SALMONARM

SMALL CITY, BIG IDEAS

AGENDA

City of Salmon Arm
Development and Planning Services Committee

Monday, May 6, 2019
8:00 a.m.
Council Chambers, City Hall
500 – 2 Avenue NE

Page #	Item #	Description
	1.	CALL TO ORDER
	2.	REVIEW OF AGENDA
	3.	DISCLOSURE OF INTEREST
	4.	PRESENTATIONS
	5.	REPORTS
1 - 10	1.	Development Variance Permit Application No. VP-496 [Gunn, D. & Cross, R/Heyde, R.; 2171 - 14 Avenue SE; Retaining Wall & Fence]
11 - 44	2.	Proposed Telecommunications Facility Referral (Cellular Tower Installation) [Rogers/ Medallion Wireless; 320 Alexander Street NE]
45 - 88	3.	2018 City of Salmon Arm Carbon Neutral Progress Survey
	6.	FOR INFORMATION
	7.	IN CAMERA
	8.	LATE ITEM
	9.	ADJOURNMENT

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CITY OF
SALMONARM

TO: His Worship Mayor Harrison and Members of Council

FROM: Director of Development Services

DATE: April 25, 2019

SUBJECT: Development Variance Permit Application No. VP-496

Legal:	Lot 15, Section 12, Township 20, Range 10, W6M, KDYD, Plan EPP71301
Civic Address:	2171 – 14 Avenue SE
Owner:	D. Gunn & R. Cross
Applicant / Agent:	R. Heyde

MOTION FOR CONSIDERATION

THAT: Development Variance Permit No. VP-496 be authorized for issuance for Lot 15, Section 12, Township 20, Range 10, W6M, KDYD, Plan EPP71301, which will vary Zoning Bylaw No. 2303 as follows:

1. Section 4.12.1 (a) Fences and Retaining Walls - increase the maximum permitted combined height of a retaining wall and fence from 2.0 m to 4.12 m

STAFF RECOMMENDATION

THAT: The motion for consideration be adopted.

PROPOSAL

The subject property is located at 2171 – 14 Avenue SE which is located in a new subdivision adjacent to Hillcrest Elementary School (Appendix 1 & 2). The proposal is to build a retaining wall along the north and west property lines (Appendix 3). The applicant is requesting a variance to increase the maximum combined height of a retaining wall in conjunction with a fence from 2.0 m to 4.12 m as per the elevation plan provided by the applicant (Appendix 4). Site photos are attached as Appendix 5

BACKGROUND

The subject property is designated Low Density Residential in the City's Official Community Plan (OCP) and zoned R-8 Residential Suite Zone in the City's Zoning Bylaw. The house and landscaping is under construction on the property and the request for the variance is to create a level backyard.

The lots along 14 Avenue SE slope from southeast to northwest. It is the northwest corner where the height of the retaining wall and fence will be the greatest; the height of the wall will be 3.05 m and the fence on the top of the wall will be an additional 1.07 m, for a total of 4.12 m. The wall will begin at grade at the northeast corner and increase in height until it reaches the highest point (4.12 m) at the northwest corner. The wall will then extend to the south towards the 14th Avenue and decrease in height until it reaches grade (Appendix 3).

The retaining wall is going to built out of 30"x30"x60" concrete blocks with drainage behind and the fencing on the top will be a metal mesh fencing.

STAFF COMMENTS

Fire Department
No response to date.

Building Department
Building permit required complete with structural or geotechnical engineers involvement

Engineering Department
No Engineering Concerns

Planning Department
The applicant is requesting a variance to Section 4.12.3 of the Zoning Bylaw. The Zoning Bylaw permits a maximum combined height of 2.0 m for a retaining wall and fence in all rear and interior side yards in residential zones.

In this situation, the applicant is requesting a variance from the maximum combined height of a retaining wall and fence from 2.0 m to 4.12 m to be able to create a level backyard. As the natural slope of the property is from the southeast to the northwest (Appendix 6), the retaining wall will gradually increase in height until it reaches the maximum height at the northwest corner. Including a fence on top of the wall will lessen the aesthetic impact of a 3.0 m retaining wall; and, more importantly the fence will provide a safety measure to lessen the fall hazard.

Being that the property backs onto the Hillcrest School and there is a buffer of vegetation between the wall and the school, the wall will have little to no aesthetic impact to school. Because the road (14th Avenue) slopes from east to west, the neighbouring property on the east has a retaining wall and a wire mesh fence already built. The retaining wall blocks and fence will be same as the ones used on the property to the east as shown in the site photos (Appendix 5). The property adjacent to the west is currently vacant but will likely need a retaining wall to achieve a more level backyard. Thus, the proposal fits well with neighbouring properties and provides stability to the natural slope from southeast to northwest.

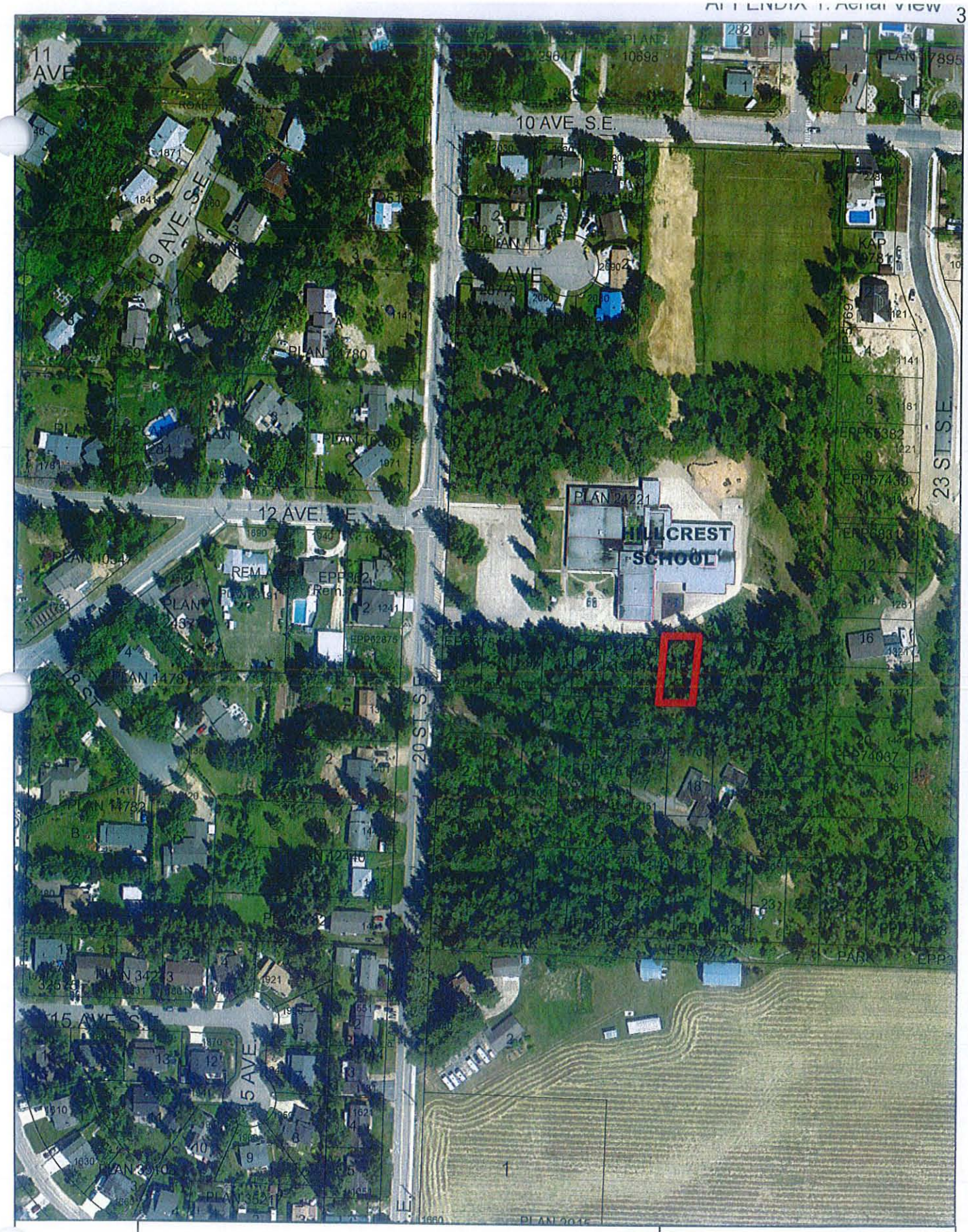
Due to the topography of Salmon Arm, there are many residential neighbourhoods built on steep slopes and construction of retaining walls is a common approach to creating level backyards in residential neighbourhoods such as this. Although OCP Policy 8.3.22 suggests minimizing cut, fill and retaining walls on hillside areas, as well as the preparation of grading plans prior to servicing and construction, this is the first retaining wall / fence variance application for this neighbourhood and the neighbouring property to the east was able to achieve a level backyard, not going over the maximum permitted height of 2.0 m.

CONCLUSION

Although the applicant is asking for over double the maximum permitted height of 2.0 m of a combined wall and fence, staff feel that it will have little aesthetic impact to neighbouring properties and is a justified request due to the topography and site conditions.

Denise Ackerman
Planner, Development Services Department

Kevin Pearson, MCIP,RPP
Director of Development Services


11 AVE
10 AVE S.E.
9 AVE S.E.
12 AVE S.E.
14 AVE
15 AVE S.
20 ST S.E.
23 ST S.E.
5 AVE E
HILLCREST SCHOOL
PLAN 24221
PARK
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0 25 50 100 150 200
Meters
Subject Parcel


PLAN 24221
14 AVE
2170
2151
18
7
0 10 20 40 60 80
Meters
N
Subject Parcel

APPENDIX 3: Site Plan

BROWNE JOHNSON Land Surveyors

BRITISH COLUMBIA AND CANADA LANDS
Box 362, Salmon Arm, B.C. V1E 4N5
250-832-9701 | office@brownejohnson.com

BC LAND SURVEYOR'S BUILDING LOCATION CERTIFICATE

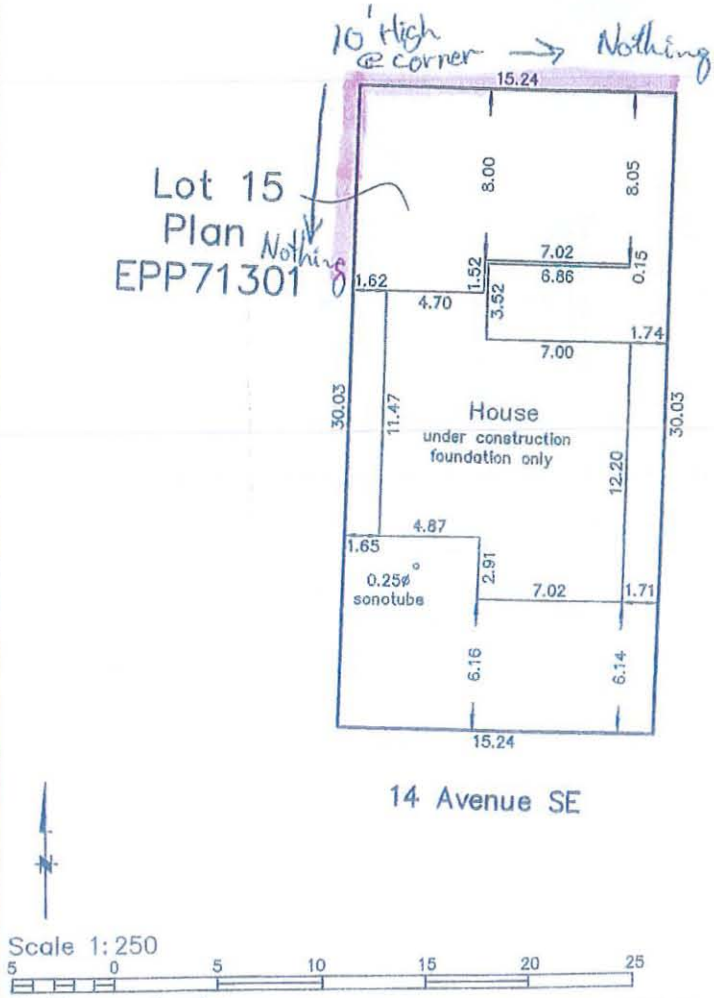
To: Heydewerk Homes,
c/o Rudy Heyde,
3702 Southview Road,
Tappen, BC V0E 2X1

Your File:

Re: Lot 15, Section 12, Township 20,
Range 10, W6M, KDYD, Plan EPP71301

Parcel Identifier (PID): 030-112-044
Civic Address: 2171 14 Avenue SE

List of documents registered on title which may affect the location of improvements:
Covenant CA5746787
Building Scheme CA5923962



All distances are in metres.

Dimensions derived from Plan EPP71301

Offsets from property line to building are measured from the foundation.

The signatory accepts no responsibility or liability for any damages that may be suffered by a third party as a result of any decisions made, or actions taken based on this document.

This plan was prepared for inspection purposes and is for the exclusive use of our client. This document shows the relative location of the surveyed structures and features with respect to the boundaries of the parcel described above. This document shall not be used to define property lines or property corners.

This building location certificate has been prepared in accordance with the Professional Reference Manual and is certified correct this 13th day of December, 2017.

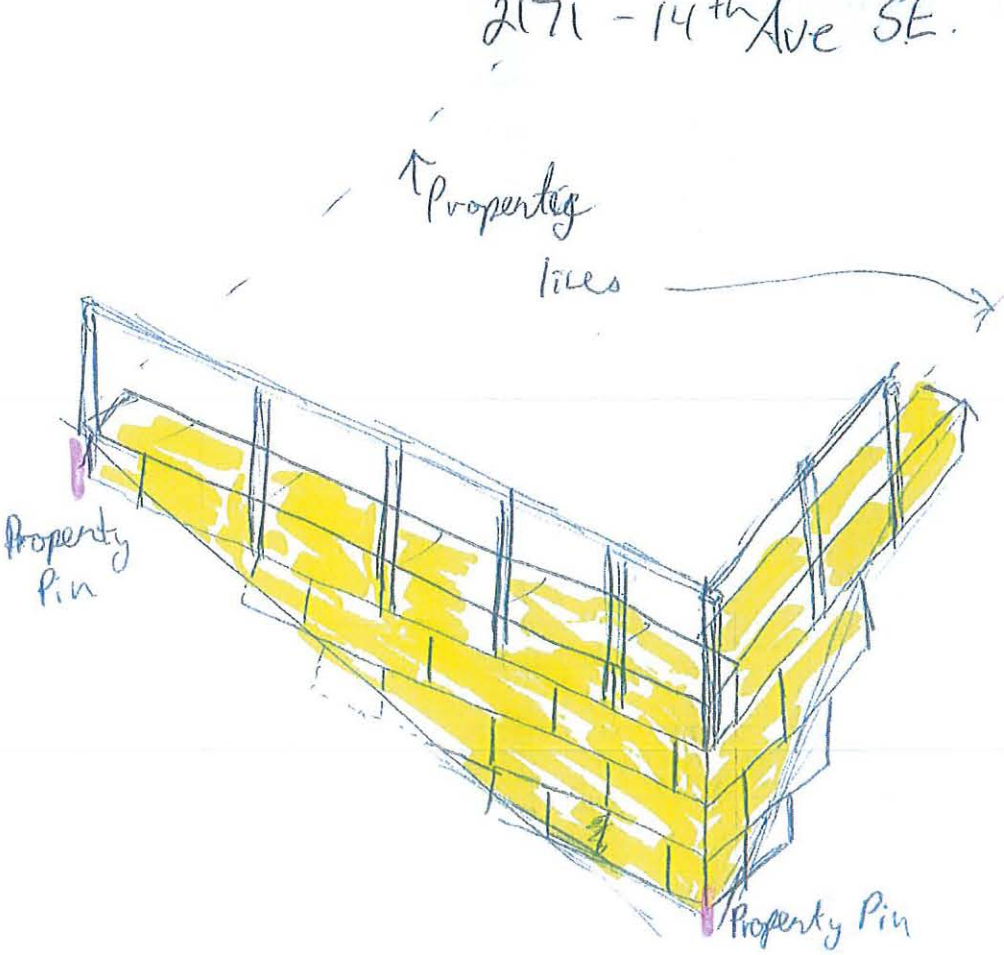
Nicole Bird GIMSQW — Digitally signed by Nicole Bird GIMSQW Date: 2017.12.19 15:53:27 -08'00'

BCLS

THIS DOCUMENT IS NOT VALID UNLESS ORIGINALLY | DIGITALLY SIGNED.

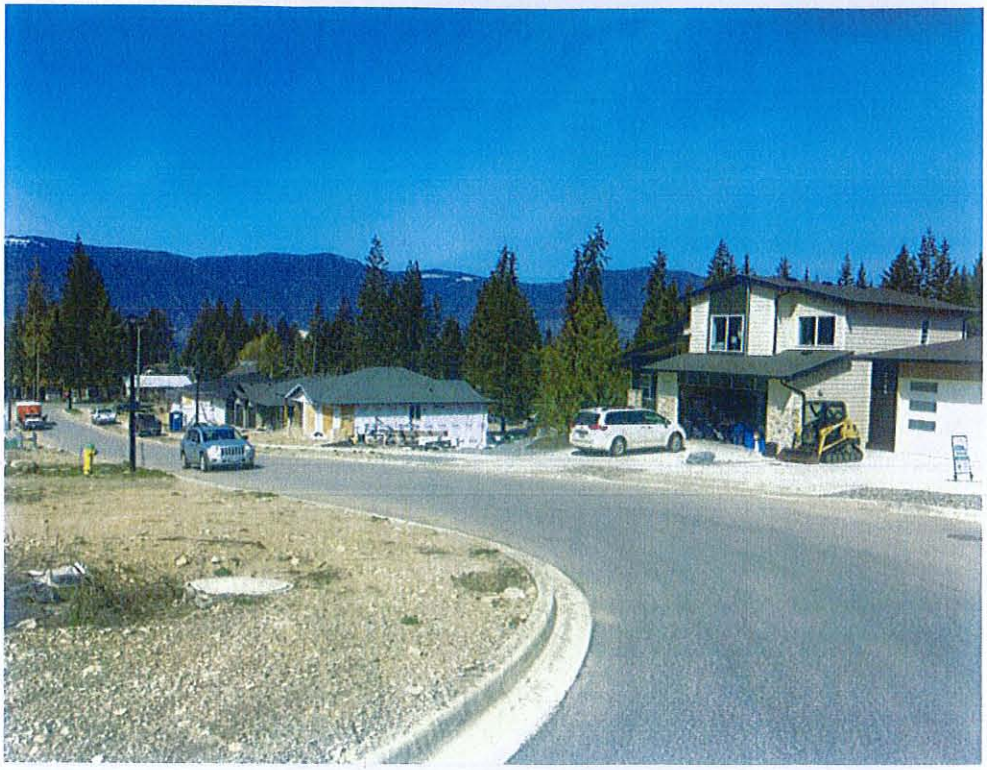
Our File: 690-17 Fb: 691-17.raw

New house @
2171 - 14th Ave SE.

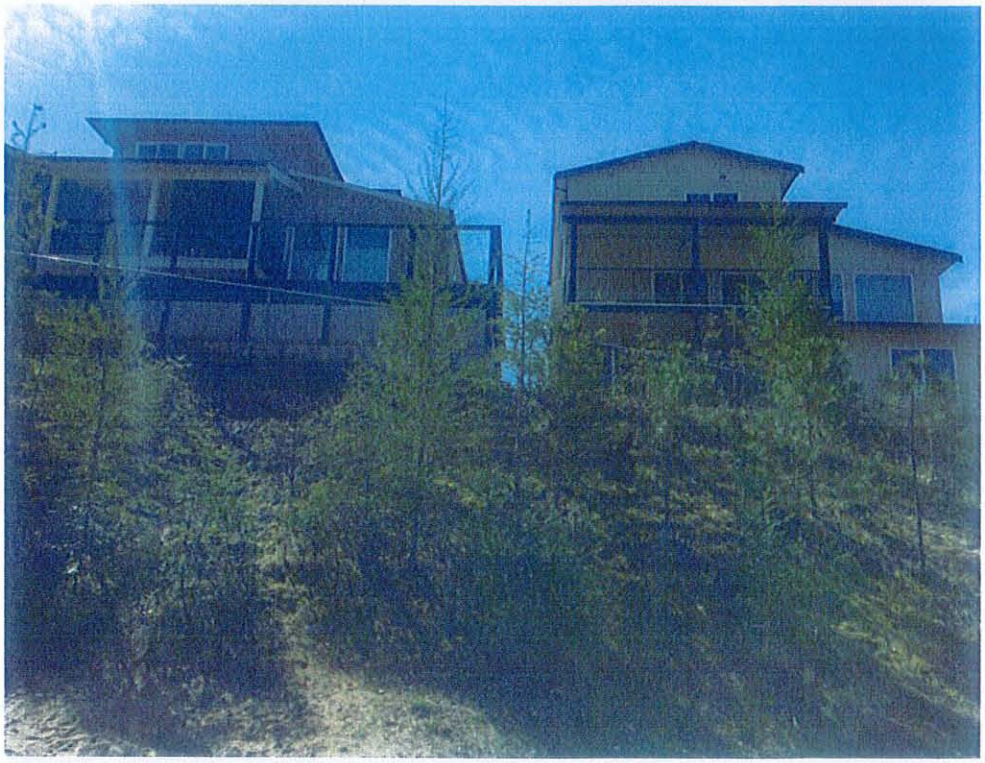


30" x 30" x 60" Concrete blocks
w/ drainage behind.

4x4 Treated and stained Posts
Metal Mesh fencing.



View looking west down 14th Avenue SE towards 20th Street SE

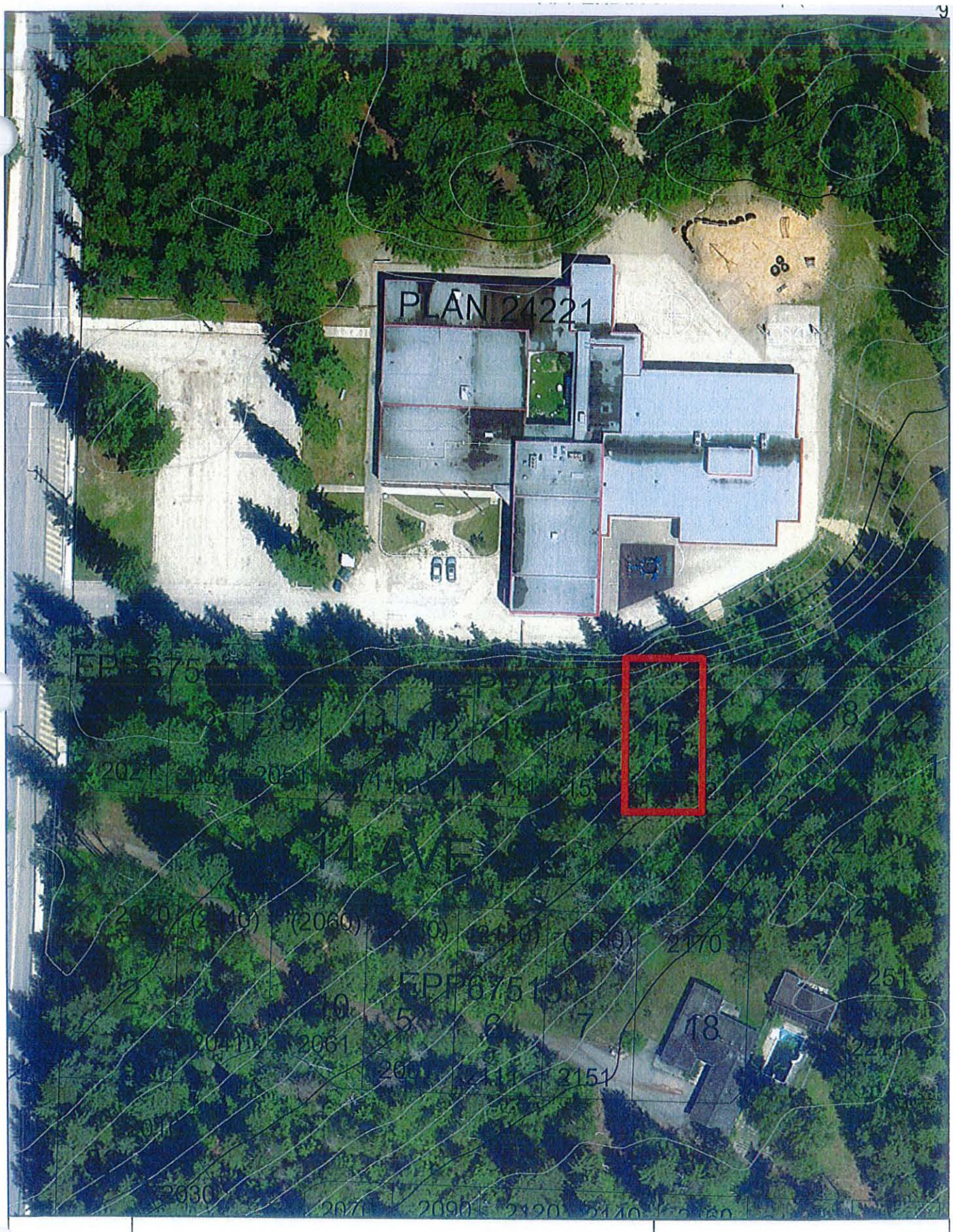


View looking south at the rear of the house (subject property on the right)

APPENDIX 5: Site Photos

View of the backyard and neighbouring property to the east

View looking northeast


PLAN 24221
EPP67515
EPP71301
14 AVE
EPP67515
N
0 10 20 40 60 80
Meters
Subject Parcel

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CITY OF
SALMON ARM

To: His Worship Mayor Harrison and Members of Council

Date: May 1, 2019

Subject: Proposed Telecommunications Facility Referral (Cellular Tower Installation)

Legal: Lot 1, Section 14, Township 20, Range 10, W6M, KDYD, Plan 17844
Civic: 320 Alexander Street NE
Proponent: Rogers
Agent: Medallion Wireless

RECOMMENDATION

THAT: **the City of Salmon Arm has been notified regarding the proposed installation of a telecommunications facility on Lot 1, Section 14, Township 20, Range 10, W6M, KDYD, Plan 17844, as shown in the information package dated April 5, 2019.**

BACKGROUND

Medallion Wireless on behalf of Rogers (the proponent), has proposed the installation of cellular antennae and associated equipment on the roof of the existing building at 320 – Alexander Street NE (Appendix 1). The subject parcel is located downtown (Appendix 2), designated City Centre Commercial in the Official Community Plan (OCP), and zoned C-2 Town Centre Commercial. The parcel and surrounding parcels are occupied largely by commercial development.

As noted in Section 4.1 of the Salmon Arm Policy, locating antennas on an existing rooftop is a preferred installation, while areas designated Commercial by the OCP are also preferred. The proposed antennas (Appendix 3) will reach 2.61m from the roof, which is less than the 3 metre maximum recommended by the City Policy. This is a height extension of 17.5% of the existing building height, well under the 25% as recommended by the City Policy. The proposal is to install 6 initial antennas and 1 microwave, with room for 3 additional antennas in the future, comparable to what might be located on a cellular tower. The antennas will be painted to blend in with the existing building.

The proposed cellular installation falls within the City Policy's exemption criteria, thus the proponent is not required to complete a community consultation process. The City's public consultation requirements are generally aligned with Federal consultation requirements. The proposal is exempt from Federal consultation requirements. A resolution from Council is not required.

COMMENTS

Building Department

The BC Building Code does not apply to the construction of cellular towers, except where the tower is affixed to a building. A Building Permit is required for this proposal.

Planning Department

The regulation of the installation of cellular towers is under the exclusive jurisdiction of the federal government and its agencies (e.g. Industry Canada and Health Canada), meaning that the City's bylaws do not apply to the proposed installation. However, the proponent has been in communication with the City prior to proceeding with the installation. The proponent has adhered to the City's Policy, using it to guide their proposal.

Under Federal policy "antennas on buildings, water towers, lamp posts, etc. may be excluded from consultation provided that the height above ground of the non-tower structure, exclusive of appurtenances, is not increased by more than 25%." City Policy states both in the introduction and in Section 5..8 that any "any additional equipment or installation as excluded by Industry Canada" shall not be subject to public consultation.

From a land use perspective, the current and anticipated or future land use patterns in and around the proposed site appear compatible and aligned with the direction of the City Policy. As detailed in their submission, the existing building is approximately 15.19 m tall with a small 0.3 m parapet, and has typical rooftop equipment (skylights and ventilation equipment). The proposed antennae are 2.61 m in height and will extend 2.31 m above the existing roof's parapet.

In the opinion of staff, the visual impact of the structure is mitigated by its position on a downtown roof with existing rooftop equipment, the small size of the proposed installation, as well as the confirmation from the proponent that the antennae will be painted to match the building.

CONCLUSION

Staff recommends that Council accept this notification as information.

Prepared by: Chris Larson, MCP
Planner, Development Services

Reviewed by: Kevin Pearson, MCIP
Director of Development Services

March 19, 2019

VIA EMAIL

Chris Larson
Planning and Development Officer
City of Salmon Arm

Dear Chris,

Subject: Proposed Telecommunications Installation
Address: 320 Alexander St NE, Salmon Arm
Rogers Site Reference: W4014

Medallion Wireless is representing Rogers Communications Canada Inc. ("Rogers") in the land use consultation for the installation and operation of a radiocommunications facility. We have been in consultation with the City of Salmon Arm planning staff to identify a suitable design and location for a telecomunications installation to provide improved wireless voice and data communication services to the community. After careful analysis of the surrounding area and the City of Salmon Arm Telecommunication Policy, a rooftop installation has been proposed to minimize impact on the community while still meeting coverage objectives.

