Freedom mobile

PROJECT NAME:	LTE/FUTURE OVERLAY UPGRADE
PROJECT TYPE:	ANTENNA & EQUIP. SWAP/ADD
PROJECT SITE No.:	BVA0202A
ADDRESS:	7216 MARY AVE., BURNABY, BC

BUILDING PHOTO

APPROVALS

DEPARTMENT	SIGNATURE	DATE

DRAWING INDEX

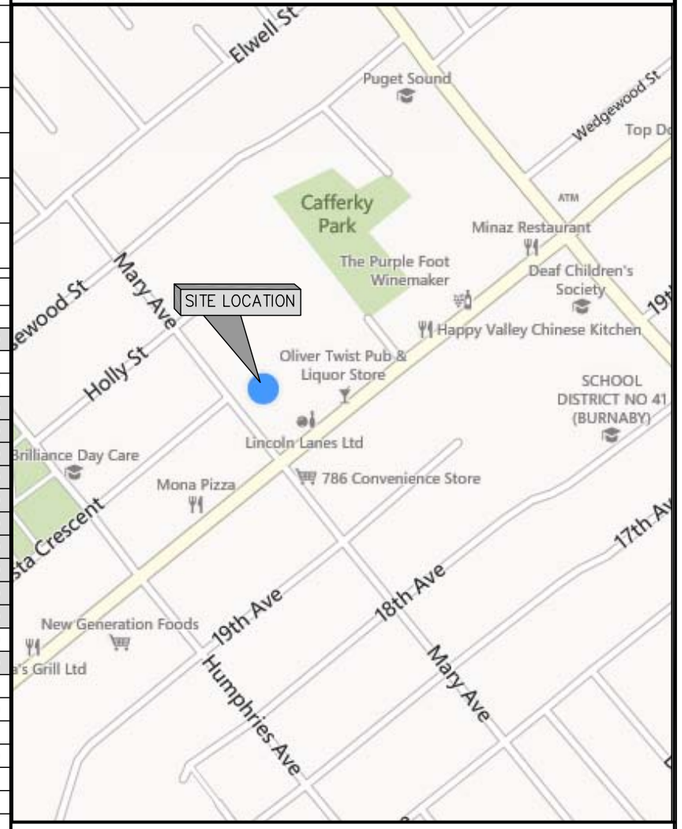
SHEET	DRAWING DESCRIPTION	NO.	DATE
COV.	TITLE SHEET & SITE KEY PLAN	3	26 MAY 20
A01	REFERENCE SHEET/LOADING	1	17 MAR 20
A01A	SITE PLAN	3	26 MAY 20
A02	ROOF PLAN	3	26 MAY 20
A03	NORTHEAST ELEVATION VIEW	3	26 MAY 20
A03A	NORTHEAST ELEVATION VIEW CLOSE-UP	3	26 MAY 20
A04	NORTHWEST ELEVATION VIEW	3	26 MAY 20
A04A	NORTHWEST ELEVATION VIEW CLOSE-UP	3	26 MAY 20
A05	SOUTHWEST ELEVATION VIEW	3	26 MAY 20
A05A	SOUTHWEST ELEVATION VIEW CLOSE-UP	3	26 MAY 20
A06	SOUTHEAST ELEVATION VIEW	3	26 MAY 20
A06A	SOUTHEAST ELEVATION VIEW CLOSE-UP	3	26 MAY 20
A07	SHROUDED ANTENNA LAYOUT	1	17 MAR 20
A08	ANTENNA AREAS	3	26 MAY 20
S01	WALL MOUNT DETAILS	1	17 MAR 20
S02	WALL CONNECTION DETAIL	0	25 FEB 20
S03	SHROUD PLAN VIEW	1	17 MAR 20
S04	SHROUD FRAME TYPE 1 DETAIL	0	25 FEB 20
S05	SHROUD FRAME TYPE 2 DETAIL	0	25 FEB 20
S06	SHROUD FRAME TYPE 3 DETAIL	0	25 FEB 20
S07	SHROUD DETAILS	0	25 FEB 20
S08	BATTERY RISERS WALL CHAIR MOUNT	0	25 FEB 20
S09	WALL CHAIR MOUNT DETAILS	0	25 FEB 20
S10	CABLE TRAY DETAIL	0	25 FEB 20
S11	CABLE TRAY MODIFICATION DETAILS	0	25 FEB 20
E01	EQUIPMENT GROUNDING	0	25 FEB 20
E02	ELECTRICAL NOTES	0	25 FEB 20
N01	GENERAL NOTES	0	25 FEB 20
N02	EQUIPMENT DETAILS	1	17 MAR 20

ISSUE

0	ISSUED FOR CONSTRUCTION	25 FEB 20
1	ANTENNA UPDATE	17 MAR 20
2	ANTENNA UPDATE	24 MAR 20
3	AS PER CLIENT COMMENTS	26 MAY 20

KEY MAP (NTS)

COURTESY BING OR GOOGLE MAPS



GEOGRAPHIC COORDINATES

LATITUDE: N 49.222664°
LONGITUDE: W 122.9455203°

UTILITY – CONTACT

BRITISH COLUMBIA ONE CALL: (BEFORE YOU DIG) 1-800-474-6886

NOTES:

1. ENSURE ALL ASPECTS OF WORK CONFORM TO FREEDOM MOBILE SPECIFICATIONS.
2. CONTRACTOR TO VERIFY NORTH DIRECTION AND REPORT ANY DISCREPANCIES.
3. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
4. READ THESE DRAWINGS IN CONJUNCTION WITH ALL OTHER CONTRACT DOCUMENTS.
5. CONTRACTOR TO VERIFY EXISTING CONDITIONS ON SITE PRIOR TO FABRICATION FOR EXACT FIT. NOTIFY CONSULTANT/ENGINEER REGARDING ANY DISCREPANCIES.
6. DO NOT SCALE DRAWINGS.

ROEHAMPTON WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
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EQUIPMENT SCHEDULE

RADIO ANTENNA SCHEDULE

MT.	RADIO ANTENNA			RRU		DC/FIBER LENGTH (m)	STATUS
	SECTOR	MODEL	AZIM.(DEG.)	QTY.	MODEL		
1	1	COMMSCOPE R2V4PX306R	60	1/1/1	FRHG/AHBCC/FRIJ	–	TO BE REMOVED
	1	FFV4–65A–R6	60	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
2	1	FFV4–65A–R6	60	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
3	1	FFV4–65A–R6	60	–	–	TBD	FUTURE
4	2	COMMSCOPE R2V4PX306R	150	1/1/1	FRHG/AHBCC/FRIJ	TBD	TO BE REMOVED
	2	FFV4–65A–R6	150	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
5	2	FFV4–65A–R6	150	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
9	2	FFV4–65A–R6	150	–	–	TBD	FUTURE
10	3	COMMSCOPE R2V4PX306R	210	1/1/1	FRHG/AHBCC/FRIJ	TBD	TO BE REMOVED
	3	FFV4–65A–R6	210	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
12	3	FFV4–65A–R6	210	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
13	3	FFV4–65A–R6	210	–	–	TBD	FUTURE
14	4	COMMSCOPE R2V4PX306R	300	1/1/1	FRHG/AHBCC/FRIJ	TBD	TO BE REMOVED
	4	FFV4–65A–R6	300	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
17	4	FFV4–65A–R6	300	1/1/1/1/1	FRIJ/AHFIB/AHBCC/AHL0A/AHHB	TBD	PROPOSED
18	4	FFV4–65A–R6	300	–	–	TBD	FUTURE

JUMPERS=LDF4 = 1/2" DC=1/2–3/4" FIBER = 3/8"–1/2" DC/FIBER LENGTH=FROM EQUIPMENT TO RRU LOCATION

MICROWAVE SCHEDULE

MT.	RADIO ANTENNA			CABLE LENGTH (m)	STATUS
	#	MODEL (SIZE)	AZIMUTH(DEG.)		
6	1	2' M/W	141.18	–	EXISTING TO BE RELOCATED
7	2	2' M/W	143.75	–	EXISTING TO BE RELOCATED
8	3	4' M/W	150.14	–	EXISTING TO BE REMOVED
11	4	4' M/W	269.84	–	EXISTING TO BE REMOVED
15	5	4' M/W	297.92	–	EXISTING TO BE REMOVED
16	6	4' M/W	319.47	–	EXISTING TO BE RELOCATED
19	7	2' M/W	62.55	–	EXISTING TO BE RELOCATED
20	8	2' M/W	88.73	–	EXISTING TO BE RELOCATED

REFERENCES AND DESIGN INFO

MOUNT STRUCTURE	
DESIGN:	BCBC 2018 / CSA–S37–18
WIND :1/50,1/10–YEAR	470Pa (1/50) / 360Pa (1/10)
SNOW :1/50–YEAR	Ss=1800Pa, Sr=200Pa
SEISMIC:	Sa(0.2)=0.768g
	Sa(0.5)=0.673g
	Sa(1.0)=0.386g
	Sa(2.0)=0.236g
	PGA=0.333g
SERVICEABILITY FACTOR	0.7
IMPORTANCE FACTOR	1.0
RADIAL ICE (mm)	10

REFERENCES		
INFO SOURCE	DOCUMENT	DATE
SITE VISIT:	FIELD NOTES	13 SEP 19
RF LOADING:	PRELIMINARY DRAW.	27 SEP 19
MW LOADING	PRELIMINARY DRAW.	27 SEP 19
OTHER:	–	–

NOTES

1. CONTRACTOR IS RESPONSIBLE TO MAKE PROVISION TO SUPPORT OR WORK AROUND EXISTING BUILDING STRUCTURES, EXISTING EQUIPMENTS, PIPES AND CABLE ROUTES .
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT SITE BEFORE PROCEEDING WITH FABRICATION AND INSTALLATION OF ANY MATERIALS. ANY DISCREPANCIES TO BE REPORTED TO THE DESIGN ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, TECHNIQUES, SEQUENCES AND PROCEDURES.
4. ALL WORK TO BE COMPLETED IN ATMOSPHERIC CONDITIONS THAT WILL NOT IMPACT THE STRUCTURAL CAPACITY OF ANY PART OF THE EXISTING BUILDING STRUCTURE.

SCOPE OF WORK

- REMOVE AND INSTALL MOUNTS & ANTENNAS AS NOTED
- REMOVE AND INSTALL SHROUD AS NOTED
- INSTALL Tx LINES AND SUPPORTS AS NOTED
- RELOCATE BATTERY RISERS AND AND INSTALL DC & GROUNDING LINE

LEGEND

NORTH ARROW		MOUNT #	# – PROPOSED MT# # – FUTURE MT# # – MODIFIED MT#
DETAIL TITLE	1 SECTION A–A N.T.S.	PROPOSED ANTENNA	SECTOR #1 Az: 0°
SECTION/DETAIL	6 6	EXISTING ANTENNA	SECTOR #1 Az: 0°
PARTIAL DETAIL	1 S02	EXISTING ANTENNA OTHER CARRIER	
REVISION CLOUD	1	PLAN VIEW ANTENNA DESCRIPTION	PROPOSED KRE ELEV.= Az.
PROPOSED INSTALLATION		ELEVATION MARKER	T/O LOWER PH = 50m

CLIENT:

CARRIER: Freedom mobile

PROFESSIONAL ENGINEER – PROVINCE OF BRITISH COLUMBIA – R. PUSZYNSKI # 32752 – 17 Mar 2020

NO.	BY	DESCRIPTION	DATE
5			
4			
3			
2			
1	NN	ANTENNA UPDATE	17 MAR 20
0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

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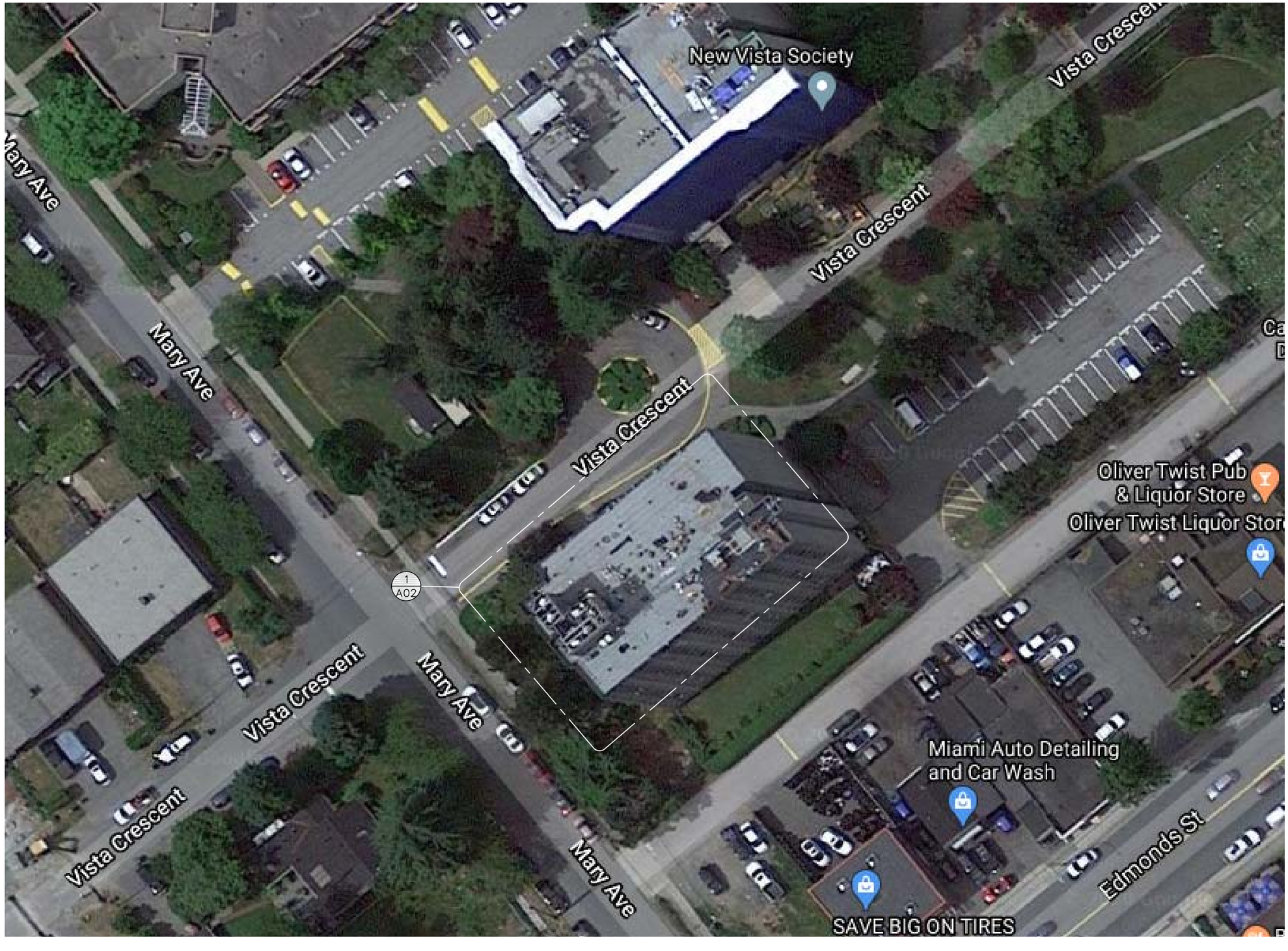
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: REFERENCE SHEET/LOADING

