

City of Surrey PLANNING & DEVELOPMENT REPORT Application No.: 7924-0050-00

Planning Report Date: July 8, 2024

PROPOSAL:

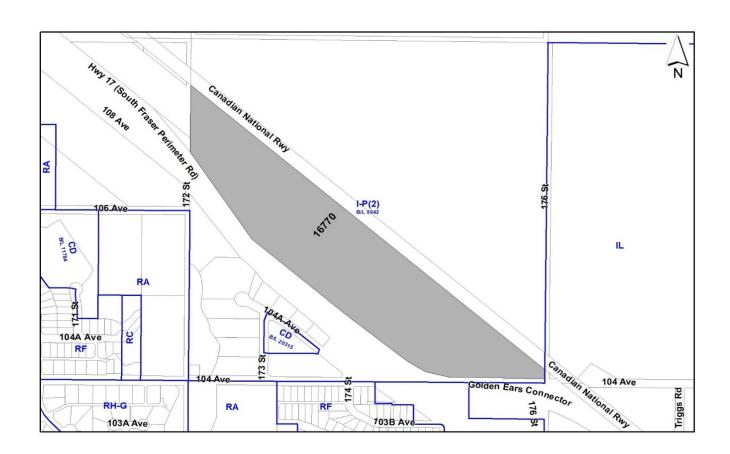
• Development Variance Permit

to increase the maximum height of a free-standing telecommunications tower from 12 metres to 37 metres

LOCATION: 16770 - Canadian National Railway

ZONING: I-P(2) (Zoning Bylaw No. 5942)

OCP DESIGNATION: Industrial



RECOMMENDATION SUMMARY

• Approval for Development Variance Permit to proceed to Public Notification.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

• Seeking a variance to Surrey Zoning By-law, 1979, No. 5942 to increase the maximum permitted height of a free-standing telecommunications tower from 12 metres to 37 metres.

RATIONALE OF RECOMMENDATION

- The proposal complies with the majority of criteria identified in the City's Policy for Telecommunications Towers.
- The applicant has provided information indicating that there are no existing structures that are suitable to mount telecommunication equipment within a 500-metre radius of the subject site. There is an existing telecommunication tower on the site that is unable to support colocation of services.
- The proposed location of the tower is located within a CN railway yard in an industrial area.
- The applicant has provided documentation which indicates that there is a demonstrated coverage gap in the area, which the wireless carrier would like to resolve to provide better service to existing and potentially new customers.

RECOMMENDATION

The Planning & Development Department recommends that:

1. Council approve Development Variance Permit No. 7924-0050-00 (Appendix II), to vary Part 4 General Provisions of the Surrey Zoning By-law, 1979, No. 5942, as amended to increase the maximum height of a free-standing telecommunications tower from 12 metres to 37 metres, to proceed to Public Notification.

SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP Designation	Existing Zone
Subject Site	CN Railway Yards	Industrial	I-P(2)
North (Across CN railway tracks):	Surrey Bend Park	Conservation and Recreation	I-P(2)
East (Across CN railway tracks):	Surrey Bend Park	Conservation and Recreation	IL
South (Across Highway No. 17):	Preloaded and vacant industrial lots and single family residential dwellings.	Mixed Employment and Urban and Landscape Buffer in the Abbey Ridge Local Area Plan	I-P(2), IL and RA
West:	CN Rail Yards and Highway No. 17	Industrial	I-P(2)

Context & Background

- The subject site is a CN railway yard and is located at 16770 Canadian National Railway. The site is designated Industrial in the Official Community Plan (OCP) and is zoned "Industrial Park Zone Two (IP-(2))" under previous Zoning By-law No. 5942 (Surrey Zoning By-law, 1979, No. 5942, as amended)
- The subject site is currently occupied by the CN railway yard.

DEVELOPMENT PROPOSAL

Planning Considerations

- Cypress Land Services Ltd. on behalf of Rogers is proposing to erect a 37-metre tall telecommunications tower and equipment compound on the subject site.
- Over the past few years, staff and the applicant explored whether there were existing structures of sufficient height within a 500-metre radius of the subject site to mount equipment, but no suitable structures were found.

- An existing 36-metre telecommunication tower exists approximately 40 metres to the west but will not allow for co-location of services.
- The proposal will provide improved telecommunication coverage and capacity for the area generally around the South Fraser Perimeter Road between 168 Street and 192 Street (see Appendix V).
- The applicant is proposing to install a monopole type telecommunication tower, with two rows of panel antennas for a total of 12 panel antennas. A 2-metre lighting rod is located at the top of the proposed monopole.
- The proposed telecommunication tower and compound are located on the eastern corner of the site by the entrance to the site near Golden Ears Connector and 176 Street. The tower is sited such that it will have a minimum impact on the functionality of the site.
- The applicant has provided a rendering of what the proposed red and white striped steel monopole will look like from the east along Golden Ears Connector (Appendix III).

Referrals

Engineering: The Engineering Department has no objection to the project.

POLICY & BYLAW CONSIDERATIONS

- Staff have relayed to telecommunication companies the importance of a comprehensive strategy to ensure adequate coverage for all carriers while minimizing the number of singular user installations and keeping the height of installations to a minimum without compromising the existing policy guidelines, especially tower proximity to residential areas and aesthetics being adequately addressed.
- Improving high speed wireless service supports the growing high technology sector, high tech education, emergency services and broadens community consultation opportunities through social media.
- The proposed telecommunications tower supports the City of Surrey's vision for building a strong economy.