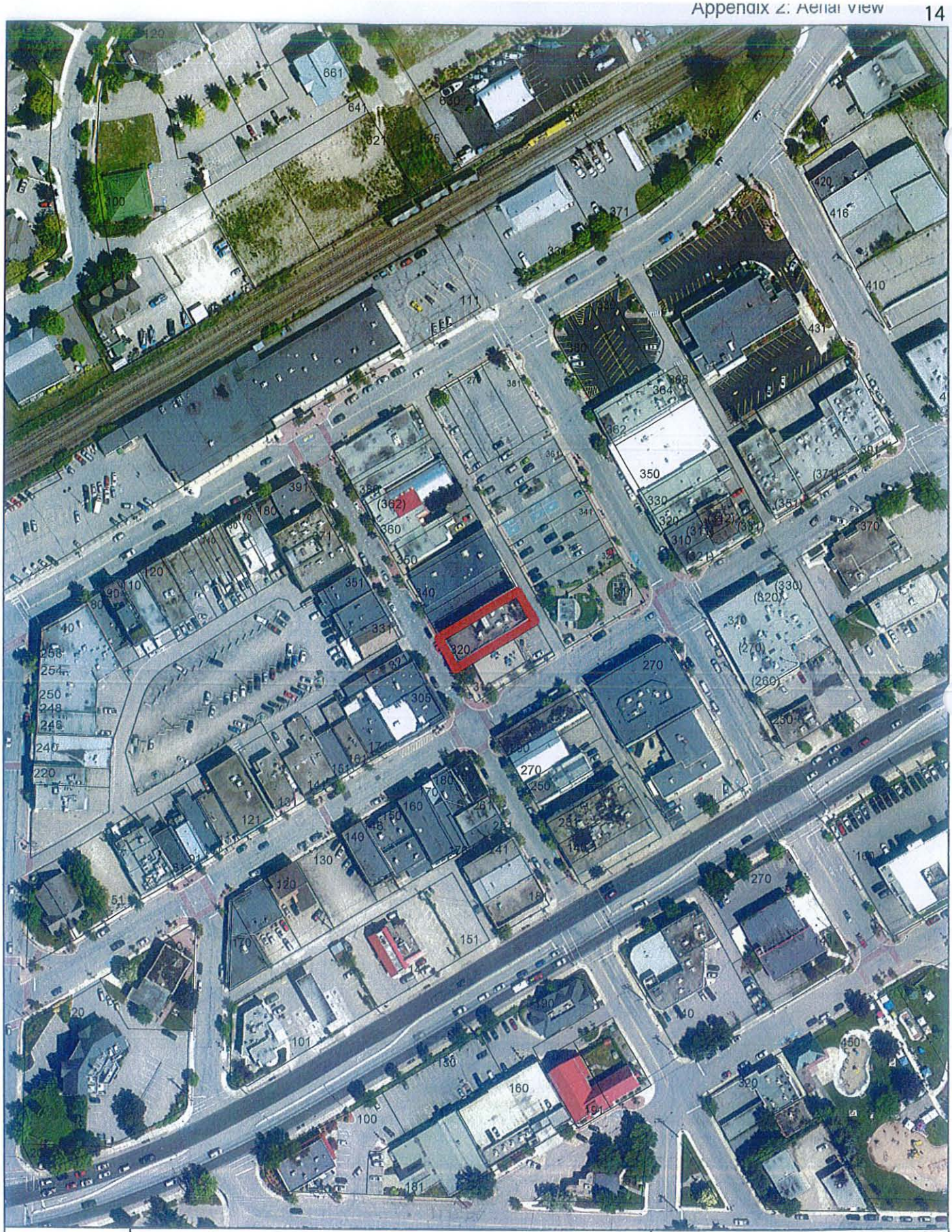
The purpose of this site is to respond to the rapid growing demand for wireless voice and data communication services, such as mobile broadband and video service for use on smartphones, computer tablets and laptops. With the growing wireless traffic, dependable service availability has diminished and will continue to diminish until additional wireless telecommunication infrastructure is installed to relieve this network capacity issue. This installation will also help provide emergency service coverage.

With this letter, please find attached construction drawings which show the proposed installation. As indicated in the drawings, the antennas, cable tray, and visable cables will be painted to match the existing building.

If you require anything further, please do not hesitate to contact us at 250-878-8831 or directly by e-mail at MarshallR@medallionwireless.com.

Sincerely,

Marshall Rasmussen
Medallion Wireless
Consultant for Rogers Communications Inc.
Phone: 250-878-8831
Email: MarshallR@MedallionWireless.com
www.MedallionWireless.com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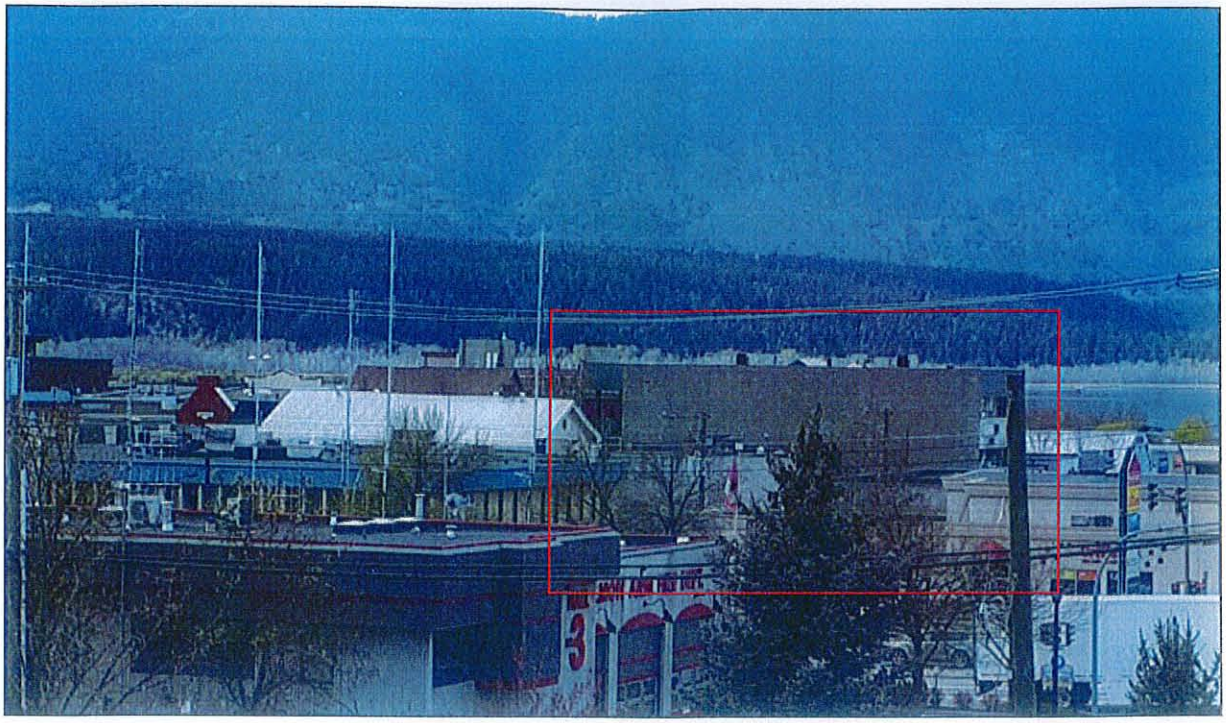


The view looking north-west over the subject property from City Hall.

DRAWING INDEX		
DWG NO	DRAWING TITLE	REV
T-1	TITLE SHEET	2
G-1	GENERAL NOTES	0
A-1	EQUIPMENT AND ANTENNA DETAILS	1
A-2	ANTENNA LOADING CHART	1
A-3	SITE PLAN	0
A-4	ROOF PLAN	1
A-5	EQUIPMENT LAYOUT	0
A-6	NORTHWEST ELEVATION	2
A-7	NORTHEAST ELEVATION	2
A-8	SOUTHEAST ELEVATION	2
A-9	SOUTHWEST ELEVATION	2
S-1	PANEL ANTENNA BALLAST MOUNT DETAILS I	0
S-2	PANEL ANTENNA BALLAST MOUNT DETAILS II	1
S-3	CONCRETE EQUIPMENT PAD DETAILS	0
S-4	CHAINLINK FENCE DETAILS	0
S-5	STRUCTURAL DETAILS	0
S-6	ANDRELL PLATE DETAIL	0
S-7	DC FIBRE GATOR BOX DETAILS	0
S-8	MICROWAVE ANTENNA BALLAST MOUNT DETAILS I	0
S-9	MICROWAVE ANTENNA BALLAST MOUNT DETAILS II	0
E-1	ELECTRICAL NOTES	0
E-2	SINGLE LINE DIAGRAM	0
E-3	PANEL AND NAMEPLATE SCHEDULE	0
E-4	ELECTRICAL LAYOUT	0
E-5	ELECTRICAL ELEVATIONS	0
E-6	EQUIPMENT GROUNDING LAYOUT	0
E-7	ROOF GROUNDING LAYOUT	1
E-8	GROUNDING DETAILS	1
E-9	GROUNDING SCHEMATIC	1

ROGERS™

KEY PLAN

NOT TO SCALE

LATITUDE: N 50.701920° NAD 83

LONGITUDE: W 119.282419°

SITE INFORMATION

SITE ID:	W4014
SITE NAME:	SALMON ARM DOWNTOWN
SITE ADDRESS:	320 ALEXANDER ST NE SALMON ARM, BC
LEGAL DESCRIPTION:	PID: 008-345-996 LEGAL: LOT 1 SECTION 14 TOWNSHIP 20 RANGE 10 WEST OF THE 6TH MERIDIAN KAMLOOPS DIVISION YALE DISTRICT PLAN 17844
SITE CONFIGURATION:	ROOFTOP - MACRO
APPLICANT:	ROGERS COMMUNICATIONS INC. 1600-4710 KINGSWAY BURNABY, BC V5H 4W4

REV	DESCRIPTION	DATE	BY
2	GENERAL REVISIONS	APR 5/19	KC
1	REVISED ELEVATIONS	MAR 25/19	AD
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS™

COREONE CONSULTING

229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2186
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
TITLE SHEET

SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	T-1
PROJECT NO:	18C1184
DRAWING NO:	T-1

GENERAL NOTES:

1. THE TENDERER MUST UNDERGO A SITE VISIT TO CAREFULLY EXAMINE AND UNDERSTAND THE SCOPE OF THE WORK REQUIRED BEFORE BID SUBMISSION. NO COMPENSATION IN ANY FORM WILL BE PAID TO THE TENDERER FOR EXPENSES INCURRED DUE TO SITE VISITS.
2. USE THESE DRAWINGS ONLY FOR THE PURPOSES SPECIFICALLY NOTED IN THE REVISION COLUMN. DO NOTE CONSTRUCT BY THESE DRAWINGS UNLESS INDICATED "FOR CONSTRUCTION". THE TERM "ISSUED FOR BUILDING PERMIT" INDICATES THAT THE DRAWINGS ARE COMPLETE FOR ALL KEY STRUCTURAL DESIGN ELEMENTS HOWEVER FINAL COORDINATION AND INSTRUCTIONS FOR CONSTRUCTION MAY NOT BE COMPLETE.
3. CORE ONE CONSULTING IS THE PRIME CONSULTANT AND REGISTERED COORDINATING PROFESSIONAL FOR THE PROJECT AND IS RESPONSIBLE FOR GENERAL COORDINATION OF THE DRAWINGS. ANY DISCREPANCIES OR INCOMPATIBILITIES IN THE DRAWINGS SHALL BE REPORTED TO CORE ONE CONSULTING.
4. THE ENGINEER RESERVES THE RIGHT TO RELOCATE ANY EQUIPMENT WITHIN 3m OF THE LOCATION SPECIFIED ON THESE DRAWINGS PRIOR TO INSTALLATION BY THE CONTRACTOR.
5. WHERE INDICATED "CONFIRM" OR "SITE VERIFY" INDICATES THAT THE CONTRACTOR SHALL CONFIRM AND REPORT TO THE ENGINEER INFORMATION REQUESTED IN THE ASSOCIATED NOTE.
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATE INSTALLATION FOR APPROVAL BY THE ENGINEER.
7. CONTRACTOR IS RESPONSIBLE FOR FIELD MEASUREMENTS TO CONFIRM LENGTHS OF CABLE TRAYS, ELECTRICAL LINES, AND ANTENNA CABLES.
8. ROUTING OF ALL CONDUITS, CABLES AND CABLE TRAY ETC. IS INDICATED AS PROPOSED LOCATIONS ONLY. CONFIRM THE EXACT ROUTING WITH THE ON-SITE ROGERS REPRESENTATIVE PRIOR TO THE START OF WORK.
9. READ THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS INCLUDING THE TECHNICAL SPECIFICATION PROVIDED BY ROGERS. REPORT ANY DISCREPANCIES TO ROGERS AND CONSULTANT. NO CHANGES FROM DRAWINGS PERMITTED UNLESS AUTHORIZED BY ENGINEER.
10. ALL DAMAGE OR OPENING UP OF THE EXISTING STRUCTURE MUST BE RESTORED TO PRE-CONSTRUCTION CONDITION OR BETTER.
11. INSPECTION OF COMPLETED WORK IS REQUIRED BEFORE COVERING UP. PROVIDE MINIMUM 24 HRS. NOTICE TO ENGINEER.
12. REMOVE AND CLEAN UP ANY DEBRIS OR MATERIAL FROM THE SITE THROUGHOUT THE DURATION OF THE CONTRACT AND ON COMPLETION OF THE WORK AS DIRECTED BY OWNER'S REPRESENTATIVE.
13. OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTIONS AFTER COMPLETION OF WORK AND ACCEPTANCE. PROVIDE CERTIFICATES TO THE OWNER VERIFYING THAT THE WORK CONFORMS TO THE REQUIREMENTS OF ALL CODES AND AUTHORITIES HAVING JURISDICTION.
14. AT THE END OF THE PROJECT, THE CONTRACTOR MUST PROVIDE TO THE CONSULTANT A COMPLETE SET OF "AS-BUILT" DRAWINGS IN PRINT FORM. FINAL PAYMENT OF THIS CONTRACT WILL BE SUBJECT TO THE OWNER/CONSULTANT'S RECEIPT OF THE "AS-BUILT" DRAWINGS.
15. PROVIDE ROGERS WITH A WRITTEN WARRANTY, EFFECTIVE FOR ONE YEAR AFTER DATE OF ACCEPTANCE, FOR THE COMPLETE INSTALLATION. REPAIR OR REPLACE ANY DEFECTS ARISING DURING THIS PERIOD AT NO EXTRA COST TO ROGERS.
16. SUBSTANTIAL PERFORMANCE

    BEFORE ANY REQUEST IS MADE FOR THE CONSULTANT AND ROGERS TO PERFORM A SUBSTANTIAL PERFORMANCE INSPECTION OF THE WORK, THE FOLLOWING CHECK LIST MUST BE COMPLETE:

    - CONFIRM THAT THE CLEANING AND TESTING OF SYSTEMS HAS BEEN COMPLETED, CONTROL FUNCTIONS HAVE BEEN CALIBRATED AND OPERATING ADJUSTMENTS HAVE BEEN MADE. ENSURE THAT THE OPERATION OF EQUIPMENT HAS BEEN PROVEN TO MEET THE PERFORMANCE REQUIREMENTS SPECIFIED, INCLUDING THOSE OF THE MANUFACTURERS.
    - CONFIRM THAT FINAL "AS-BUILT" DRAWINGS HAVE BEEN RECEIVED AND ACCEPTED BY THE CONSULTANT.
    - DELIVER THE FINAL ELECTRICAL APPROVAL CERTIFICATE OF THE LOCAL INSPECTION AUTHORITY TO THE CONSULTANT.
    - CONFIRM THAT FACTORY FINISHED EQUIPMENT HAS BEEN CLEANED, TOUCHED UP OR REFINISHED TO PRESENT A NEW APPEARANCE.
    - CONFIRM THAT NAMEPLATES AND PANELBOARD SCHEDULES HAVE BEEN INSTALLED AND VERIFIED AS CORRECT.
    - SUBMIT SWEEP TEST REPORTS TO ROGERS REPRESENTATIVE.
    - SUBMIT GUARANTEES PROPERLY COMPLETED, TEST REPORTS AND QUALITY ASSURANCE CERTIFICATES AND REPORTS.
17. NO DEVIATIONS FROM DESIGN SHOWN ON THESE DRAWINGS IS PERMITTED WITHOUT WRITTEN APPROVAL FROM ROGERS AND CONSULTANT. ANY DEVIATIONS MAY RESULT IN CONTRACTOR CORRECTING THE INSTALLATION AT THEIR EXPENSE.
18. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, PROVINCIAL, AND FEDERAL SAFETY CODES AND REGULATIONS COVERNING THIS WORK.
20. PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID THE CONTRACTOR/OWNER. THE CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.

GENERAL NOTES (CONTINUED):

21. ALL HARDWARE ASSEMBLY SHALL CONFORM TO THE MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS. ANY MANUFACTURER'S INSTRUCTIONS/RECOMMENDATIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFUCTING NOTES ENCLOSED HEREIN.
22. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH ROGERS SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO ROGERS PRIOR TO COMMENCING WORK ON THE PROJECT.
23. THESE DOCUMENTS DO NOT INCLUDE THE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. SAFETY, CARE OF ADJACENT PROPERTIES AND COMPLIANCE WITH PROVINCIAL AND FEDERAL REGULATIONS REGARDING SAFETY SHALL BE THE CONTRACTOR'S RESPONSIBILITY AS PER THE CANADA LABOUR CODE – PART II, REGULATORS RESPECTING OCCUPATIONAL SAFETY & HEALTH. THE CONTRACTOR IS REQUIRED TO SUBMIT THE SAFETY MANUAL AT THE PROJECT SITE.
24. DO NOT CUT OR DRILL INTO STRUCTURAL MEMBERS OR CUT REBAR PROJECTIONS WITHOUT FIRST CONTACTING AND OBTAINING THE PERMISSION OF THE CONSULTANT. WHEN THE DRAWINGS INDICATE THAT NEW OPENINGS ARE REQUIRED IN A CONCRETE STRUCTURE, ALL SUCH AREAS ARE TO BE X-RAYED TO CONFIRM REBAR AND CONDUIT LOCATIONS PRIOR TO MAKING THE OPENINGS. IN ALL OTHER BUILDING TYPES THE CONTRACTOR MUST ENSURE ALL REQUIRED OPENINGS AVOID STRUCTURAL MEMBERS. NOTIFY THE ENGINEER IF CONFLICTS ARISE.

COMMUNICATION NOTES:

1. CONTRACTOR TO PERFORM TWO SWEEP TESTS IN ACCORDANCE WITH ROGERS SPECIFICATIONS TO ENSURE PROPER EQUIPMENT FUNCTIONALITY. TEST RESULTS SHALL BE FORWARDED TO ROGERS IN DOCUMENT AND DIGITAL FORM. HARD COPY TO REMAIN ON SITE IN SEPARATE BINDER.
2. A PROFESSIONAL CONSULTING SERVICE SHALL BE UTILIZED TO PROVIDE A CERTIFIED ANTENNA ALIGNMENT REPORT TO ROGERS. THIS SERVICE SHALL BE INCLUDED IN THE TENDER PRICE.
3. ALL JUMPER CABLES TO THE EQUIPMENT CABINETS MUST BE OF PROPER LENGTH WITH LESS THAN 152mm SLACK. IF JUMPER INSTALLATION MUST BE PERFORMED PRIOR TO EQUIPMENT INSTALLATION, THE CONTRACTOR MUST ENSURE THAT THEY ARE CUT TO APPROPRIATE LENGTH AND PROTECTED UNTIL EQUIPMENT IS INSTALLED.
4. LABEL ANTENNA CABLES AT EQUIPMENT AND AT ANTENNAS AS PER ROGERS SPECIFICATIONS.
5. ONLY QUALIFIED PERSONNEL HAVING COMPLETED A MANUFACTURER CONNECTOR COURSE SHALL COMPLETE THE INSTALLATION OF CONNECTORS, GROUND KITS, AND WEATHERPROOFING KITS. PROOF OF CERTIFICATION OF PERSONNEL MAY BE REQUESTED AT SITE BY ROGERS OR ENGINEER. FAILURE TO PRODUCE MAY REQUIRE A CHANGE OF PERSONNEL TO A QUALIFIED PERSON.

STRUCTURAL SPECIFICATIONS:

1. UNLESS NOTED OTHERWISE ALL THE WORK TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITIONS OF THE BRITISH COLUMBIA BUILDING CODE (BCBC) AND CSA S37, ALONG WITH OCCUPATIONAL HEALTH AND HEALTH ACT AND REGULATIONS.
2. ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF CSA S16 AND WITH ROGERS CONSTRUCTION SPECIFICATIONS. STRUCTURAL STEEL SHALL BE NEW AND SHALL CONFORM TO G40.21. STEEL GRADE, UNLESS NOTED OTHERWISE OR APPROVED PRIOR TO CONSTRUCTION SHALL BE:

HOLLOW STRUCTURAL STEEL (HSS)	G40.21 W 350W
WIDE FLANGE SECTIONS	G40.21 W 350W
CHANNELS, ANGLES, PLATES, MISC	G40.21 W 300W
PIPE SECTIONS	ASTM A53 (241 MPA)

3. ALL CONCRETE REINFORCING SHALL BE IN ACCORDANCE WITH CSA G30.18-GRADE 400 DEFORMED BARS AND WITH ROGERS CONSTRUCTION SPECIFICATIONS.
4. ALL CAST IN PLACE CONCRETE SHALL BE IN ACCORDANCE WITH CSA A23.1/A23.2 AND WITH ROGERS CONSTRUCTION SPECIFICATIONS.
   PROVIDE MINIMUM CONCRETE COVER TO REINFORCING STEEL (U.N.O):
   a. SURFACES POURED AGAINST EARTH (GROUND): 75mm
   b. CONCRETE EXPOSED TO SOIL OR WEATHER: 75mm
   c. SLABS AND WALLS: 20mm
   d. BEAMS: 30mm
5. MINIMUM CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS: 30MPa.
6. BOLT SPECIFICATION:

ANCHOR BOLTS	A307 HDG OR BETTER
STRUCTURAL BOLTS	A325 16mm DIA. (U.N.O.) C/W LOCK WASHERS

7. ALL CONNECTIONS TO BE BEARING WITH BOLT THREADS OUTSIDE OF SHEAR PLANE. IF BOLTS ARE TO BE PRETENSIONED, IT SHALL BE TO THE VALUES AS SPECIFIED IN CSA S16 AND TO THE METHOD AS IN THE SAME STANDARD.
8. ALL STEEL INCLUDING NUTS, BOLTS AND WASHERS ARE TO BE HOT DIPPED GALVANIZED (U.N.O.) ACCORDING TO ASTM A153 OR CSA G164. PAINTED STEEL IS TO BE PRIMED AND FINISH COATED WITH ALKYD BASED PAINT.
9. TOUCH UP ALL FIELD DRILLING WITH 2 COATS OF GALVACON (ZINC RICH PAINT) OR APPROVED EQUAL.
10. ALL VENT HOLES REQUIRED FOR GALVANIZING ARE TO BE SEALED BY WELDED PLUG. GRIND SMOOTH AND TOUCH UP WITH TWO COATS OF ZINC RICH PAINT
11. ANTENNA CABLES NOT IN CABLE TRAY MUST BE SUPPORTED BY UNISTRUT CHANNELS AND CONDUIT CLAMPS AT MAX. 914mm O/C (U.N.O.).
12. ALL WELDING SHALL CONFORM TO W59 AND BY FABRICATORS QUALIFIED TO CSA W47.1 DIV 1 OR DIV 2. THE ELECTRODES SHALL BE E49XX.
13. ALL WELDS TO BE 6mm FILLET (U.N.O.)
14. BOLT HOLES TO BE 2mm GREATER THAN THE BOLT NOMINAL DIAMETER. EDGE AND END DISTANCES FOR BOLTS SHALL BE 1.5 TIMES THE BOLT DIAMETER. SPACING BETWEEN BOLTS SHALL BE 3 TIMES THE BOLT DIAMETER.
15. HSS SECTIONS ARE TO HAVE NO OPEN ENDS TO ACCUMULATE WATER.
16. ALL EXPANSION ANCHORS TO BE HILTI BRAND. ADHESIVE ANCHORS REQUIRE TESTING TO CONFIRM CAPACITY UNLESS WAIVED BY ENGINEER. ANCHORS SHALL BE INSTALLED AS PER MANUFACTURERS INSTRUCTIONS AND PROCEDURES. SPECIAL ATTENTION IS REQUIRED DURING COLD WEATHER INSTALLATIONS.
17. SUBMIT 3 SETS OF SHOP DRAWINGS FOR REVIEW BY ENGINEER PRIOR TO FABRICATION. SHOP DRAWINGS SHOULD INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS AND WELDED SECTIONS.
18. PROVIDE SONOBOURNE NP-1 CAULKING AROUND PERIMETER OF ALL WALL PLATES, ANGLES AND AT FASTENER PENETRATIONS THROUGH PLATES.
19. DESIGN LOADS (SALMON ARM, BC):
    1) WIND LOADS q 1:50 = 0.39kPa; q 1:10 = 0.30 kPa
    2) SNOW LOADS Ss=3.5kPa Sr=0.1kPa
    3) SEISMIC LOADS Sa(0.2)=0.131g
       Sa(0.5)=0.104g
       Sa(1.0)=0.075g
       Sa(2.0)=0.052g
       PGA=0.059g
20. GROUT UNDER BASE PLATES OF COLUMNS WITH A NON-SHRINK FLOWABLE GROUT WITH MIN. COMPRESSIVE STRENGTH OF 40 MPa AT 28 DAYS. TARGET MACHINE BASE OR SIMILAR CAST UNDER HYDRAULIC HEAD. ENSURE FULL AREA IS GROUTED. PROVIDE 25mm THICK GROUT (U.N.O.).

STRUCTURAL SPECIFICATIONS CONT'D:

21. ALL ANTENNA TYPES AND SIZES ARE AS NOTED ON THE ANTENNA SCHEDULE ON THE DRAWINGS. ALL MOUNTS ARE DESIGNED FOR THE SPECIFIC ANTENNA LISTED. ANY CHANGES TO THE ANTENNA TYPE MUST BE APPROVED BY THE ENGINEER.
22. EXPOSED CONCRETE FACES SHALL BE SMOOTHED WITH A STEEL TROWEL AND THE EDGES SHALL BE CHAMFERED 19mm AT 45°.
23. THE CONTRACTOR MUST X-RAY THE WALLS AND FLOORS IN ALL AREAS REQUIRING CORE DRILLING. DO NOT PROCEED WITH CORE DRILLING UNTIL X-RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
24. IF A POST-TENSION SLAB IS TO BE PENETRATED IN ANY MANNER, THE CONTRACTOR MUST X-RAY SLAB PRIOR TO CONSTRUCTION. DO NOT PROCEED WITH CORE DRILLING UNTIL X-RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION.
25. IF REQUIRED, ALL CORE DRILLING OF THE STRUCTURE INTO AREAS OCCUPIED BY OTHER TENANTS SHALL BE CARRIED OUT DURING HOURS, THAT ARE CONVENIENT TO THE BUILDING OWNER AND PROPERTY MANAGER. THE CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES AT HIS OWN EXPENSE. SEAL ALL PENETRATIONS.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

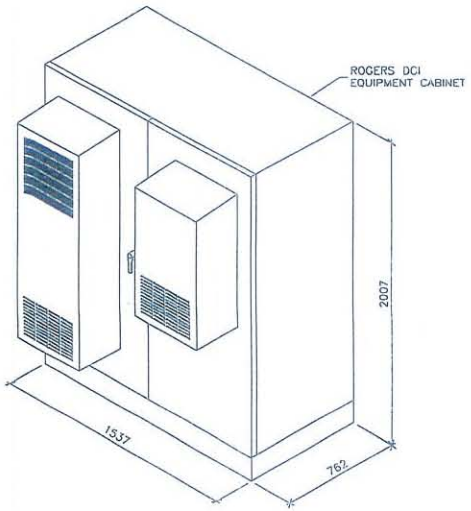
COREONE CONSULTING
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM
DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
GENERAL NOTES

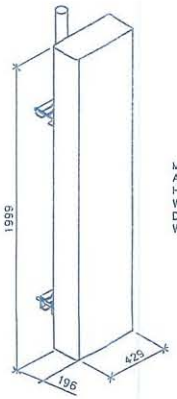
SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	G-1
PROJECT NO:	18C1184
DRAWING NO:	G-1

ROGERS DCI CABINET	
CABINET WEIGHT	499kg (1100lbs)
MAX. CABINET WEIGHT	948kg (2090lbs)



1 DCI EQUIPMENT ISOMETRIC
N.T.S.

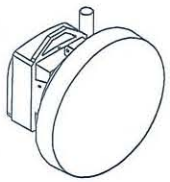
ANTENNA MODEL AS PER
RADIO SITE QUALIFICATION
DATED DECEMBER 20, 2018



MANUFACTURER:	HUAWEI
ANTENNA MODEL:	ASI4517R0v06
HEIGHT:	1999mm
WIDTH:	429mm
DEPTH:	196mm
WEIGHT:	36.0kg

2 ANTENNA ISOMETRIC
N.T.S.

MICROWAVE ANTENNA MODEL AS PER
TRANSMISSION ENGINEERING SITE
QUALIFICATION DATED FEBRUARY 8, 2019



MANUFACTURER:	ERICSSON
ANTENNA MODEL:	ANT2 0.6 80 HPX
DIAMETER:	610mm
WEIGHT:	T.B.D.

3 MICROWAVE ISOMETRIC
N.T.S.

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 10525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
EQUIPMENT AND
ANTENNA DETAILS

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	KO
DATE:	MAR 8/19
CAD FILE:	A-1
PROJECT NO:	18C1184
DRAWING NO:	A-1

ANTENNA LOADING CHART

#	ANTENNA ID		ANTENNA/HARDWARE TYPE P=PANEL W=WHIP		HEIGHT RAD CENTRE	ANTENNA HEIGHT REF.	POS	AZIMUTH (°)	MDT (°)	MET (°)		DIV (°)	SPACE DIV (m)	RRU LOADING	RRU'S INITIAL INSTALL	JUMPER TYPES	JUMPER LENGTH (m)	STATUS
	TECHNOLOGY	LABEL								700/850	1900/2100/2600							
1	LTE OFFSET	OFFSET-1	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	0°	0	4°	2°	N/A	N/A	3	3	H&S	<5	INITIAL
2	LTE	T.B.D.	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	60°	0	4°	2°	N/A	N/A	3	0	H&S	<5	FUTURE
3	LTE/UMTS	LTE-1	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	60°	0	4°	2°	N/A	N/A	4	3	H&S	<5	INITIAL
4	LTE OFFSET	OFFSET-2	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	120°	0	4°	2°	N/A	N/A	3	3	H&S	<5	INITIAL
5	LTE/UMTS	LTE-2	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	180°	0	4°	2°	N/A	N/A	4	3	H&S	<5	FUTURE
6	LTE	T.B.D.	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	180°	0	4°	2°	N/A	N/A	3	0	H&S	<5	INITIAL
7	LTE OFFSET	OFFSET-3	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	240°	0	4°	2°	N/A	N/A	3	3	H&S	<5	FUTURE
8	LTE/UMTS	LTE-3	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	310°	0	4°	2°	N/A	N/A	4	3	H&S	<5	INITIAL
9	LTE	T.B.D.	HUAWEI ASI4517R0v06	P	±16.96m	CENTRE	UP	310°	0	4°	2°	N/A	N/A	3	0	H&S	<5	INITIAL
10	GPS	GPS-1	GPSGLONASS-36-N-S	-	±16.96m	-	-	-	-	-	-	-	-	-	-	T.B.D	-	T.B.D.