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A01



1 SITE PLAN

NOTES:

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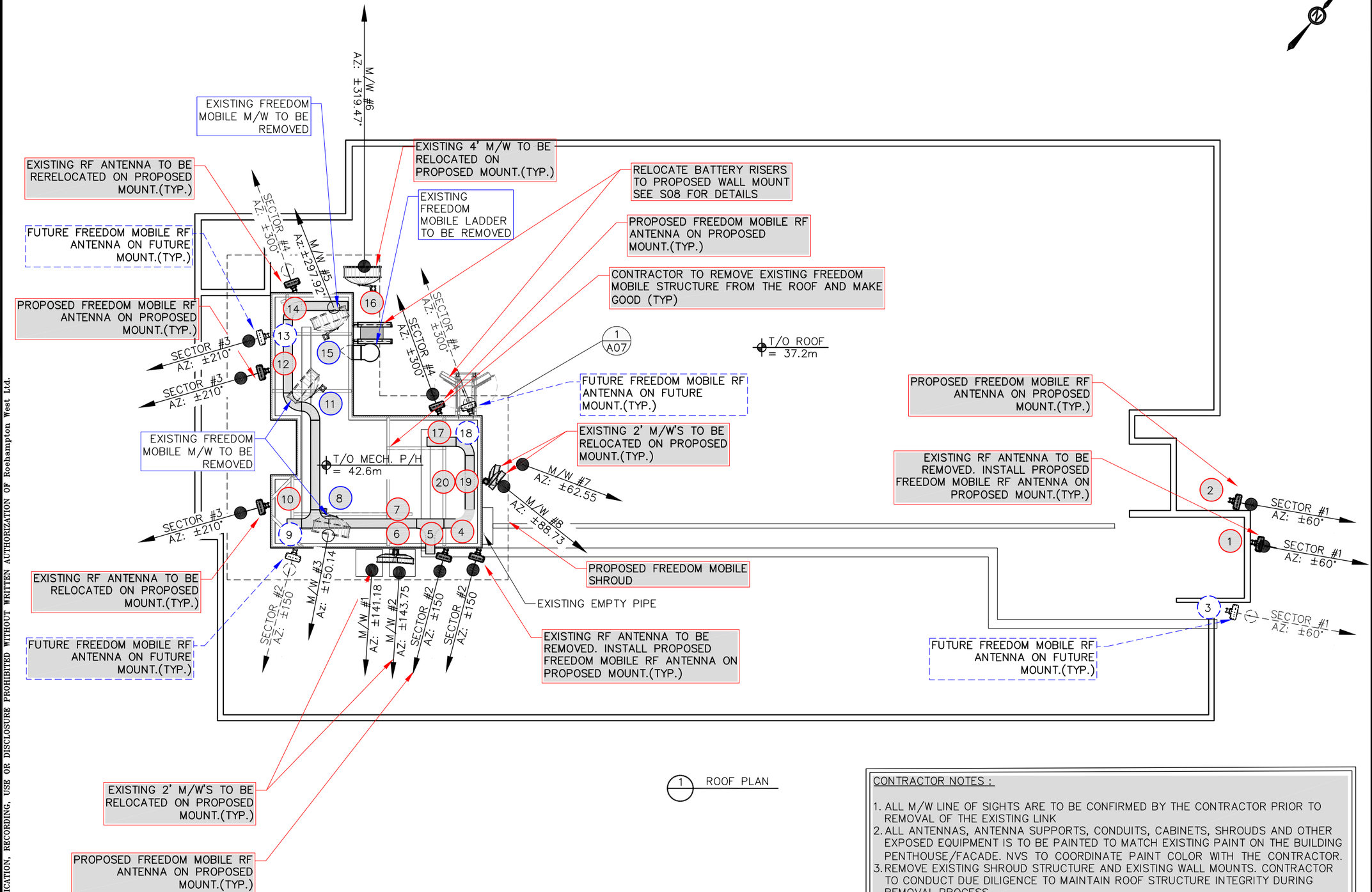
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: SITE PLAN

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A01A



1 ROOF PLAN

CONTRACTOR NOTES :

1. ALL M/W LINE OF SIGHTS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO REMOVAL OF THE EXISTING LINK
2. ALL ANTENNAS, ANTENNA SUPPORTS, CONDUITS, CABINETS, SHROUDS AND OTHER EXPOSED EQUIPMENT IS TO BE PAINTED TO MATCH EXISTING PAINT ON THE BUILDING PENTHOUSE/FACADE. NVS TO COORDINATE PAINT COLOR WITH THE CONTRACTOR.
3. REMOVE EXISTING SHROUD STRUCTURE AND EXISTING WALL MOUNTS. CONTRACTOR TO CONDUCT DUE DILIGENCE TO MAINTAIN ROOF STRUCTURE INTEGRITY DURING REMOVAL PROCESS.
4. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO FABRICATION/INSTALLATION.
5. INSTALL PROPOSED WALL MOUNTS AS SHOWN.
6. INSTALL PROPOSED SHROUD STRUCTURE AS SHOWN.

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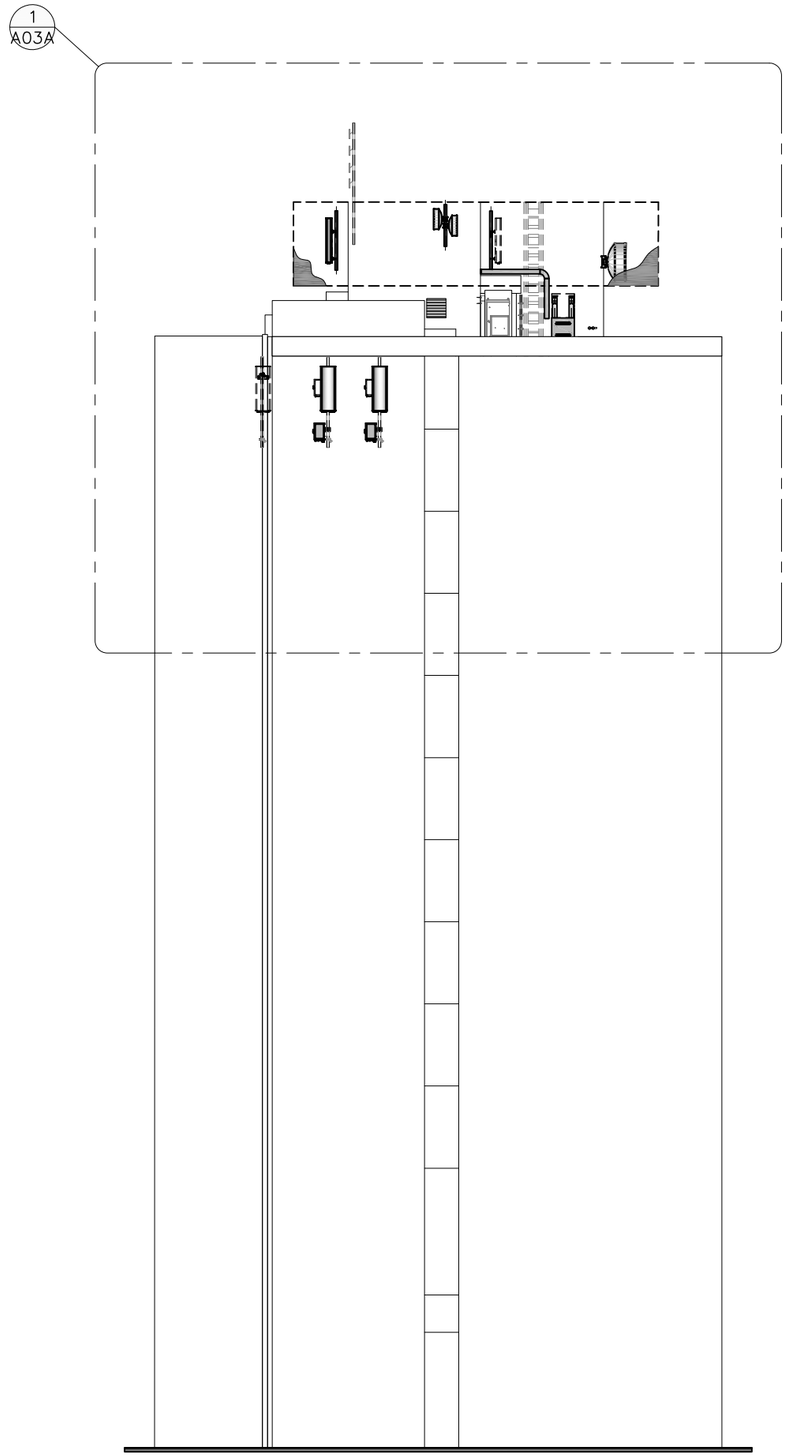
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: ROOF PLAN

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A02



1 NORTHEAST ELEVATION VIEW

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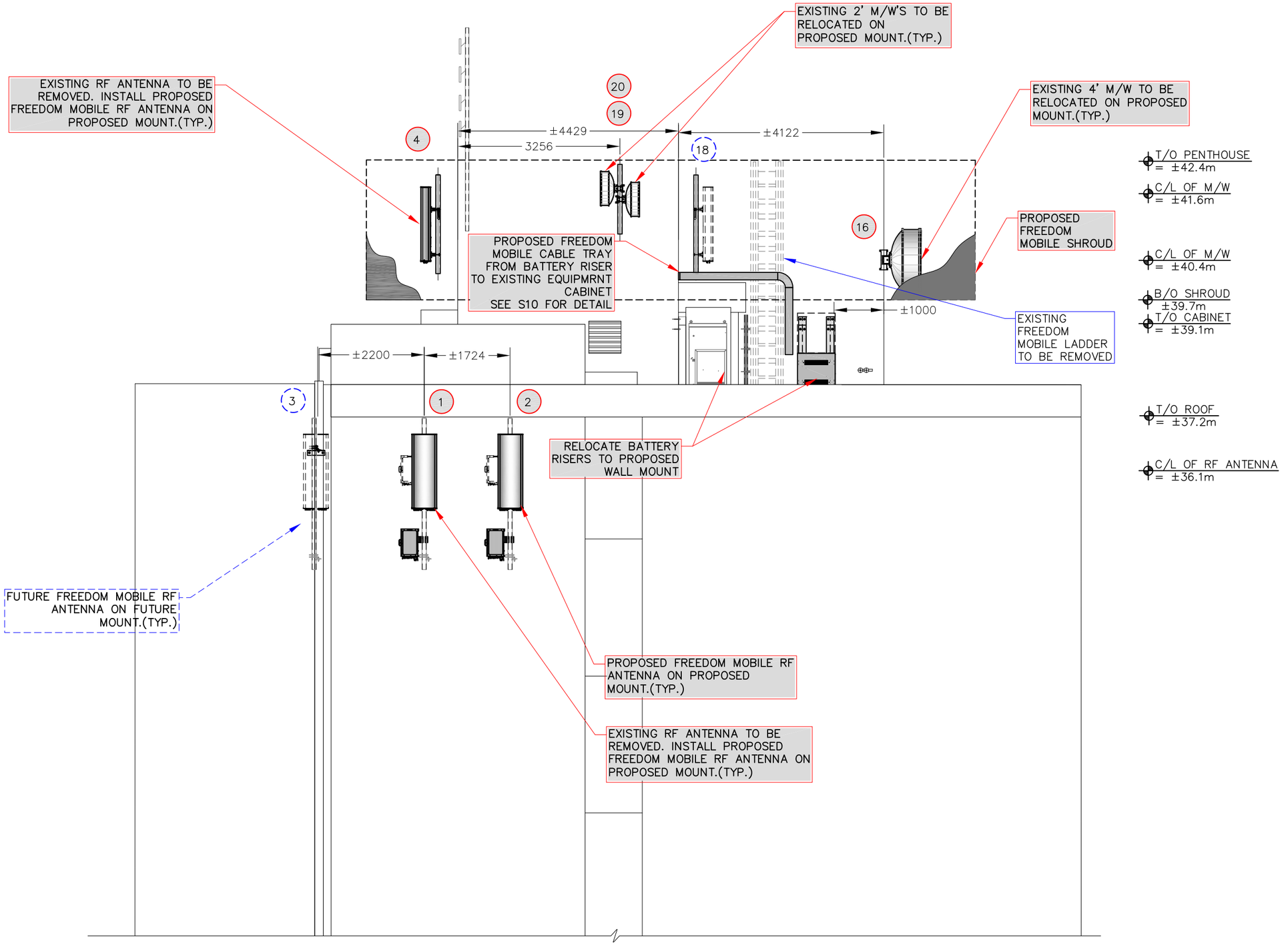
TITLE:
NORTHEAST ELEVATION VIEW