<u>City's Telecommunications Strategy</u>

- The subject application generally complies with the current Telecommunications Tower Policy No. O-62 and is therefore being presented for Council's consideration.
- The City policy on telecommunication towers was developed in conjunction with wireless providers and approved by Council on February 22, 2021 (Policy No. O-62 Telecommunication Towers). The policy provides parameters on how the towers should be sited and designed.
- The following is an evaluation of the current proposal in relation to Policy No. O-62:

Location and Siting

• When considering the siting of telecommunication tower facilities, every effort should be made to locate new equipment on existing structures such as BC Hydro transmission line towers, utility poles, roof tops, etc.

The applicant has indicated that they require a 37-metre tower height in order to ensure an expanded infill coverage area generally bound by South Fraser Perimeter Road between 168 Street and 192 Street (see Appendix V).

The applicant has informed staff that there are no existing structures within a 500-metre radius from the proposed location of the telecommunication tower that have the necessary height to facilitate the increased coverage area.

The existing 35 metre tower to the west does not have sufficient height to allow for colocation.

They have provided a map of all existing telecommunication towers in the area (Appendix IV).

• It is preferable that new free-standing telecommunication towers be sited in non-residential locations and preferably in industrial areas.

The proposed location is within the CN rail yards in an industrial area and is approximately 250 metres from residential properties across South Fraser Perimeter Road and vacant industrial lands to the southeast.

• Towers on prominent natural and cultural features, environmentally sensitive areas or areas with historically significant buildings are discouraged.

The proposed location of the installation is within an industrial area with no known cultural or historically significant features.

• New free-standing telecommunication towers should be located at a distance from the edge of an existing or future road allowance no less than the height of the tower.

The proposed 37-metre tall wireless installation is located at the eastern corner of an industrial lot approximately 55 metres from Golden Ears Connector.

• Locating of telecommunication towers on sites with mature trees is encouraged.

As the site is a rail yard, there are currently no trees.

All applicants for free-standing telecommunication structures will be requested to identify
any other structure (e.g. hydro transmission tower, existing telecommunication towers, etc.)
within a radius of 500 metres from the proposed location and to provide reasons why other
existing structures within that radius are not acceptable for use (i.e. structural capabilities,
safety, available space or failing to meet service coverage needs).

There are no suitable structures for mounting equipment within a 500-metre radius of the subject site that have the necessary height to facilitate the increased coverage area.

The existing 35 metre tower to the west does not have sufficient height to allow for colocation.

Co-Location

• The carriers and other telecommunication tower owners are encouraged to work co-operatively in reaching agreements which allow for sharing of tower structures so as to minimize the total number of towers in the City. This practice is typically referred to as "co-location".

No other carriers have requested to co-locate on the proposed tower.

If co-location were required, it would require an additional height of approximately 11 metres as well as additional width and massing which would make the proposed tower more visible.

Tower Design and Landscaping Criteria

• Towers and ancillary equipment shelters will be designed to fit their surroundings and to minimize their visual impact on surrounding properties.

The proposed tower is located at the eastern corner of an industrial property.

• The use of the monopole is encouraged. Where a tower is being constructed to accommodate a single user, a monopole design is required.

The proposed tower is a monopole design. Due to the height proposed, the proposed tower is for a single carrier.

• Landscaping shall be appropriately placed around telecommunication towers and ancillary facilities, such as equipment shelters, to minimize their visual impact on the neighbourhood.

No landscaping is proposed as the tower and compound are located at the entrance to the CN rail yard. CN does not support incorporating landscaping at the subject location due to impacts on rail yard operations.

BY-LAW VARIANCES AND JUSTIFICATION

(a) Requested Variances:

• To vary Part 4 General Provisions of Surrey Zoning By-law, 1979, No. 5942, as amended, to increase the maximum height of a free-standing telecommunications tower from 12 metres to 37 metres.

Applicant's Reasons:

- The applicant has submitted documentation demonstrating that there is a coverage gap in the area, which the proposed telecommunications tower would assist in resolving.
- There are limited options for locating cell towers in the area.
- The proposed location within the site is located at the eastern corner of the existing CN rail yards and is adjacent to a staff parking lot area.

Staff Comments:

- The proposal complies with the majority of criteria identified in the City's Policy for Telecommunications Towers.
- The proposed height variance is not anticipated to adversely impact the functionality of the site.
- Staff support the requested variance.

PUBLIC ENGAGEMENT

In accordance with City policy, the applicant sent out approximately 55 notification packages on February 15, 2024 to property owners within a notification area of 105 metres (which is approximately three times the height of the proposed tower of the tower) of the subject site.

As a result of these notifications, no responses were received.

TREES

No by-law sized trees will be removed as part of this telecommunication tower proposal.