MICROWAVE LOADING CHART

#	ANTENNA ID	ANTENNA TYPE	HEIGHT RAD CENTRE (ARL)	AZIMUTH (°)	LINE TYPE	LINE LENGTH (m)	STATUS
1	W0227 BASTION MTN	ANT2 0.6 15 HPX	16.89m	8.61°	T.B.D.	T.B.D.	INITIAL

MICROWAVE ANTENNA LOADING CHART AS PER TRANSMISSION ENGINEERING SITE QUALIFICATION DATED FEBRUARY 8, 2019

ANTENNA LOADING CHART AS PER RADIO SITE QUALIFICATION DATED DECEMBER 20, 2018

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

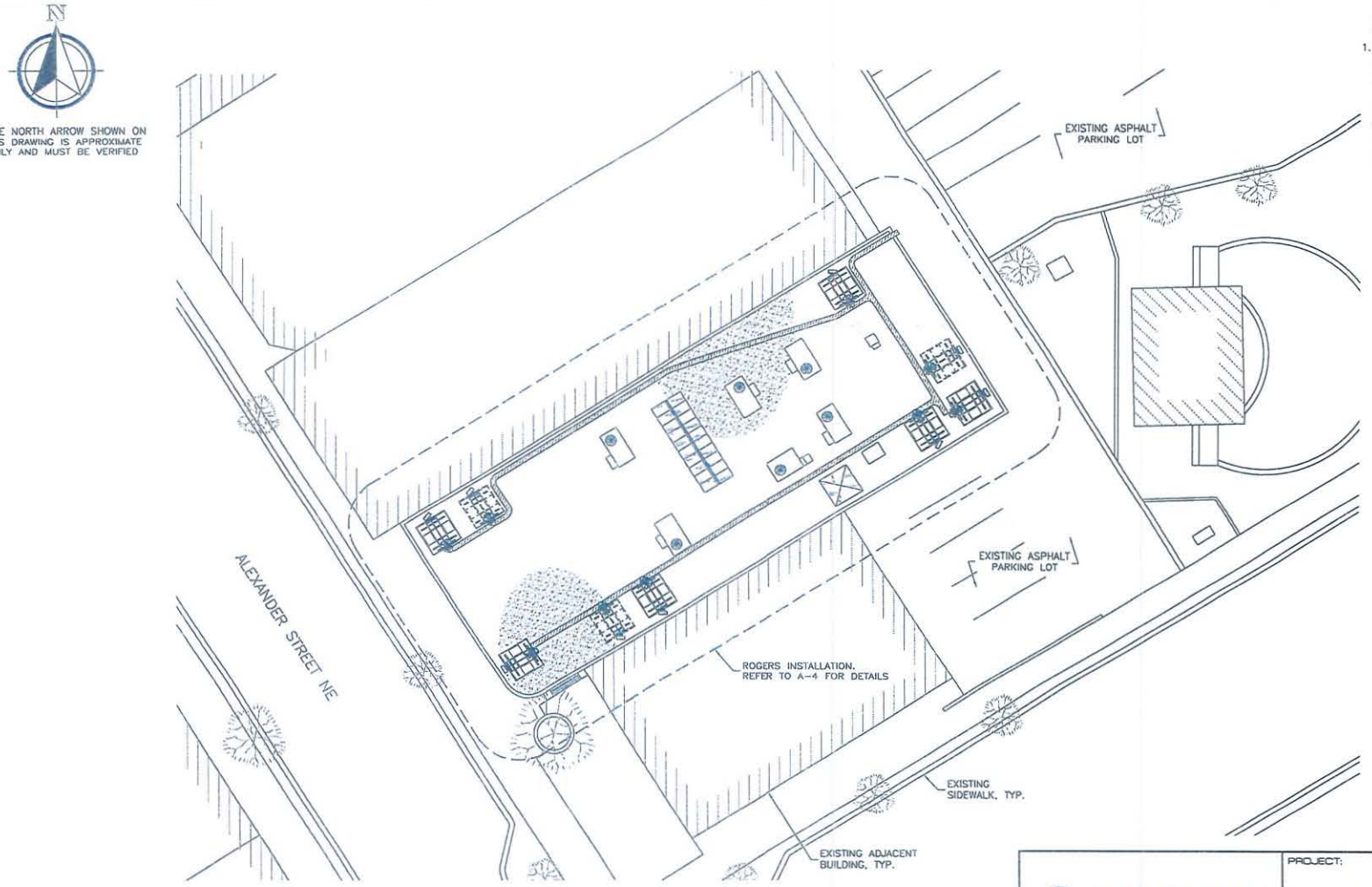
ROGERS.

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ANTENNA LOADING CHART

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-2
PROJECT NO:	18C1184
DRAWING NO:	A-2



1 SITE PLAN
1:250

NOTES:

1. SITE PLAN INFORMATION OBTAINED FROM SITE MEASUREMENTS TAKEN BY CORE ONE CONSULTING LTD. ON DECEMBER 14, 2018 AND AERIAL PHOTO. THIS DRAWING DOES NOT REPRESENT A SURVEY.

LEGAL DESCRIPTION:

PID: 008-345-996 LEGAL: LOT 1 SECTION 14 TOWNSHIP 20 RANGE 10 WEST OF THE 6TH MERIDIAN KAMLOOPS DIVISION YALE DISTRICT PLAN 17844

REV	DESCRIPTION	DATE	BY
D	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

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SALMON ARM
BRITISH COLUMBIA

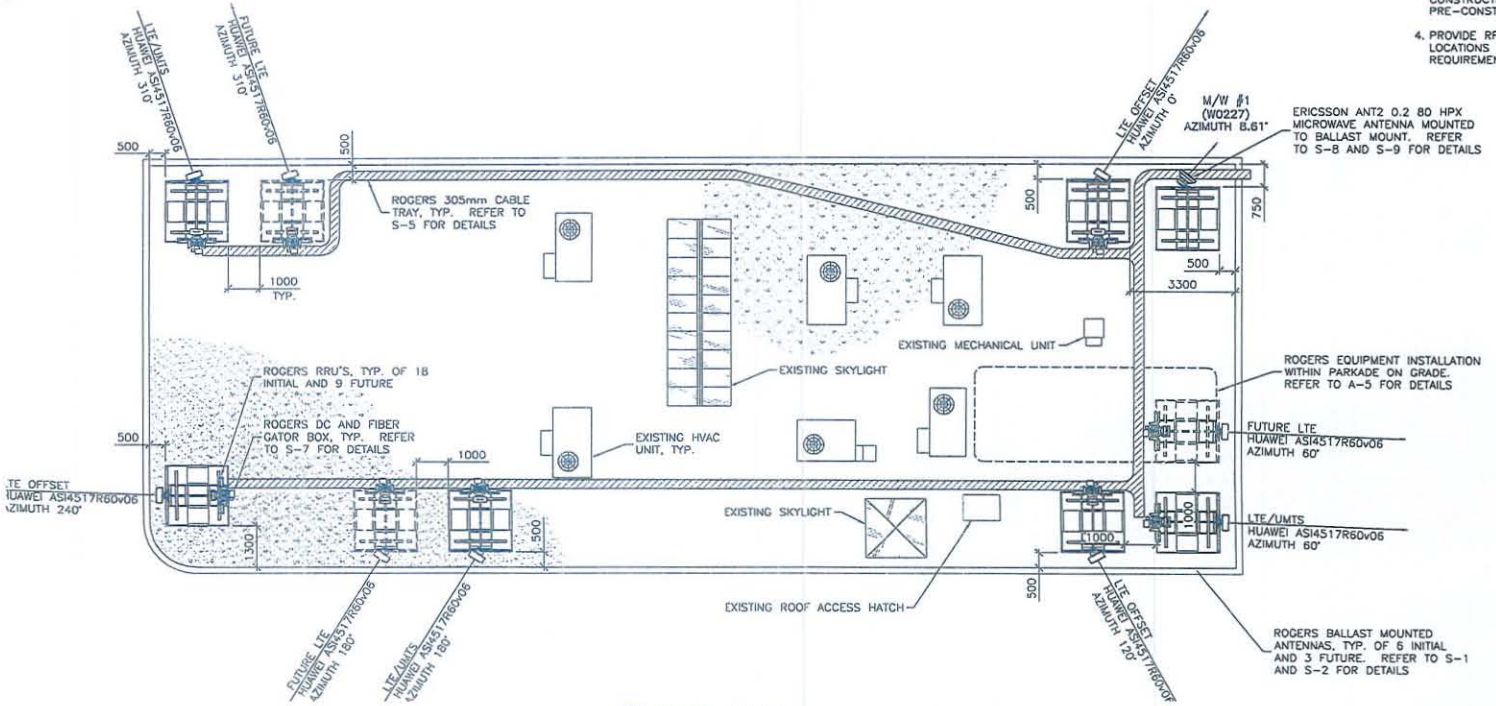
DRAWING TITLE:
SITE PLAN

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-3
PROJECT NO.	18C1184
DRAWING NO.	A-3

TRUE NORTH ARROW SHOWN ON THIS DRAWING IS APPROXIMATE ONLY AND MUST BE VERIFIED

NOTES:

1. ROOF PLAN INFORMATION OBTAINED FROM SITE MEASUREMENTS TAKEN BY CORE ONE CONSULTING LTD. DATED JANUARY 7, 2019.
2. CONTRACTOR TO SITE VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF ROOF MEMBRANE DURING CONSTRUCTION. REPAIR ANY DAMAGE TO PRE-CONSTRUCTION CONDITIONS.
4. PROVIDE RF SIGNAGE AT ALL ROOF ACCESS LOCATIONS IN ACCORDANCE WITH SC-6 REQUIREMENTS.



1 ROOF PLAN
1:150

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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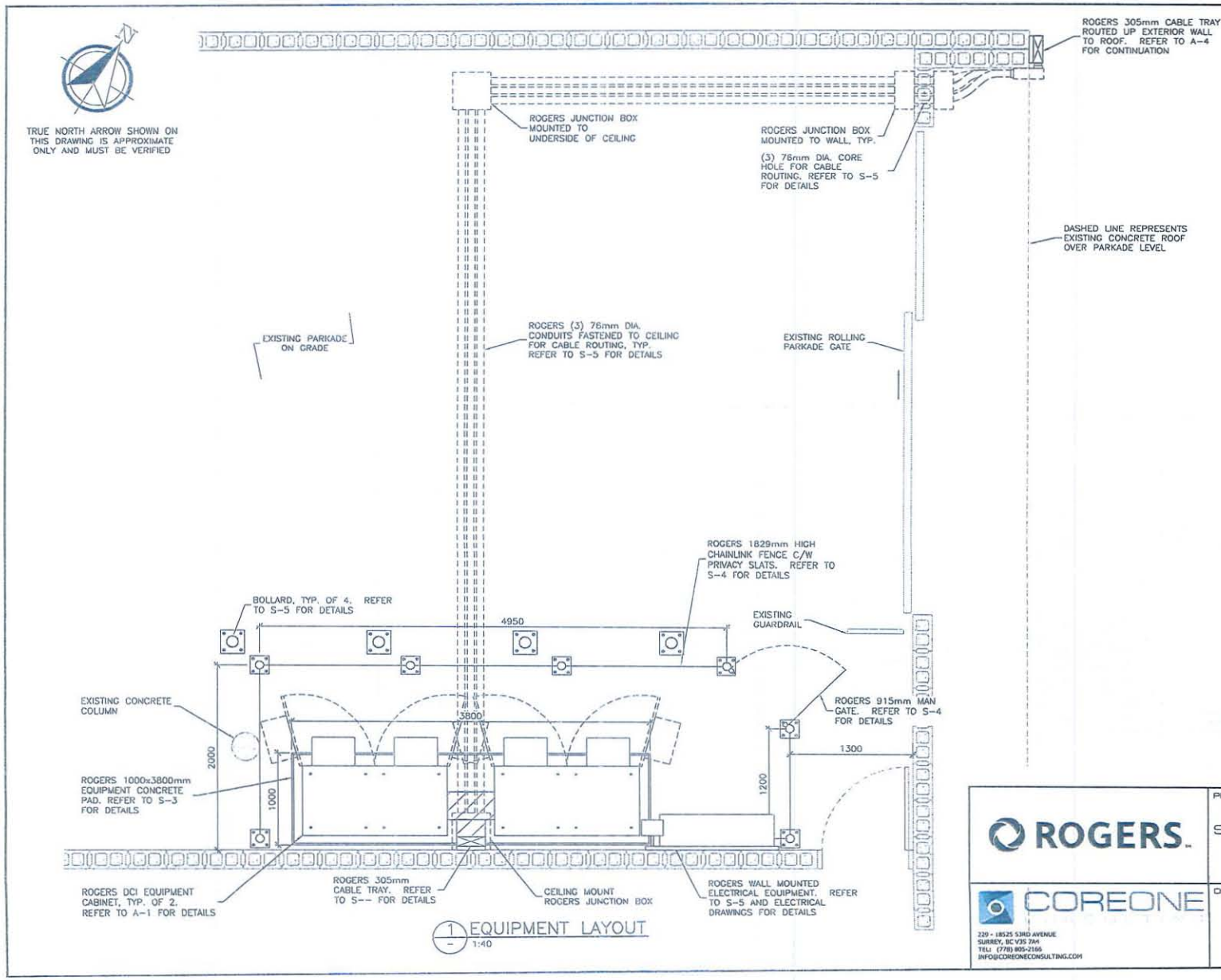
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ROOF PLAN

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-4
PROJECT NO:	18C1184
DRAWING NO:	A-4



1 / - EQUIPMENT LAYOUT
1:40

NOTES:

1. PARKADE PLAN INFORMATION OBTAINED FROM SITE MEASUREMENTS TAKEN BY CORE ONE CONSULTING LTD. DATED JANUARY 7, 2019.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

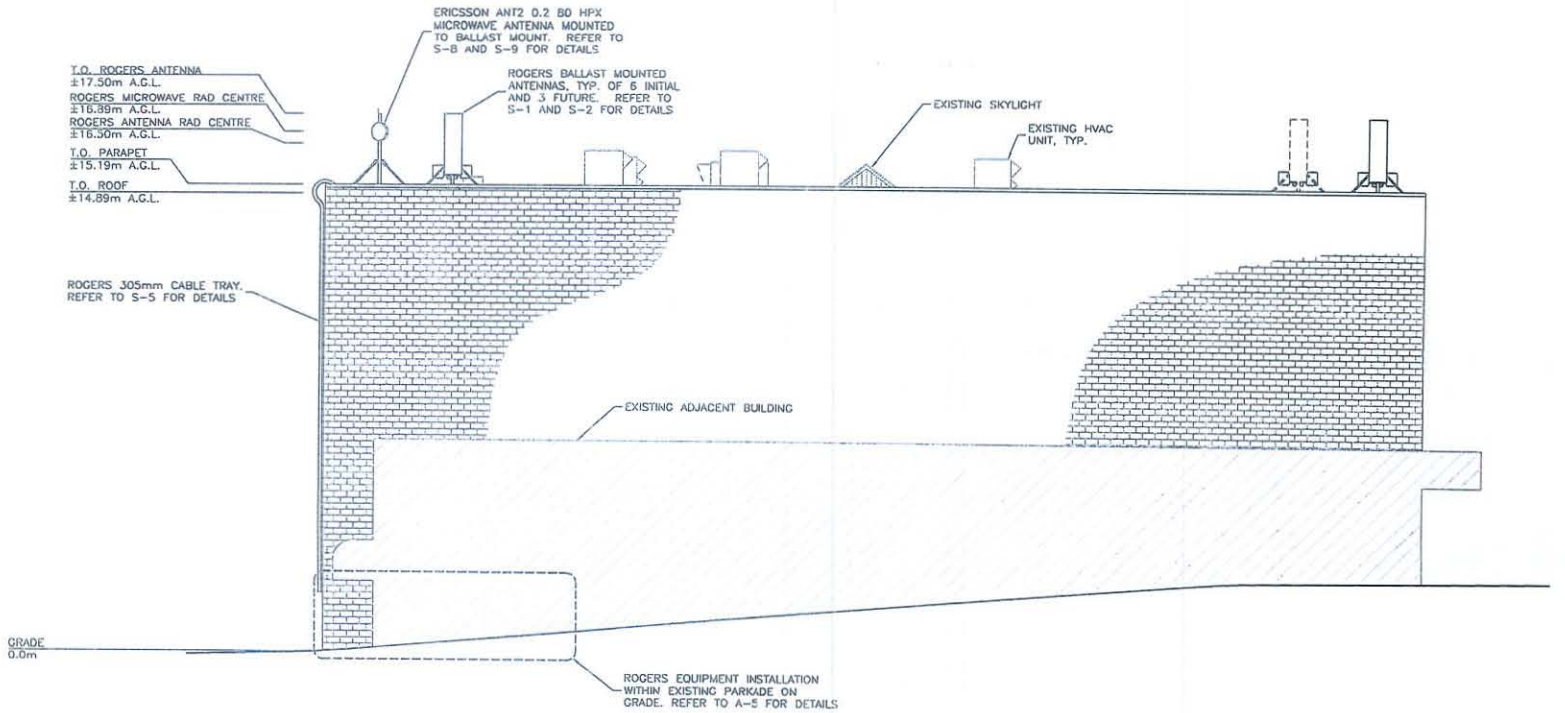
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
EQUIPMENT LAYOUT

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-5
PROJECT NO:	18C1184
DRAWING NO:	A-5

NOTES:

1. ELEVATION IS DIAGRAMMATIC ONLY.
2. PAINT ALL ANTENNAS, CABLE TRAY AND VISIBLE ANTENNA CABLES TO MATCH EXISTING BUILDING.



1 NORTHWEST ELEVATION
1:150

REV	DESCRIPTION	DATE	BY
2	GENERAL REVISIONS	APR 5/19	KC
1	REVISED ELEVATIONS	MAR 25/19	AD
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

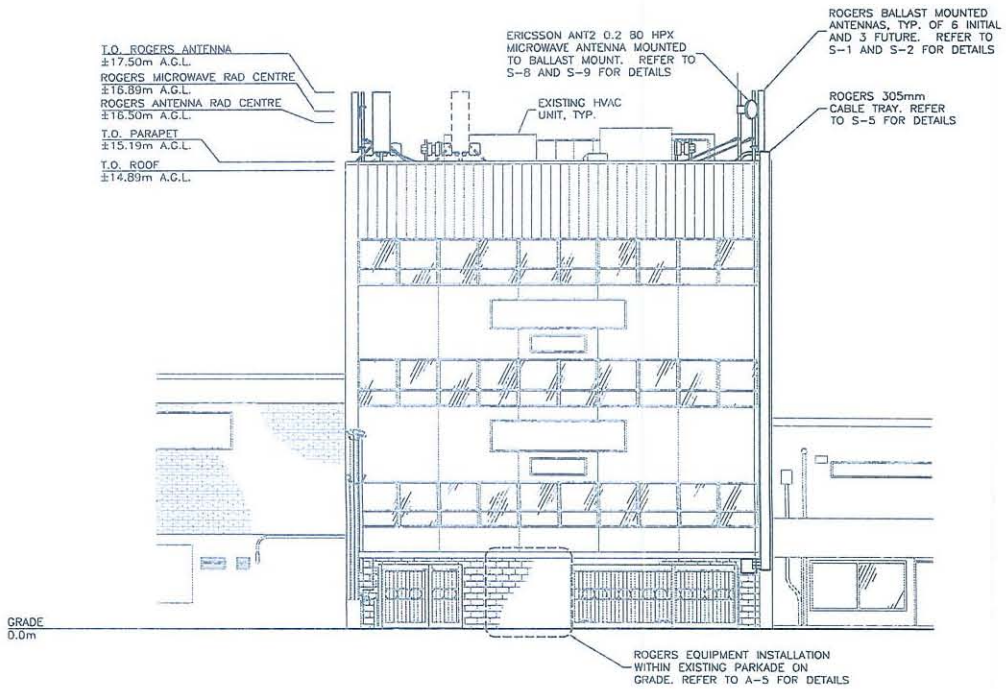
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
NORTHWEST ELEVATION

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-6
PROJECT NO:	18C1194
DRAWING NO:	A-6

NOTES:

1. ELEVATION IS DIAGRAMMATIC ONLY.
2. PAINT ALL ANTENNAS, CABLE TRAY AND VISIBLE ANTENNA CABLES TO MATCH EXISTING BUILDING.



1 NORTHEAST ELEVATION
1:150

REV	DESCRIPTION	DATE	BY
2	GENERAL REVISIONS	APR 5/19	KC
1	REVISED ELEVATIONS	MAR 25/19	AD
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

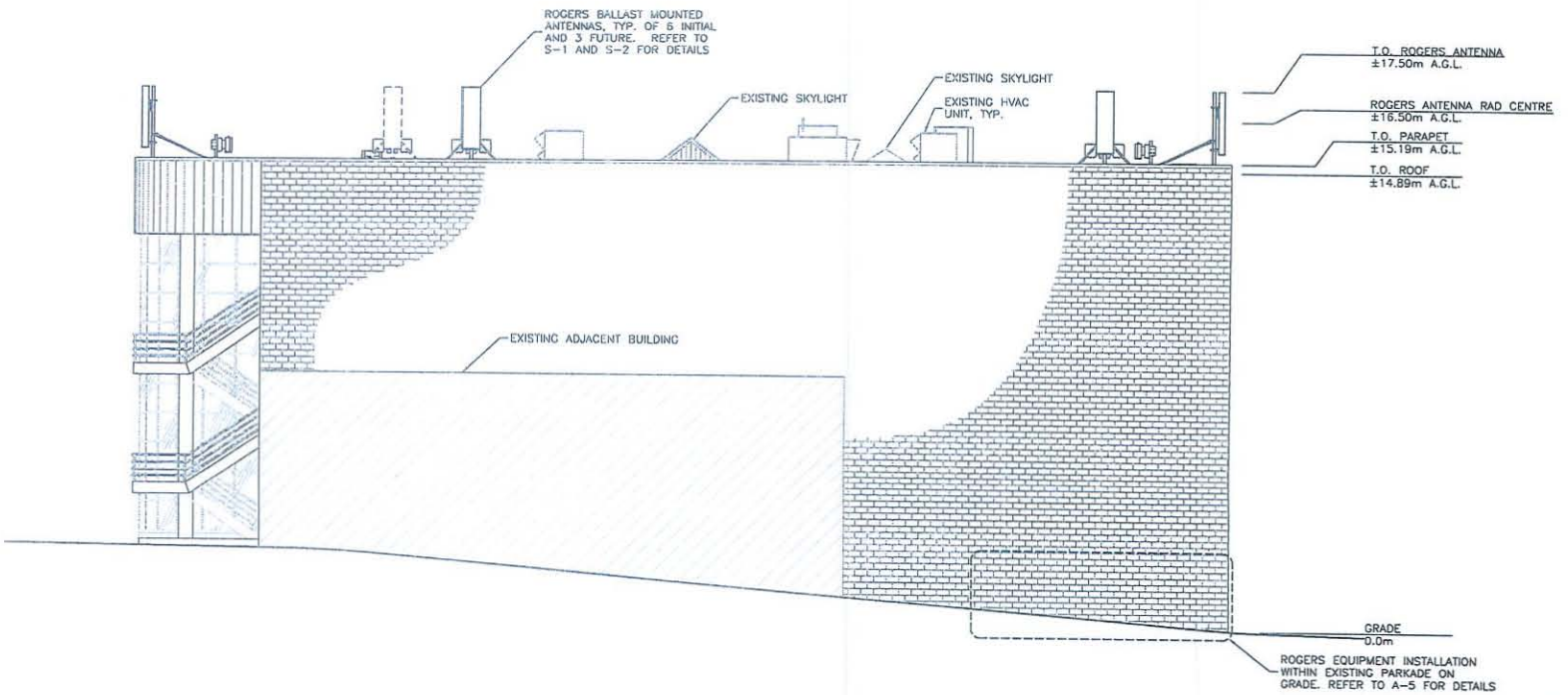
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
NORTHEAST ELEVATION

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-7
PROJECT NO:	18C1184
DRAWING NO:	A-7

NOTES:

1. ELEVATION IS DIAGRAMMATIC ONLY.
2. PAINT ALL ANTENNAS, CABLE TRAY AND VISIBLE ANTENNA CABLES TO MATCH EXISTING BUILDING.



1 SOUTHEAST ELEVATION
1:150

REV	DESCRIPTION	DATE	BY
2	GENERAL REVISIONS	APR 5/19	KC
1	REVISED ELEVATIONS	MAR 25/19	AD
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE

229 - 18525 53RD AVENUE
SURREY, BC V3S 7W4
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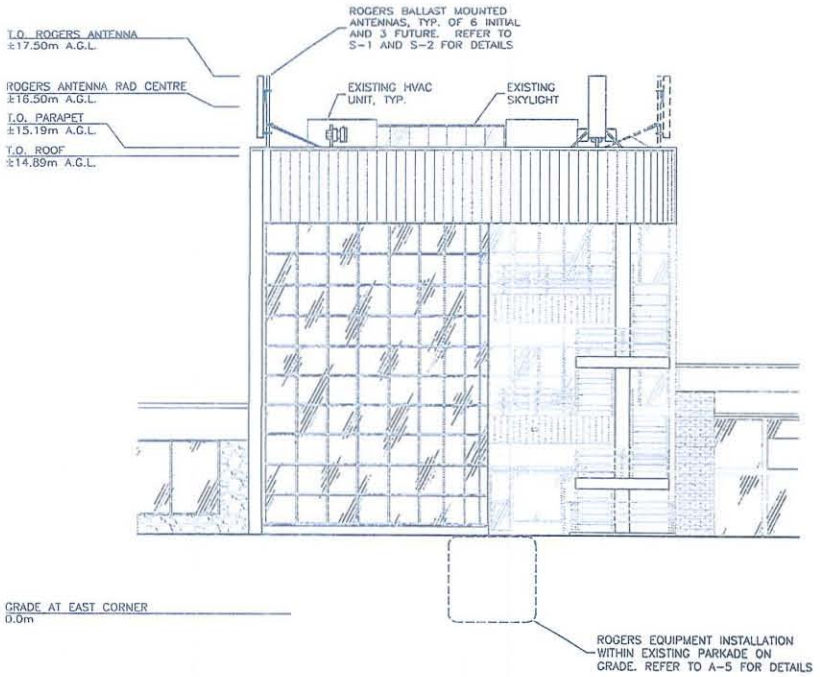
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
SOUTHEAST ELEVATION

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-8
PROJECT NO:	18C1184
DRAWING NO:	A-8

NOTES:

1. ELEVATION IS DIAGRAMMATIC ONLY.
2. PAINT ALL ANTENNAS, CABLE TRAY AND VISIBLE ANTENNA CABLES TO MATCH EXISTING BUILDING.



1 SOUTHWEST ELEVATION
1:150

REV	DESCRIPTION	DATE	BY
2	GENERAL REVISIONS	APR 5/19	KC
1	REVISED ELEVATIONS	MAR 25/19	AD
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

COREONE
229 - 19525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
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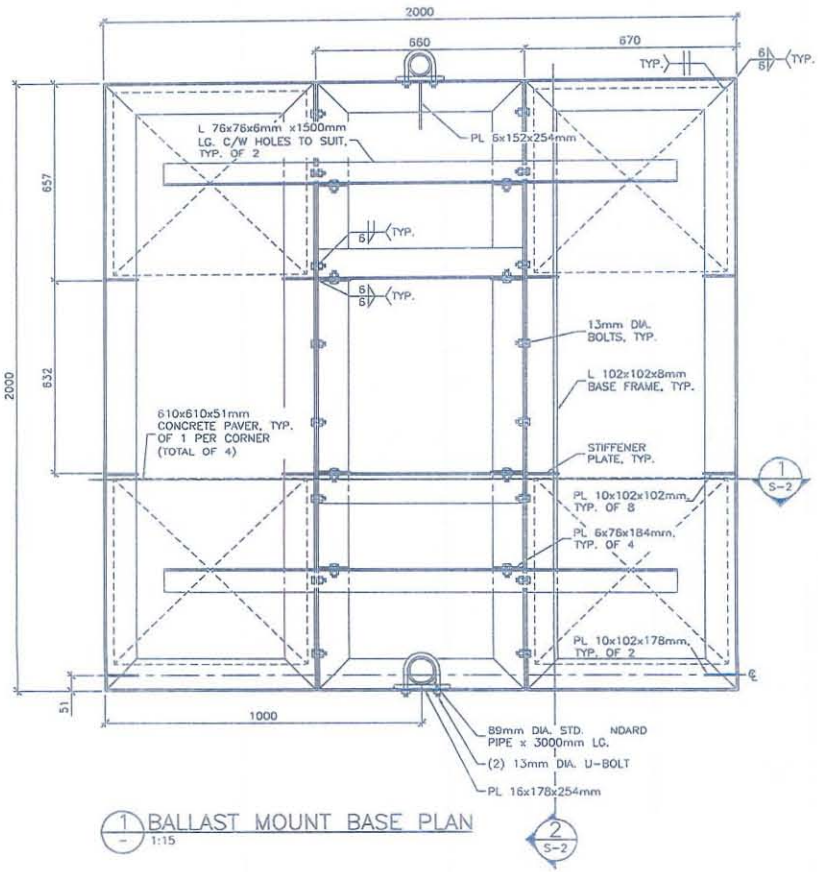
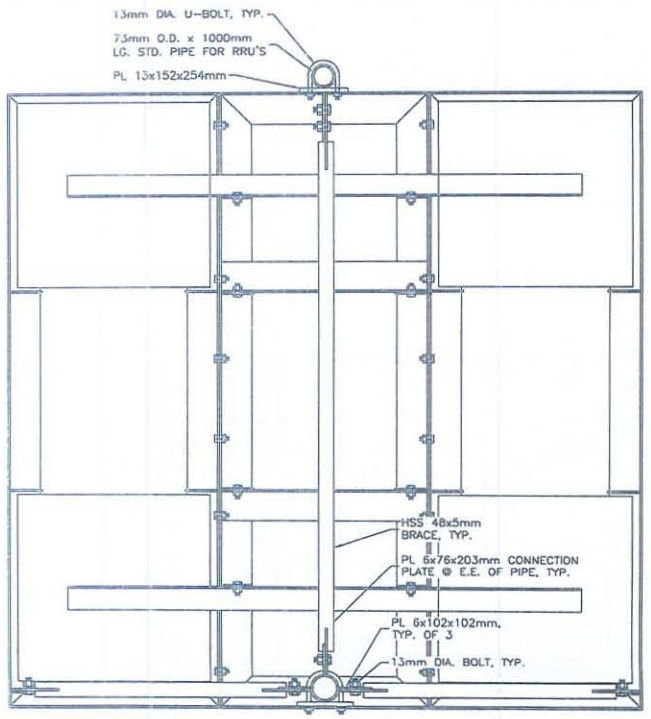
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
SOUTHWEST ELEVATION

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	A-9
PROJECT NO:	18C1184
DRAWING NO:	A-9



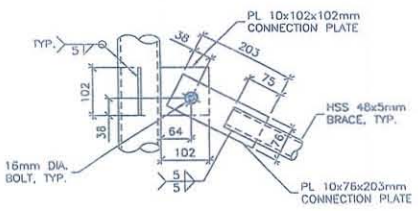
1 BALLAST MOUNT BASE PLAN
1:15



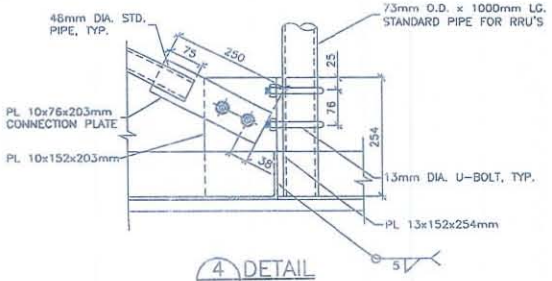
2 BALLAST MOUNT DIAGONAL PLAN
1:15

NOTES:

1. REFER TO G-1 FOR SPECIFICATIONS.
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. PROVIDE VENT HOLES AS REQUIRED FOR GALVANIZING.
4. ALL WELDS TO BE SEALED.
5. MINIMUM WEIGHT OF PAVER 90LBS.
6. THE EXISTING BUILDING STRUCTURAL ELEMENTS ARE ADEQUATE TO SUPPORT THE LOADING FROM THE PROPOSED TELECOMMUNICATION EQUIPMENT MOUNTS.
7. BEFORE INSTALLING THE BALLAST MOUNT THE CONTRACTOR SHALL CLEAN THE ROOF AREA THAT IS TO BE FREE FROM ANY DUST, IRREGULARITIES AND VEGETATION ETC. THE RUBBER MAT SHALL SIT ON A CLEAN ROOF SURFACE.