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A03



1 NORTHEAST ELEVATION VIEW CLOSE–UP

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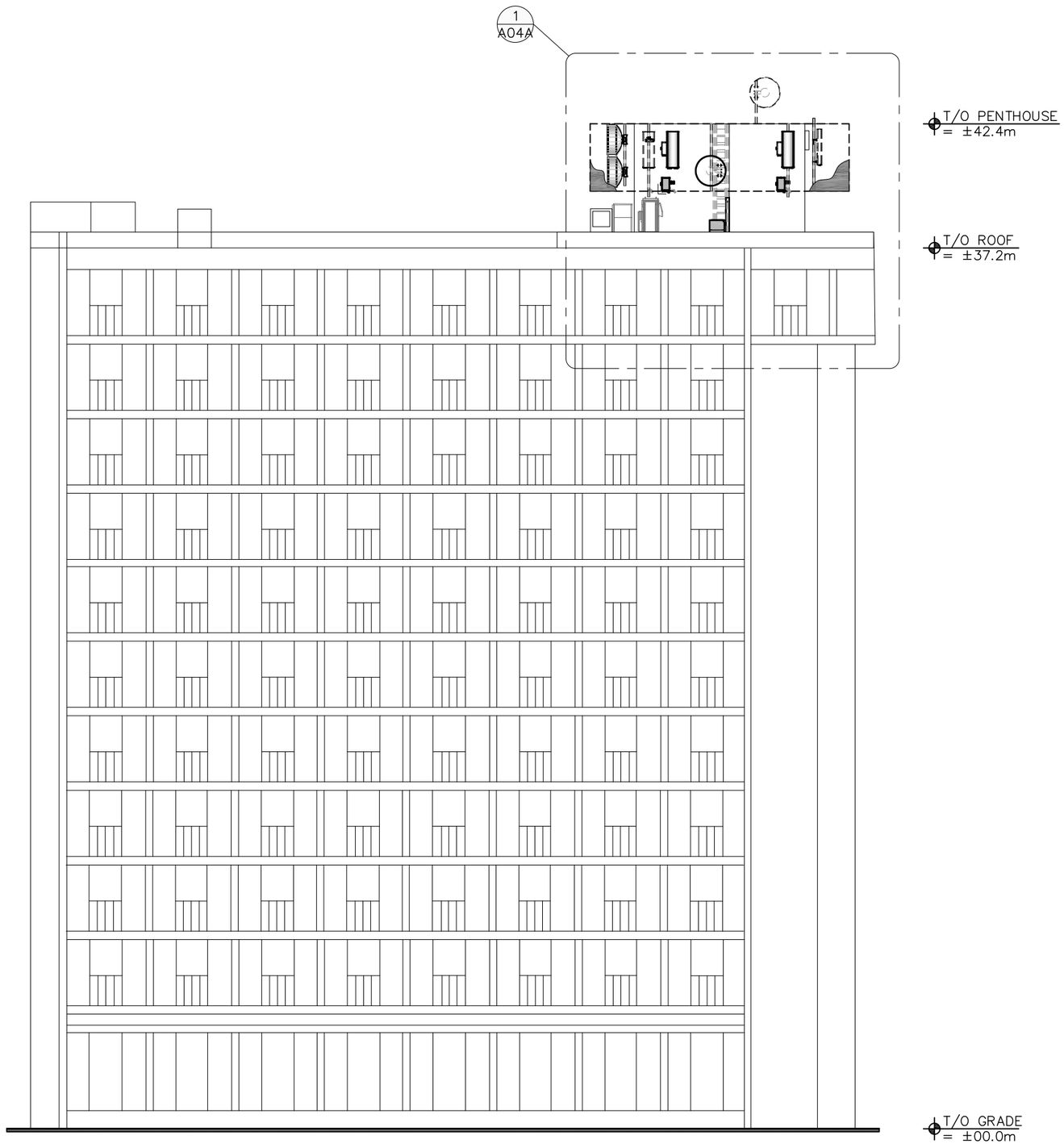
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: NORTHEAST ELEVATION VIEW CLOSE–UP

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A03A



1 NORTHWEST ELEVATION VIEW

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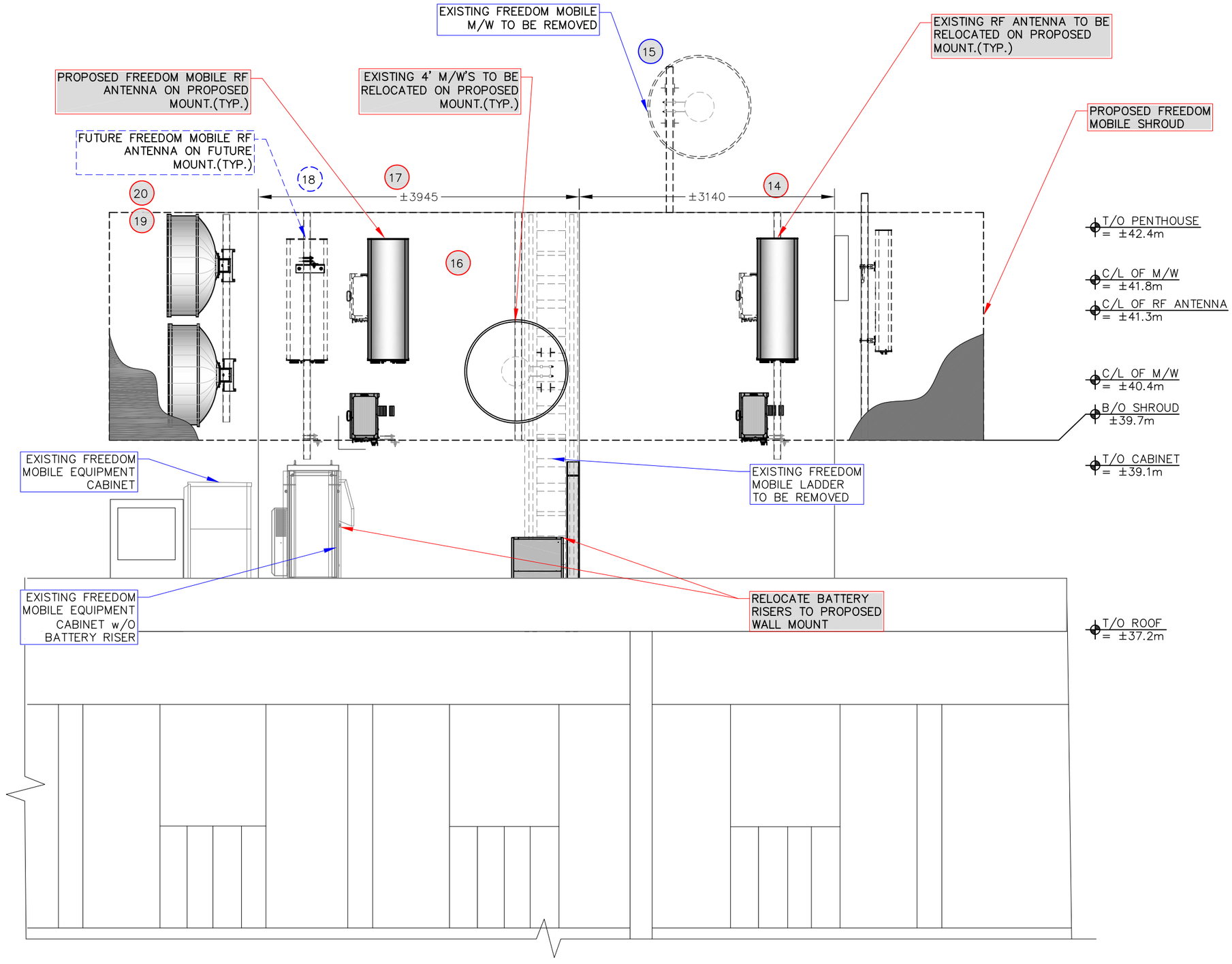
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: NORTHWEST ELEVATION VIEW

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A04



1 NORTHWEST ELEVATION VIEW CLOSE-UP

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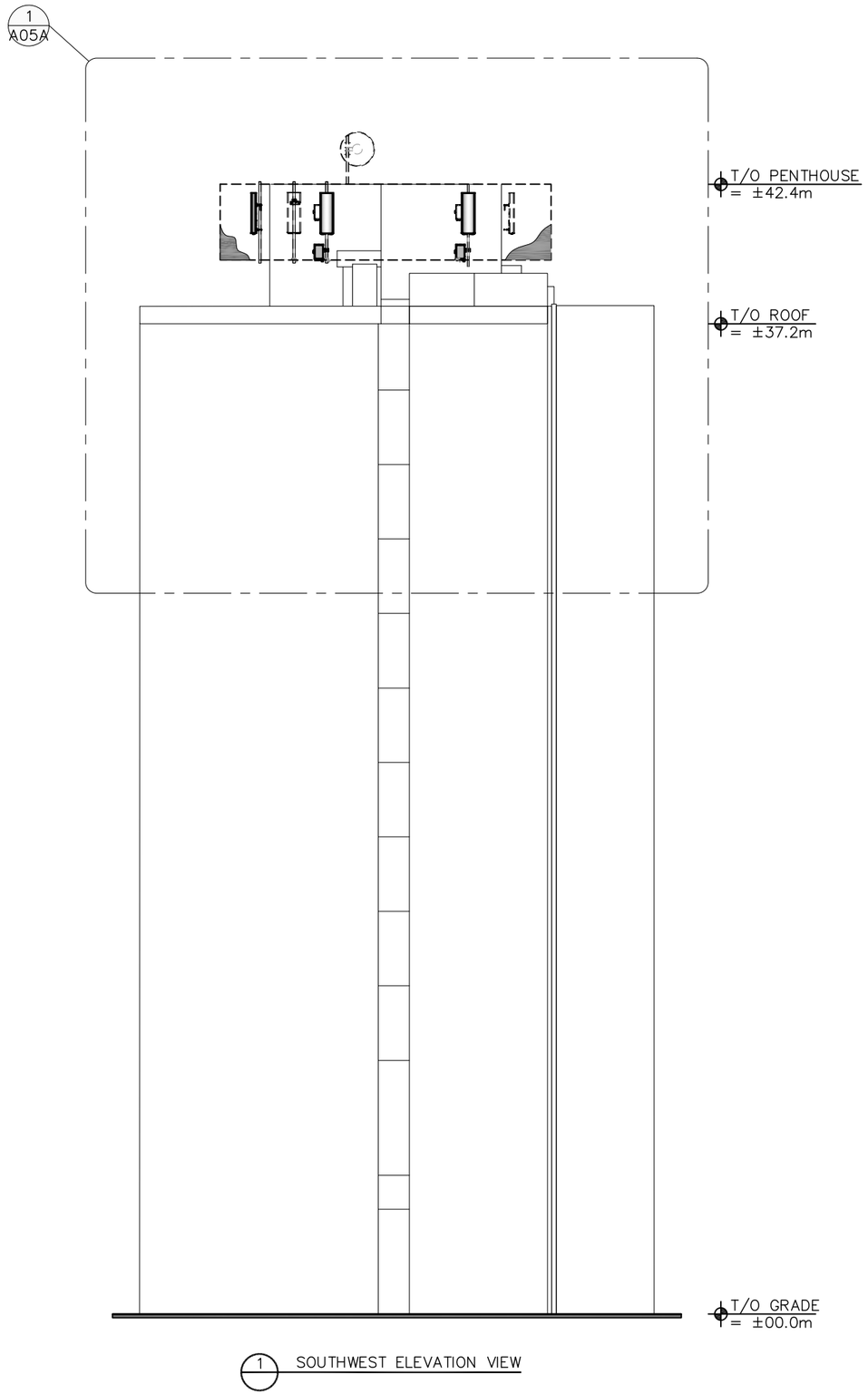
TITLE:
NORTHWEST ELEVATION VIEW CLOSE-UP

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A04A



1 SOUTHWEST ELEVATION VIEW

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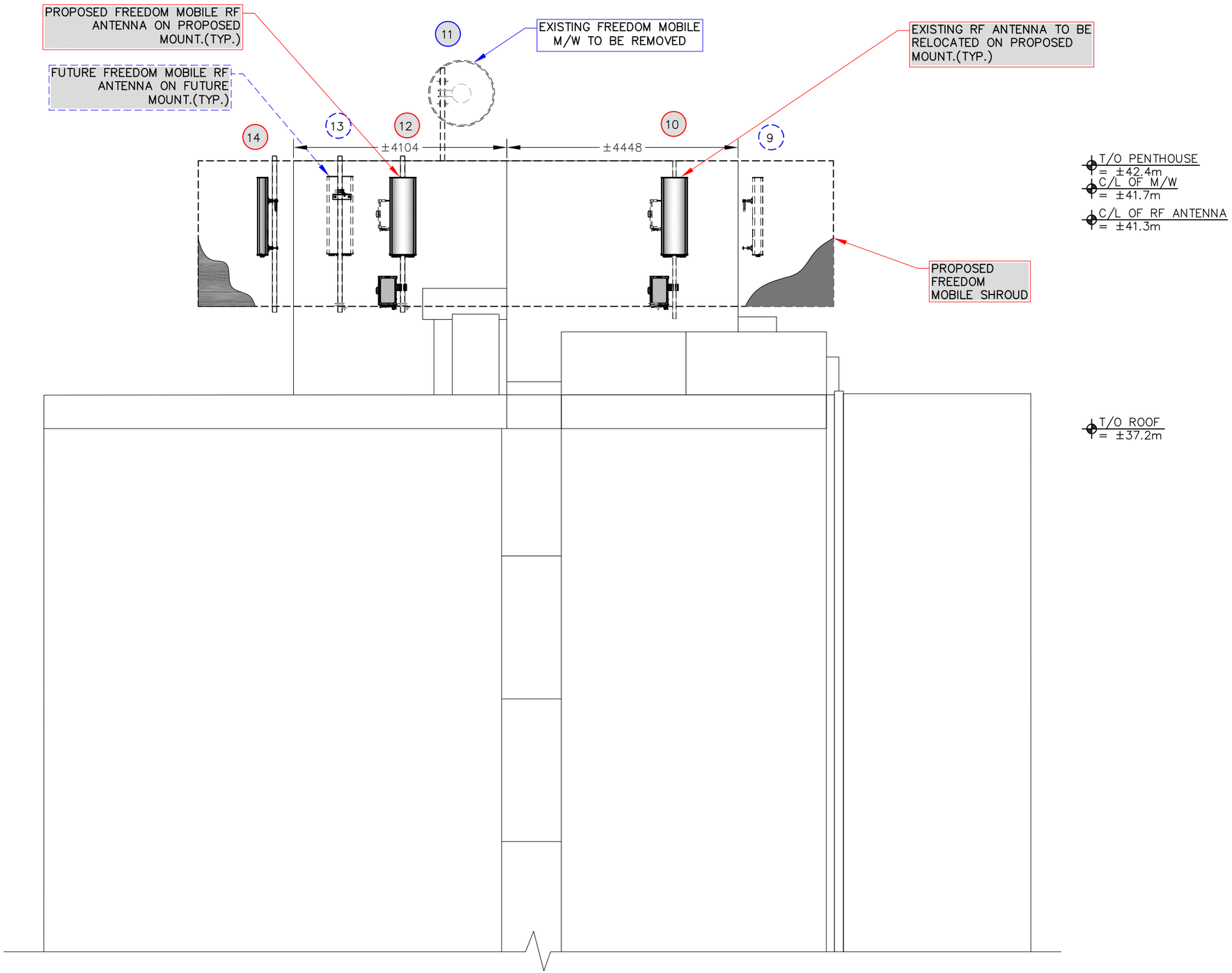
TITLE:
SOUTHWEST ELEVATION VIEW