INFORMATION ATTACHED TO THIS REPORT

The following information is attached to this Report:

Application No.: 7924-0050-00

Page 8

Appendix I. Proposed, Site Plan and Elevations

Appendix II. Development Variance Permit No. 7924-0050-00

Appendix III. Renderings

Appendix IV. Existing towers in the area

Appendix V. Coverage Map

approved by Ron Gill

Don Luymes General Manager Planning and Development

JKS/kd







SITE NAME: SPFR EAST (CN RAIL)

SITE ID: W4455

LOCATION: 17569 104 AVE, SURREY, BC

16770 CNR YARD - SURGE, SURREY, BC

SITE TYPE: 35m MONOPOLE AND WIC

DRAWING LIST: \$101 TITLE PAGE

S203 ANTENNA TABLE AND DETAILS

S204 RRU DETAILS

S205 ANTENNA LAYOUTS

S301 SITE PLAN

S302 COMPOUND LAYOUT

S401 SOUTHWEST AND NORTHWEST ELEVATIONS

S402 COMPOUND ISOMETRIC

	2024.01.08	REVISED PER RF QUAL REV A
	2023.12.06	REVISED SITE LOCATION
		ISSUED FOR CLIENT REVIEW
	2022.11.01	ISSUED FOR CLIENT REVIEW
No.:	Date:	Description:

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SFPR EAST (CN RAIL)
SURREY, BC

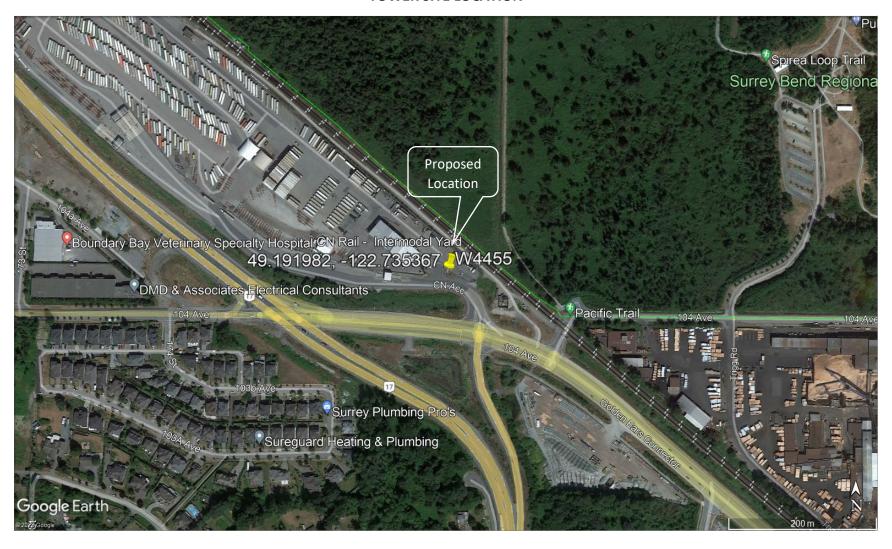
O ROGERS.

Sheet Title:
TITLE PAGE

EGBC Permit To Practice: 1003171

Revisions:

SCHEDULE A TOWER SITE LOCATION



ROGERS SITE: W4455 Page **4** of **6**

Appendix 1: Location map of the Proposed Installation **Annexe 1**: Carte de localisation du projet proposé



ANTENNA TABLE														
ANT.			MOUNT				MET (*)		AZIMUTH		CABLE	RRUs		
POS. No.	TECHNOLOGY	LABEL	HEIGHT AGL(m)	HEIGHT MOUNT AGL(m) (UP/DOWN)	ANTENNA TYPE	MDT (*)	700/ 850	1900/ 2100/ 2600	(°)	LINE TYPE	LENGTH (m)	TOTAL RRUs	INITIAL RRUs	STATUS
1	LTE	LTE-1	33.95	UP	FFV4S4-65B-R7-V2	0	6	4	60	DC/FIBER	±38	4	3	INITIAL
2	NR	NR-1	31.97	UP	AIR3258	TBD	TBD	TBD	60	DC/FIBER	±36	0	0	INITIAL
3	OFFSET	OFFSET-1	33.95	UP	FFV4S4-65B-R7-V2	0	7	4	0	DC/FIBER	±38	4	2	INITIAL
4	NR	NR-A	31.97	UP	AIR3228	TBD	TBD	TBD	0	-	±36	0	0	FUTURE
5	LTE	LTE-2	33.95	UP	FFV4S4-65B-R7-V2	0	2	2	180	DC/FIBER	±38	4	3	INITIAL
6	NR	NR-1	31.97	UP	AIR3258	TBD	TBD	TBD	180	DC/FIBER	±36	0	0	INITIAL
7	OFFSET	OFFSET-2	33.95	UP	FFV4S4-65B-R7-V2	0	7	4	120	DC/FIBER	±38	4	2	INITIAL
8	NR	NR-B	31.97	UP	AIR3228	TBD	TBD	TBD	120	-	±36	0	0	FUTURE
9	LTE	LTE-3	33.95	UP	FFV4S4-65B-R7-V2	0	7	4	300	DC/FIBER	±38	4	3	INITIAL
10	NR	NR-1	31.97	UP	AIR3258	TBD	TBD	TBD	300	DC/FIBER	±36	0	0	INITIAL
11	OFFSET	OFFSET-3	33.95	UP	FFV4S4-65B-R7-V2	4	2	2	240	DC/FIBER	±38	4	2	INITIAL
12	NR	NR-C	31.97	UP	AIR3228	TBD	TBD	TBD	240	-	±36	0	0	FUTURE
13	GPS	GPS-1	3.00	-	KRE1012395/2	_	-	-	-	TBD	±2	-	-	INITIAL

NOTES: 1. TABLE CONTENTS TO BE CONFIRMED WITH ROGERS.

2. CABLE BEND RADIUS AS PER MANUFACTURER'S RECOMMENDATIONS. 3. ANTENNA HEIGHT TO CENTER OF ANTENNA.

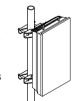
4. CABLE LENGTHS ARE APPROXIMATE ONLY AND MUST BE CONFIRMED BY CONTRACTOR PRIOR TO CONSTRUCTION.