3 DETAIL
1:10



4 DETAIL
1:10

REV	DESCRIPTION	DATE	BY
D	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

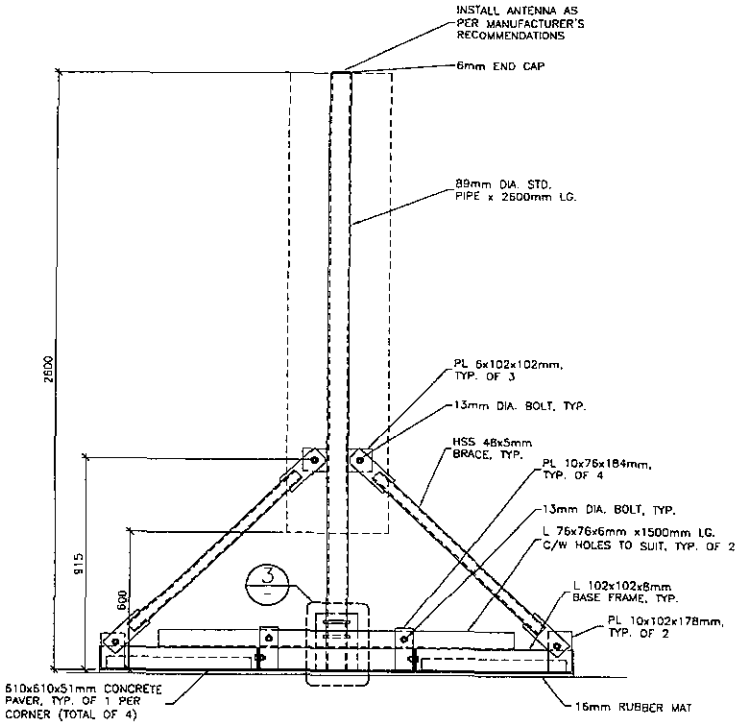
DRAWING TITLE:
PANEL ANTENNA BALLAST MOUNT DETAILS I

SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-1
PROJECT NO:	18C1184
DRAWING NO:	S-1

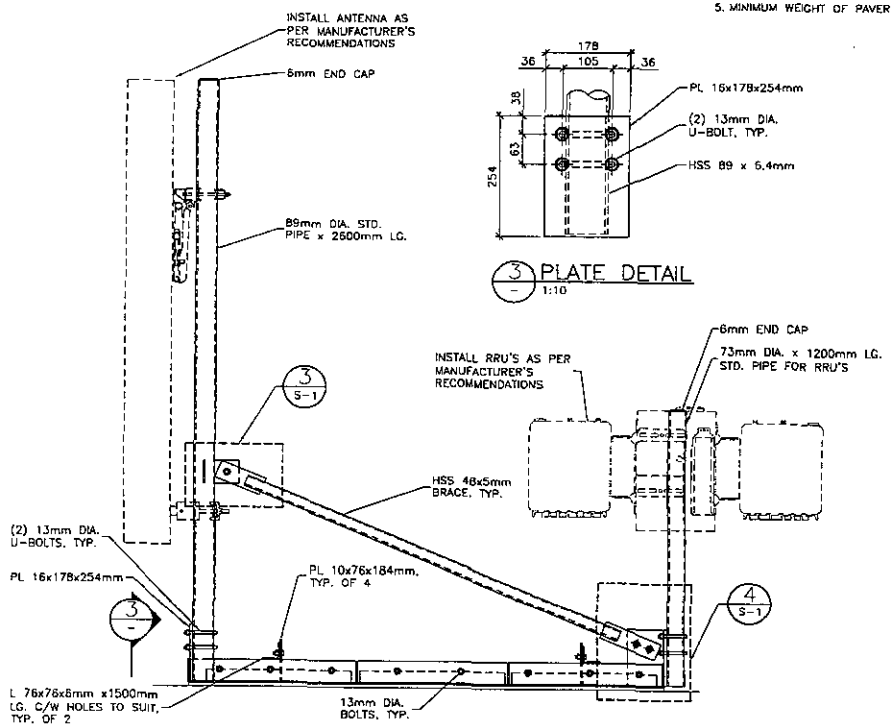
Appendix 3 - Photosimulations

NOTES:

1. REFER TO G-1 FOR SPECIFICATIONS.
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. PROVIDE VENT HOLES AS REQUIRED FOR GALVANIZING.
4. ALL WELDS TO BE SEALED.
5. MINIMUM WEIGHT OF PAVER 90LBS.



1 / - BALLAST MOUNT ELEVATION
1:20



3 / - PLATE DETAIL
1:10

2 / - BALLAST MOUNT ELEVATION
1:20

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

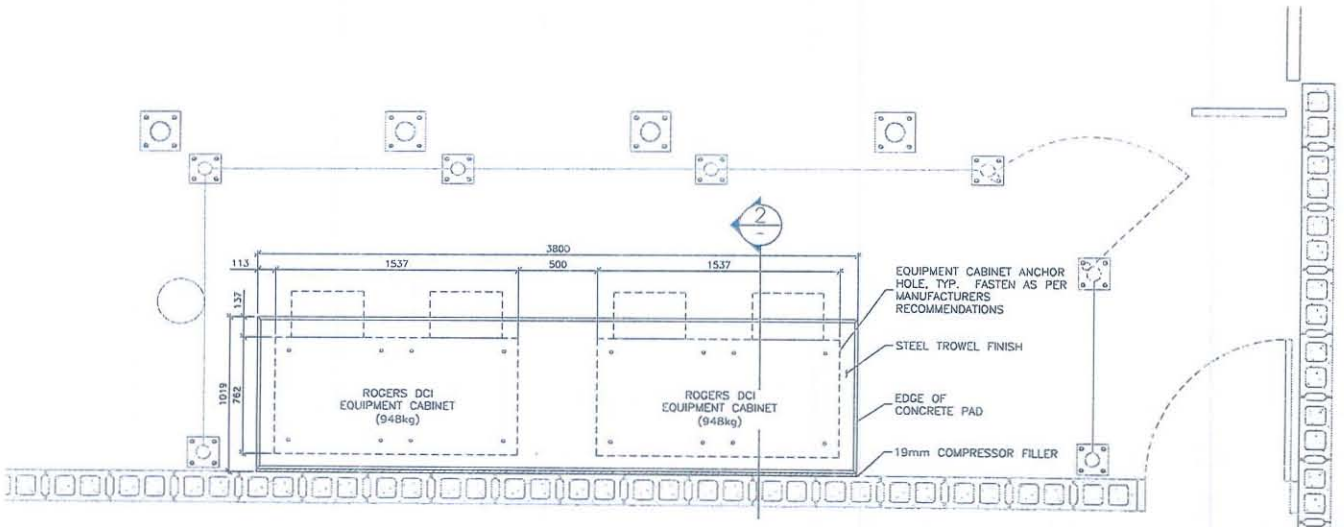
COREONE CONSULTING

229 - 16525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2156
INFO@COREONECONSULTING.COM

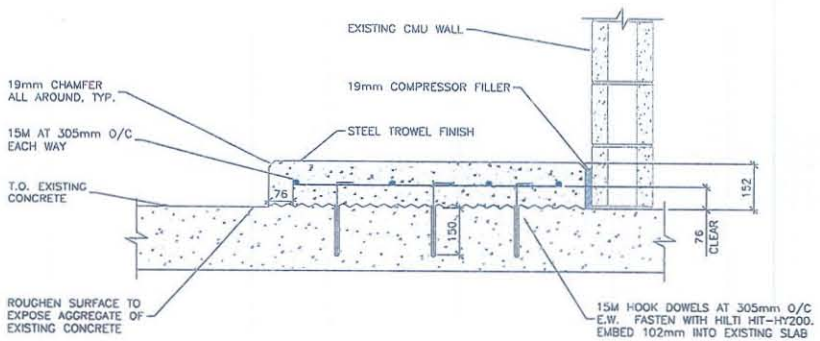
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
PANEL ANTENNA BALLAST MOUNT DETAILS II

SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-2
PROJECT NO:	18C1164
DRAWING NO:	S-2



1 CONCRETE PAD PLAN
1:25



2 CONCRETE PAD SECTION
1:15

NOTES:

1. REFER TO G-1 FOR GENERAL NOTES.
2. SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. ALL CONCRETE WORK SHALL BE EXECUTED IN CONFORMITY WITH THE CSA A23.1-94 STANDARD.
4. CONCRETE STRENGTH AT 28 DAYS: 30MPa.
5. ENTRAINED AIR: 5% TO 8%.
6. USE CSA TYPE 50 SULPHATE RESISTING CEMENT.
7. REINFORCING STEEL SHALL CONFORM WITH CSA G30.18 STANDARD, GRADE 400MPa.
8. COVERING OF THE REINFORCED STEEL SHALL BE IN ACCORDANCE WITH THE ACNOR A23.3 STANDARD AND THE MINIMUM THICKNESS SHALL BE:
   - POURED CONCRETE IN CONTACT WITH SOIL: 75mm
   - CONCRETE EXPOSED TO SOIL OR WEATHER: 75mm
9. EXPOSED CONCRETE FACES SHALL BE SMOOTHED WITH A STEEL TROWEL AND THE EDGES SHALL BE CHAMFERED 19mm AT 45°.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

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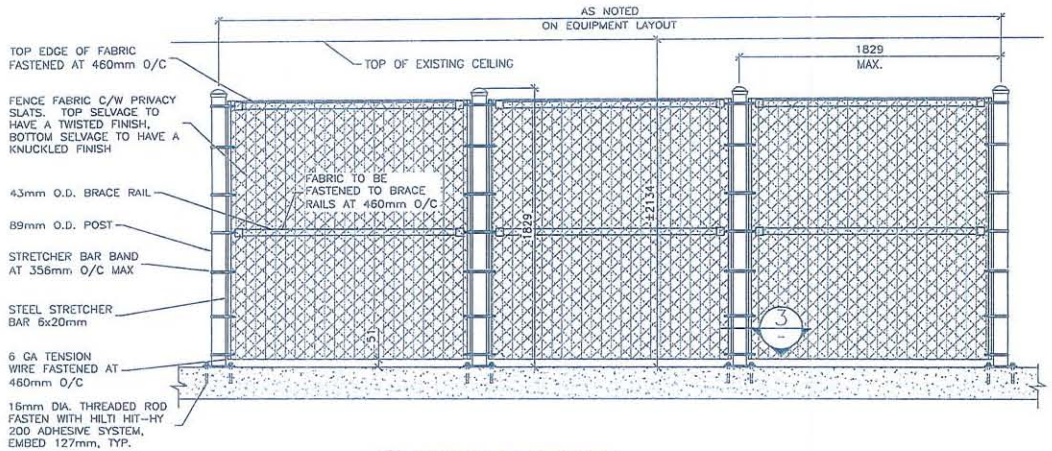
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
CONCRETE EQUIPMENT PAD DETAILS

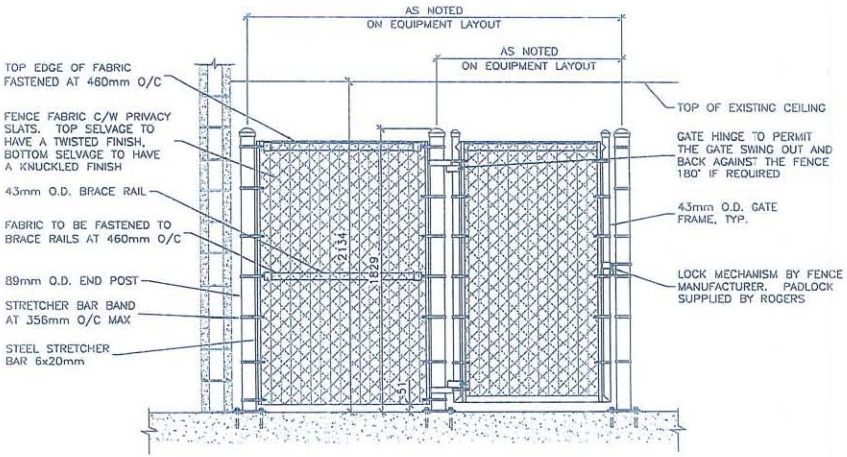
SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-3
PROJECT NO:	18C1184
DRAWING NO:	S-3



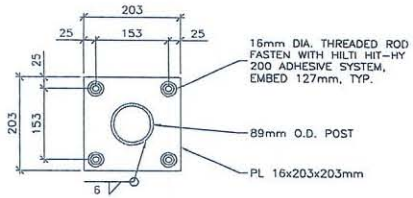
1 FENCE ELEVATION
1:30

NOTES:

1. REFER TO ROGERS NETWORK STANDARD 4007 FOR ALL FENCING REQUIREMENTS.
2. INSTALL FENCING PER CAN2-138.1 AND SWING GATES PER CAN2-138.4.
3. GATE POST, CORNER, END OR PULL POST: 88.9mm O.D. SCHEDULE 40, FOR GATE WIDTHS UP TO 1829mm OR 3658mm FOR DOUBLE SWING GATE PER CAN2-138.4.
4. LINE POSTS: 60.325mm O.D. SCHEDULE 40 PER CAN2-138.2.
5. GATE FRAME: 42.2mm O.D. SCHEDULE 40 PER CAN2-138.4.
6. TOP RAIL AND BRACE RAIL: 42.9mm O.D. x 3mm PIPE PER CAN2-138.2.
7. FABRIC: TYPE 1 STEEL FABRIC, CLASS A, ZINC COATED, STYLE 2 MEDIUM STEEL WIRE, 3.5mm DIA., HOT-DIP GALVANIZED AFTER WEAVING. THE FABRIC SHALL BE 1800mm WIDE WITH A UNIFORM 50mm DIAMOND PATTERN CHAIN LINK MESH CLOSED AT ONE EDGE BY KNUCKLING AND AT THE OTHER EDGE BY TWISTING TO FORM A BARB, CONFORMING TO CAN2-138.1.
8. DIAMETER OF THE TOP AND BOTTOM WIRES SHOULD BE 5mm AND 3.5mm RESPECTIVELY. PROVIDE A SINGLE WRAP OF FABRIC TIE AT POSTS, RAILS, AND AT TENSION WIRE BY HOG RINGS. MAXIMUM SPACING 305mm O/C.
9. TENSION WIRE: MINIMUM 6 GAUGE GALVANIZED STEEL.
10. GATE LATCH: 35mm O.D. PLUNGER ROD WITH MUSHROOM TYPE CATCH.
11. DETERMINE IF LOCAL ORDINANCE REQUIRE A BARBED WIRE PERMIT. COMPLY TO REGULATIONS IF APPLICABLE.
12. FABRIC HEIGHT = 1829mm.



2 SINGLE GATE ELEVATION
1:40



3 BASE PLATE DETAIL
1:10

REV	DESCRIPTION	DATE	BY
D	ISSUED FOR REVIEW	MAR 8/19	AD

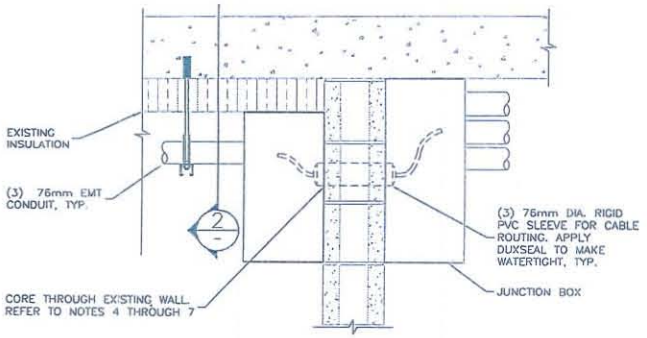
ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

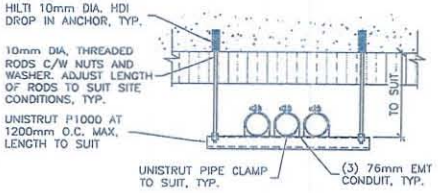
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
CHAINLINK FENCE DETAILS

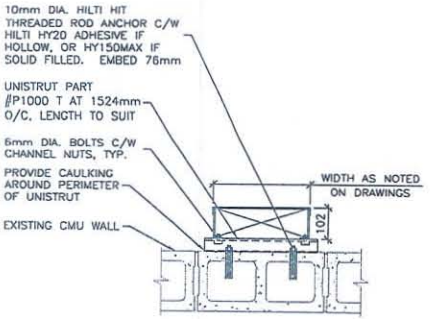
SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-4
PROJECT NO:	18C1184
DRAWING NO:	S-4



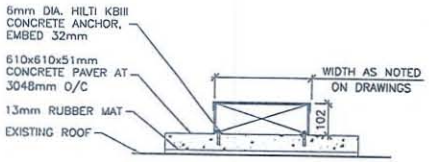
1 CABLE ROUTING SECTION
1:15



2 CABLE ROUTING SECTION
1:15



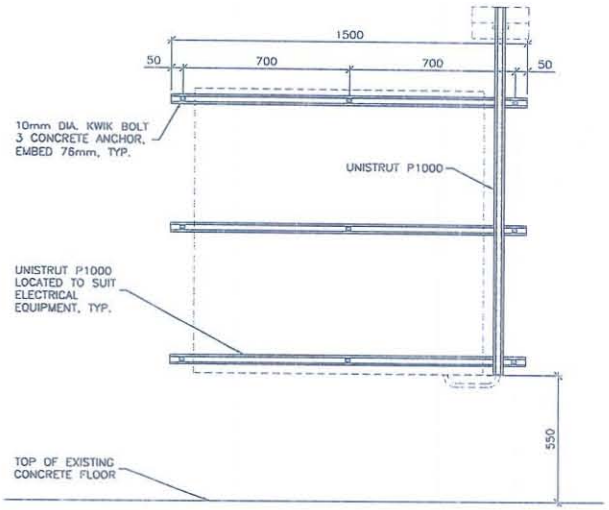
3 CABLE TRAY DETAIL
1:15



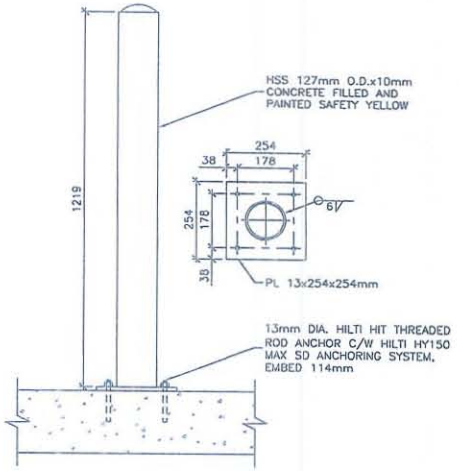
4 CABLE TRAY DETAIL
1:15

NOTES:

1. REFER TO G-1 FOR GENERAL NOTES.
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. CABLE TRAY IS STEEL LADDER TYPE C (18 GAUGE), NOMINAL DEPTH OF 100mm AND RUNGS AT 457mm O/C MAXIMUM WITH MATCHING COVER PLATE. CONTRACTOR TO PROVIDE ALL ELBOWS, TEE'S AND OTHER FITTINGS AS REQUIRED TO COMPLETE THE CABLE TRAY ROUTE. CABLE TRAY RADIUS OF CORNER PIECES TO SUIT CABLE BEND RADIUS.
4. ALL ANTENNA AND GROUND CABLES TO EXIT CABLE TRAY VIA SIDEWALL PENETRATIONS C/W GROMMETS.
5. UTILIZE SONNEBORN TYPE NP-1 CAULKING FOR SEALING ALL EXTERIOR WALL PENETRATIONS.
6. ALL SERVICES PENETRATING WALLS OR FLOORS SHALL BE IN CONDUIT UNLESS SPECIFIED OTHERWISE. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL BE FIRESTOPPED. REFER TO G-1 FOR REQUIREMENTS.
7. THE CONTRACTOR SHALL X-RAY THE WALLS AND FLOORS IN ALL AREAS REQUIRING CORE DRILLING. DO NOT PROCEED WITH CORE DRILLING UNTIL X-RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
8. ALL CORE DRILLING OF THE STRUCTURE INTO AREAS OCCUPIED BY OTHER TENANTS SHALL BE CARRIED OUT DURING HOURS, THAT ARE CONVENIENT TO THE BUILDING OWNER AND PROPERTY MANAGER. THE CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES AT HIS OWN EXPENSE. SEAL ALL PENETRATIONS.



5 ELECTRICAL EQUIPMENT MOUNTING ELEVATION
1:20



6 BOLLARD DETAIL
1:15

REV	DESCRIPTION	DATE	BY
D	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

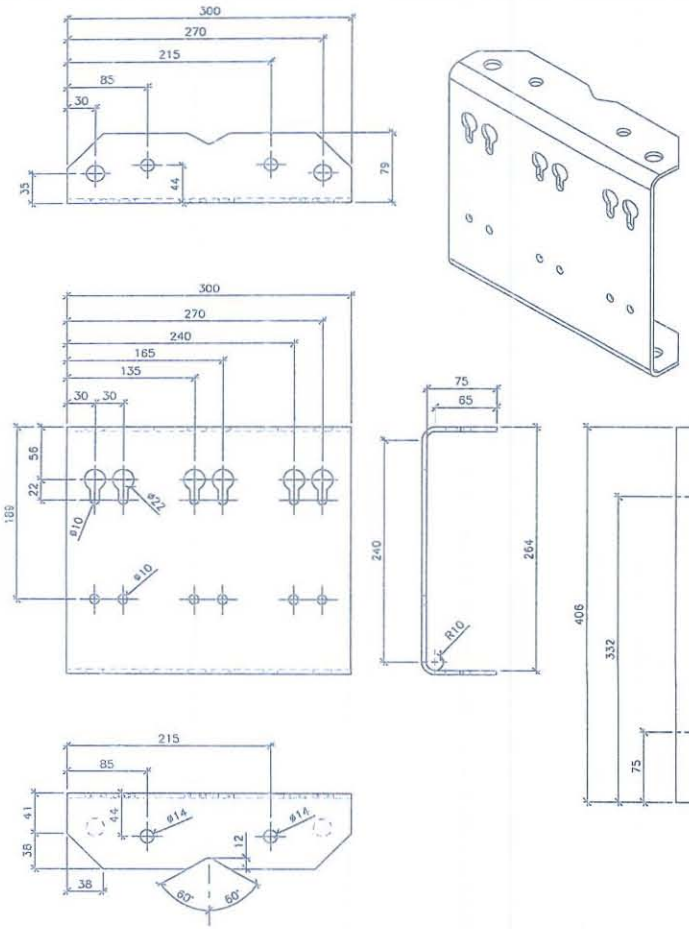
DRAWING TITLE:
STRUCTURAL DETAILS

SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-5
PROJECT NO:	18C1184
DRAWING NO:	S-5

Appendix 3: Proposal Plans

NOTES:

1. REFER TO G-1 FOR GENERAL NOTES
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.



MATERIAL: PL 4.8mm
GRADE: G40.21 44W (300W)
FINISH: HDG
BLACK WEIGHT: 9.3lb (4.3kg)
HDG: 9.8lb (4.5kg)

1 ANDRELL PLATE DETAIL
1:30

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

COREONE
229 - 18525 53RD AVENUE
SURREY, BCV3S 7M4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

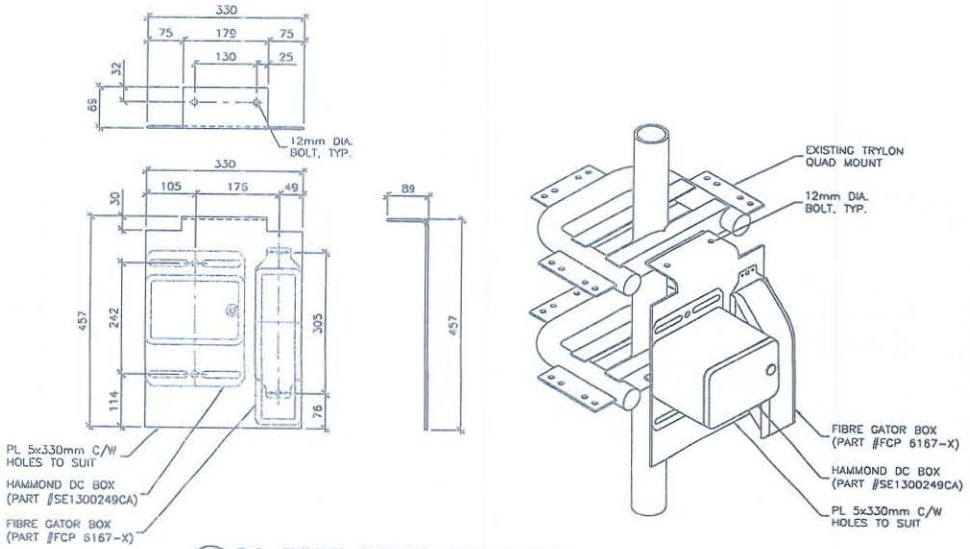
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ANDRELL PLATE DETAIL

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-6
PROJECT NO.	18C1184
DRAWING NO.	S-6

NOTES:

1. REFER TO G-1 FOR GENERAL NOTES
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.



1 DC FIBRE GATOR BOX DETAIL
1:10

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

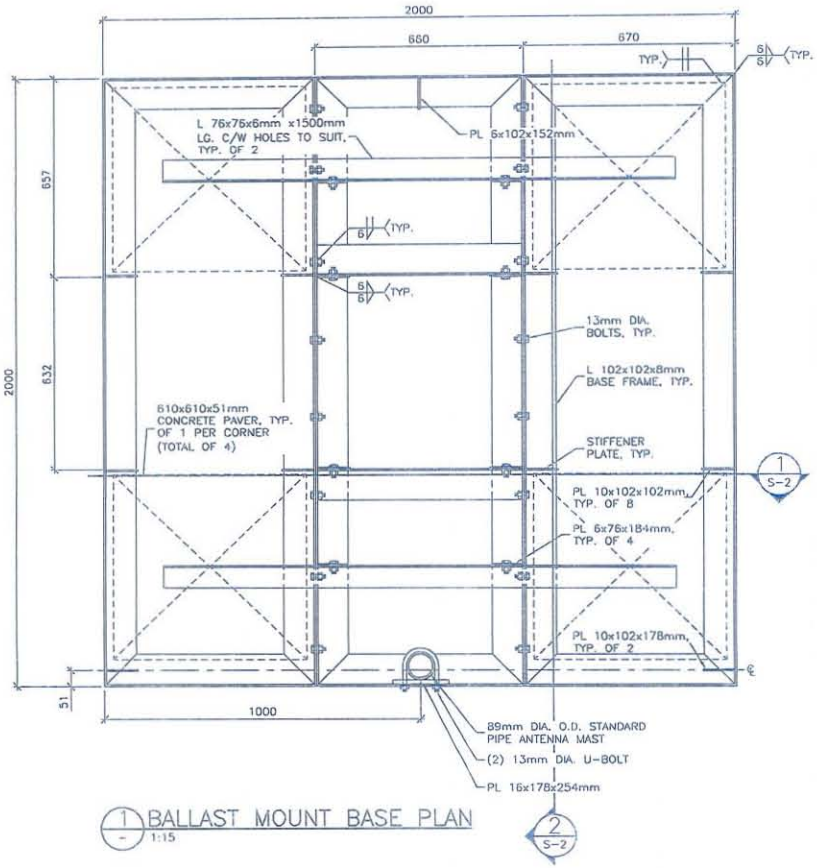
COREONE

229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

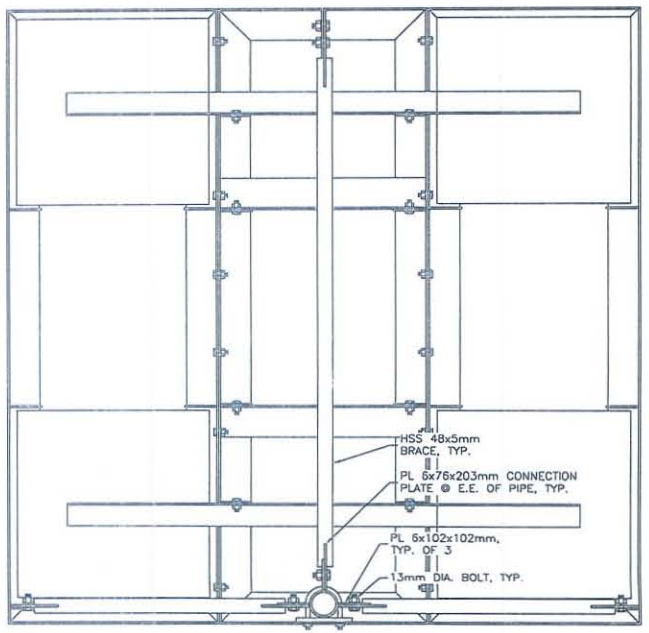
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
DC FIBRE GATOR BOX DETAIL

SCALE:	AS NOTED
CHECK BY:	LC
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	S-7
PROJECT NO:	19C1194
DRAWING NO:	S-7



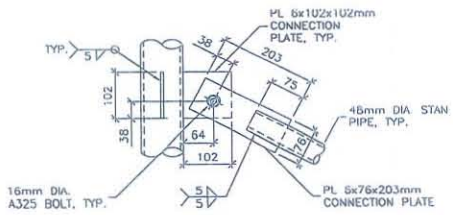
1 BALLAST MOUNT BASE PLAN
1:15



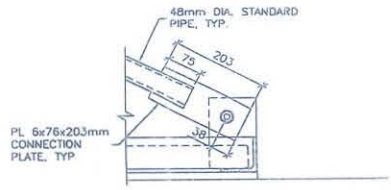
2 BALLAST MOUNT DIAGONAL PLAN
1:15

NOTES:

1. REFER TO G-1 FOR SPECIFICATIONS.
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. PROVIDE VENT HOLES AS REQUIRED FOR GALVANIZING.
4. ALL WELDS TO BE SEALED.
5. MINIMUM WEIGHT OF PAVER 90LBS.
6. THE EXISTING BUILDING STRUCTURAL ELEMENTS ARE ADEQUATE TO SUPPORT THE LOADING FROM THE PROPOSED TELECOMMUNICATION EQUIPMENT MOUNTS.
7. BEFORE INSTALLING THE BALLAST MOUNT THE CONTRACTOR SHALL CLEAN THE ROOF AREA THAT IS TO BE FREE FROM ANY DUST, IRREGULARITIES AND VEGETATION ETC. THE RUBBER MAT SHALL SIT ON A CLEAN ROOF SURFACE.