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A05



1 SOUTHWEST ELEVATION VIEW CLOSE–UP

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SOUTHWEST ELEVATION VIEW CLOSE–UP

PROJECT NAME:	PROJECT NO:	DWG. NO:
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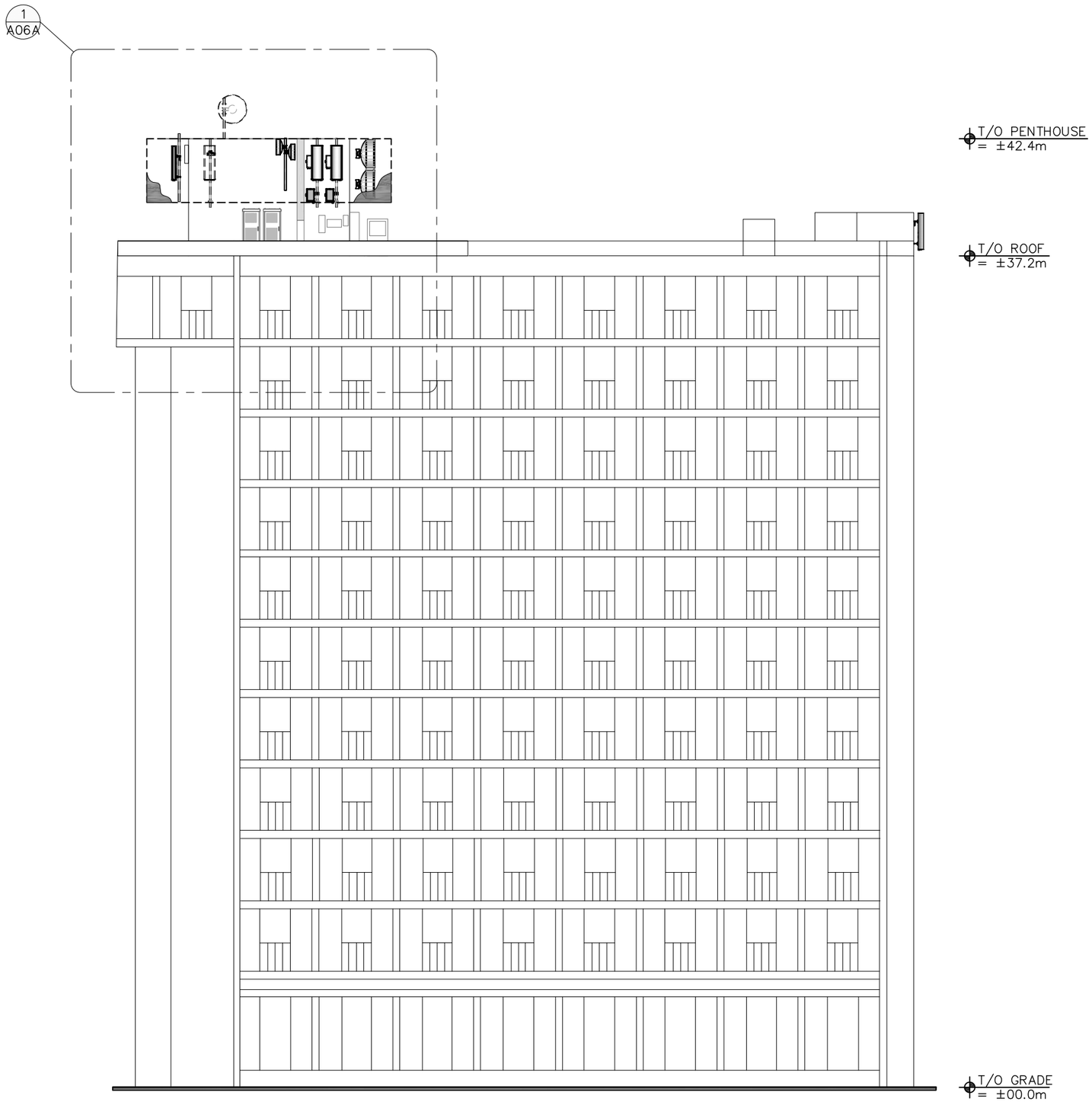

1 SOUTHEAST ELEVATION VIEW

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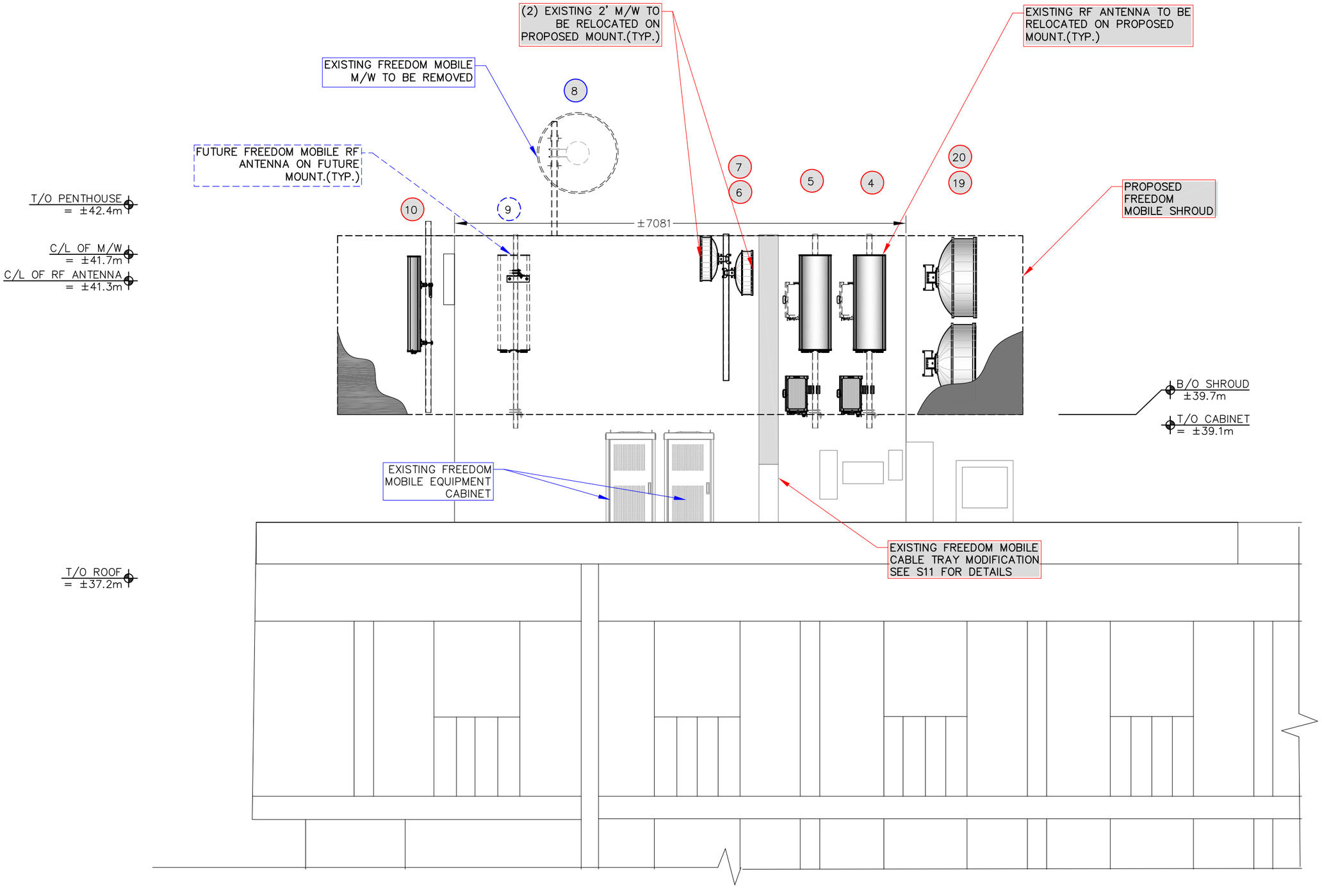
SOUTHEAST ELEVATION VIEW

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A06



1 SOUTHEAST ELEVATION VIEW CLOSE–UP

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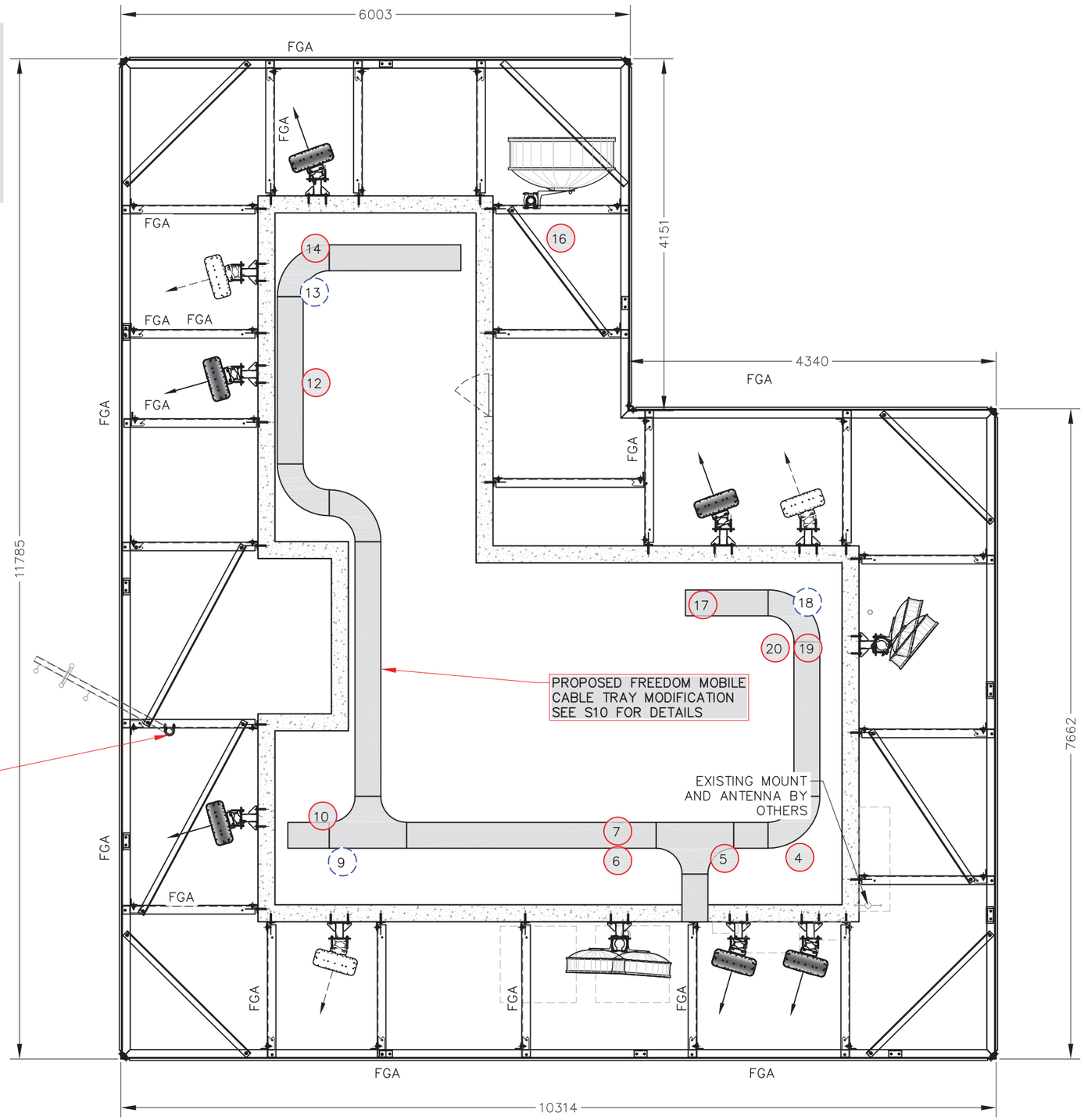
TITLE: SOUTHEAST ELEVATION VIEW CLOSE–UP

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A06A

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
3. FIBERGLASS SHROUD TO BE USED IN FRONT OF ANTENNA INSTALLATION.
4. FIBERGLASS HORIZONTAL/DIAGONAL/VERTICAL MEMBERS ARE TO BE USED WHEN INSTALLED IN FRONT OF ANTENNAS LINE OF SIGHT



1 SHROUDED ANTENNA LAYOUT

NOTES:

1. DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. SOME OBJECTS MAY NOT BE SHOWN FOR CLARITY.

(#) – PROPOSED MT#

(#) – MODIFIED MT#

(#) – FUTURE MT#

FGA– FIBERGLASS MID–LEVEL ANGLE

CLIENT:

CARRIER: Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
17 Mar 2020

NO.	BY	DESCRIPTION	DATE
5			
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1	NN	ANTENNA UPDATE	17 MAR 20
0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

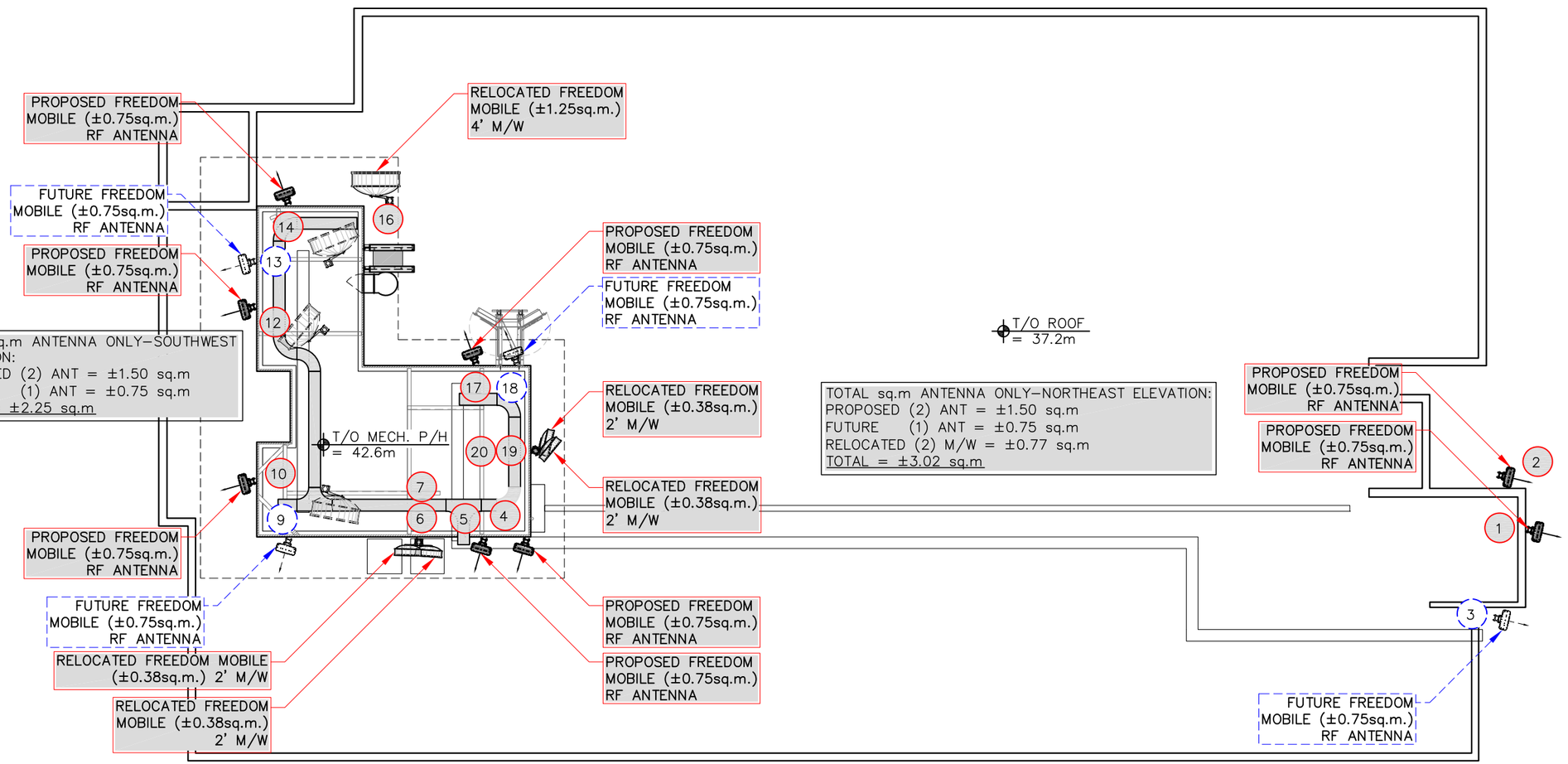
ROEHAMPTON WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: SHROUDED ANTENNA LAYOUT

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A07

TOTAL sq.m ANTENNA ONLY–NORTHWEST ELEVATION:
PROPOSED (2) ANT = ±1.50 sq.m
FUTURE (1) ANT = ±0.75 sq.m
RELOCATED (1) M/W = ±1.25 sq.m
TOTAL = ±3.50 sq.m



TOTAL sq.m ANTENNA ONLY–SOUTHWEST ELEVATION:
PROPOSED (2) ANT = ±1.50 sq.m
FUTURE (1) ANT = ±0.75 sq.m
TOTAL = ±2.25 sq.m

TOTAL sq.m ANTENNA ONLY–NORTHEAST ELEVATION:
PROPOSED (2) ANT = ±1.50 sq.m
FUTURE (1) ANT = ±0.75 sq.m
RELOCATED (2) M/W = ±0.77 sq.m
TOTAL = ±3.02 sq.m

TOTAL sq.m ANTENNA ONLY–SOUTHEAST ELEVATION:
PROPOSED (2) ANT = ±1.50 sq.m
FUTURE (1) ANT = ±0.75 sq.m
RELOCATED (2) M/W = ±0.77 sq.m
TOTAL = ±3.02 sq.m

1 ROOF PLAN

CONTRACTOR NOTES :

1. ALL M/W LINE OF SIGHTS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO REMOVAL OF THE EXISTING LINK
2. ALL ANTENNAS, ANTENNA SUPPORTS, CONDUITS, CABINETS, SHROUDS AND OTHER EXPOSED EQUIPMENT IS TO BE PAINTED TO MATCH EXISTING PAINT ON THE BUILDING PENTHOUSE/FACADE. NVS TO COORDINATE PAINT COLOR WITH THE CONTRACTOR.
3. REMOVE EXISTING SHROUD STRUCTURE AND EXISTING WALL MOUNTS. CONTRACTOR TO CONDUCT DUE DILIGENCE TO MAINTAIN ROOF STRUCTURE INTEGRITY DURING REMOVAL PROCESS.
4. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO FABRICATION/INSTALLATION.
5. INSTALL PROPOSED WALL MOUNTS AS SHOWN.
6. INSTALL PROPOSED SHROUD STRUCTURE AS SHOWN.

NOTES:

1. DO NOT SCALE DRAWINGS. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. SOME OBJECTS MAY NOT BE SHOWN FOR CLARITY.

(#) – PROPOSED MT#
(#) – MODIFIED MT#
(#) – FUTURE MT#

CLIENT:

CARRIER: Freedom mobile

NO.	BY	DESCRIPTION	DATE
5			
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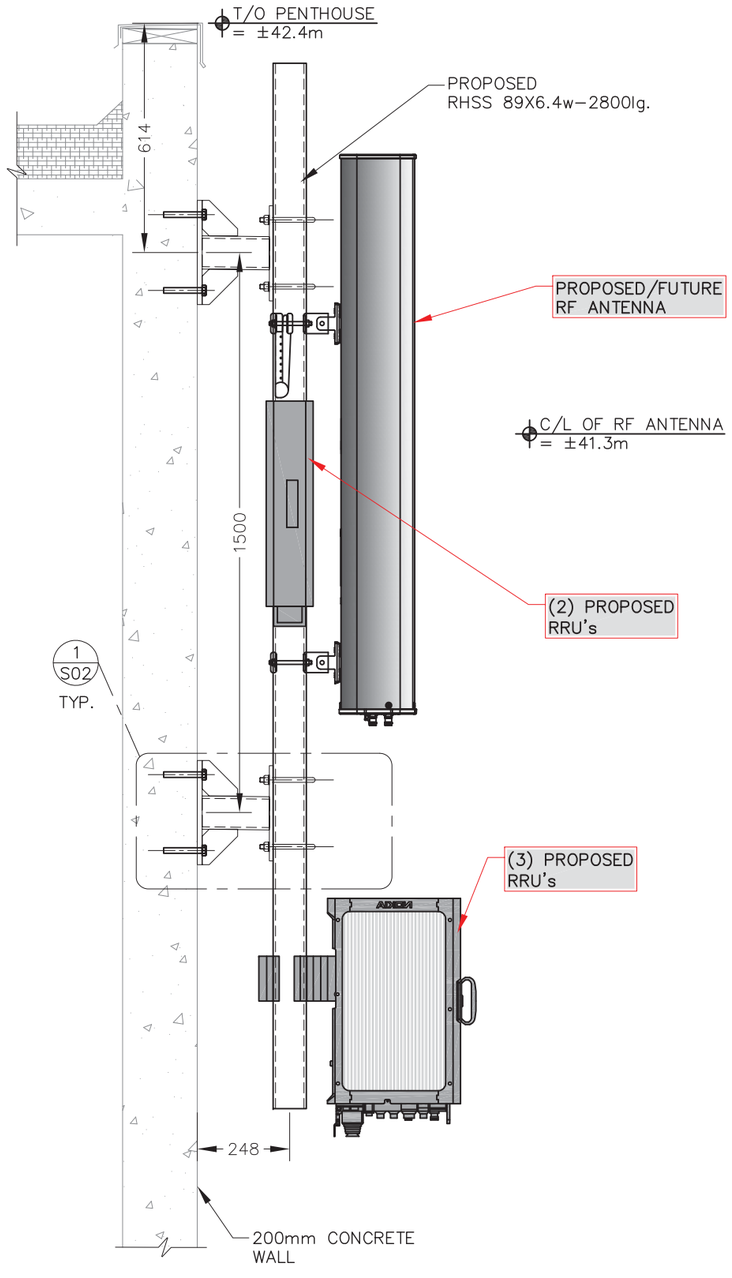
3	LS	AS PER CLIENT COMMENTS	26 MAY 20
2	NN	ANTENNA UPDATE	24 MAR 20
1	NN	ANTENNA UPDATE	17 MAR 20
0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

ROEHAMPTON WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

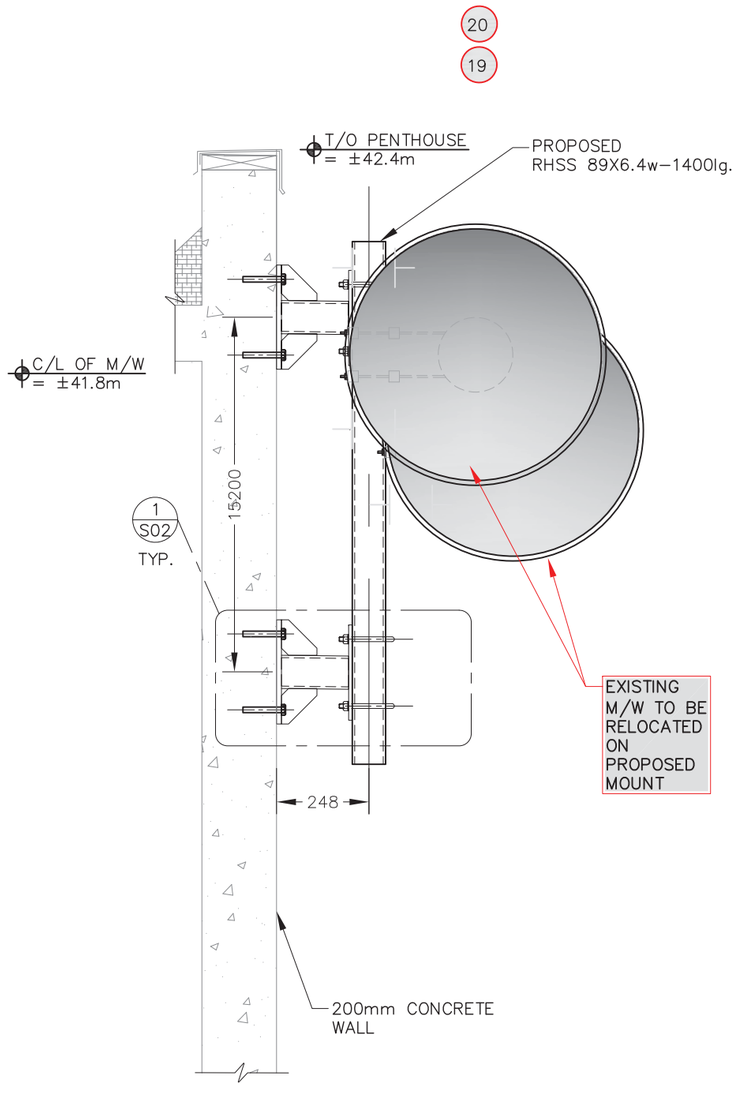
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: ANTENNA AREAS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	A08



1 ANTENNA WALL MOUNT



2 M/W WALL MOUNT #19 & 20

NOTES:

1. DO NOT SCALE DRAWINGS.
2. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
3. ALL WORK TO CONFORM TO LATEST FREEDOM MOBILE SPEC.
4. CONTRACTOR TO VERIFY ALL DIMENSIONS.
5. ALL U–BOLTS 1/2ø ASSY (4N,2W) UNLESS NOTED.
6. ALL BOLTS 5/8ø A325 BOLT ASSY'S UNLESS NOTED.
7. ALL STRUCTURAL BOLTS TO BE GRADE A325 WITH FLAT WASHER UNLESS NOTED.
8. ALL OTHER BOLT AND THREADED ROD CONNECTIONS ARE TO USE FLAT WASHERS WITH EITHER DOUBLE NUT OR SINGLE NUT WITH LOCK WASHER.
9. ALL U–BOLTS TO BE STEEL GRADE F1554 GR.55 OR A572 GR.55, c/w LOCK NUT. INSTALLED AS PER S37–18 WITH PRE–TENSION DURING THE INSTALLATION MIN. OF 30% OF RODS TENSILE CAPACITY.