ROGERS PRELIMINARY RADIO SITE QUALIFICATION REV A - DATED DEC. 8, 2023



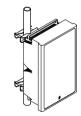
ANT. TYPE: COMMSCOPE FFV4S4-65B-R7-V2 MODEL:

HEIGHT: 2000mm WIDTH: 498mm 197mm 41.6kg W/O MOUNTING BRACKETS DEPTH: WEIGHT:



ANT. TYPE: ERICSSON MODEL: AIR 3258 793mm HEIGHT: WIDTH: 408mm DEPTH: 235mm

WEIGHT: 28.0kg (W/O MOUNTING KIT)



ANT. TYPE: ERICSSON AIR 3228 MODEL: 841mm HEIGHT:

WIDTH: 524mm DEPTH: 286mm 46.0kg (W/O MOUNTING KIT) WEIGHT:



MANUFACTURER: ERICSSON MODEL: KRE1012395/2 HEIGHT: 74mm DIAMETER: 77mm WEIGHT: 0.3kg



	2024.01.08	RF QUAL REV A
	2023.12.06	REVISED SITE LOCATION
	2022.12.16	ISSUED FOR CLIENT REVIEW
		ISSUED FOR CLIENT REVIEW
No.:	Date:	Description:

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Site ID: **W4455** Project: SFPR EAST (CN RAIL) SURREY, BC



Sheet Title: ANTENNA TABLE

EGBC Permit To Practice: 1003171 Revisions: Date: OCT 2022 Drawing: Scale: Drawn: CW Checked: GF Project: 222189



MANUFACTURER: ERICSSON
MODEL: 8863 (RRU)
HEIGHT: 478mm
DEPTH: 145mm (NO FAN)
WIDTH: 375mm
WEIGHT: 22.6kg



MANUFACTURER: ERICSSON
MODEL: 4415 (RRU)
HEIGHT: 420mm
DEPTH: 149mm (NO FAN)

WIDTH: 342mm WEIGHT: 20.0kg

 MANUFACTURER:
 ERICSSON

 MODEL:
 4478 (RRU)

 HEIGHT:
 460mm

 DEPTH:
 199mm (NO FAN)

 WIDTH:
 342mm

 WEIGHT:
 25.5kg



| MANUFACTURER: | ERICSSON | MODEL: | 4449 (RRU) | 455mm | 240mm | WIDTH: | 335mm | 32kg |



 MANUFACTURER:
 ERICSSON

 MODEL:
 4426 (RRU)

 HEIGHT:
 420mm

 DEPTH:
 164mm (NO FAN)

 WIDTH:
 343mm

 WEIGHT:
 21.0kg



MANUFACTURER: ERICSSON
MODEL: 4418 (RRU)
HEIGHT: 420mm
DEPTH: 123mm
WIDTH: 342mm
WEIGHT: 15.6kg



2024.01.08 REVISED PER RF QUAL REV A REVISED SITE LOCATION 2022.12.16 SSUED FOR CLIENT REVIEW 2022.11.01 SSUED FOR CLIENT REVIEW No.: Date: Description:

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SFPR EAST (CN RAIL)
SURREY, BC

O ROGERS.

EGBC Permit To Practice: 1003171 Revisions:

Sheet Title: Date: 0

RRU DETAILS

 Date:
 OCT 2022
 Drawing:

 Scale:
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 CW
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 Checked:
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 Project:
 222189
 Of

THESE LAYOUTS ARE SCHEMATIC ONLY.
SPECIFIC MONOPOLE AND ANTENNA
MOUNT DIMENSIONS AND CONFIGURATION
BY MONOPOLE ENGINEER





- INDICATES PARTICULAR ATTENTION SHOULD BE GIVEN TO WHAT IS NOTED ON THE DRAWING

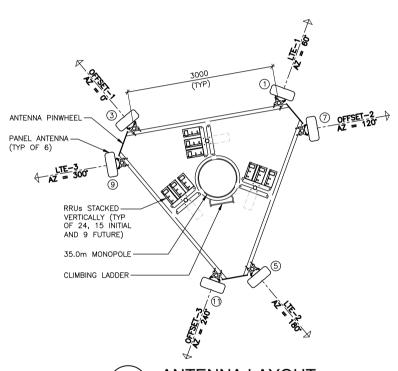
- DENOTES ANTENNA POSITION. SEE S203

- DENOTES EXISTING

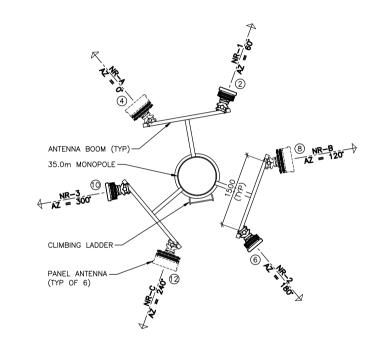
(TYP) - DENOTES TYPICAL



APPROXIMATE







ANTENNA LAYOUT 1:50 (@ 31.97m AGL)

		REVISED PER RF QUAL REV A
	2023.12.06	REVISED SITE LOCATION
	2022.12.16	ISSUED FOR CLIENT REVIEW
		ISSUED FOR CLIENT REVIEW
No.:	Date:	Description:

