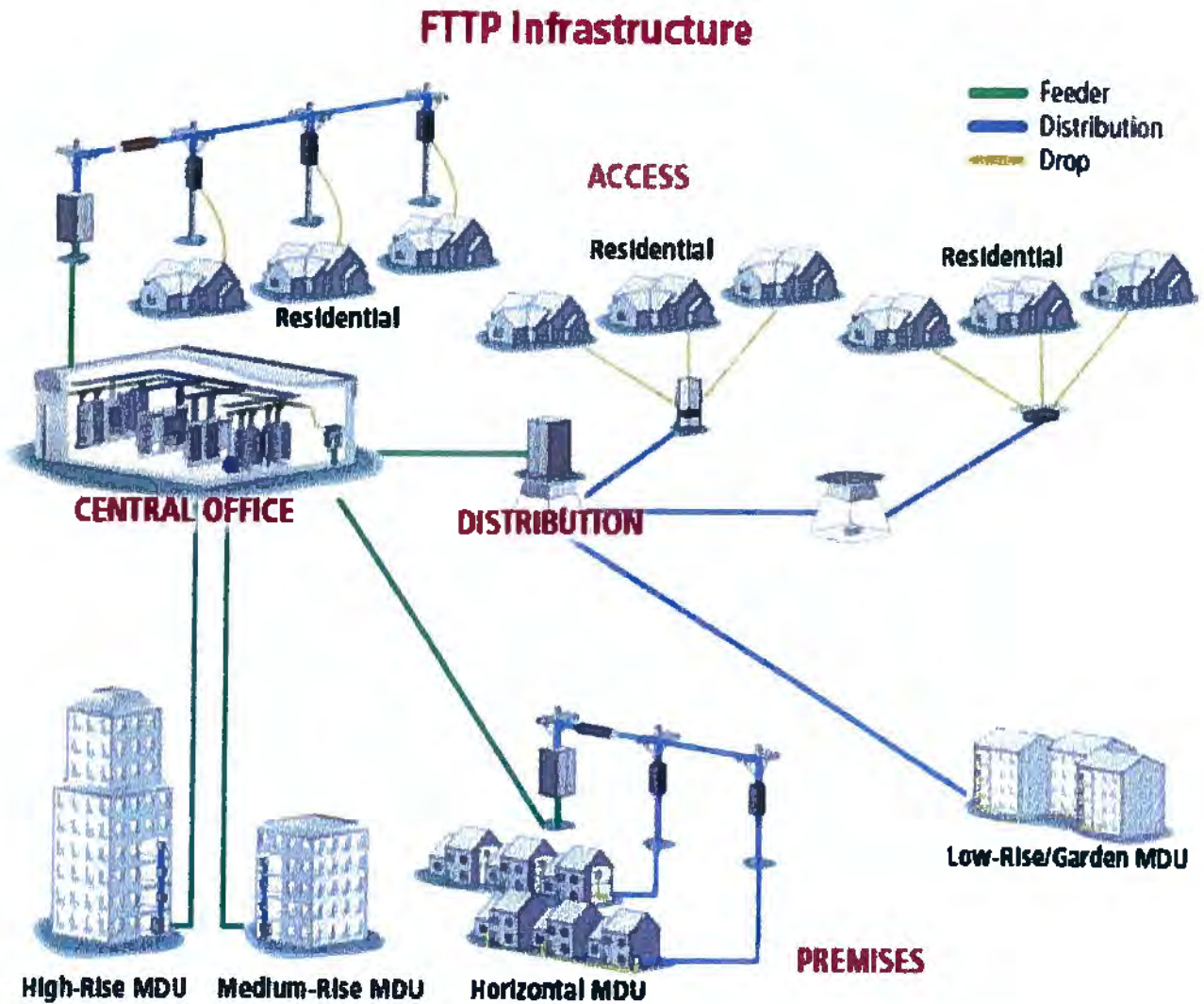
**everyone wins** in each community

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# Basic Fibre to the Home Diagram



# Basic LTE Diagram