CLIENT:

CARRIER: Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
17 Mar 2020

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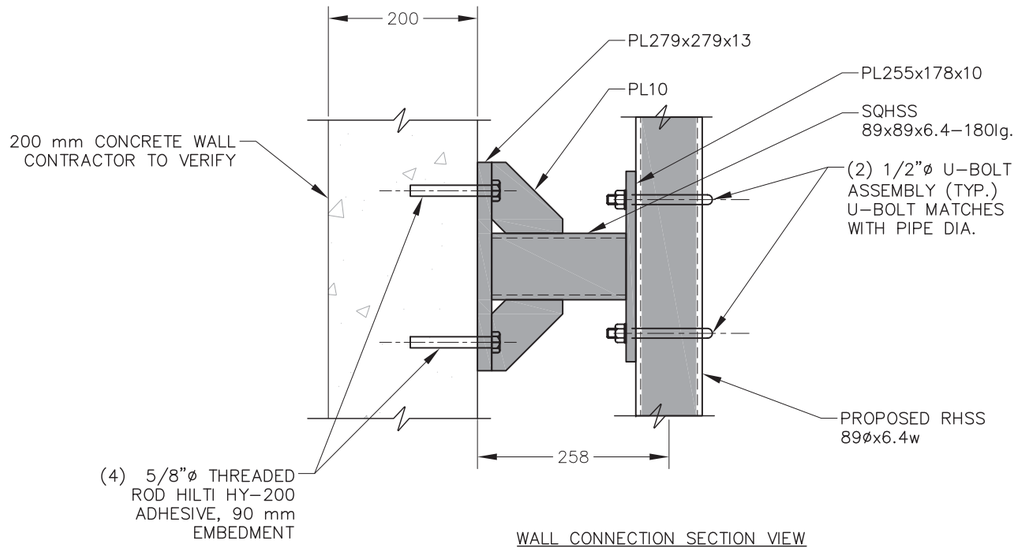
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

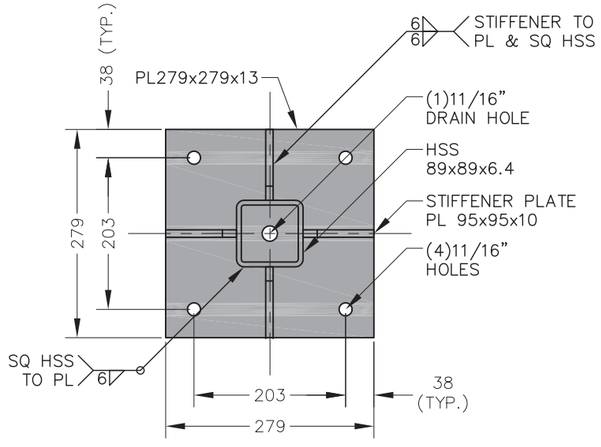
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: WALL MOUNT DETAILS

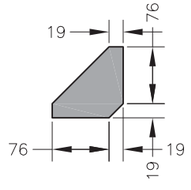
PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S01



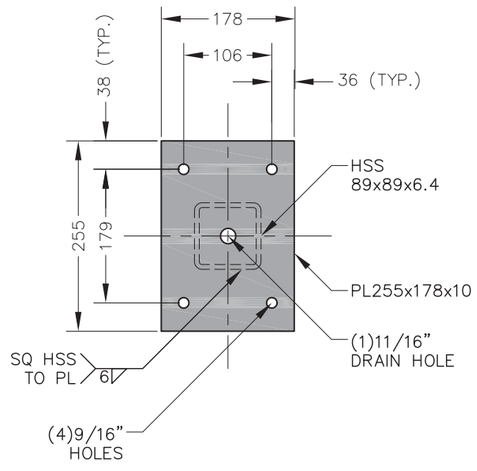
WALL CONNECTION SECTION VIEW



WALL CONNECTION PLATE
SECTION A–A



95x95x10
STIFFENER PLATE



PIPE CONNECTION PLATE
SECTION B–B

1 WALL CONNECTION DETAIL

NOTES:

1. DO NOT SCALE DRAWINGS.
2. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
3. ALL WORK TO CONFORM TO LATEST FREEDOM MOBILE SPEC.
4. CONTRACTOR TO VERIFY ALL DIMENSIONS.
5. ALL U–BOLTS 1/2ø ASSY (4N,2W) UNLESS NOTED.
6. ALL BOLTS 5/8ø A325 BOLT ASSY'S UNLESS NOTED.
7. ALL STRUCTURAL BOLTS TO BE GRADE A325 WITH FLAT WASHER UNLESS NOTED.
8. ALL OTHER BOLT AND THREADED ROD CONNECTIONS ARE TO USE FLAT WASHERS WITH EITHER DOUBLE NUT OR SINGLE NUT WITH LOCK WASHER.
9. ALL U–BOLTS TO BE STEEL GRADE F1554 GR.55 OR A572 GR.55, c/w LOCK NUT. INSTALLED AS PER S37–18 WITH PRE–TENSION DURING THE INSTALLATION MIN. OF 30% OF RODS TENSILE CAPACITY.

CLIENT:

CARRIER:

Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
25 Feb 2020

NO.	BY	DESCRIPTION	DATE
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0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

ROEHAMPTON
WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

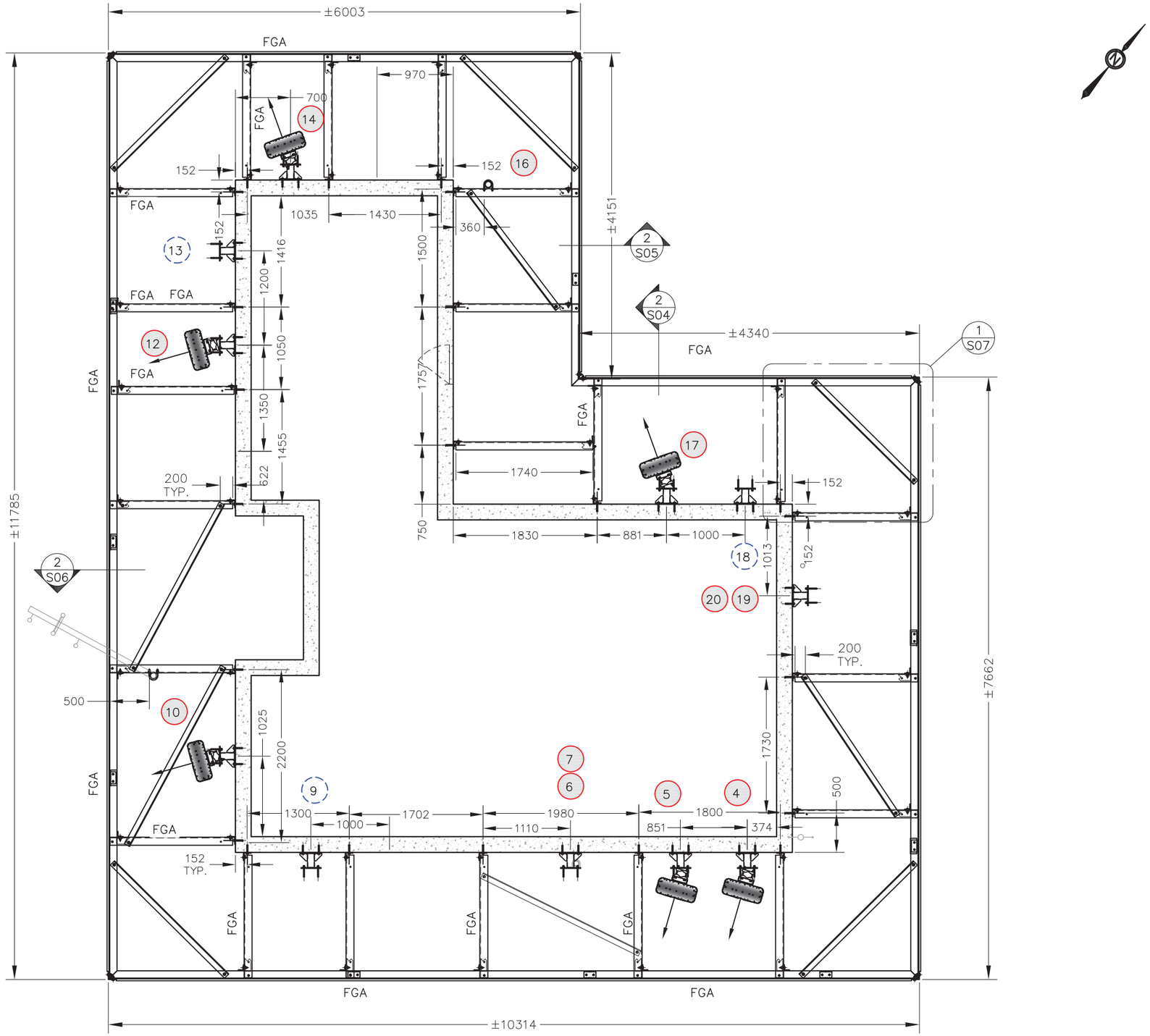
LOCATION:
7216 MARY AVE., BURNABY, BC

TITLE:
WALL CONNECTION DETAIL

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S02

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
3. FIBERGLASS SHROUD TO BE USED IN FRONT OF ANTENNA INSTALLATION.
4. FIBERGLASS HORIZONTAL/DIAGONAL/VERTICAL MEMBERS ARE TO BE USED WHEN INSTALLED IN FRONT OF ANTENNAS LINE OF SIGHT



1 SHROUD PLAN VIEW

NOTES:

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FGA- FIBERGLASS HORIZONTAL MID-LEVEL ANGLE

CLIENT:

CARRIER:

Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
17 Mar 2020

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TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION:
7216 MARY AVE., BURNABY, BC

TITLE:
SHROUD PLAN VIEW

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S03

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
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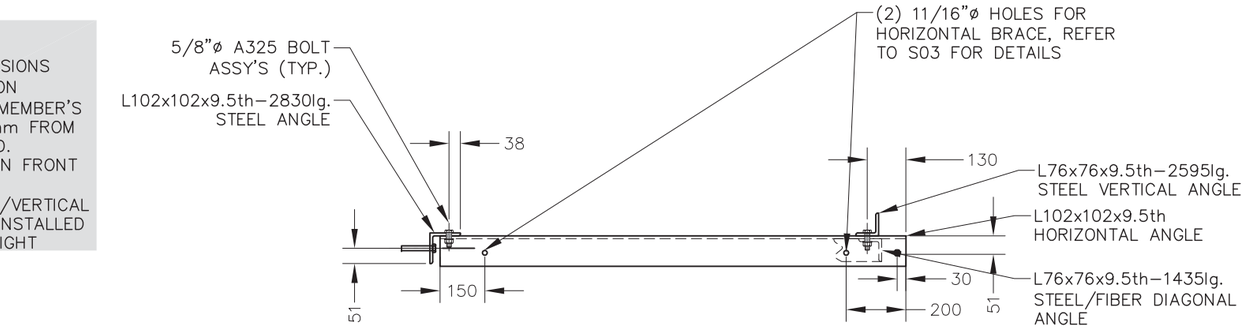