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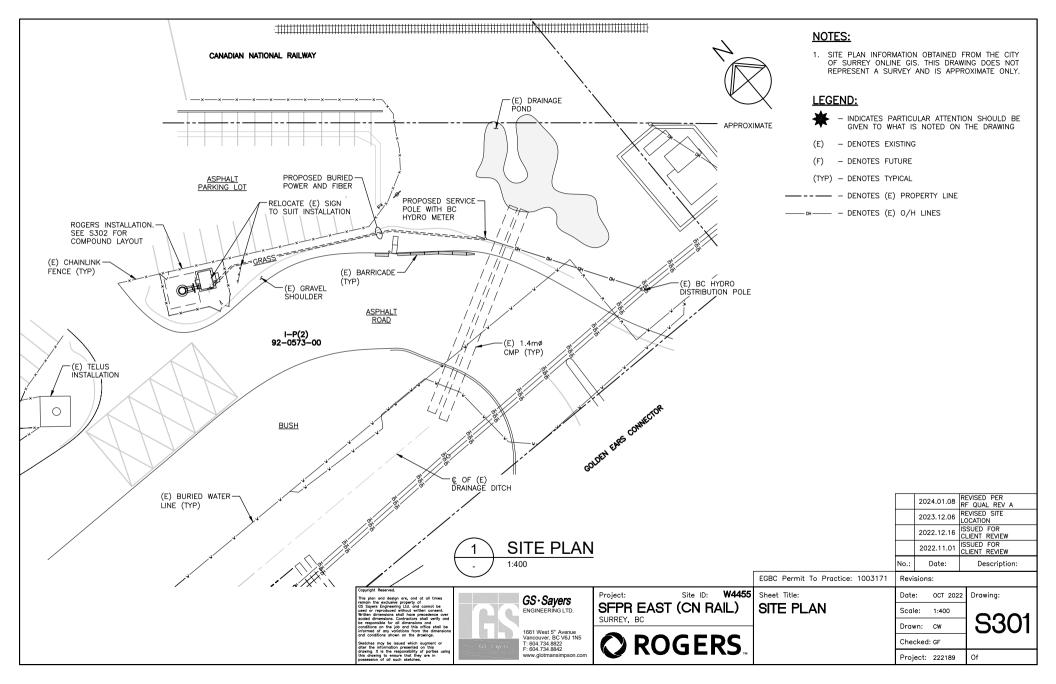
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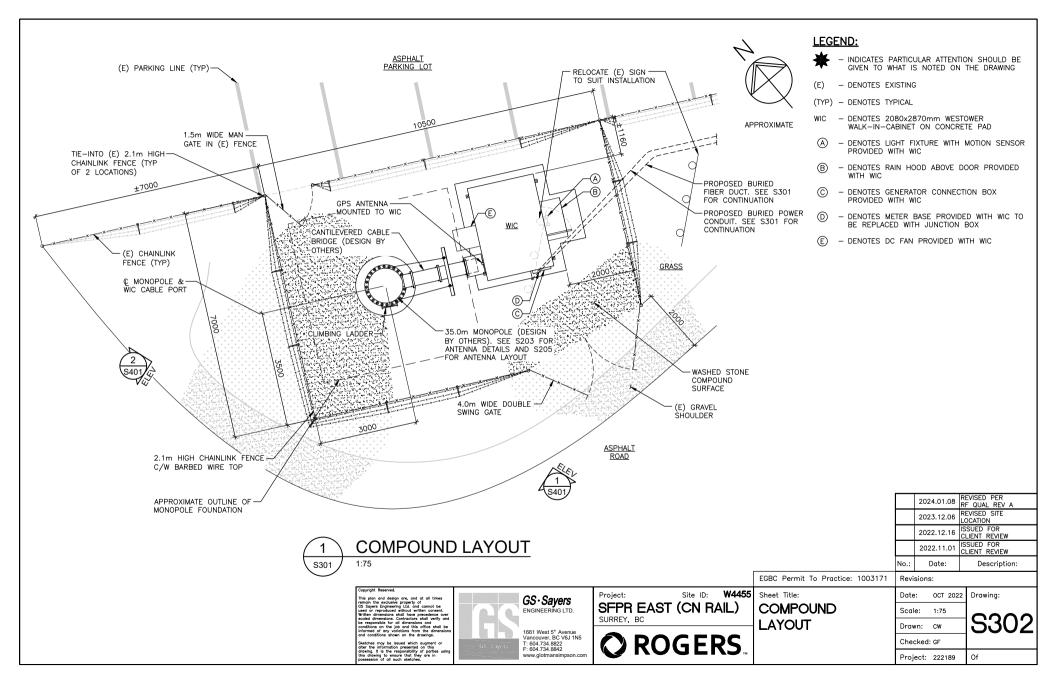
Site ID: **W4455** Project: SFPR EAST (CN RAIL) SURREY, BC