3 DETAIL
1:10



4 DETAIL
1:10

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

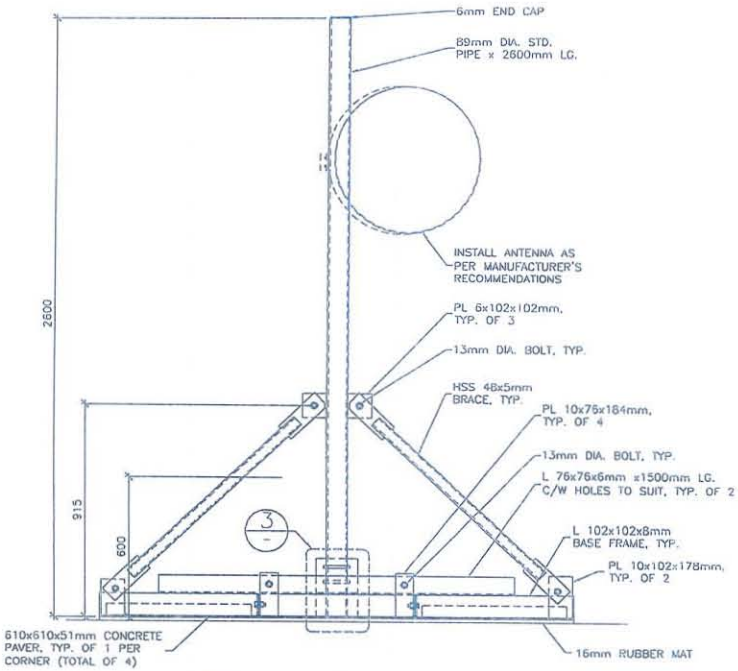
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
MICROWAVE
ANTENNA BALLAST
MOUNT DETAILS II

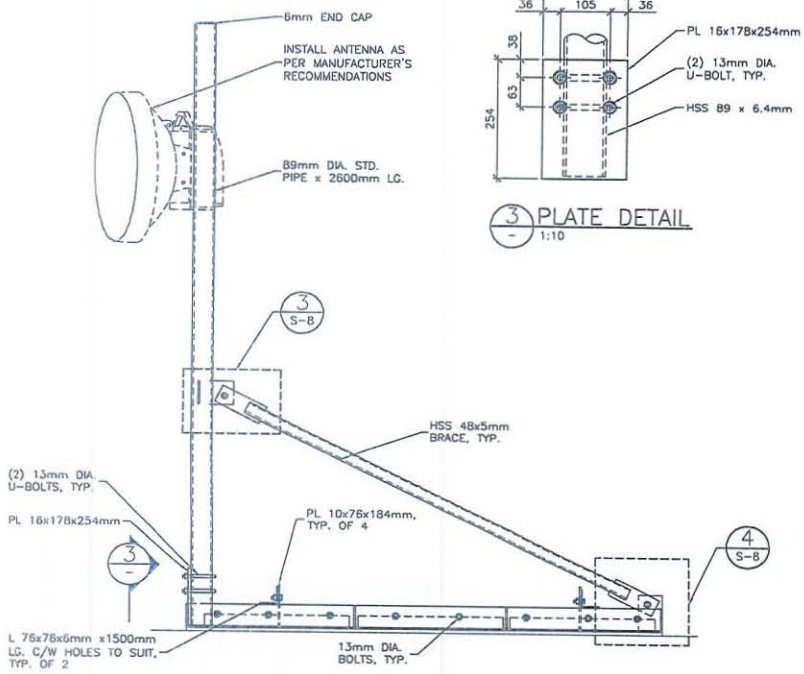
SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	KC
DATE:	MAR 8/19
CAD FILE:	S-8
PROJECT NO.	18C1184
DRAWING NO.	S-8

NOTES:

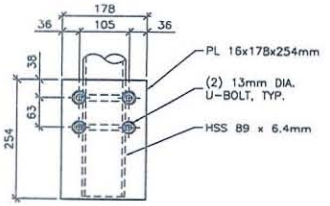
1. REFER TO G-1 FOR SPECIFICATIONS.
2. CONTRACTOR TO SITE VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO CONSTRUCTION. REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. PROVIDE VENT HOLES AS REQUIRED FOR GALVANIZING.
4. ALL WELDS TO BE SEALED.
5. MINIMUM WEIGHT OF PAVER 90LBS.



1 / - BALLAST MOUNT ELEVATION
1:20



2 / - BALLAST MOUNT ELEVATION
1:20



3 / - PLATE DETAIL
1:10

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
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PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
MICROWAVE ANTENNA BALLAST MOUNT DETAILS II

SCALE:	N/A
CHECK BY:	LC
DRAWN BY:	KC
DATE:	MAR 8/19
CAD FILE:	S-9
PROJECT NO:	18C1184
DRAWING NO:	S-9

Appendix A - Proposal Plans

GENERAL ELECTRICAL NOTES:

1. ALL ELECTRICAL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CANADIAN ELECTRICAL CODE.
2. COMPLY WITH THE LATEST EDITION OF THE PROVINCIAL ELECTRICAL BULLETINS IN FORCE AT TIME OF CONSTRUCTION. WHILE NOT IDENTIFIED AND SPECIFIED BY NUMBER IN THIS DIVISION, BULLETINS ARE TO BE CONSIDERED AS FORMING PART OF THE RELATED ELECTRICAL STANDARD.
3. COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE MUNICIPAL AND PROVINCIAL CODES AND REGULATIONS, AND UTILITY GUIDELINES.
4. OBTAIN ALL NECESSARY ELECTRICAL PERMITS AND PAY ALL FEES AS REQUIRED TO COMPLETE THE ELECTRICAL WORK. UPON PROJECT COMPLETION AND PRIOR TO REQUESTING A FINAL INSPECTION, DELIVER A COPY OF THE FINAL ELECTRICAL INSPECTION CERTIFICATE TO THE ENGINEER.
5. PERFORM ALL VERIFICATION, OBSERVATIONS, TESTING AND EXAMINATION OF WORK PRIOR TO THE ORDERING OF ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
6. READ THE ELECTRICAL DRAWINGS IN CONJUNCTION WITH THE DRAWINGS AND SPECIFICATIONS OF ALL OTHER DISCIPLINES, INCLUDING THE ROGERS TECHNICAL SPECIFICATION. REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER AND ENGINEER.
7. SCHEDULE AND COORDINATE ALL WORK WITH OTHER TRADES BEFORE INSTALLATION OF EQUIPMENT TO AVOID CONFLICT DURING OR AFTER INSTALLATION.
8. PROVIDE ALL LABOUR AND MATERIALS NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL SYSTEM.
9. OBTAIN LOCATES PRIOR TO ANY EXCAVATION AND PROTECT ALL BURIED UTILITIES. REINSTATE ALL DISTURBED SURFACES TO PRE-CONSTRUCTION CONDITIONS.
10. ENSURE ALL EXTERIOR WALL PENETRATIONS ARE WATERTIGHT.
11. PROVIDE TEMPORARY POWER SUPPLIES WITH RECEPTACLES FOR ALL TRADES' CONSTRUCTION EQUIPMENT, E.G. WELDER, SAWS, ETC. RELOCATE AND REMOVE SERVICES AS DIRECTED BY THE CONSTRUCTION MANAGER.
12. ALL POWER WIRING SHALL BE SIZED AS NOTED, STRANDED COPPER WITH 600V RW90 INSULATION.
13. GROUND WIRES SHALL BE STRANDED COPPER WITH 1W GREEN INSULATION OR BARE TINNED STRANDED COPPER AS NOTED.
14. ALL WIRING, DEVICES AND EQUIPMENT SHALL BE NEW AND CSA APPROVED AND MARKED. EQUIPMENT OF SAME TYPE SHALL BE OF THE SAME MANUFACTURER.
15. ALL EQUIPMENT RATED 60A OR MORE TO BE LISTED FOR USE WITH 75°C CONDUCTORS MIN.
16. ALL ELECTRICAL DISTRIBUTION EQUIPMENT TO BE SUPPLIED WITH APPROPRIATE ENCLOSURES WHEN LOCATED WITHIN SPRINKLERED AREAS.
17. INSTALL A 3mm NYLON PULL CORD IN ALL EMPTY CONDUITS.
18. PROVIDE A SEPARATE GROUND WIRE IN ALL RACEWAYS AND CABLES.
19. PROVIDE PHENOLIC PLASTIC LAMINATE NAMEPLATES WITH MACHINE ENGRAVED BLACK PLATE, WHITE LETTERS, EXCEPT AS NOTED. NAMEPLATES SHALL BE ATTACHED WITH SELF TAPPING SCREWS OR RIVETS (NO SELF ADHESIVE). REFER TO NAMEPLATE SCHEDULE.
20. LEAVE ALL AREAS IN A CLEAN STATE AT CONSTRUCTION COMPLETION. TOUCH UP PAINT ALL DISTURBED SURFACES.
21. A COMPLETE SET OF FULL SIZE ELECTRICAL DRAWINGS MUST BE ON SITE AT ALL TIMES. MARK "AS-BUILT" INFORMATION, IN RED, ON SITE SET ONLY.
22. ALL CABLES ROUTED IN CABLE TRAY TO BE FASTENED IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF THE CEC.
23. REARRANGE CIRCUITING OF ALL PANELBOARDS INVOLVED WITH PROJECT TO ENSURE A BALANCED LOAD ACROSS ALL PHASES.
24. ALL NEW OVERCURRENT DEVICES AND ELECTRICAL EQUIPMENT TO HAVE AN A.I.C. RATING GREATER THAN THE AVAILABLE FAULT CURRENT THEY MAY BE SUBJECTED TO (10kA MIN.).
25. VERTICAL CONDUCTORS TO BE SUPPORTED AT INTERVALS AS SPECIFIED IN CEC RULE 12-120 AND TABLE 21.
26. WHERE CONDUIT/DUCTS TRANSITION FROM BELOW GRADE TO VERTICAL, PROVIDE (ABOVE GRADE) EXPANSION JOINTS IN ACCORDANCE WITH CEC RULE 12-012(12).
27. WHEN EQUIPMENT MODIFICATIONS ARE REQUIRED TO FACILITATE CONDUCTOR CONNECTIONS TO AN EXISTING SWITCHBOARD, SPLITTER, BUS DUCT ETC., IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN THE NECESSARY MANUFACTURER, CSA OR THIRD PARTY APPROVALS TO THE SATISFACTION OF LOCAL ELECTRICAL INSPECTION.

GROUNDING NOTES:

1. COMPLY WITH ROGERS'S SPECIFIC SITE GROUNDING REQUIREMENTS.
2. ALL INSULATED GROUND CABLES TO HAVE TWH INSULATION.
3. PROVIDE A GROUNDING SYSTEM TO COMPLY WITH THE LATEST ADOPTED EDITION OF THE CANADIAN ELECTRICAL CODE. ANY BULLETINS ISSUED BY THE LOCAL JURISDICTION AND UTILITY GUIDELINES (WHEN APPLICABLE).
4. ALL GROUNDING CONNECTIONS TO BE CLEAN AND FREE OF PAINT AT THEIR MATING SURFACES AND INSTALLED OPER MANUFACTURER'S RECOMMENDATIONS. USE PENETROX OR EQUIVALENT ANTIOXIDANT GREASE.
5. ALL GROUND BAR CONNECTIONS ARE TO BE 2 HOLE LUG LONG BARREL COMPRESSION TYPE. GROUND BARS ARE TO BE GALVANIZED STEEL.
6. INSTALL ALL GROUNDING CONNECTIONS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ENSURE CORRECT TORQUE IS ACHIEVED WHERE APPLICABLE.
7. GROUNDING WIRES MUST ALWAYS BE CONTINUOUS AND TRAVEL IN A DOWNWARD DIRECTION FREE FROM SHARP BENDS OR SUDDEN CHANGES IN DIRECTION. (MINIMUM BEND RADIUS OF CABLE GROUND IS 200mm).

CORING NOTES:

1. THE CONTRACTOR SHALL X-RAY THE WALLS AND FLOOR SLABS IN ALL AREAS REQUIRING CORE DRILLING. DO NOT PROCEED WITH CORE DRILLING UNTIL X-RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
2. ALL CORE DRILLING OF THE STRUCTURE INTO AREAS OCCUPIED BY OTHER TENANTS SHALL BE CARRIED OUT DURING HOURS, THAT ARE CONVENIENT TO THE BUILDING OWNER AND PROPERTY MANAGER. THE CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES AT HIS OWN EXPENSE. SEAL ALL PENETRATIONS. AIRBORNE SILICA DUST MUST BE KEPT TO A MINIMUM. ELECTRICAL ROOMS MUST BE KEPT CLEAN AT ALL TIMES.

FIRESTOPPING NOTES:

1. FIRESTOP SYSTEM INSTALLATION MUST MEET REQUIREMENTS OF CAN4-S115-M, ULC S-115-M OR UL2079 TESTED ASSEMBLIES, BUILDING CODE AND JURISDICTION REQUIREMENTS.
2. FIRESTOP SYSTEMS DO NOT REESTABLISH THE STRUCTURAL INTEGRITY OF LOAD BEARING PARTITIONS/ASSEMBLIES, OR SUPPORT LIVE LOADS AND TRAFFIC. INSTALLER SHALL CONSULT THE STRUCTURAL ENGINEER PRIOR TO PENETRATING ANY LOAD BEARING ASSEMBLY.
3. ENSURE ALL PENETRATIONS ARE FIRESTOPPED WITH ULC "F" RATING APPROPRIATE TO FIRE RESISTANCE RATING OF SEPARATION.
4. CONTRACTOR MUST SUBMIT MANUFACTURER'S SPECIFICATIONS AND TECHNICAL DATA FOR EACH MATERIAL INCLUDING THE COMPOSITION AND LIMITATIONS AND DOCUMENTATION OF ULC OR cUL FIRESTOP SYSTEMS TO BE USED. DRAWINGS TO BE REDLINED INDICATING THE EXISTING CONSTRUCTION OF THE STRUCTURE AT EACH PENETRATION. SUBMITTAL MUST BE ORGANIZED SUCH THAT ENGINEER CAN EASILY IDENTIFY WHICH DOCUMENTATION APPLIES TO WHICH FIRESTOPPING LOCATION. CONTRACTOR'S WORK WILL NOT BE ACCEPTED UNTIL DOCUMENTATION IS APPROVED BY ENGINEER.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

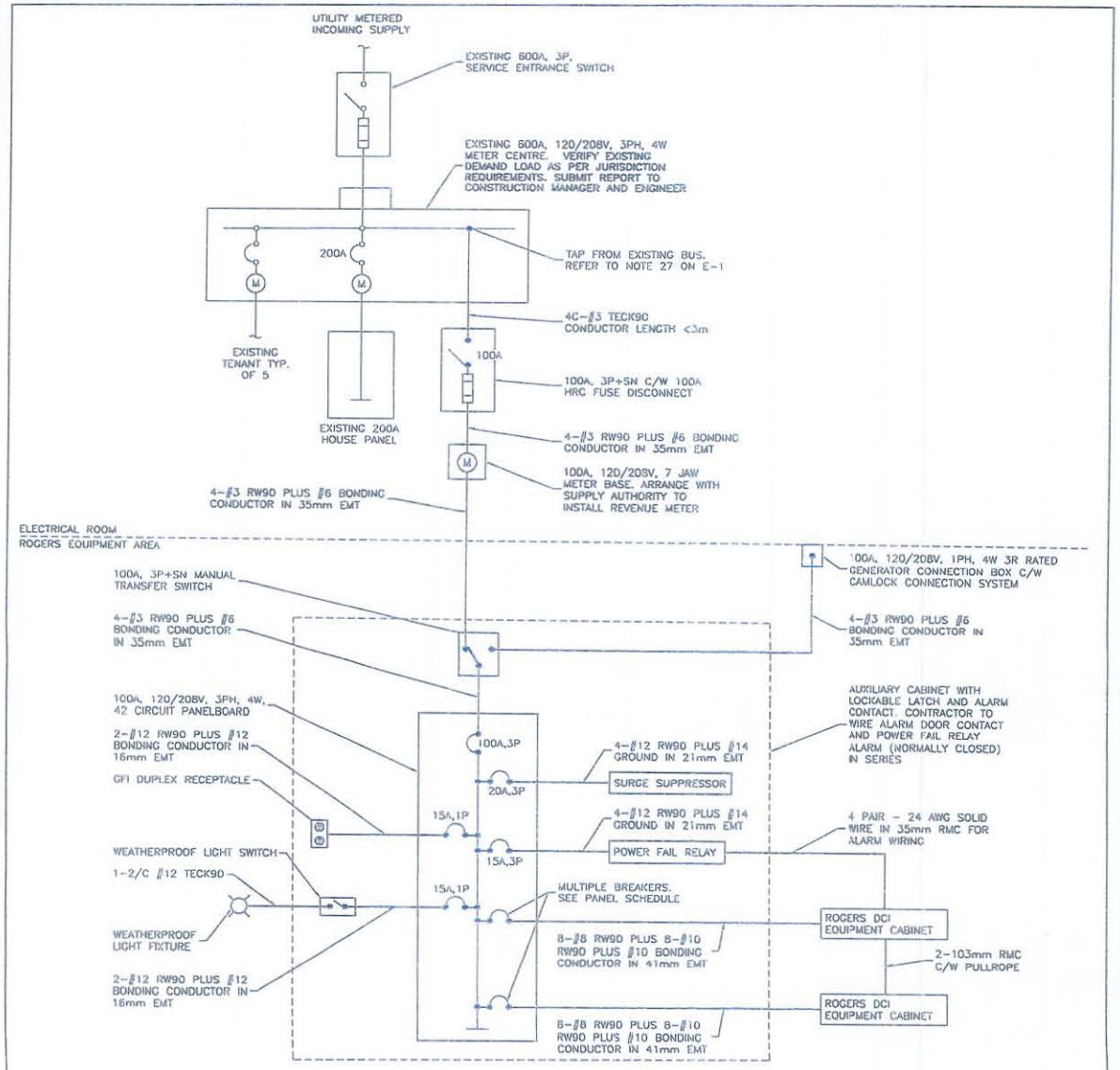
COREONE

229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ELECTRICAL NOTES

SCALE:	N/A
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-1
PROJECT NO:	18C1184
DRAWING NO:	E-1



SINGLE LINE DIAGRAM

ELECTRICAL EQUIPMENT SPECIFICATIONS:

1. GENERATOR CONNECTION BOX TO BE RANGERACK, PART NO: RAL58-50-20-3R, CSA RATED 3R WITH CAM-LOK CONNECTORS AND RATINGS AS INDICATED (APPROX: 584X508X228mm)
2. AUXILIARY CABINET TO BE 1200x1200x305mm EEMAC 3R RATED DOUBLE DOOR HINGED, LOCKABLE WITH PLYWOOD BACKING. WESTCOAST ELECTRIC OR APPROVED EQUAL.
3. AC POWER FAIL RELAYS TO BE (3) - POTTER AND BRUMFIELD RELAYS NC MOUNTED IN 150x150x100mm BOX.
4. SURGE SUPPRESSOR TO BE WILCAN PART #SD 120/208V, 3PH 4W.
5. PANELBOARD TO BE HEAVY DUTY TYPE WITH BOLT ON BRANCH BREAKERS. 42 CIRCUITS AND RATINGS AS INDICATED.
6. RECEPTACLES AND SWITCH TO BE COMMERCIAL GRADE WITH WEATHERPROOF COVERS.
7. LIGHT FIXTURE TO BE LUMARK TMQ150W C/W TWIN 150W, 120V QUARTZ HALOGEN LAMPS OR APPROVED EQUAL.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

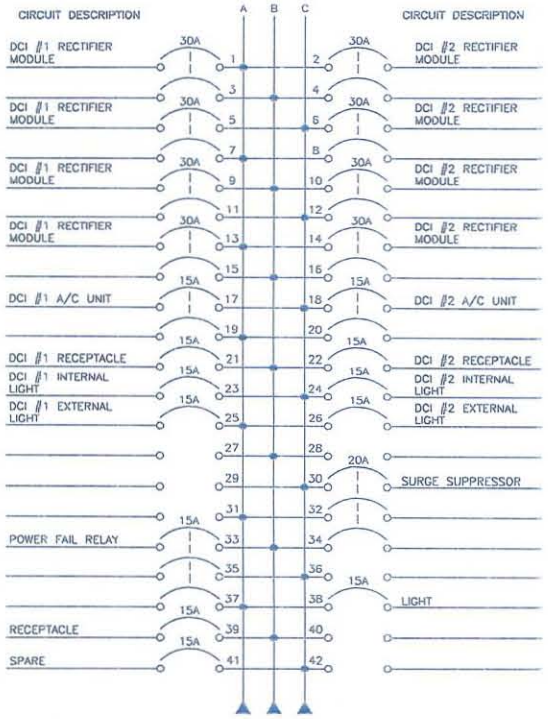
DRAWING TITLE:
SINGLE LINE DIAGRAM

SCALE:	N/A
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-2
PROJECT NO:	180119
DRAWING NO:	E-2

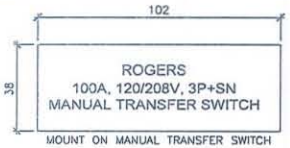
PANEL SCHEDULE:

AC MAIN BREAKER: 100A

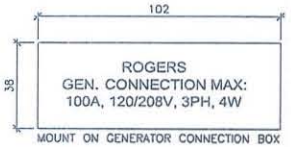
PANEL NAME:	R
VOLTAGE:	120/208V
PHASE:	3PH, 4W
PANEL RATING:	100A
NO. OF CIRCUITS:	42



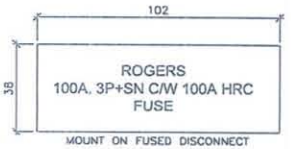
NAMEPLATE SCHEDULE



MOUNT ON MANUAL TRANSFER SWITCH

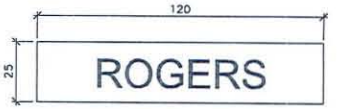


MOUNT ON GENERATOR CONNECTION BOX



MOUNT ON FUSED DISCONNECT

MOUNT TO DCI CABINET DOOR



MOUNT TO CHECK METER

NAMEPLATES TO BE PHENOLIC PLASTIC LAMINATE WITH MACHINE ENGRAVED LETTERS (BLACK PLATE AND WHITE LETTERS) U.N.O. ATTACH NAMEPLATES WITH SELF TAPPING SCREWS OR RIVETS

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

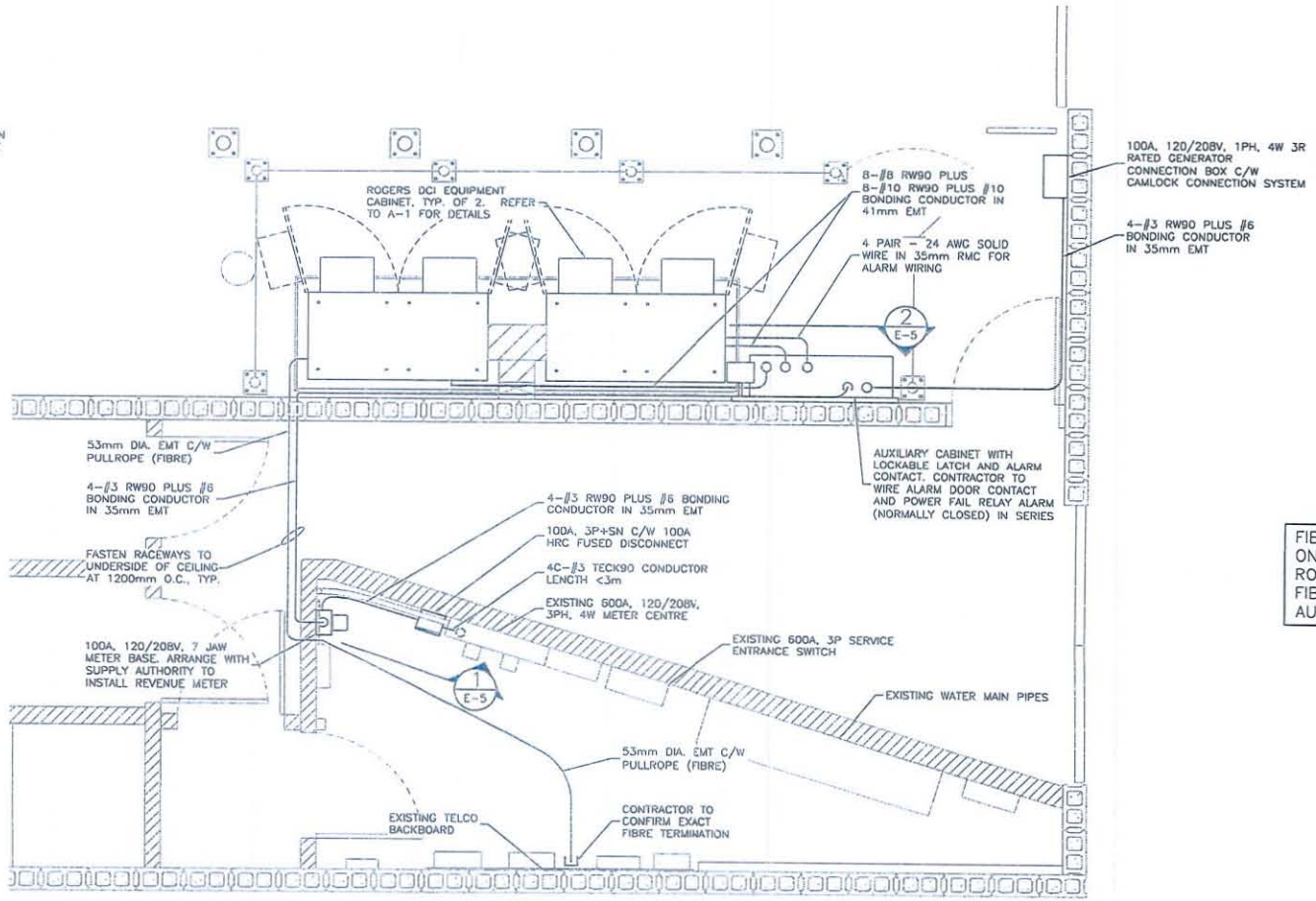
COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
PANEL AND NAMEPLATE SCHEDULE

SCALE:	N/A
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-3
PROJECT NO.	18C1184
DRAWING NO.	E-3

TRUE NORTH ARROW SHOWN ON THIS DRAWING IS APPROXIMATE ONLY AND MUST BE VERIFIED



1 ELECTRICAL LAYOUT
1:40

NOTES:

1. ALL SERVICES PENETRATING WALLS OR FLOORS SHALL BE IN CONDUIT UNLESS SPECIFIED OTHERWISE. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL BE FIRESTOPPED. REFER TO E-1 FOR REQUIREMENTS.
2. THE CONTRACTOR SHALL X-RAY THE WALLS AND FLOORS IN ALL AREAS REQUIRING CORE DRILLING. DO NOT PROCEED WITH CORE DRILLING UNTIL X-RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
3. ALL CORE DRILLING OF THE STRUCTURE INTO AREAS OCCUPIED BY OTHER TENANTS SHALL BE CARRIED OUT DURING HOURS, THAT ARE CONVENIENT TO THE BUILDING OWNER AND PROPERTY MANAGER. THE CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES AT HIS OWN EXPENSE. SEAL ALL PENETRATIONS.
4. UTILIZE SONNEBORN TYPE NP-1 CAULKING FOR SEALING ALL EXTERIOR WALL ABOVE GRADE AND GROUTE BELOW GRADE PENETRATIONS.
5. PROVIDE WATERTIGHT CONNECTORS AND COUPLINGS FOR ALL OUTDOOR CONDUIT/CABLE RUNS.
6. CONTRACTOR IS RESPONSIBLE TO LOCATE AND IDENTIFY ANY AND ALL BURIED SERVICES IN THE VICINITY OF REQUIRED EXCAVATION PRIOR TO CONSTRUCTION.
7. CONFIRM EXACT POWER AND FIBRE TERMINATION LOCATIONS WITH ACTUAL SHELTER SUPPLIED PRIOR TO CONSTRUCTION.
8. REFER TO E-1 FOR NOTES.