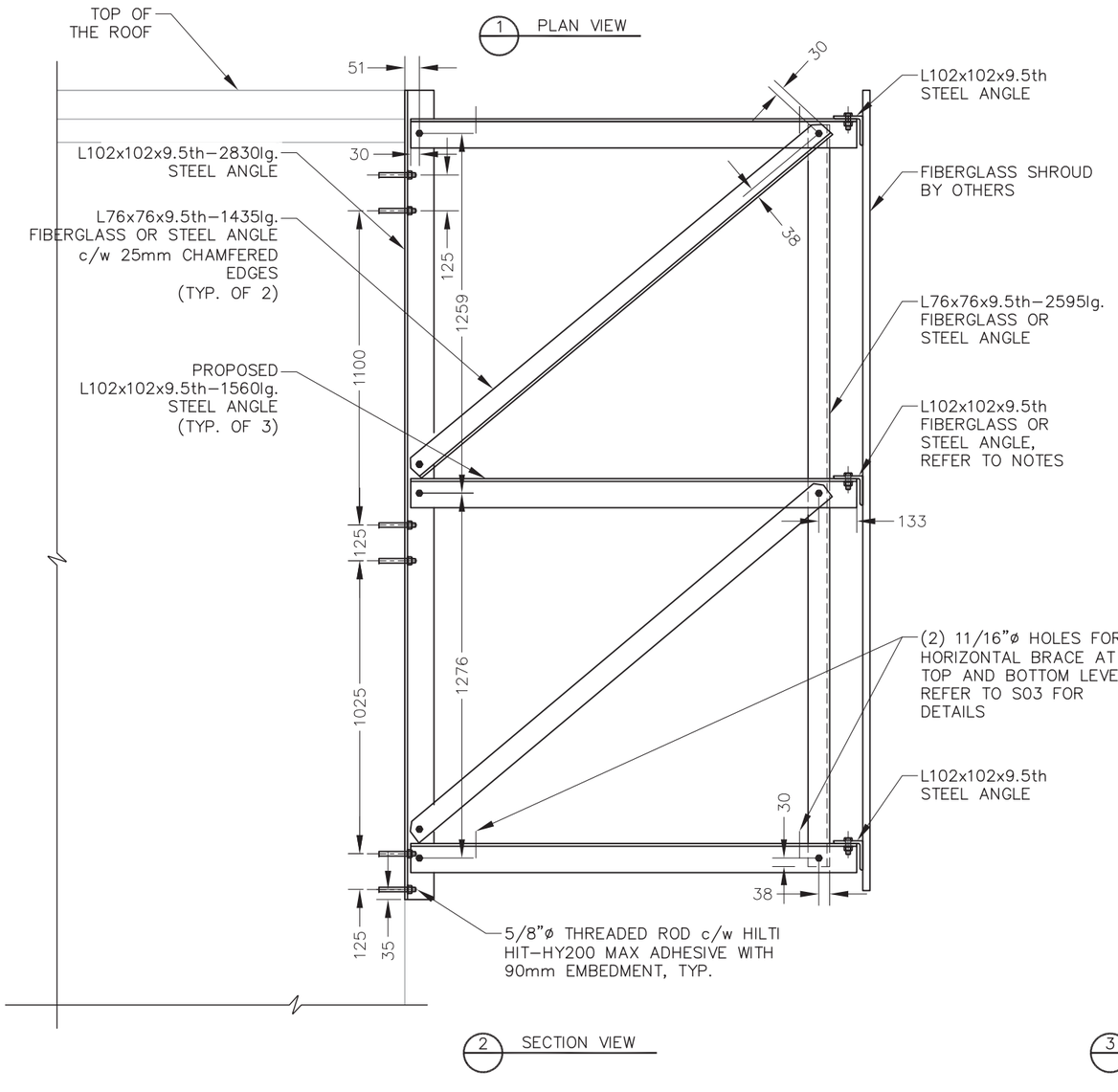

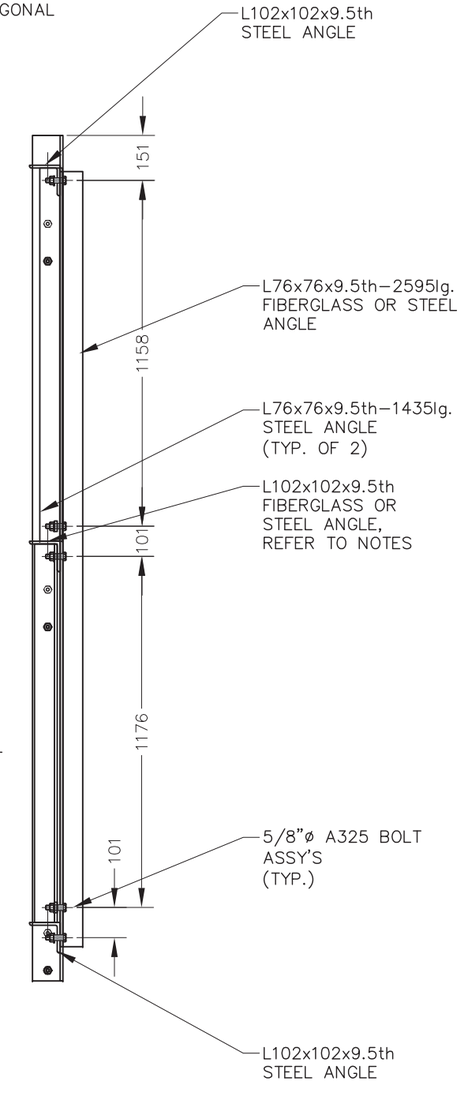

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CLIENT:

CARRIER:

Freedom mobile

PROFESSIONAL ENGINEER
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R. PUSZYNSKI
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ROEHAMPTON WEST
1112 WEST PENDER ST, SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION:
7216 MARY AVE., BURNABY, BC

TITLE:
SHROUD FRAME TYPE 1 DETAIL

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S04

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
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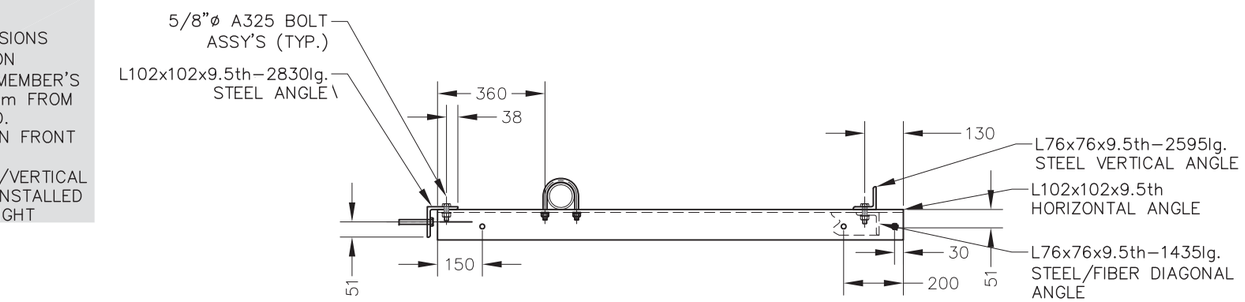
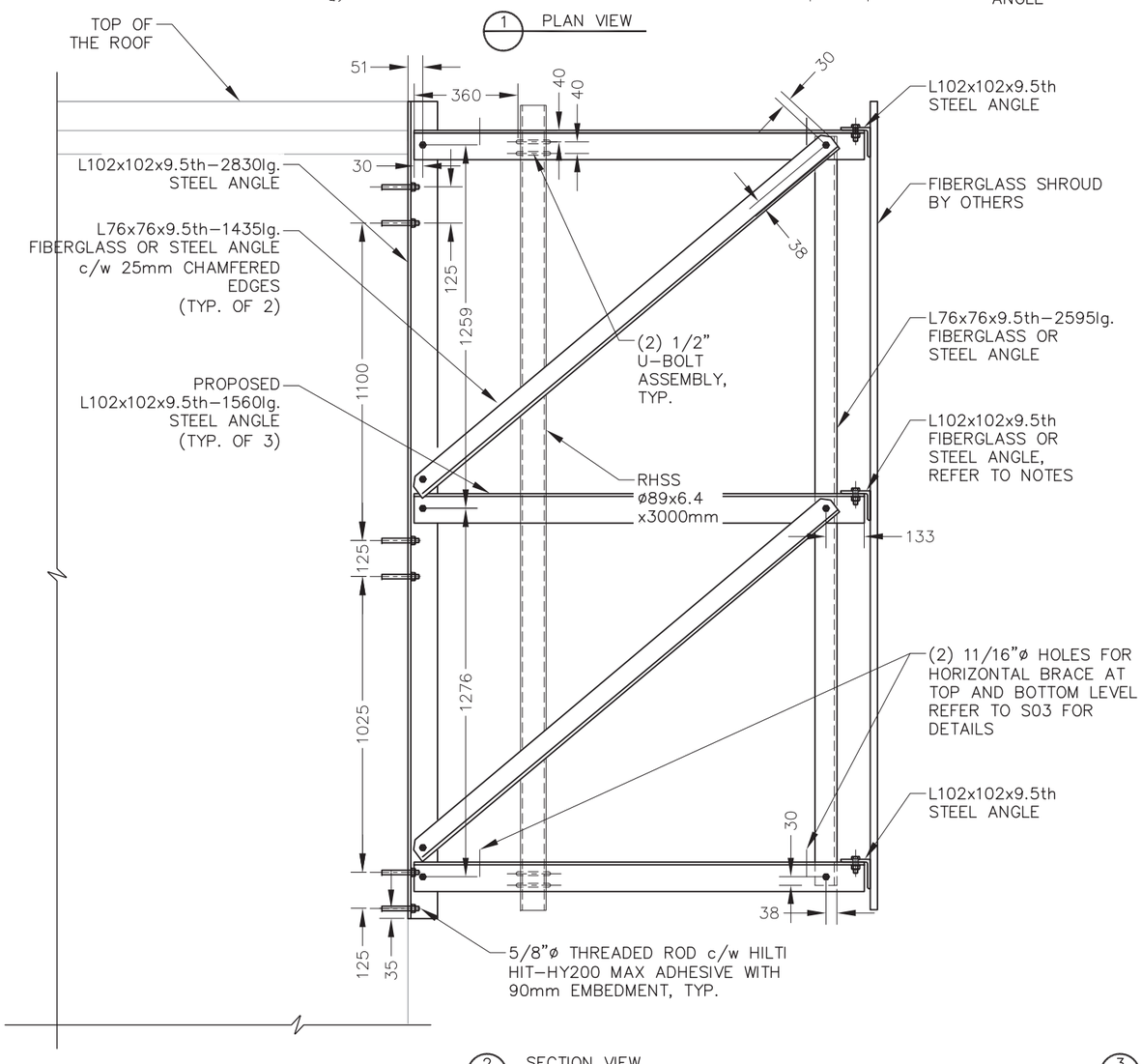
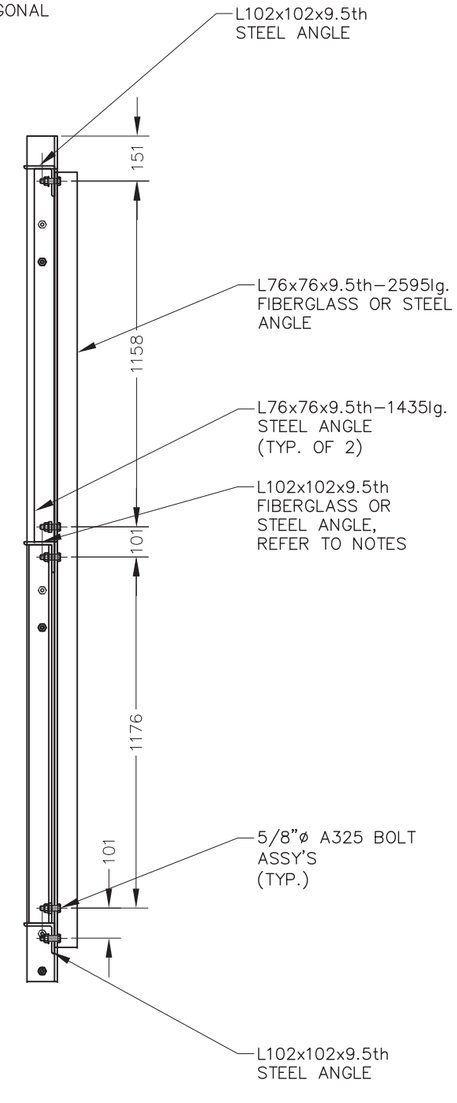


1 PLAN VIEW



2 SECTION VIEW



3 ELEVATION VIEW

NOTES:

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CLIENT:

CARRIER:

Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
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ROEHAMPTON WEST
1112 WEST PENDER ST, SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: SHROUD FRAME TYPE 2 DETAIL

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S05

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
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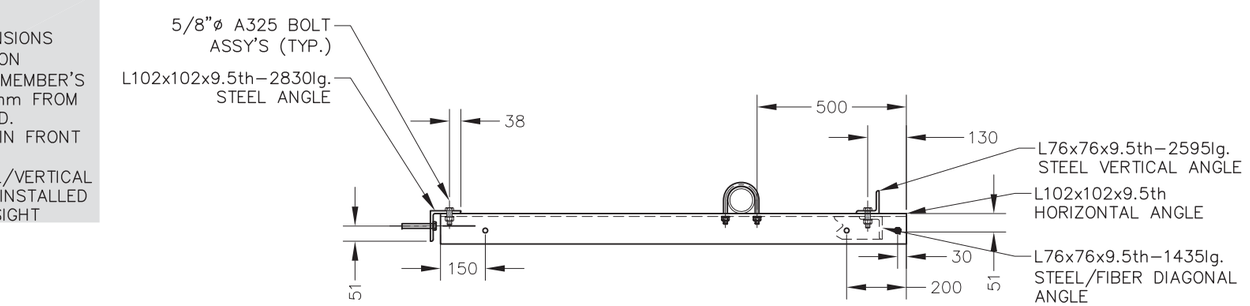
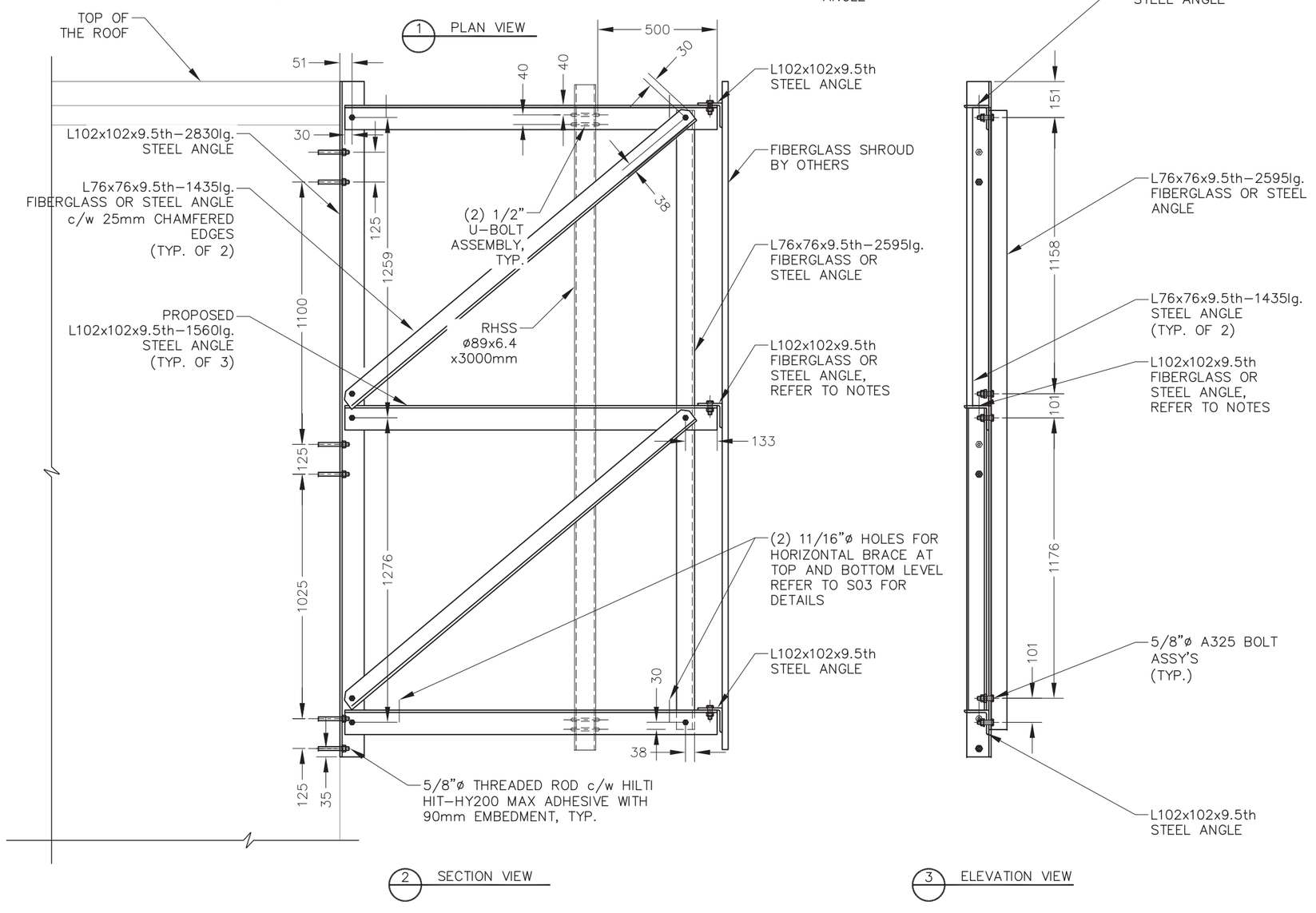
4. FIBERGLASS HORIZONTAL/DIAGONAL/VERTICAL MEMBERS ARE TO BE USED WHEN INSTALLED IN FRONT OF ANTENNAS LINE OF SIGHT