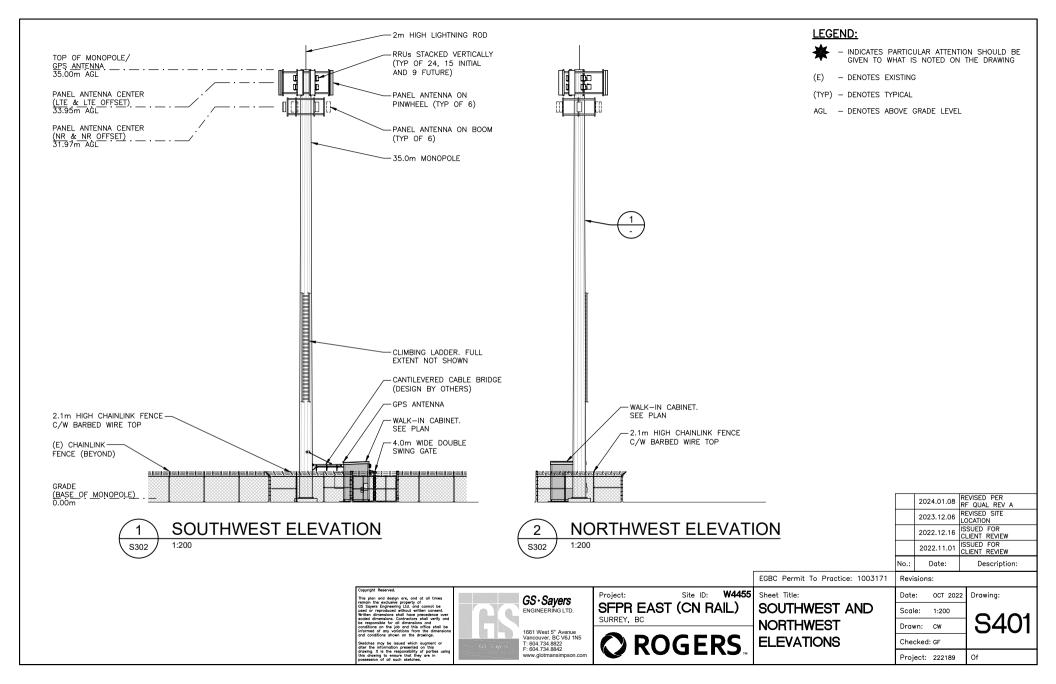
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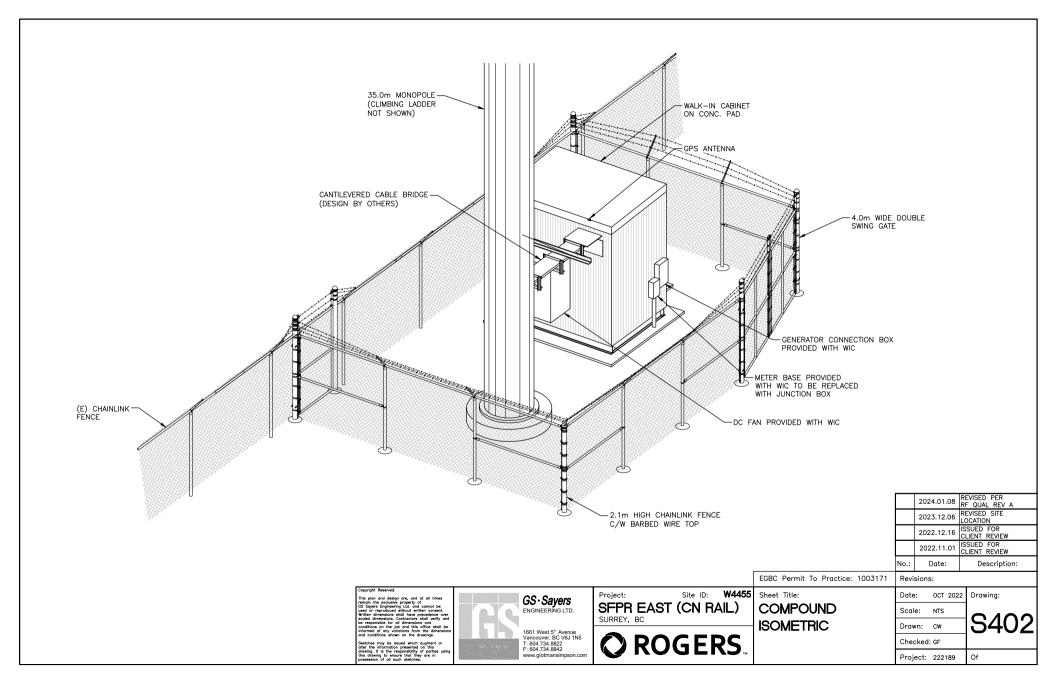
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	Project:	222189	Of









CITY OF SURREY

(the "City")

Appendix II

DEVELOPMENT VARIANCE PERMIT

NO.: 7924-0050-00

т 1	
Issued	10.
issucu	10.

(the "Owner")

Address of Owner:

- 1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
- 2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 014-158-353
Parcel "H" Except Part In Plan Bcp16544 And Epp1704 Section 7 Township 9 New Westminster
District Reference Plan 80727

16770 Canadian National Railway

(the "Land")

- 3. Surrey Zoning By-law, 1979, No. 5942, as amended is varied as follows:
 - In Sub-section A.1(a)ii.b. of Part 4 General Provisions, the height of a telecommunication tower is increased from 12 metres to 37 metres;
- 4. The siting of buildings and structures shall be in accordance with the drawings numbered 7924-0050-00(A) through to and including 7924-0050-00(D) (the "Drawings") which are attached hereto and form part of this development variance permit.
- 5. This development variance permit applies to only the <u>that portion of the buildings and structures on the Land</u> shown on Schedule A which is attached hereto and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A, which is attached hereto and forms part of this development variance permit.