FIBRE TERMINATION LOCATION IS PRELIMINARY ONLY AND NEEDS TO BE CONFIRMED WITH ROGERS PRIOR TO CONSTRUCTION. TERMINATE FIBRE IN ACCORDANCE WITH SUPPLY AUTHORITIES REQUIREMENTS

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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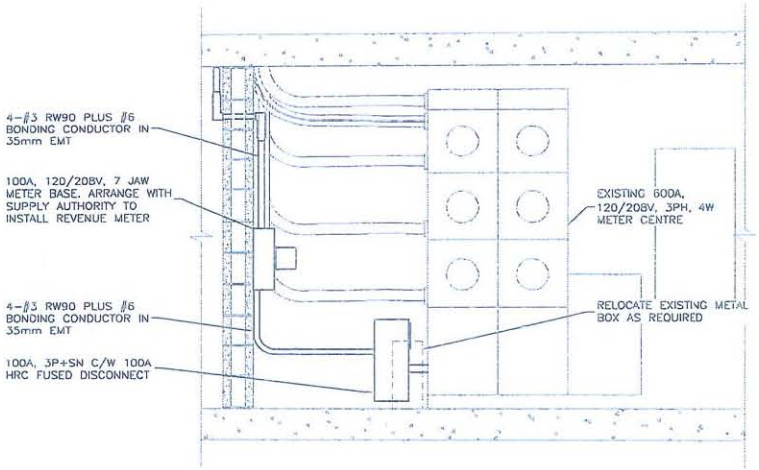
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

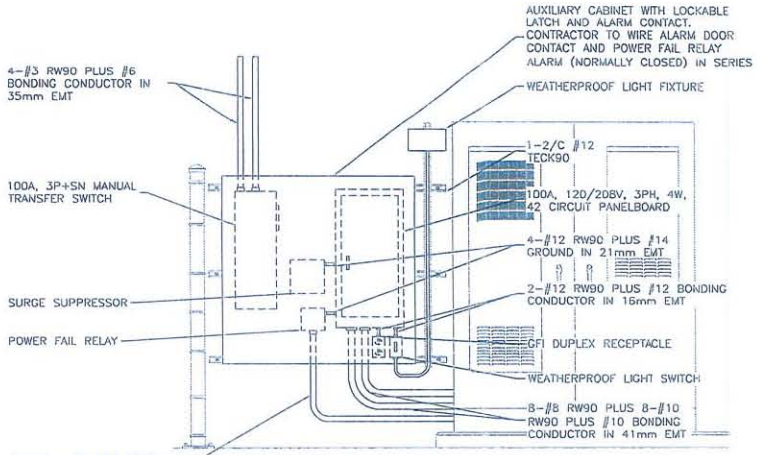
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ELECTRICAL LAYOUT

SCALE:	AS NOTED
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-4
PROJECT NO:	18C1154
DRAWING NO:	E-4



1 ELECTRICAL ELEVATION
1:30



2 ELECTRICAL ELEVATION
1:30

NOTES:

1. ALL SERVICES PENETRATING WALLS OR FLOORS SHALL BE IN CONDUIT UNLESS SPECIFIED OTHERWISE. ALL CONDUIT PENETRATIONS THROUGH FIRE RATED WALLS OR FLOORS SHALL BE FIRESTOPPED. REFER TO E–1 FOR REQUIREMENTS.
2. THE CONTRACTOR SHALL X–RAY THE WALLS AND FLOORS IN ALL AREAS REQUIRING CORE DRILLING. DO NOT PROCEED WITH CORE DRILLING UNTIL X–RAY INSPECTION HAS BEEN CARRIED OUT TO ASCERTAIN PROPER LOCATION FOR PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
3. ALL CORE DRILLING OF THE STRUCTURE INTO AREAS OCCUPIED BY OTHER TENANTS SHALL BE CARRIED OUT DURING HOURS, THAT ARE CONVENIENT TO THE BUILDING OWNER AND PROPERTY MANAGER. THE CONTRACTOR MUST REPAIR ANY DAMAGED SERVICES AT HIS OWN EXPENSE. SEAL ALL PENETRATIONS.
4. UTILIZE SONNEBORN TYPE NP–1 CAULKING FOR SEALING ALL EXTERIOR WALL ABOVE GRADE AND GROUTE BELOW GRADE PENETRATIONS.
5. PROVIDE WATERTIGHT CONNECTORS AND COUPLINGS FOR ALL OUTDOOR CONDUIT/CABLE RUNS.
6. CONTRACTOR IS RESPONSIBLE TO LOCATE AND IDENTIFY ANY AND ALL BURIED SERVICES IN THE VICINITY OF REQUIRED EXCAVATION PRIOR TO CONSTRUCTION.
7. CONFIRM EXACT POWER AND FIBRE TERMINATION LOCATIONS WITH ACTUAL CABINETS SUPPLIED PRIOR TO CONSTRUCTION.
8. REFER TO E–1 FOR NOTES.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

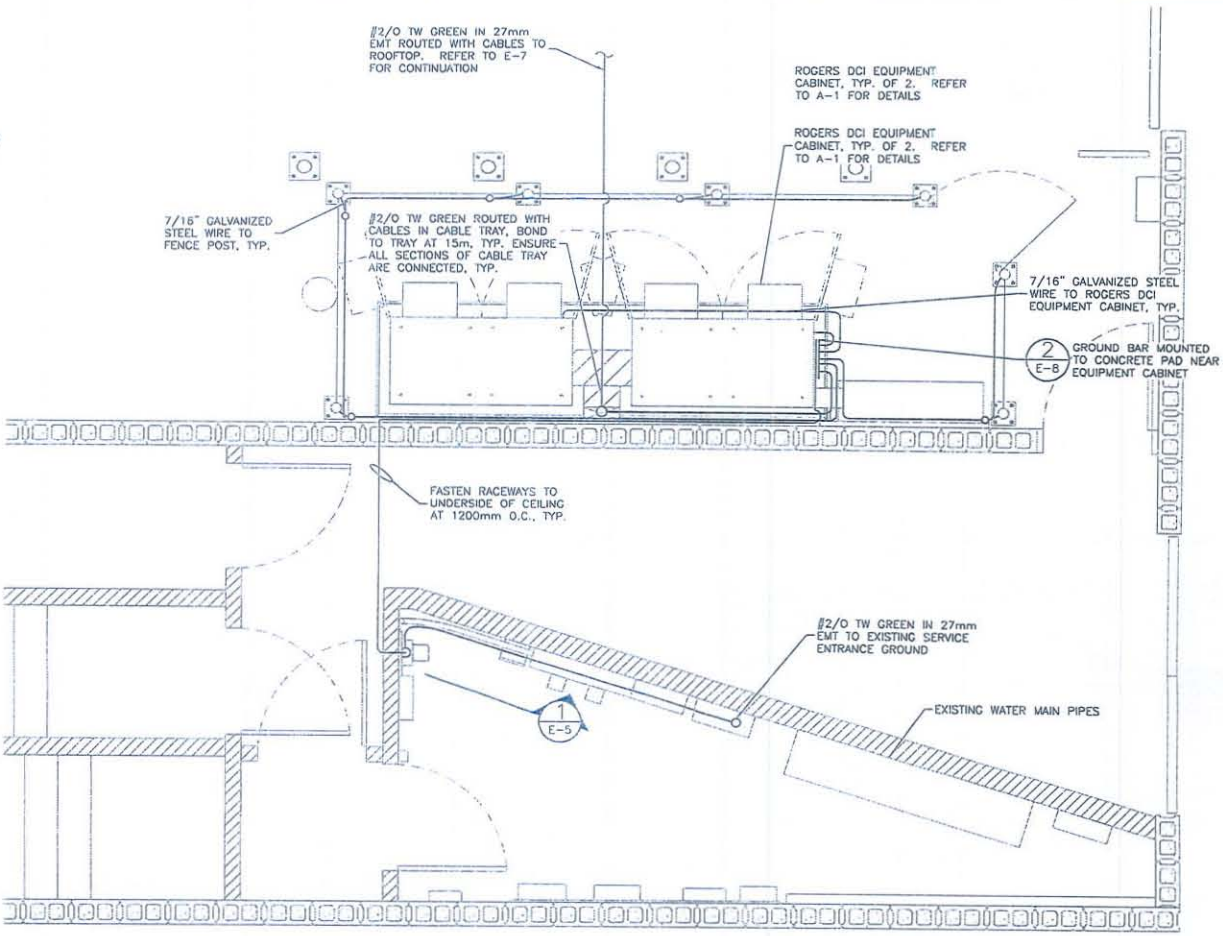
COREONE
229 - 18525 53RD AVENUE
SURREY, BC V3S 7A4
TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ELECTRICAL ELEVATIONS

SCALE:	AS NOTED
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-5
PROJECT NO:	18C1184
DRAWING NO:	E-5

TRUE NORTH ARROW SHOWN ON THIS DRAWING IS APPROXIMATE ONLY AND MUST BE VERIFIED



1 ELECTRICAL LAYOUT
1:40

NOTES:

1. REFER TO E-1 FOR GROUNDING NOTES.
2. COMPLY WITH ROGERS'S SPECIFIC SITE GROUNDING REQUIREMENTS.
3. CONTRACTOR IS RESPONSIBLE TO LOCATE AND IDENTIFY ANY AND ALL BURIED SERVICES IN THE VICINITY OF REQUIRED EXCAVATION PRIOR TO CONSTRUCTION.
4. ALL EXPOSED LEADS TO GROUND RING TO BE GALVANIZED STEEL, #6x36 (7/16").
5. PROVIDE PVC SLEEVES FOR ALL EXPOSED COPPER GROUND LEADS STARTING 150mm BELOW GRADE.
6. MINIMUM 305mm BENDING RADIUS FOR ALL CABLES #6 AWG AND LARGER.
7. COORDINATE EXACT GROUND LOCATIONS WITH EQUIPMENT ON SITE.
8. ALL GROUNDING CONNECTIONS TO BE CLEAN AND FREE OF PAINT AT THEIR MATING SURFACES AND INSTALLED OPER MANUFACTURER'S RECOMMENDATIONS. USE PENETROX OR EQUIVALENT ANTIOXIDANT GREASE.

REV	DESCRIPTION	DATE	BY
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

COREONE
229 - 18525 53RD AVENUE
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TEL: (778) 805-2166
INFO@COREONECONSULTING.COM

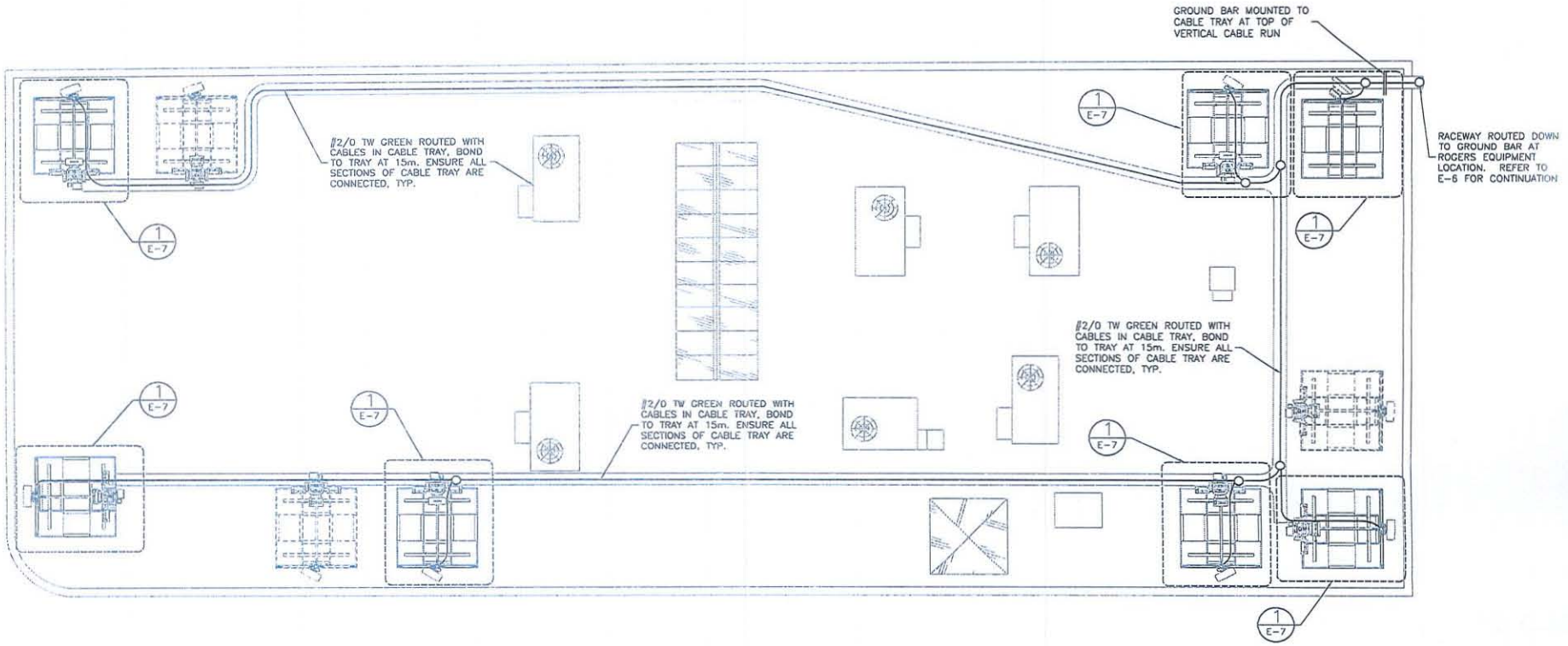
PROJECT:
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
EQUIPMENT GROUNDING LAYOUT

SCALE:	AS NOTED
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-6
PROJECT NO.	18C1184
DRAWING NO.	E-6

NOTES:

1. REFER TO E-1 FOR GROUNDING NOTES.



1 ROOF GROUNDING LAYOUT
1:100

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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229 - 18525 53RD AVENUE
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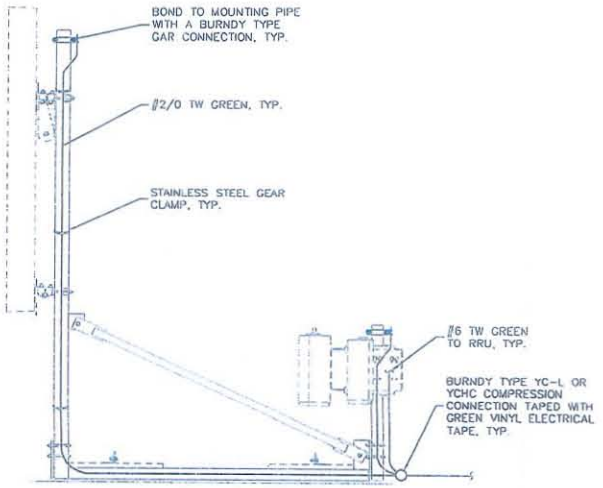
W4014
SALMON ARM DOWNTOWN
320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
ROOF GROUNDING LAYOUT

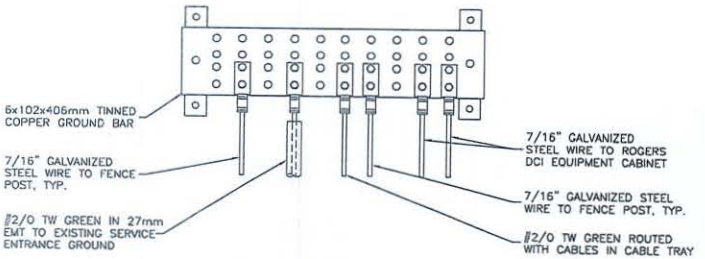
SCALE:	AS NOTED
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-7
PROJECT NO:	18C1184
DRAWING NO:	E-7

NOTES:

1. REFER TO E-1 FOR GROUNDING NOTES.



1 — 1:30 TYPICAL BALLAST MOUNT GROUNDING DETAILS



2 — N.T.S. GROUND BAR DETAIL

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS.

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SALMON ARM DOWNTOWN
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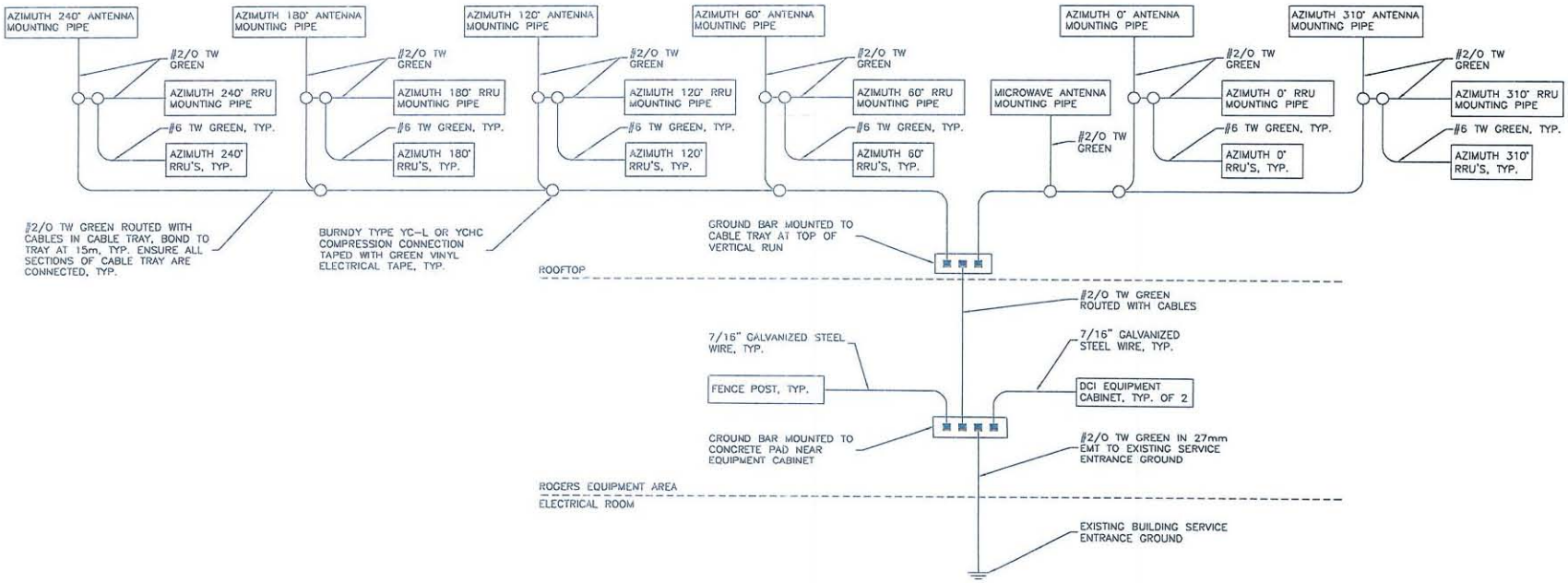
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
GROUNDING DETAILS

SCALE:	AS NOTED
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-8
PROJECT NO.	16C1184
DRAWING NO.	E-8

NOTES:

1. REFER TO E-1 FOR GROUNDING NOTES.



1 / - GROUNDING SCHEMATIC
N.T.S.

REV	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS	APR 5/19	KC
0	ISSUED FOR REVIEW	MAR 8/19	AD

ROGERS

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320 ALEXANDER ST NE
SALMON ARM
BRITISH COLUMBIA

DRAWING TITLE:
GROUNDING SCHEMATIC

SCALE:	N/A
CHECK BY:	SW
DRAWN BY:	AD
DATE:	MAR 8/19
CAD FILE:	E-9
PROJECT NO:	18C1184
DRAWING NO:	E-9

CITY OF
SALMON ARM

To: His Worship Mayor Harrison and Members of Council

Date: April 30, 2019

Subject: 2018 City of Salmon Arm Carbon Neutral Progress Survey

RECOMMENDATION

THAT: The 2018 City of Salmon Arm Climate Action/Carbon Neutral Progress Survey indicate the City is eligible for recognition from the Green Communities Committee as a 'Level 3 – Accelerating Progress' local government and that the City will not be carbon neutral for the 2018 reporting year;

AND FURTHER THAT: The 2018 City of Salmon Arm Climate Action/Carbon Neutral Progress Survey, attached as Appendix 1 in the Development Services Department memorandum dated April 30, 2019, be received as information.

INTRODUCTION

The purpose of this report is to present the 2018 City of Salmon Arm *Climate Action/Carbon Neutral Progress Survey* to Council for information to fulfill the public reporting requirements of the City's application for the annual provincial Climate Action Revenue Incentive Program (CARIP) grant. The 2018 *Climate Action/Carbon Neutral Progress Survey* is attached as Appendix 1. To complete the *Climate Action/Carbon Neutral Progress Survey* due for submission on June 1, 2019, the City must identify whether or not it intends to be carbon neutral for the 2018 reporting year or to continue with an option discussed below.

BACKGROUND

The CARIP program currently requires the submission of a *Climate Action/Carbon Neutral Progress Survey*. The survey will be posted on the City's website and provided to the Province in support of the City's application for the annual CARIP grant. In order to complete the reporting process and ensure that the City is eligible for the CARIP grant, this survey must be completed and made public prior to the June 1, 2019 deadline. The proposed 2018 Salmon Arm *Climate Action/Carbon Neutral Progress Survey* is attached as Appendix 1 for Council's consideration. As attached the proposed *Climate Action/Carbon Neutral Progress Survey* indicates to the Province that: (1) it is the 'final' report; (2) the City will not be carbon neutral for the 2018 reporting year; and (3) the City suggests recognition at the 'Level 3 – Accelerating Progress' level with the Green Communities Committee.

British Columbia Climate Action Charter

The City's Official Community Plan (OCP) provides overall direction towards creating a more efficient community, with policies of "urban containment" guiding decisions on land use proposals and subdivision. Along with the majority of other local governments in the province, in 2008 the City voluntarily signed the B.C. Climate Action Charter, a non-legally binding agreement between the provincial government, the Union of British Columbia Municipalities (UBCM) and local governments that acknowledges that climate change is a reality and establishes a number of goals to address the issue going forward. Of particular relevance to local governments is the agreement to achieve the following goals:

1. *Being carbon neutral in respect of their operations by 2012;*
2. *Measuring and reporting on their community's greenhouse gas emissions profile; and*
3. *Creating complete, compact, more energy efficient communities.*

While operations have not been carbon neutral for previous reporting years, the City has been annually measuring and reporting on emissions, and has completed several projects to improve efficiency.

Climate Action Reserve

The City of Salmon Arm has been claiming a carbon tax rebate via CARIP since 2008, considered conditional on directing these funds towards expenditures that will reduce greenhouse gas emissions. The funds received have been placed in a Climate Action Reserve which has directly financed various projects such as the SASCU Rec Centre and Arena upgrades (boilers, hot water tanks, heat exchangers, and LED lighting). This Climate Action Reserve fund (estimated balance is $148,000 following budgeted 2019 expenditures towards hybrid fleet vehicles) can support projects that allow the City to continue making progress towards carbon neutrality. The current CARIP rebate application is expected to be approximately $54,000 for the 2018 reporting year.

2008 Energy and Greenhouse Gas Emissions Study

In October of 2008 the City received the City of Salmon Arm Energy and Greenhouse Gas Emissions Study completed by Urban Systems, providing a description of initiatives that the City could undertake to reduce emissions and energy consumption and how the Climate Action Reserve may be best directed. Over time, the City has acted on several of these recommendations for initiatives funded by the Climate Action Reserve.

2010 Facility Reports

In June 2010, following the broad direction of the City of Salmon Arm Energy and Greenhouse Gas Emissions Study, four specific facility energy studies were completed to analyze the public works building, recreation centre, arena, and RCMP building, the City's largest producers of GHG emissions (the arena and rec centre produce roughly 40% of the City's emissions). Following the specific recommendations of the facility reports provides further guidance for future projects.

Climate Action Revenue Incentive Program Grant Reporting

As a signatory to the Charter, the City is eligible to apply for the annual CARIP grant equal to the amount spent by the City on Carbon Tax each year. CARIP grants to the City are allocated to a reserve account for future GHG emissions reduction projects and/or potentially for the purchase of carbon offset credits to achieve carbon neutrality. The City has been required to report publicly on its progress in reducing and managing both corporate and community-wide GHG emissions since 2010 and previous Salmon Arm Climate Action Reports are available on the City's website.

Corporate Emissions Inventory

A corporate emissions inventory tracks energy consumption (e.g. natural gas, electricity, gasoline, diesel and propane) from corporate operations and quantifies the corresponding GHG emissions. The service areas and required scope of a corporate emissions inventory are defined by several guidance documents produced by the Green Communities Committee – a partnership between the provincial government and the UBCM - and the Ministry of Environment. The City's corporate emissions inventory was prepared by staff using these guidance documents, which are available on the BC Climate Action Toolkit website at www.toolkit.bc.ca. A summary of the City's 2018 inventory is shown below:

Table 1. Summary of the 2018 City of Salmon Arm Corporate Emissions Inventory

Service Area	Emissions (tonnes CO_2e)
Administration and Governance	78.02
Drinking, Storm and Waste Water	427.23
Solid Waste Collection, Transportation and Diversion	123.1
Roads and Traffic Operations	425.94
Arts, Recreation, Parks and Cultural Services	904.44
Fire Protection	103.1
Total	**2061.8**

* For context, the 2017 total was 2100.5, the total in 2016 was 1878.9, while 2015 was 1,866.3 tonnes

An expanded inventory is attached as Appendix 2. A detailed multi-department analysis could more accurately explain the annual variation in emissions, but in general changes can be correlated to weather (including snowfall and temperature), capital works projects, demand from new programs and facilities, and fluctuating service demands.

Carbon Neutrality

The City's corporate operations produced a total of 2,061.8 tonnes CO_2e in 2018, meaning that in order to be carbon neutral, the City would need to purchase 2,061.8 carbon offset credits from a provider of certified offsets. Past quotes for carbon offset credits have ranged from $16.00 to $25.00 per tonne. To offset 2,061.8 tonnes CO_2e to become carbon neutral for the 2017 reporting year would cost in the range of $33,000.00 to $52,000.00 (not including associated administrative costs). For neutrality under the CARIP program, carbon offset credits would need to be purchased prior to June 1, 2019, the deadline for completing the *Carbon Neutral Progress Survey*. For the reporting years up to and including 2017, the City has not opted to purchase offset credits to achieve carbon neutrality.

Climate Action Recognition Program

Local governments are not required to be carbon neutral for the 2018 reporting year and are still eligible for the CARIP grant based on continued measurement and reporting. The CARIP program now provides three levels of recognition for local governments that will not be carbon neutral: "1 - Demonstrating Progress", "2 - Measuring", and "3 - Accelerating Progress". These options are provided as it is understood that it may be difficult for some local governments to be carbon neutral, and furthermore, that local governments may be undertaking projects that have the effect of reducing emissions that are difficult to quantify, but none-the-less important (e.g. constructing sidewalks, improving pedestrian spaces and alternative transportation options, smart growth policy).

The City has been measuring and publicly reporting on emissions for several years now through our Corporate Emissions Inventory. CARIP's "Measuring" category recognizes local governments that are both completing relevant emission-reduction projects and measuring emissions. The City chose and was awarded the City with Level 3 recognition: "Accelerating Progress" last year. As such, and in consideration of the range of projects, staff recommends that "Accelerating Progress" is again the appropriate recognition for the City

Projects completed in 2018 and potential future actions planned include:

2018 projects:	Efficient Arena Flood Technology; Hybrid fleet vehicles (2 purchased); Tree planting - BC Hydro Re-Greening Program (urban area & Blackburn Park); Residential yard waste pick-up (bi-annual); Sidewalk install (509 m by City and 761 through development); and Greenway network enhancement (2,579 m new trails created).
Future projects:	Solar project feasibility study; Hybrid fleet vehicles (purchase of 2 additional budgeted); Tree planting - BC Hydro Re-Greening Program (urban area); LED street lighting projects (Hudson Street revitalization); Auditorium LED lighting project (rec centre); Ross Street Underpass; Roof replacement projects (Arena and Senior's Centre); Curbside food waste pick-up program; Continued residential yard waste pick-up (bi-annual); Planning for Aquatic Centre replacement; Ongoing park enhancements (Klahani, Blackburn, and Canoe Beach Parks); Ongoing greenways network enhancements (including Turner Creek Trail); Trans Canada Highway improvements including parallel pathway; and Various sidewalk projects (175 m proposed for 2019).

The future projects listed are merely options and suggestions by City staff, and each would be subject to City Council's approval with the annual budget.

Context: CARIP Results

The CARIP "Summary Report on Local Government Climate Actions 2017" is attached as Appendix 3. A total of 45 out of 187 participating local governments (regional and municipal) were carbon neutral for the 2017 reporting year (there are 189 local governments in BC). The majority of participating local governments were not carbon neutral, including Salmon Arm: 142 participating local governments were not carbon neutral in 2017, representing 76% of 2017 CARIP participants.

Staff annually monitor CARIP reports from comparable communities and have observed a somewhat predictable trend where communities with the coldest climates show relatively high emissions, while those in warmer climates report lower emissions. Of the carbon neutral communities, approximately one-third achieve carbon neutrality through their own actions (primarily landfill gas capture or through organic recycling programs), while approximately two-thirds purchase offsets (note that while the City contributes to the CSRD's landfill gas capture, the CSRD maintains associated carbon credits). The attached 2017 Summary Report details recent initiatives undertaken by local governments.

CONCLUSION

Staff recommend that the 2018 City of Salmon Arm *Climate Action/Carbon Neutral Progress Survey* indicate that the City is eligible for recognition at 'Level 3 – Accelerating Progress' with the Green Communities Committee and intends to continue making progress towards carbon neutrality. The 2018 *Climate Action/Carbon Neutral Progress Survey* will be placed on the City's website to fulfill the public reporting requirements of the City's application for the annual CARIP grant.

Prepared by: Chris Larson, MCP
Planning and Development Officer

Reviewed by: Kevin Pearson, MCIP, RPP
Director of Development Services

CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

Survey Template

For the *2018 CARIP Climate Action/Carbon Neutral Progress Survey*

Local governments are required to submit the *2018 CARIP Climate Action/Carbon Neutral Progress Survey* on or before June 1, 2019.

Use Template to Collect Information

This Survey Template has been provided to help local governments complete the survey and report its contents. The template can be used to:

- gather and record survey responses before inputting data into the survey; and/or
- create the public report.

Alternatively, a local government may choose to use a template or format of their own design.

Responses entered into this Survey Template can be cut and pasted into the online survey. The survey asks for up to five actions in each category, and there is a place in the survey to report additional actions if desired. In this Survey Template, simply add more lines to the tables to report more than five actions.

Public Reports:

Public reports must contain the same information as submitted in the 2018 Climate Action/Carbon Neutral Progress Survey. Because respondents are unable to generate a report of survey responses, Ministry staff will send each respondent a PDF version of their CARIP report once it has been completed online.

For purposes of the CARIP Survey, the following definitions apply:

COMMUNITY-WIDE ACTIONS
Actions undertaken to reduce GHG emissions in the community at-large (e.g. not related to corporate operations).

CORPORATE ACTIONS
Actions undertaken to reduce GHG emissions produced as a result of a local government's delivery of "traditional services", including fire protection, solid waste management, recreational/cultural services, road and traffic operations, water and wastewater management, and local government administration.

Climate Action Revenue Incentive (CARIP) Public Report for 2018

Local Government:

City of Salmon Arm

Report Submitted by:
Name: Chris Larson
Role: Planner
Email: clarson@samonarm.ca
Phone: 250-803-4000

Date: April 30, 2019

The **City of Salmon Arm** has completed the 2018 Climate Action Revenue Incentive Program (CARIP) Public Report as required by the Province of BC. The CARIP report summarizes actions taken in 2018 and proposed for 2019 to reduce corporate and community-wide energy consumption and greenhouse gas emissions (GHG) and reports on progress towards achieving carbon neutrality.

CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 BROAD PLANNING ACTIONS

Broad Planning Actions

Broad Planning refers to high level planning that sets the stage for GHG emissions reductions, including plans such as Official Community Plans, Integrated Community Sustainability Plans, Climate Action Plans or Community Energy Emissions Plans. Land use planning that focuses on Smart Growth principles (compact, complete, connected, and centred) plays an especially important role in energy and GHG reduction.

Q 6 + Q 7 Community-Wide Broad Planning Actions Taken in 2018 + Additional Actions	
	As per OCP policy, use Urban Containment Boundary to support long-term growth.
	As per OCP policy, strive to protect ALR lands, forested hillsides, and watercourses.
	As supported by OCP and Greenways Strategy enhance and continued development of greenways, active transportation network.
Q 8 Community-Wide Broad Planning Actions Proposed for 2019	
	As per OCP policy, use Urban Containment Boundary to support long-term growth.
	As per OCP policy, strive to protect ALR lands, forested hillsides, and watercourses.
	As supported by OCP and Greenways Strategy enhance and continued development of greenways, active transportation network.

Q 9 + Q 10 Corporate Broad Planning Actions Taken in 2018 + Additional Actions	
	Set aside funds in climate action reserve.
Q 11 Corporate Broad Planning Actions Proposed for 2019	
	Continue to set aside funds in climate action reserve for projects that will improve efficiency.

Broad Planning	
Q 12 What is (are) your current GHG reduction target(s)?	**OCP Section 4.6: 6% reduction by 2020**
Q 13 Are you familiar with your local government's community energy and emissions inventory (e.g. CEEI or another inventory)?	**Yes**
Q 14 What plans, policies or guidelines govern the implementation of climate mitigation in your community?	
• Community Energy and Emissions Plan	**No**
• Integrated Community Sustainability Plan	**No**
• Community- Wide Climate Action Plan	**No**
• Official Community Plan	**Yes**
• Regional Growth Strategy	**No**
• Do not have a plan	**No**
• Other:	**No**
Q 15 Does your local government have a corporate GHG reduction plan?	**Yes**

CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 BUILDING AND LIGHTING ACTIONS

Building and Lighting Actions

Low-carbon buildings use the minimum amount of energy needed to provide comfort and safety for their inhabitants and tap into renewable energy sources for heating, cooling and power. These buildings can save money, especially when calculated over the long term. This category also includes reductions realized from energy efficient street lights and lights in parks or other public spaces.

Q 16 + Q 17 Community-Wide Building and Lighting Actions Taken in 2018 + Additional Actions	
Q 18 Community-Wide Building and Lighting Actions Proposed for 2019	

Q 19 + Q 20 Corporate Building and Lighting Actions Taken in 2018 + Additional Actions	
	Efficient Arena Flood Technology
Q 21 Corporate Building and Lighting Actions Proposed for 2019	
	LED street lighting projects (Hudson Street revitalization)
	Auditorium LED lighting project (rec centre)
	Roof replacement projects (Arena and Senior's Centre)
	Planning for Aquatic Centre replacement

Building and Lighting The Province has committed to taking incremental steps to increase energy-efficiency requirements in the BC Building Code to make buildings net-zero energy ready by 2032. The BC Energy Step Code--a part of the BC Building Code--supports that effort	
Q 22 Is your local government aware of the BC Energy Step Code?	Yes
Q 23 Is your local government implementing the BC Energy Step Code?	Yes

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CLIMATE ACTION REVENUE INCENTIVE PROGRAM

P5 2018 ENERGY GENERATION ACTIONS

Energy Generation Actions

A transition to renewable or low-emission energy sources for heating, cooling and power supports large, long-term GHG emissions reductions. Renewable energy including waste heat recovery (e.g. from biogas and biomass), geo-exchange, micro hydroelectric, solar thermal and solar photovoltaic, heat pumps, tidal, wave, and wind energy can be implemented at different scales, e.g. in individual homes, or integrated across neighbourhoods through district energy or co-generation systems.

Q 24 + Q 25 Community-Wide Energy Generation Actions Taken in 2018 + Additional Actions
Q 26 Community-Wide Energy Generation Actions Proposed for 2019

Q 27 + Q 28 Corporate Energy Generation Actions Taken in 2018 + Additional Actions
Solar Project Research
Q 29 Corporate Energy Generation Actions Proposed for 2019
Solar project feasibility study

Energy Generation	
Q 30 Is your local government developing, or constructing a • district energy system • renewable energy system • none of the above	 No No
Q 31 Is your local government operating a • district energy system • renewable energy system • none of the above	 No No
Q 32 Is your local government connected to a district energy system that is operated by another energy provider?	No
Q 33 Are you familiar with the 2018 List of Funding Opportunities for Clean Energy Projects Led by First Nations and Local Governments?	Yes

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2018 GREENSPACE/NATURAL RESOURCE PROTECTION ACTIONS

Greenspace Actions

Greenspace/Natural Resource Protection refers to the creation of parks and greenways, boulevards, community forests, urban agriculture, riparian areas, gardens, recreation/school sites, and other green spaces, such as remediated brownfield/contaminated sites as well as the protection of wetlands, waterways and other naturally occurring features.

Q 34 + Q 36 Community-Wide Greenspace Actions Taken in 2018 + Additional Actions (Q 35 below Q 41)	
Q 37 Community-Wide Greenspace Actions Proposed for 2019	

Q 38 + Q 39 Corporate Greenspace Actions Taken in 2018 + Additional Actions	
	Tree planting - BC Hydro Re-Greening Program (urban area & Blackburn Park)
	Greenway network enhancement (2,579 m new trails created)
Q 40 Corporate Greenspace Actions Proposed for 2019	
	Tree planting - BC Hydro Re-Greening Program
	Ongoing park enhancements (Klahani, Blackburn, and Canoe Beach Parks)
	Ongoing greenways network enhancements (including Turner Creek Trail)

Greenspace	
Q 41 Does your local government have urban forest policies, plans or programs?	Yes
Q 35. Does your local government have policies, plans or programs to support local food production?	Yes

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2018 SOLID WASTE ACTIONS

Solid Waste Actions

Reducing, reusing, recycling, recovering and managing the disposal of the residual solid waste minimizes environmental impacts and supports sustainable environmental management, greenhouse gas reductions, and improved air and water quality.

Q 42 + Q 43 Community-Wide Solid Waste Actions Taken in 2018 + Additional Actions	
	Continued residential recycling pick-up.
	Residential yard waste pick-up (bi-annual).
Q 44 Community-Wide Solid Waste Actions Proposed for 2019	
	Continued residential recycling pick-up.
	Residential yard waste pick-up (bi-annual).
	Begin curbside food waste pick-up program

Q 45 + Q 46 Corporate Solid Waste Actions Taken in 2018 + Additional Actions	
	Food waste program
Q 47 Corporate Solid Waste Actions Proposed for 2019	

Solid Waste	
Q 48 Does your local government have construction and demolition waste reduction policies, plans or programs?	No
Q 49 Does your local government have organics reduction/diversion policies, plans or programs?	Yes

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CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 TRANSPORTATION ACTIONS

Transportation Actions

Transportation actions that increase transportation system efficiency emphasize the movement of people and goods, and give priority to more efficient modes, e.g. walking, cycling and public transit, can contribute to reductions in GHG emissions and more livable communities.

Q 50 + Q 51 Community-Wide Transportation Actions Taken in 2018 + Additional Actions	
	Greenway network enhancement (2,579 m new trails created)
	New sidewalk install (509 m by City and 761 through development)
Q 52 Community-Wide Transportation Actions Proposed for 2019	
	Ongoing greenways network enhancements (including Turner Creek Trail)
	Various sidewalk projects (175 m proposed).
	Ross Street Underpass project
	Trans Canada Highway improvements including parallel pathway

Q 53 + Q 54 Corporate Transportation Actions Taken in 2018 + Additional Actions	
	Hybrid fleet vehicles (2 purchased)
Q 55 Corporate Transportation - Actions Proposed for 2019	
	Hybrid fleet vehicles (purchase of 2 additional budgeted)

Transportation	
Q 56 Does your local government have policies, plans or programs to support: • Walking • Cycling • Transit Use • Electric Vehicle Use • Other (please specify)	 Yes Yes Yes Yes No
Q 57 Does your local government have a Transportation Demand Management (TDM) strategy (e.g. to reduce single-vehicle occupancy trips, increase travel options, provide incentives to encourage individuals to modify travel behaviour)?	No
Q 58 Does your local government integrate its transportation and land use planning?	Yes

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CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 WATER AND WASTEWATER ACTIONS

Managing and reducing water consumption and wastewater is an important aspect of developing a sustainable built environment that supports healthy communities, protects ecological integrity, and reduces GHG emissions.

Q 59 + Q 60 Community-Wide Water and Wastewater Actions Taken in 2018 + Additional Actions	
	Annual sprinkler restrictions.
	Require installation of water meters on new development.
Q 61 Community-Wide Water and Wastewater Actions Proposed for 2019	
	Continued annual sprinkler restrictions.
	Continue to require installation of water meters on new development.

Q 62 + Q 63 Corporate Water and Wastewater Actions Taken in 2018 + Additional Actions	
Q 64 Corporate Water and Wastewater Actions Proposed for 2019	
	Continue exploring Water and Wastewater System efficiency upgrades and techniques.

Water Conservation	
Q 65 Does your local government have water conservation policies, plans or programs?	Yes

CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 CLIMATE CHANGE ADAPTATION ACTIONS

This section of the CARIP survey is designed to collect information related to the types of climate impacts local governments are experiencing and how they are being addressed.

Q 66 Please identify the THREE climate impacts that are most relevant to your Local Government.	
• Increased temperatures increasing wildfire activity • Increased temperatures affecting air quality • Extreme weather events contributing to urban and overland flooding	
Other (please specify): Decreased average temperatures increasing winter burdens	

Q 67 In 2018 has your local government addressed the impacts of a changing climate using any of the following?	
Risk and Vulnerability Assessments	Yes
Risk Reduction Strategies	Yes
Emergency Response Planning	Yes
Asset Management	Yes
Natural/Eco Asset Management Strategies	Yes
Infrastructure Upgrades (e.g. stormwater system upgrades)	Yes
Beach Nourishment Projects	No
Economic Diversification Initiatives	Yes
Strategic and Financial Planning	Yes
Cross-Department Working Groups	Yes
Official Community Plan Policy Changes	Yes
Changes to Zoning and other Bylaws and Regulations	Yes
Incentives for Property Owners (e.g. reducing storm water run-off)	Yes
Public Education and Awareness	Yes
Research	Yes
Mapping	Yes
Partnerships	Yes
Other (please specify):	

Q 68 Climate Change Adaptation Actions Taken in 2018 Please elaborate on key actions and/or partnerships your local government has engaged in to prepare for, and adapt to a changing climate. Add links to key documents and information where appropriate.

Q 69 Climate Change Adaptation Actions Proposed for 2019	
	Wildfire mitigation study
	Solar project feasibility study
Q 70 For more information please contact	

Q 71. The following are key resources that may be helpful to your local government in identifying climate impacts, as well as, strategies, actions and funding to deal with them. For those resources that you have used, please indicate whether they were useful in advancing your work in climate change adaptation?	
Indicators of Climate Change for British Columbia	Useful
Plan2Adapt	Useful
Climate Projections for Metro Vancouver	Not Useful
Climate Projections for the Capital Region	Not Useful
Climate Projections for the Cowichan Valley Regional District	Not Useful
Province of BC's BC Adapts Video Series	Haven't Used
Preparing for Climate Change: Implementation Guide for Local Governments	Useful
Public Infrastructure and Engineering Vulnerability Committee's (PIEVC)	Haven't Used
Sea Level Rise Adaptation Primer	Not Useful
BC Regional Adaptation Collaborative Webinars	Haven't Used
Retooling for Climate Change	Useful
Water Balance Model	Haven't Used
Water Conservation Calculator	Haven't Used
Funding:	
National Disaster Mitigation Program (NDMP)	Haven't Used /Useful/Not Useful
Community Emergency Preparedness Fund (CEPF)	Haven't Used /Useful/Not Useful
Municipalities for Climate Innovation Program (MCIP)	Haven't Used /Useful/Not Useful
Climate Adaptation Partner Grants (FCM)	Haven't Used /Useful/Not Useful
Infrastructure Planning Grants (MAH)	Haven't Used /Useful/Not Useful
Federal Gas Tax Fund	Haven't Used /Useful/Not Useful
Other (please specify)	

CARIP
CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 OTHER CLIMATE ACTIONS

Other Climate Actions

This section provides local governments the opportunity to report other climate actions that are not captured in the categories above.

Q 72 Community-Wide Other Actions Taken in 2018
Q 73 Corporate Other Actions Taken in 2018

Other	
Q 74 Are you familiar with the Community Lifecycle Infrastructure Costing Tool (CLIC)?	Yes
Q 75 Is your local government using the CLIC tool?	No

INNOVATION AND PEER-TO-PEER LEARNING

Innovation

This section provides the opportunity to showcase an innovative *Corporate and/or Community-Wide* GHG reduction and/or climate change adaptation activity that your local government has undertaken and that has had, or has the potential to have, a significant impact. You are welcome to highlight an action that has already been listed. Projects included here may be featured as success stories on the B.C. Climate Action Toolkit and/or shared with other local governments to inspire further climate action. Please add links to additional information where possible. Communities that have conducted innovative initiatives may want to consider making applications to CEA's Climate and Energy Action Awards, FCM Sustainable Communities Awards or to FCM's National Measures Report.

Q 76 Community-Wide Innovation Action
Q 77 Corporate Innovation Action

Programs, Partnerships and Funding Opportunities

Local governments often rely on programs, partnerships and funding opportunities to achieve their climate action goals. Please share the names of programs and organizations that have supported your local government's climate actions by listing each entry in the box below separated by a forward slash (e.g. program1/program2).

Mitigation

Q 79 Mitigation Programs, Partnerships and Funding
As a member municipality of the CSRD, the City of Salmon Arm contributes to regional climate actions, with the most relevant being the CSRD`s gas capture at the Salmon Arm landfill.

Adaptation

Q 80 Adaptation Programs, Partnerships and Funding

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CLIMATE ACTION REVENUE INCENTIVE PROGRAM

2018 CARBON NEUTRAL REPORTING

Local governments are required to report on their progress in achieving their carbon neutral goal under the B.C. Climate Action Charter. Working with B.C. local governments, the joint Provincial-UBCM Green Communities Committee (GCC) has established a common approach to determining carbon neutrality for the purposes of the Climate Action Charter, including a Carbon Neutral Framework and supporting guidance for local governments on how to become carbon neutral.

Prior to completing this portion of the survey, please ensure that you are familiar with guidance available on the B.C. Climate Action Toolkit website, especially the Workbook and Becoming Carbon Neutral: A Guide for Local Governments in British Columbia.

Please note: As a result of the BC Recycling Regulation, local governments are no longer required to account for GHG emissions from vehicles, equipment and machinery required for the collection, transportation and diversion of packaging and printed paper, in their annual Climate Action Revenue Incentive Program (CARIP) reports.

Reporting Emissions

Q 81 Did your local government measure corporate GHG emissions for 2018?	Yes
Q 82 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from services delivered directly by your local government (in tonnes of carbon dioxide equivalent)	1114.77
Q 83 If your local government measured 2018 corporate GHG emissions, please report the number of corporate GHG emissions from contracted services (in tonnes of carbon dioxide equivalent)	947.03
Q 84 TOTAL A: CORPORATE GHG EMISSIONS FOR 2018 (Direct GHGs + Contracted GHGs)	2061.8 tCO2e

Reporting Reductions and Offsets

To be carbon neutral, a local government must balance their TOTAL corporate GHG emissions generated in 2018 by one or a combination of the following actions:

- undertake GCC-supported Option 1 Project(s)
- undertake GCC-supported Option 2 Project(s)
- purchase carbon offsets from a credible offset provider

For more information about options to balance or offset corporate GHG emissions please refer to Becoming Carbon Neutral: A Guidebook for Local Governments in British Columbia.

If applicable, please report the 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from any of the following Option 1 GHG Reduction Projects:

OPTION 1 PROJECTS	REDUCTIONS
Q 85 Energy Efficient Retrofits (in tonnes of carbon dioxide equivalent (tCO2e))	
Q 86 Solar Thermal (in tonnes of carbon dioxide equivalent (tCO2e))	
Q 87 Household Organic Waste Composting (in tonnes of carbon dioxide equivalent (tCO2e))	
Q 88 Low Emission Vehicles (in tonnes of carbon dioxide equivalent (tCO2e))	
Q 89 Avoided Forest Conversion (in tonnes of carbon dioxide equivalent (tCO2e))	
Q 90 TOTAL B: REDUCTIONS FROM ALL OPTION 1 PROJECTS FOR 2018	0 tCO2e

Q 91 If applicable, please report the names and 2018 GHG emissions reductions (in tonnes of carbon dioxide equivalent (tCO2e)) being claimed from Option 2 GHG Reduction Projects:

Option 2 Project Name	REDUCTIONS
Option 2 GHGs Reduced (tCO2e)	
Q 92 TOTAL C: REDUCTIONS FROM ALL OPTION 2 PROJECTS FOR 2018	0 tCO2e

Offsets

Q 93 If applicable, please report the name of the offset provider, type of project and number of offsets purchased (in tonnes of carbon dioxide equivalent (tCO2e)) from an offset provider for the 2018 reporting year:

NOTE: DO NOT INCLUDE ANY FUNDS THAT MAY BE SET ASIDE IN A CLIMATE ACTION RESERVE FUND.

Offset Provider Name	OFFSETS
Offsets (tCO2e)	
Q 94 TOTAL D: OFFSETS PURCHASED FOR 2018	0 tCO2e

Q 95 TOTAL REDUCTIONS AND OFFSETS FOR 2018 (Total B+C+D) = 0 tCO2e

Corporate GHG Emissions Balance for 2018

Your local government's Corporate GHG Emissions Balance is the difference between total corporate offsetable GHG emissions (direct + contracted emissions) and the GHG emissions reduced through GCC Option 1 and Option 2 projects and/or the purchase of offsets.

Q 96 CORPORATE GHG EMISSIONS BALANCE FOR 2018 = (A – (B+C+D)) = 2061.8 tCO2e

If your Corporate GHG Emissions Balance is negative or zero, your local government is carbon neutral. CONGRATULATIONS!

Q 97 If your local government was carbon neutral in 2018, please record any emissions reductions you will be carrying over for future years and the source of the reductions, including the year they were earned (e.g. organics diversion, 2018 100 tCO2e)

SOURCE OF CARRY OVER EMISSION REDUCTIONS (and year earned)	REDUCTIONS
Q 98 BALANCE OF REDUCTIONS ELIGIBLE FOR CARRY OVER TO NEXT YEAR	tCO2e

Carbon Neutral Reporting	
Q 99 Does your local government set aside funds in a climate reserve fund or similar?	Yes

GCC CLIMATE ACTION RECOGNITION PROGRAM

Green Communities Committee Climate Action Recognition Program

The joint Provincial-UBCM Green Communities Committee (GCC) is pleased to be continuing the Climate Action Recognition Program again this year. This multi-level program provides the GCC with an opportunity to review and publicly recognize the progress and achievements of each Climate Action Charter (Charter) signatory.

Recognition is provided on an annual basis to local governments who demonstrate progress on their Charter commitments, according to the following:

Level 1 – Demonstrating Progress on Charter Commitments: For local governments who demonstrate progress on fulfilling one or more of their Charter commitments.

Level 2 – Measuring GHG Emissions: For local governments that achieve Level 1, and who have measured their Corporate GHG Emissions for the reporting year and demonstrate that they are familiar with their community's energy and emissions inventory (i.e. CEEI)

Level 3 – Accelerating Progress on Charter Commitments: For those local governments who have achieved Level 1 and 2 and have demonstrated undertaking significant action (corporately or community wide) to reduce GHG emissions in the reporting year (e.g. through undertaking a GHG reduction project, purchasing offsets, establishing a reserve fund).

Level 4 - Achievement of Carbon Neutrality: For local governments who achieve carbon neutrality in the reporting year.

Q 100 Based on your local government's 2018 CARIP Climate Action/Carbon Neutral Progress Survey, please check the GCC Climate Action Recognition Program level that best applies:

	Level 1 – Demonstrating Progress on Charter Commitments	
	Level 2 – Measuring GHG Emissions	
	Level 3 – Accelerating Progress on Charter Commitments	X
	Level 4 - Achievement of Carbon Neutrality	
	Not Sure	

Q 101 Related to Level 3 recognition, if applicable, please identify any new or ongoing corporate or community wide GHG reduction projects (other than an Option 1 or Option 2 project) undertaken by your local government that reflects a significant investment of time and/or financial resources and is intended to result in significant GHG reductions:

PROJECT NAME:
• Hybrid fleet vehicles purchases • Efficient Arena Flood Technology • Solar project feasibility study • LED street lighting projects (Hudson Street revitalization) • Auditorium LED lighting project (rec centre) • Ross Street Underpass project • Curbside food waste pick-up program • Planning for Aquatic Centre replacement • Trans Canada Highway improvements including parallel pathway

Service Area	Emissions (tonnes CO_2e)						
	2012	2013	2014	2015	2016	2017	2018
Administration and Governance	72	42.9	60.7	55.4	53.1	74.57	78.02
Drinking, Storm and Waste Water	462	403.4	455.8	427.9	405.4	451.26	427.23
Solid Waste Collection, Transportation and Diversion	107	106.5	119.5	113.8	116.5	115	123.1
Roads and Traffic Operations	266	344.7	361.6	367.1	369	415.59	425.94
Arts, Recreation, Parks and Cultural Services	932	858.3	877.3	806.7	843.2	932.53	904.44
Fire Protection	105	94.5	106	95.4	91.7	111.55	103.1
Total	1944	1850.3	1980.9	1866.3	1878.9	2100.5	2061.8

Service Area	Emissions (tonnes CO_2e)						
	2012	2013	2014	2015	2016	2017	2018
Administration and Governance							
City Hall	65	36.2	53	47.4	44.6	64.67	69.07
Fleet	7	6.7	7.7	8	8.5	9.9	8.95
Total	**72**	**42.9**	**60.7**	**55.4**	**53.1**	**74.57**	**78.02**
Drinking, Storm and Waste Water							
Water	130	148.1	165.8	161.2	145	159.84	134.93
Sewer (Treatment Plant)	153	125.6	156.7	146	135	157.77	167.97
Public Works Yard (1/3)	10	10.7	10.6	9.5	9.3	12.52	10.9
Fleet	169	119	122.7	111.2	116.1	121.13	113.43
Total	**462**	**403.4**	**455.8**	**427.9**	**405.4**	**451.26**	**427.23**
Solid Waste Collection, Transportation and Diversion							
Curbside Collection Program*	107	106.5	119.5	113.8	116.5	115	123.1
Total	**107**	**106.5**	**119.5**	**113.8**	**116.5**	**115**	**123.1**
Roads and Traffic Operations							
Lighting	18	16.4	20.2	19.8	20.3	20.77	20.97
Public Works Yard (1/3)	10	10.7	10.6	9.5	9.3	12.52	10.9
Fleet	238	317.6	330.8	337.8	339.4	382.3	394.07
Total	**266**	**344.7**	**361.6**	**367.1**	**369**	**415.59**	**425.94**

Arts, Recreation, Parks and Cultural Services							
Parks+cemetery+LMC	12	10.7	11.55	10.3	8.6	12.9	20.0
Public Works Yard (1/3)	10	10.7	10.6	9.5	9.3	12.52	10.9
Arena and Recreation Centre*	810	761	759.7	695.1	740.8	829.34	801.31
Haney Heritage Village & Museum*	10	7	8.8	7.7	7.3	10.19	9.95
Art Gallery*	13	15	17.9	12.3	11.6	14.04	12.67
Fleet	77	53.9	68.75	71.8	65.6	53.54	49.61
Total	**932**	**858.3**	**877.3**	**806.7**	**843.2**	**932.53**	**904.44**
Fire Protection							
Fire Halls & Training Centre	72	63.5	74.2	63.7	59.8	80.37	75.18
Fleet	33	31	31.8	31.7	31.9	31.18	27.93
Total	**105**	**94.5**	**106**	**95.4**	**91.7**	**111.55**	**103.1**
Grand Total	**1944**	**1850.3**	**1980.9**	**1866.3**	**1878.9**	**2100.5**	**2061.8**
In-House Portion	**991**	**960.8**	**1075**	**1037.4**	**1002.7**	**1131.93**	**1114.77**
Contracted Portion*	**953**	**889.5**	**905.9**	**828.9**	**876.2**	**968.57**	**947.03**

Appendix 3

Summary Report on LOCAL GOVERNMENT CLIMATE ACTIONS 2017

BRITISH COLUMBIA

CARIP

CLIMATE ACTION REVENUE INCENTIVE PROGRAM

September 2018

Contents

Cover photo courtesy of Luke Mori

Introduction

The Climate Action Revenue Incentive Program (CARIP) is a conditional grant program that provides funding to local governments who have signed on to the BC Climate Action Charter (Charter). Under the Charter, local government signatories commit to take actions to become carbon neutral in their corporate operations and reduce community-wide emissions by creating more complete, compact and energy efficient rural and urban communities. Since 2007, increasing numbers of local governments have signed on to the Charter, demonstrating their leadership in addressing climate change.

2017 CARIP Report Snapshot

Local Governments Reporting: **187**
Local Governments Measuring: **151**
Carbon Neutral Local Governments: **45**

The CARIP grant is equal to one hundred percent of the carbon tax that eligible local governments have directly paid in a given year. To be eligible for the CARIP grant, local governments are required to have signed on to the Charter, report publicly on their plans and progress toward meeting their corporate and community-wide climate action goals and submit a survey of their actions to the Province.

In 2018, for the second time in a row, all 187 signatory local governments submitted CARIP reports, demonstrating significant commitment to taking climate action. Through their role in land use, transportation, waste, water, energy and other infrastructure and service provision, many local governments are demonstrating leadership and applying innovative approaches to reducing Greenhouse Gas (GHG) emissions and adapting to climate change.

The 2017 CARIP Summary Report

This year's annual report showcases the continued progress of BC local governments by highlighting some of the achievements and experiences of small, medium and large local governments.

The 2017 CARIP Summary Report includes:

- Updates on the carbon neutral progress and status of reporting local governments
- Mitigation and adaptation highlights of actions taken by small, medium and large communities
- Hyperlinked list of funding sources and programs reported by local governments

45 Local Governments achieved carbon neutrality in 2017

- Ashcroft
- Capital RD
- Central Saanich
- Coldstream
- Columbia Shuswap RD
- Comox Valley RD
- Comox
- Cowichan Valley RD
- Cumberland
- Dawson Creek
- Delta
- Duncan
- East Kootenay RD
- Fort St. James
- Granisle
- Highlands
- Islands Trust
- Kitimat-Stikine RD
- Ladysmith
- Langley, Township
- Lantzville
- Logan Lake
- Lumby
- Oak Bay
- Oliver
- Osoyoos
- Parksville
- Peace River RD
- Pemberton
- Penticton
- Mount Waddington RD
- Nanaimo RD
- Richmond
- Sidney
- Sooke
- Squamish
- Squamish-Lillooet RD
- Thompson-Nicola RD
- Tofino
- Ucluelet
- West Vancouver
- Vancouver
- Vanderhoof
- View Royal
- Whistler

Carbon Neutral Local Government

The submission of CARIP surveys by all 187 Climate Action Charter signatories a second year in a row enables a consistent comparison from year to year on the progress made by local governments on their carbon neutral commitments under the Charter.

The number of local governments measuring corporate (GHG) emissions increased by three in the 2017 CARIP reporting year. This positive step forward is an indication that local governments are gaining greater understanding of their corporate operations as they strive towards carbon neutrality. Of the 151 local governments that measured and reported on their GHGs in the 2017 CARIP reporting year, 45 local governments achieved carbon neutrality. Appendix A lists the carbon neutral status of each reporting BC local government.

The amount of corporate GHG emissions generated by local governments in 2017 was 273,776 tCO_2e,[1] an increase of 17,007 tCO_2e compared to 2016. This increase may be partly attributable to additional contracted services becoming eligible for reporting. For example, in 2017 Metro Vancouver made changes to several multi-year contracts; while actual emissions did not increase, the amounts to be included in reporting did. The result of these changes was an increase in Metro Vancouver's total reported contracted emissions from 1,732 tCO_2e in 2016 to 6,543 tCO_2e in 2017, despite a similar extent of contracted activity across the two years. This is a 'paper increase' due to improved tracking and more accurate reporting of contracted emissions, and could be being experienced by other local governments. While a decrease in corporate emissions is the ultimate goal, accurate measurement and reporting is an important step to reaching carbon neutral status.

In 2017, local governments claimed 116,497 tCO_2e of GHG emission reductions and offsets to balance their corporate footprint. Of the total emission reductions and offsets claimed, 103,720 tCO_2e were achieved through the Green Communities Committee (GCC) Option 1 and Option 2 projects.[2] In 2017, Household Organic Waste Composting remained the most common Option 1 project and Biocover Methane Reduction the most common Option 2 project. Local governments chose to purchase 12,349 tCO_2e worth of offsets in 2017, fewer than the 13,093 tCO_2e purchased in 2016.

Please refer to Appendix B for total corporate emissions and reductions reported through CARIP between 2012 and 2017.

1 tCO_2e denotes tonnes of carbon dioxide equivalent

2 Option 1 and Option 2 projects under the Carbon Neutral Framework are designed to help local governments balance their corporate GHG emissions. For more information, see Chapter 2 of Becoming Carbon Neutral: Guidebook for B.C. Local Governments.