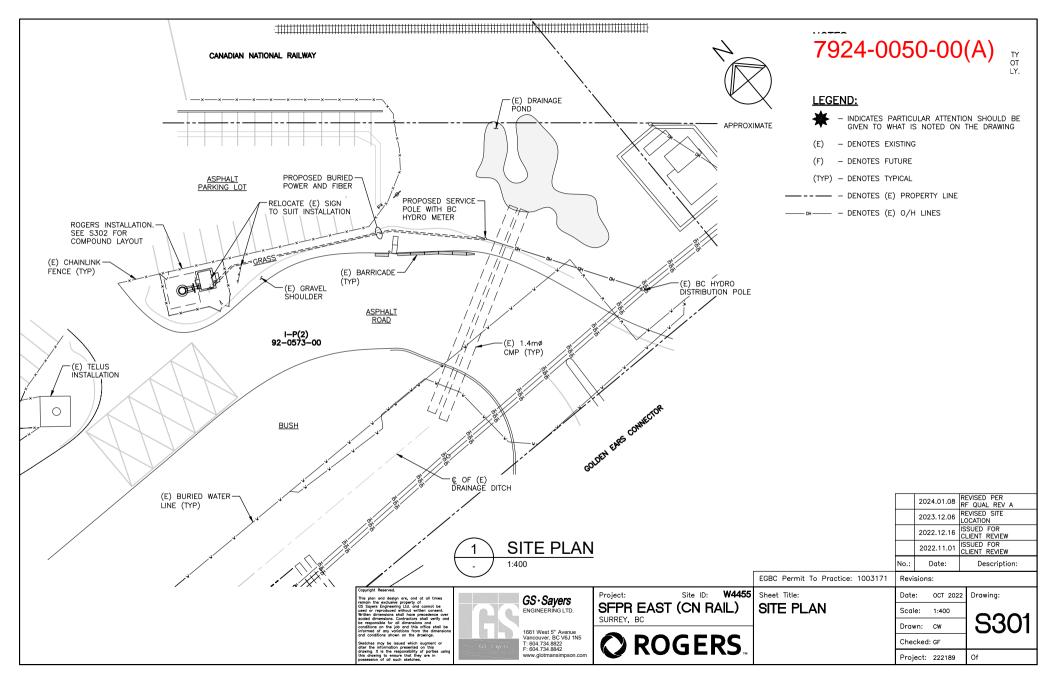
- 6. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
- 7. This development variance permit shall lapse if the Owner does not substantially start any construction with respect to which this development variance permit is issued, within two (2) years after the date this development variance permit is issued.
- 8. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.
- 9. This development variance permit is not a building permit.

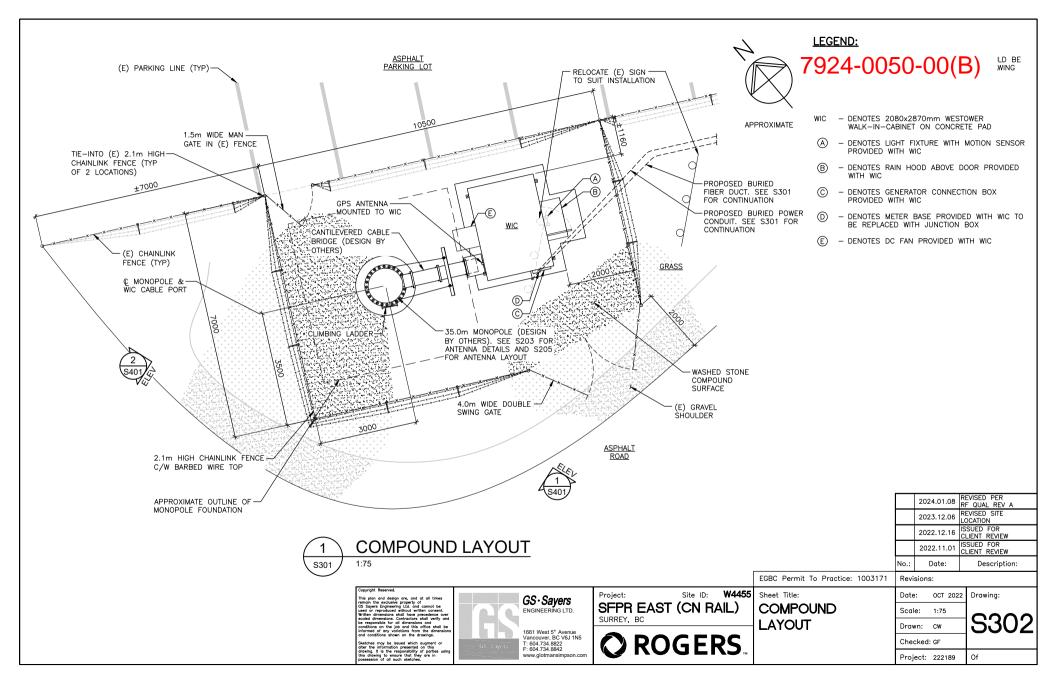
AUTHORIZING RESOLUTION PASSED BY THE COUNCIL/DELEGATED OFFICIAL, THE DAY OF $\,$, 20 $\,$.

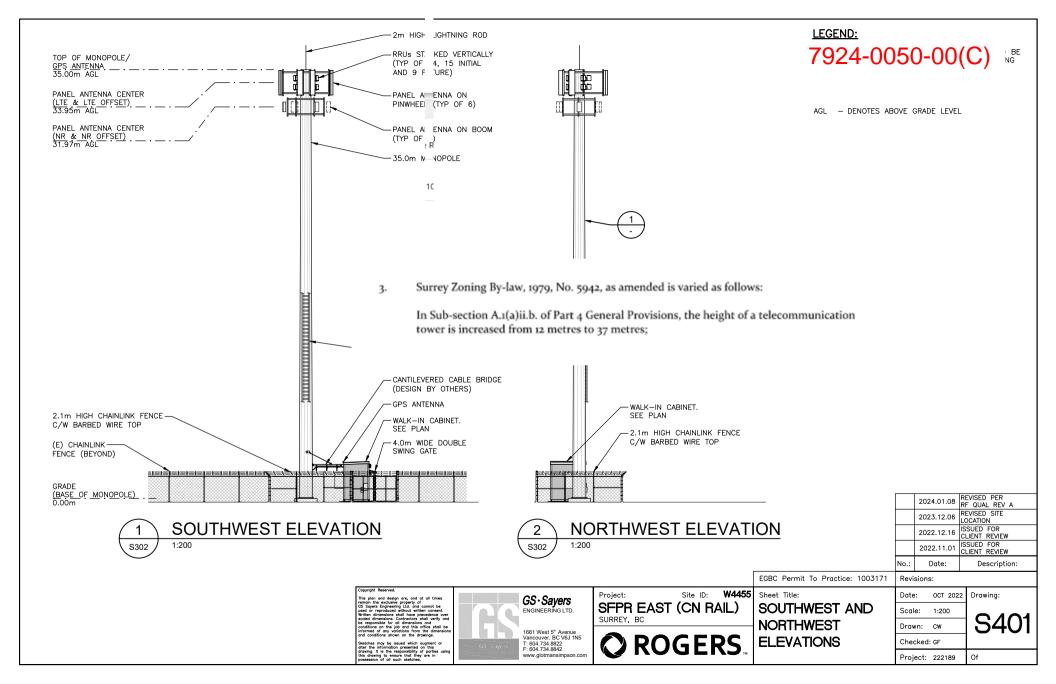
ISSUED THIS DAY OF , 20 .

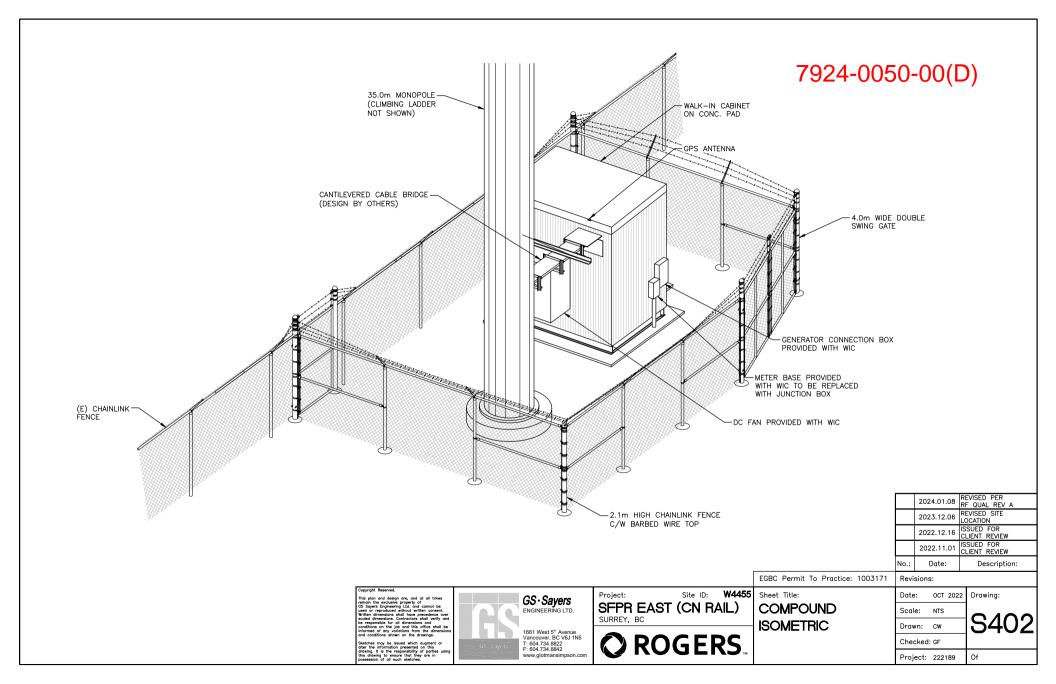
Mayor – Brenda Locke

City Clerk and Director Legislative Services Jennifer Ficocelli









Appendix III

SCHEDULE C PHOTO-SIMULATION Before



After



ROGERS SITE: W4455 Page **6** of **6**

Appendix 5: Visual simulations of the Proposed Installation **Annexe 5**: Simulations visuelles de l'installation proposée







View: Looking north at site Vue: Vue vers le nord sur le site

Photo Simulation is a close representation and is for conceptual purposes only – not to scale.

Proposed design is subject to change based on final engineer plans /

La simulation photo est une représentation étroite et est à des fins conceptuelles seulement - pas à l'échelle.

La conception proposée est sujette à changement en fonction des plans finaux de l'ingénieur



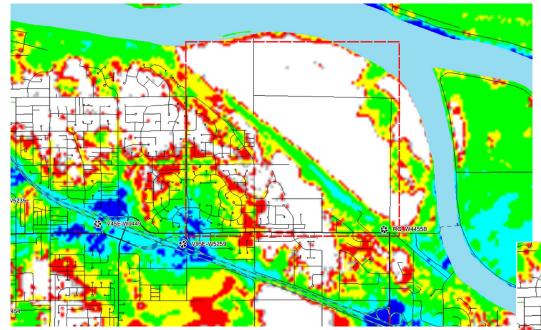
SCHEDULE B - RATIONALE MAP OF EXISTING SITES



ROGERS SITE: W4455 Page **5** of **6**



Appendix V



Before