Corporate and Community-wide Climate Mitigation Actions

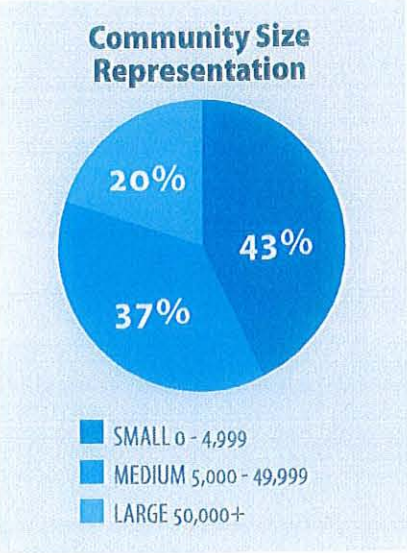
Since the CARIP program was initiated in 2010, the number of corporate and community-wide climate change mitigation actions and plans being undertaken by local governments has been steadily increasing. Actions range from the relatively straightforward, such as shifting to LED lighting, to those that require substantial investment, such as installing alternative energy systems.

In 2017, 51 percent of CARIP respondents reported having corporate GHG reduction plans in place while approximately 92 percent of CARIP respondents indicated having some type of plan in place to support climate mitigation on a community-wide scale. As shown in Table 1, since 2015[3], there has been an increase in the percentage of local governments with Energy and Emissions Plans, Community Wide Action Plans and Official Community Plans supporting climate action.

Table 1: Types of Plans Supporting Climate Action

TYPE OF PLAN	DEGREE OF USE – 2017	DEGREE OF USE – 2016	DEGREE OF USE – 2015
Energy and Emissions Plan	49%	46%	42%
Integrated Community Sustainability Plan	36%	39%	32%
Community-Wide Action Plan	35%	32%	21%
OCP	93%	91%	83%
Other (eg. RGS)	39%	37%	38%

This year's CARIP summary report continues to highlight actions undertaken in small, medium and large communities. As illustrated in the Community Size Representation graph, small communities (0-4,999) represent 43 percent of total CARIP respondents, medium sized communities (5,000- 49,999) represent 37 percent, and large communities (50,000+) represent 20 percent.



The Small Community Experience (0-4,999)

Corporate Actions

Small communities continue to make progress with their corporate mitigation actions in ways that best suit their needs and capacity.

Installation of LED lighting in buildings, recycling, composting and changes to fleet vehicles are some of the types of actions reported, and approximately 67 percent of small communities reported having climate action reserve funds. As in 2016 there was also a very strong focus on the installation of solar generation systems and energy upgrades to existing buildings.

3 2015 was the first year local government were asked to identify the plans they have that support climate change mitigation.

Photo courtesy of Hudson's Hope

Climate Action Highlights

The installation of solar generation systems appears to be an effective way for smaller local governments to reduce the GHG consumption of their community owned buildings and facilities. Examples include the Village of Alert Bay, which installed a battery bank to store the energy generated by the solar panels put on community owned buildings during the previous year, the District of Sparwood's district office and leisure centre solar photovoltaic energy systems, and Port McNeill's installation of a solar heating system at their public swimming pool.

As identified in the following examples, solar energy projects and building upgrades not only reduce GHG emissions but can also save money.

The District of Hudson's Hope is engaged in what is expected to be the largest municipal solar array in BC. The District is installing enough solar panels to generate 500kW of electricity, including roof-mounted solar arrays on seven municipally-owned buildings and ground-mounted arrays at the sewage treatment lagoon and District swimming pool. The project will be "grid-tied" meaning that the surplus solar energy generated will be fed into the grid and accumulate credit with BC Hydro to be used during the darker winter months. The District anticipates saving approximately $70,000 in electrical costs annually. The project was supported by Gas Tax funding.

There were a number of other energy upgrades reported including the District of Wells' upgrades to the Wells-Barkerville Elementary School heating system. Two oil-fired boilers were replaced with high efficiency propane fired condensing boilers. The new boilers and existing hot water heating system were connected to an existing geothermal heating system. This reduced greenhouse gas emissions as well as heating and cooling costs.

"Within our municipality, utilizing newer technology helps us to stay competitive. In addition, the new boilers integrated with the geothermal system provide better overall covering in the facility. Our Public Works Department and CAO have done an excellent job bringing all the pieces together to ensure that we benefit from heating cost savings as well as savings within our maintenance budget."

Mayor Jay Vermette, District of Wells

Community-Wide Actions

As in past years, a number of small communities indicated that they are installing LED street lighting, supporting transit and other transportation alternatives, preserving parkland and forests and supporting local food production. Improving and expanding recycling and composting activities community wide is also a focus. For example, the District of Chetwynd initiated a pilot curbside recycling pickup program in two large subdivisions resulting in a significant reduction in the amount of residential garbage that was taken to the landfill.

90% of CARIP respondents have water conservation plans or policies in place (a 2% increase from 2016).

43% of CARIP respondents have urban forest policies, plans or programs. 63% have policies, plans or programs to support local food production.

Table 2: Modes of Transportation

MODE OF TRANSPORTATION	% OF LGS REPORTING ACTIONS 2017	% OF LGS REPORTING ACTIONS 2016
Walking	80	79
Cycling	76	75
Transit	72	65
Electric Vehicles	62	54

As indicated in Table 2: Modes of Transportation, there has been an increase in the number of local governments reporting actions across all modes of transportation with notable increases in actions related to transit and electric vehicles.

About 19% of CARIP respondents are engaged in transportation demand management activities. In large communities (100,000+), where congestion is most acute, 42% of local governments have transportation demand management strategies in place.

Climate Action Highlights

A number of unique approaches to providing transit were reported in this year's CARIP reports. These include Tofino's continuation of its free bus service connecting the downtown with local beaches and other popular areas, and Gabriola Island's ongoing operation of its volunteer run bus system GERTIE (Gabriola's Environmentally Responsible Trans-Island Express).

One means of reducing transportation emissions is increasing density. In small communities, one way to increase density, reduce GHGs and support affordable housing is to allow additional housing units on residential lots. The Town of Port McNeill reported allowing carriage houses and accessory suites. Bowen Island adopted a secondary suites bylaw to densify existing residential land use.

Photo courtesy of Bowen Island

Bowen Island has also undertaken a number of actions to help reduce its total volume of waste, which goes to an off-island landfill, by 80 percent by 2020. These actions were highlighted in a video produced by the Regional District of Metro Vancouver. Bowen Island's efforts are supported by the community's re-use store, called the Knick Knack Nook. The volunteer run Knick Knack Nook helps divert landfill waste by collecting and selling donations of household items and clothing. The revenues – close to $70,000 in 2017 and $100,000 anticipated in 2018 – are being invested back into the community. This supports a number of community initiatives, including approximately $32,600 which was provided to the Municipality to purchase two balers to compact recycling at the depot.

One baler is used exclusively to bale corrugated cardboard, the other to crush mixed plastics and light metals. This significantly decreases the number of trips required to take recyclables to Vancouver and reduces the cost and frequency of shipments. In partnership with the Municipality, the Knick Knack Nook has also been exploring the opportunity to develop an on-island composting facility.

The Ministry of Municipal Affairs and Housing's Community Lifecycle Infrastructure Costing (CLIC) Tool, compares the infrastructure costs of different development scenarios and provides a financial rationale to support more compact growth. 62% of survey respondents are familiar with the CLIC Tool.

The Medium-sized Community Experience (5,000-49,999)

Corporate Actions

Many corporate actions undertaken by medium-sized communities occurred under the building and lighting, transportation, and water and waste water categories. In transportation, new approaches to staff travel reported included the addition of electric bikes to fleets and the promotion of the use of car share programs. LED lighting upgrades continue to be undertaken as do updates to HVAC systems. There were also a number of efforts reported related to solar energy.

Climate Action Highlights

The following example highlights a unique approach to using solar to reduce GHG emissions in the community while enabling businesses and residents to benefit financially.

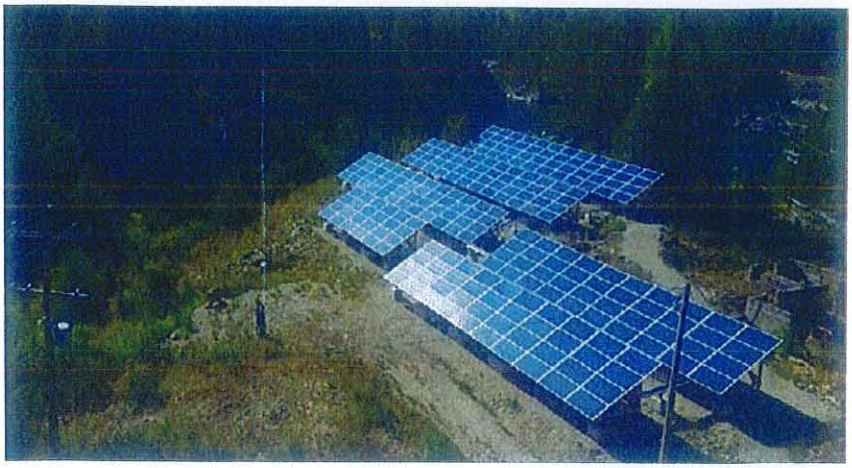


Photo courtesy of Luke Mori, City of Nelson

In June 2017, the City of Nelson launched Canada's first community solar garden, a creative approach to financing a municipal solar energy system. Members of the community were invited to invest in solar energy production on a per panel basis. The solar energy generated, which feeds Nelson Hydro's[4] energy grid, is credited to the subscriber's electricity bills in proportion to their investment on an annual basis for 25 years. The current size of the system is 248 solar modules generating approximately 60kW of solar electricity. The annual estimated energy production for the entire system is approximately 70,000kWh/year for the 25 year period. The system was fully subscribed prior to its construction. Investors range from renters to business owners to churches and schools.

Community-Wide Actions

In 2017, medium-sized communities continued to demonstrate commitment to reducing GHG emissions by implementing many actions in all sectors. Educating and engaging community members and businesses was a major theme across the actions reported.

Climate Action Highlights

The Township of Esquimalt and the City of Nanaimo reported undertaking programs to educate students. In Esquimalt, the District introduced the

4 Nelson Hydro is a City of Nelson owned and operated electric utility

Cool It! Program, a climate leadership training program facilitated by the BC Sustainable Energy Association, which involved 109 students in energy saving actions over a four week period. Students' energy conserving and emissions saving actions at home resulted in projected total savings of 58.723 tonnes of carbon dioxide (tCo2e), if they continued their actions for one year. The City of Nanaimo hosted an annual Public Works Day, where up to 300 students from grades four and five were invited for a full day of learning about the services provided by the Public Works department. They also learned about the hydrological cycle, watershed, water conservation rationale, sewers and drainage systems, and the overall impact of climate change on water resources.

Approximately 55% of CARIP respondents have organics collection programs in place (an increase of 2% since 2016). Over 80% of medium-sized and large communities operate such programs (an increase of 10% from 2016).

Also in the realm of community engagement, the Regional District of Okanagan Similkameen (RDOS) won a Canada Wide Water Award for their West Bench Homeowner Leak Detection Program. The program identified and encouraged homeowners to fix leaks on their side of the water meter before volume based pricing was later implemented. Reducing water use results in GHG reductions related to pumping and delivery and also enables communities to better adapt to climate changes by contributing to the increased retention of water for periods of shortage. The RDOS project successfully identified 167 individual accounts with some kind of intermittent or continuous leak. Using new water meter technology, staff were able to provide detailed reports of leak volumes over time, which assisted homeowners in pinpointing and fixing leaks. This resulted in greater overall water conservation and an 80-85percent reduction in high bill complaints. Due to the success of the system, the RDOS is planning on implementing the system in Naramata, which will ultimately work to reduce residential, commercial and agricultural leaks.

RDOS West Bench Homeowner Leak Detection Program

The City of Campbell River is running a social media campaign promoting local businesses that focus on building energy efficiency in the services they deliver. The City of Fort St. John created a showcase Passive House building that included many green/energy saving initiatives that were unfamiliar to builders in the north. More information is available on the City's website.

Medium-sized communities also focused on actions supporting more compact complete communities, including:

- The District of Mission's OCP encourages compact, complete community development by encouraging density in the urban core.
- The Town of Comox is focussing on transit oriented development.
- The City of Langford maintained their application fee reductions for new multi-family, mixed use, affordable and rental housing.
- The District of West Kelowna introduced a Development Cost Charge Reduction Program to developers looking to create denser, infill and mixed use projects in the city centre and more opportunities for secondary suite and carriage house development.
- The City of Powell River adopted a bylaw to permit carriage houses on applicable residential lots.

Large Community Experience (50,000+)

Corporate Actions

Large communities in BC continue to be engaged in a variety of GHG reduction activities. Building upgrades, innovative energy efficient design and lighting replacement were popular themes in the corporate actions reported by these communities.

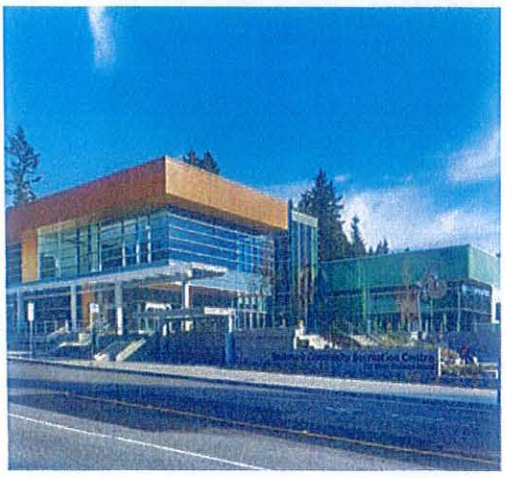
Climate Action Highlights

Many large communities reported LED lighting upgrades in their buildings and streetlights. Those that reported GHG reductions included:

- The District of Saanich implementing Phase 3 of a 5-year street-light replacement program. This phase is estimated to save nearly 200,000 kWh and $18,000 per year.
- The City of Richmond implementing Phase 2 of their street lighting conversion project for an estimated energy savings of over 460,000 kWh annually (replacing 1,500 streetlights).
- The City of Surrey beginning Phase 1 of their streetlight replacement program, generating 1.5 GWh savings within 9 months of project commencement (replacing 64,000 streetlights)

Some of the other types of efforts to improve the energy efficiency of local government buildings reported by large communities are identified below.

The City of Vancouver continued its efforts to meet its target of 100 percent renewable energy and zero emissions in its own facilities by 2040. In line with this, the demolition of City Hall East Wing catalyzed the replacement of the old chiller and cooling tower system with an air-source heat pump, which extracts heat from the outside air and transfers it to the inside to warm the building. It can also cool the inside environment by reversing this process. By the end of 2019, the heat pump is expected to have reduced City Hall's GHG emissions by 34 percent annually, and is projected to save $20,000 each year through energy cost savings.



District of North Vancouver

The District of North Vancouver opened their new Delbrook Community Recreation Centre. The innovative design of this community facility includes natural day lighting, energy efficient lighting and an integrated heat recovery system as part of the air-to-water heat pump system for heating and cooling. It also incorporates a high performance building envelope, natural landscaping and water conservation fixtures. The building exceeded the targets set out in the District's green building policy and received incentives through BC Hydro's New Construction Program. More information is available at: http://www.dnv.org/recreation-and-leisure/delbrook-community-recreation-centre.

Since 2010, the City of Coquitlam's corporate green team, the Carbon Cutters, with support from BC Hydro and Fortis BC, have implemented more than 25 campaigns engaging staff in energy conservation behaviours. The team of 12

staff members, from nine different divisions, supports operational and behavioural changes to achieve energy reductions. These efforts have collectively resulted in reducing approximately 500,000 kWh annually, which represents approximately $50,000 in energy cost savings.

Community-Wide Actions

As in previous years, there was a large range of community-wide actions reported by large communities. This included the efforts of many communities to provide education and promote the Step Code to business and industry.

The highlights below illustrate how regional districts are playing leadership roles in many different sectors.

51% of CARIP respondents had a corporate GHG reduction plan in 2017 (an increase of 3% since 2016). 50% of respondents have a climate action reserve fund.

Approximately 21% of CARIP respondents are in the process of developing or constructing a district energy or renewable energy system, about 33% report operating one, and 9% are connected to a district energy system being operated by another provider.

Climate Action Highlights

Accelerate Kootenays is Canada's first community-driven, collaborative strategy to build a clean transportation network. The project, facilitated by the Community Energy Association, will create an Electric Vehicle (EV) charging station network to ensure EV travel to and within the region is convenient and reliable. It is a two-year, $1.5 million initiative supported by the Columbia Basin Trust, Federation of Canadian Municipalities, Province of BC, FortisBC, BC Hydro, and Powertech Labs. The Accelerate Kootenays project was initiated by the Regional District of East Kootenay (RDEK) and included in the RDEK's Community Energy Manager work plan. The scope of the project has been subsequently expanded to include the Regional District of East Kootenay, Regional District of Central Kootenay and Regional District of Kootenay Boundary.

Accelerate Kootenays

In 2017 the Capital Regional District completed the "Food Service Establishment Water, Energy and GHG Savings Program" that assisted 141 local businesses to reduce their environmental footprint and save money. Participants received high-efficiency water fixtures with free installation, as well as on-site education about further water and energy saving opportunities and rebate programs. The program is expected to save at least 598 tCo2e and 77,000,000 litres of water annually.

The Fraser Valley Regional District (FVRD) partnered with FoodMesh to launch a regional food recovery initiative that connects local farms, charities and food industry partners to exchange surplus edible food via an online app/marketplace. The goal is to work with 50 local FVRD businesses and charities to join the network with a shared goal of "redirecting" $400,000 of edible food through the website. This will help organizations recover costs and increase margins by matching overstock food with businesses and charities, provide meals and lower GHG emissions by reducing the amount of food waste traveling to the landfill.

Adaptation

The 2017 reporting year was the third year in a row that local governments were asked to report on climate adaptation actions. Survey responses reveal that since 2015 there has been a significant shift in local government understanding of adaptation and an increase in actions being reported.

In 2017, about 75 percent of survey respondents identified being engaged in emergency response planning to address the impacts of a changing climate. Over half of survey respondents reported being engaged in infrastructure upgrades and public education. Over 40 percent reported being engaged in risk and vulnerability assessments, risk and reduction strategies, strategic financial planning, OCP policy changes, research, mapping and partnerships.

The top three climate change impacts of concern include:

- Extreme weather events contributing to urban and overland flooding
- Increased temperatures increasing wildfire activity
- Changes in temperature and precipitation causing seasonal drought

Below are examples of how some local governments are addressing these three main impacts.

Flooding

Many communities, including the Districts of Chetwynd, Sicamous, and Sparwood and the City of Dawson Creek engaged in flood risk studies. The City and District of North Vancouver, City of Williams Lake, City of Richmond and District of Saanich undertook stormwater management planning.

Stormwater management strategies seek to improve stormwater drainage thereby reducing the risk of flooding during heavy rain events.

City of Surrey
Coastal Flood Adaptation Strategy

The City of Surrey has been developing a Coastal Flood Adaptation Strategy (CFA) to explore options and preferred strategies to adapt to climate impacts, including sea level rise in Surrey's coastal floodplain area. Technical sea level and flood risk studies previously conducted are being used to inform adaptation options. Preferred options are being refined with stakeholder and partner input. The Public Infrastructure Engineering Vulnerability Committee (PIEVC) standards for infrastructure development, encouraged by Engineers Canada, are being applied to the highest risk areas of Surrey's coastal floodplain. A triple bottom line approach recognizing social, environmental and economic impacts is also being applied. More information can be found in this video.

Wildfire

A number of local governments have addressed wildfire risk through fuel reduction. Fuel reduction is a fire management strategy that focusses on removing ground brush and debris, pruning lower branches and removing tight second growth trees. For example, the Resort Municipality of Whistler has been engaged in fuel reduction since 2004 (More information is available online on The Strategic Wildfire Prevention Initiative).

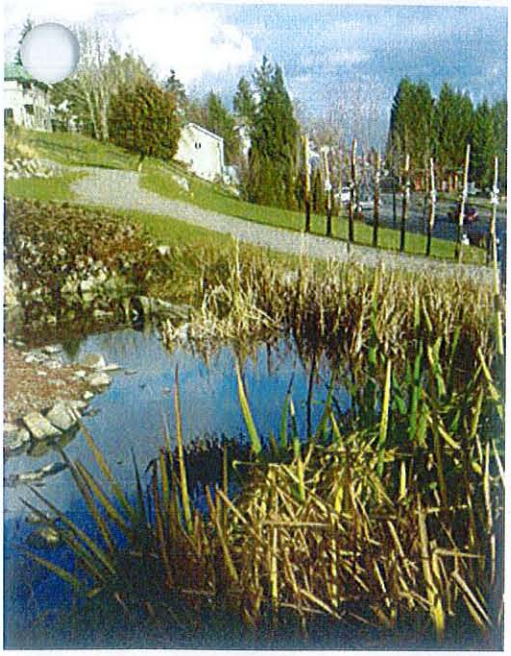
In addition to taking direct action to mitigate the spread of wildfires many local governments also engaged in fire protection outreach activities. The City of Nelson, Squamish Lillooet Regional District, City of Merritt and District of West Kelowna delivered FireSmart workshops and campaigns. In West Kelowna, staff worked with a Registered Professional Forester to host a FireSmart open house and carry out a door to door campaign in one of their neighborhoods to educate and inform private property owners about wildfire mitigation best practices. FireSmart Canada is a program of the Partners in Protection (PiP), a multidisciplinary non-profit association. It is made up of members representing national, provincial and municipal associations, government departments responsible for emergency services, forest and parks management and land use planning, private business and industry.

Drought

A number of local governments took actions to address the impacts of drought in their community. The Comox Valley Regional District has been encouraging the development of rain gardens and bioswales, the use of rain barrels for collecting rainwater and maintenance of trees and vegetation. Similarly, the Thompson Nicola Regional District worked throughout the community to promote a rain barrel program, and on the Sunshine Coast, the Regional District has been collaborating with communities on water conservation strategies which include water meters and water restrictions. In the northern reaches of the province, the City of Dawson Creek started construction of a new raw water reservoir (1,000,000 m3) for increased water security. This provides up to 155 days of reserve in the event that their main watershed is running low or is at risk of becoming contaminated.

The Regional District of North Okanagan's 2011 Drought Management Plan for the Greater Vernon Water Utility was recognized by the Okanagan Basin Water Board (OBWB) as a useful tool for water service providers facing drought related challenges. The key element of the Plan is the decision tree, which helps identify triggers (e.g. reservoir storage, snow pack, weather forecast and customer demand levels) and drought stages, which are then connected to related responses. The Plan is frequently reviewed and has stood the test of time. In 2016, the OBWB created a template based on the Plan and began sharing it with other water service providers in 2017.

To further support the implementation of drought management response, a new web-based alert service for the agricultural sector, connecting drought levels to actions, was piloted by the Regional District of North Okanagan and the City of Penticton in 2017.



MNAI featuring Gibsons

Partner Organizations

As in previous CARIP reporting years, local governments have identified many partner organizations that have helped them work towards their climate mitigation and adaptation goals. Each year the CARIP summary report highlights one partner out of the list of those generated from the CARIP surveys. This year a number of local governments identified connecting with the Municipal Natural Assets Initiative (MNAI).

The MNAI recognizes the contribution of natural assets to local government service delivery. Local governments are increasingly recognizing the MNAI's perspective as they examine options to address their infrastructure needs that are financially sustainable and consider climate change impacts. The MNAI team, comprised of Brooke and Associates, the David Suzuki Foundation, Smart Prosperity Institute and the Town of Gibsons, provides scientific, economic and municipal expertise to support local governments in identifying, valuing and accounting for natural assets in their financial and asset management programs. In 2017, the City of Nanaimo, District of West Vancouver and City of Grand Forks engaged in a pilot project conducted by MNAI to test the natural asset management approach. Click here for more information.

List of Partners Identified in CARIP Reports

Asset Management BC
BC Agriculture and Food Climate Action Initiative
BC Healthy Communities
BC Hydro Sustainable Communities
BC Sustainable Energy Association
BC Hydro Power Smart
BC Hydro EV Charging Station Program
BC Oil to Heat Pump Incentive Program
BC Sustainable Energy Association
Bike BC
Bike to Work BC
C40 Cities
Canadian Urban Sustainability Practitioners Network
Carbon Neutral Cities Alliance
Cariboo Chilcotin Conservation Society
Carpool.ca
Cascadia Network Climate Smart Business
Columbia Basin Trust
Community Energy Association
CRD Climate Action Program
E3 Fleets
EcoTrust
Emergency Management BC
FCM Green Municipal Fund
Federal Gas Tax Funding
Forest Enhancement Society of BC
Fortis BC
Fraser Basin Council
ICLEI Canada
Interior Health Authority
Investment Agricultural Foundation of BC
Interior Health Authority
Municipal Natural Assets Initiative
National Resources Canada
National Wetland Conservation Fund
Northern Development Trust
Northern Initiative Trust
Okanagan Basin Water Board
Pacific Institute for Climate Solutions
Pacific Climate Impacts Consortium
Partnership for Water Sustainability
Pembina Institute (Green Building Leaders)
Plug in BC
Quality Urban Energy Systems of Tomorrow
RBC Blue Water
Real Estate Foundation
Rotary Club
SolarBC Solar Hot Water Ready Regulation (BC Gov)
TD Friends of the Environment Foundation
Tree Canada
UBCM: Community Emergency Preparedness Fund
VanCity
Vancouver Foundation
Woodstove Exchange Program

Conclusion

As demonstrated by the one hundred percent participation of Charter signatories in the CARIP program this year, and the extensive mitigation and adaptation actions reported in 2017, local governments are clearly committed to reducing their corporate and community-wide GHG emissions and addressing the impact of climate change.

The number of local governments measuring corporate emissions increased to 151 with 45 reporting carbon neutral status. Approximately 92 percent of CARIP respondents have a plan in place to support community-wide climate mitigation. As indicated in the Climate Action Highlights sections of this report, innovative projects are being implemented by communities of all sizes, from installing LED lighting to advancing solar energy capture projects. Local governments also reported adaptation actions being implemented in 2017 and planned for in 2018 further demonstrating an understanding of the need to address the changes that are being experienced as a result of climate change.

More information on the CARIP program and CARIP Summary Reports from past years can be found on the Ministry of Municipal Affairs and Housing's website.

Appendix A

2017 Carbon Neutral Status of Reporting B.C. Local Governments

CARBON NEUTRAL

Ashcroft
Capital RD
Central Saanich
Coldstream
Columbia Shuswap RD
Comox Valley RD
Comox
Cowichan Valley RD
Cumberland
Dawson Creek
Delta
Duncan
Fort St. James
Granisle
Highlands
Islands Trust
Ladysmith
Langley, Township
Lantzville
Logan Lake
Lumby
Oak Bay
Oliver
Osoyoos
Parksville
Peace River RD
Pemberton
Penticton
East Kootenay RD
Kitimat-Stikine RD
Mount Waddington RD
Nanaimo RD
Richmond
Sidney
Sooke
Squamish
Squamish-Lillooet RD
Thompson-Nicola RD
Tofino
Ucluelet
West Vancouver
Vancouver
Vanderhoof
View Royal
Whistler

ACCELERATING PROGRESS ON CHARTER COMMITMENTS

Abbotsford
Alert Bay
Bulkley-Nechako RD
Campbell River
Central Kootenay RD
Chilliwack
Clearwater
Colwood
Coquitlam
Courtenay
Creston
Elkford
Esquimalt
Fernie
Fort St. John
Fraser-Fort George RD
Fraser Valley RD
Gold River
Golden
Grand Forks
Harrison Hot Springs
Houston
Invermere
Kamloops
Kelowna
Keremeos
Kimberley
Kootenay Boundary RD
Lake Country
Langford
Langley, City
Masset
Metchosin
Metro Vancouver RD
Midway
Mission
Montrose
Nanaimo
New Denver
New Westminister
North Cowichan
North Saanich
North Vancouver, City
North Vancouver, District
Peachland
Pitt Meadows
Port Alberni
Port Alice
Port Coquitlam
Port Hardy
Port McNeill
Port Moody
Prince George
qathet RD
Qualicum Beach
Radium Hot Springs
Revelstoke
Rossland
Saanich
Salmon Arm
Slocan
Smithers
Sparwood
Summerland
Surrey
Taylor
Telkwa
Trail
Valemount
Vernon
Victoria
Wells
West Kelowna
White Rock

MEASURING GHG EMISSIONS

100 Mile House
Armstrong
Burnaby
Cariboo RD
Central Okanagan RD
Chetwynd
Clinton
Cranbrook
Enderby
Fruitvale
Gibsons
Greenwood
Hudson's Hope
Kitimat
Mackenzie
Maple Ridge
Merritt
Nelson
North Okanagan RD
Northern Rockies
Okanagan-Similkameen RD
Port Clements
Powell River
Quesnel
Salmo
Sicamous
Stewart
Strathcona RD
Sunshine Coast RD
Terrace
Tumbler Ridge
Williams Lake

DEMONSTRATING PROGRESS ON CHARTER COMMITMENTS

Alberni-Clayoquot RD
Anmore
Barriere
Belcarra
Bowen Island
Burns Lake
Cache Creek
Canal Flats
Castlegar
Central Coast RD
Chase
Fraser Lake
Hazelton
Hope
Kaslo
Kent
Lake Cowichan
Lillooet
Lions Bay
Lytton
McBride
Nakusp
New Hazelton
North Coast RD
Port Edward
Pouce Coupe
Prince Rupert
Princeton
Queen Charlotte
Sayward
Sechelt
Silverton
Spallumcheen
Sun Peaks
Tahsis
Warfield

Appendix B

The following table and bar graph present corporate emissions reported and emission reductions claimed toward carbon neutral status[5].

For further information, please contact PLUM@gov.bc.ca.

CORPORATE EMISSIONS REPORTED THROUGH CARIP, 2012-2017

	Number of LGs Measuring	Total Corporate Emissions	Emission Reductions Claimed toward CN Status	Remaining Corporate Emissions
2012	144	245,686	91,362	154,324
2013	157	248,601	122,967	125,634
2014	142	239,350	123,026	116,325
2015	146	239,966	131,401	108,564
2016	147	256,769	123,514	133,255
2017	151	273,776	111,955	161,821

5 These figures do not include carryover amounts (i.e. the amounts that can be carried over to the following year from reductions over and above the amount required to be carbon neutral). Carryover amounts were included in emission reductions reported in previous years' CARIP Summary Reports.

Photo courtesy of Hudson's Hope

BRITISH COLUMBIA

CARIP

CLIMATE ACTION REVENUE INCENTIVE PROGRAM

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