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4. CONTRACTOR TO VERIFY ALL DIMENSIONS.
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CLIENT:

CARRIER: Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
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25 Feb 2020

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ROEHAMPTON WEST
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VANCOUVER - EDMONTON - CALGARY

LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: SHROUD FRAME TYPE 3 DETAIL

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S06

CONTRACTOR NOTE:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO INSTALLATION/FABRICATION
2. ALL HOLES CENTERED ALONG THE MEMBER'S CENTER GUAGE LINE AND MIN. 30mm FROM THE SHEARED EDGE, UNLESS NOTED.
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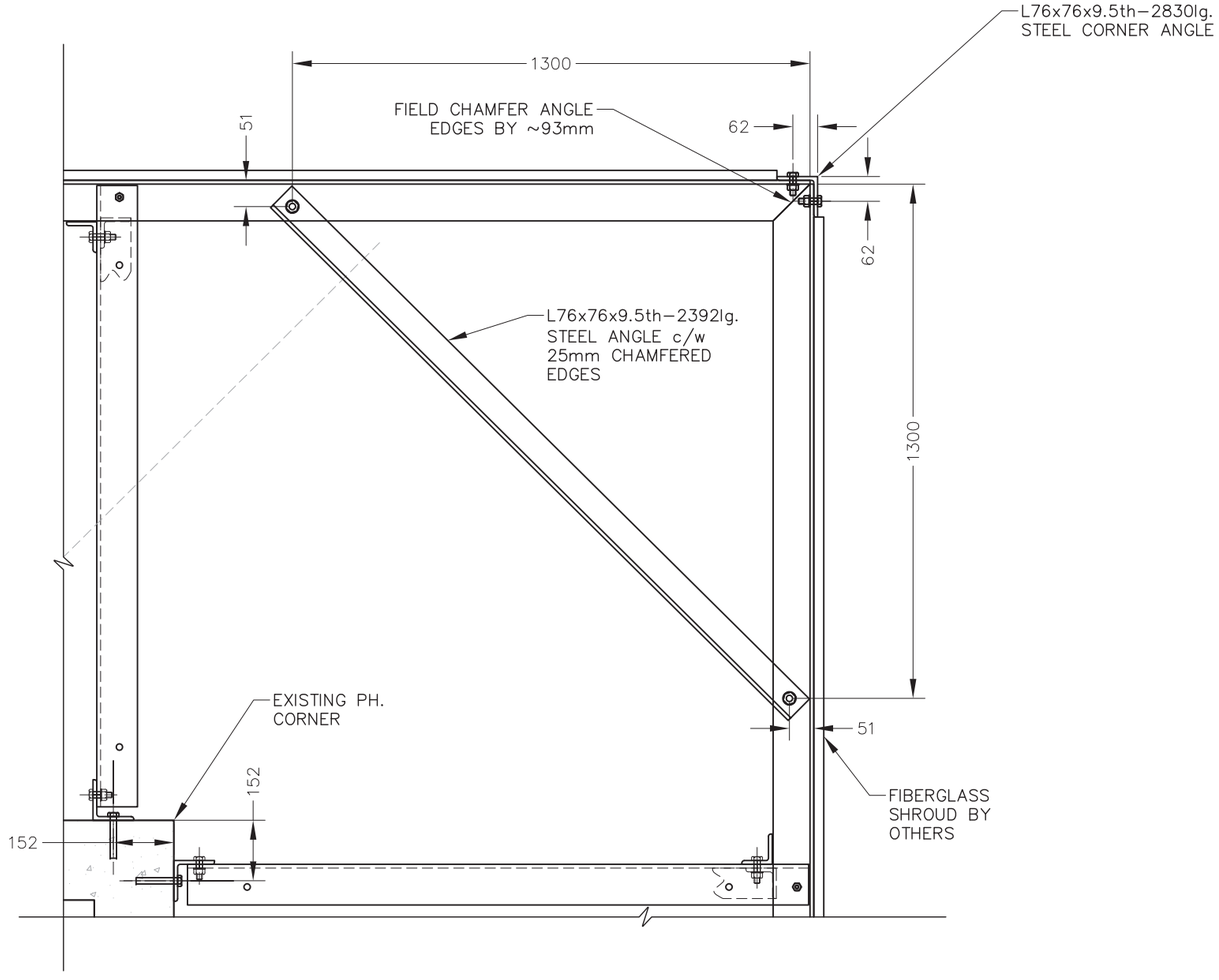
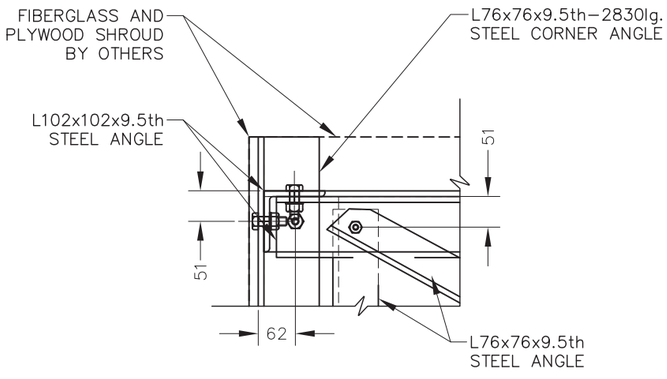
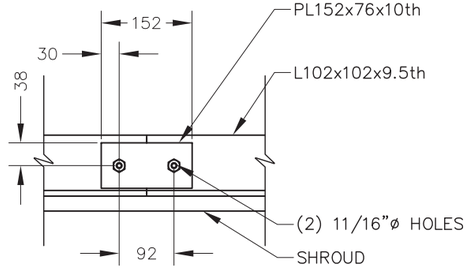
4. FIBERGLASS HORIZONTAL/DIAGONAL/VERTICAL MEMBERS ARE TO BE USED WHEN INSTALLED IN FRONT OF ANTENNAS LINE OF SIGHT



1 SHROUD CORNER DETAIL



3 FRAME CONNECTION DETAIL
CORNER ANGLE



2 ANGLE SPLICE

NOTES:

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7. ALL STRUCTURAL BOLTS TO BE GRADE A325 WITH FLAT WASHER UNLESS NOTED.
8. ALL OTHER BOLT AND THREADED ROD CONNECTIONS ARE TO USE FLAT WASHERS WITH EITHER DOUBLE NUT OR SINGLE NUT WITH LOCK WASHER.
9. ALL U–BOLTS TO BE STEEL GRADE F1554 GR.55 OR A572 GR.55, c/w LOCK NUT. INSTALLED AS PER S37–18 WITH PRE–TENSION DURING THE INSTALLATION MIN. OF 30% OF RODS TENSILE CAPACITY.

CLIENT:

CARRIER:
Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
25 Feb 2020

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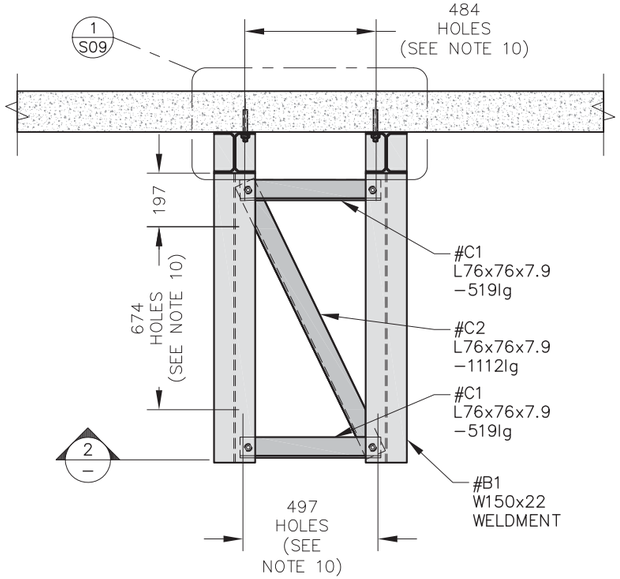
ROEHAMPTON WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL. (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION:
7216 MARY AVE., BURNABY, BC

TITLE:
SHROUD DETAILS

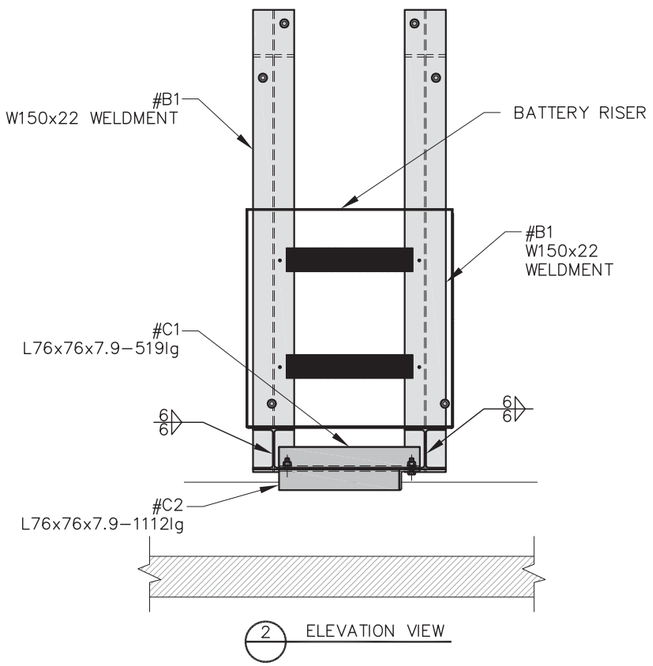
PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S07



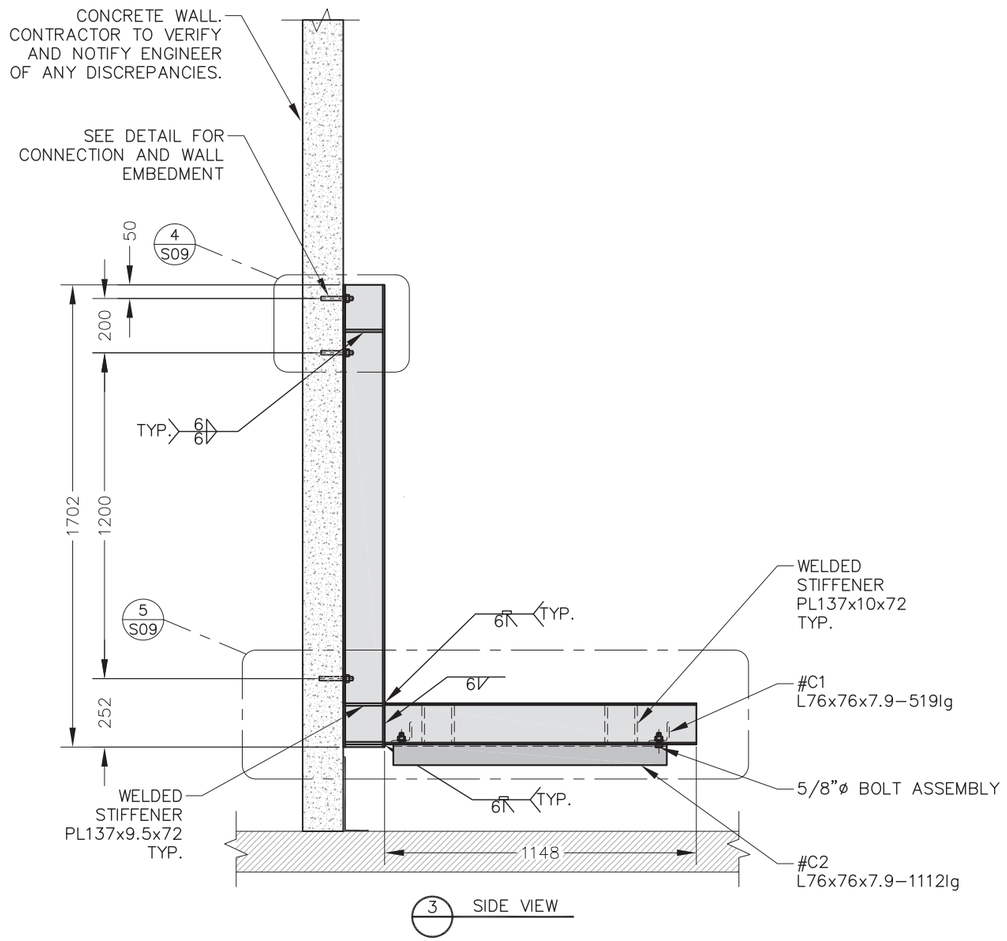
1 PLAN VIEW

FABRICATED PARTS					
ITEM	QTY	PART NO.	DESCRIPTION	UNIT WT	SUBTOTAL
1	2	#B1	W150X22– WELDMENT	70.21	140.42
2	2	#C1	L76x76x7.9–519lg	4.67	9.34
3	1	#C2	L76x76x7.9–1112lg	10.00	10.00
				TOTAL WEIGHT	159.76Kg

HARDWARE		
ITEM	QTY	DESCRIPTION
1	6	5/8"ø HILTI HAS–E B7 HY–200 MAX THREADED ROD
2	4	5/8"ø x 2 1/2" LG BOLT ASSY (1N,1LW)



2 ELEVATION VIEW



3 SIDE VIEW

NOTES:

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10. HOLE SPACING BASED ON EMERSON MTG HOLE LOCATION TEMPLATE PROVIDED WITH FLEX (30x25) 558205–C CABINET.

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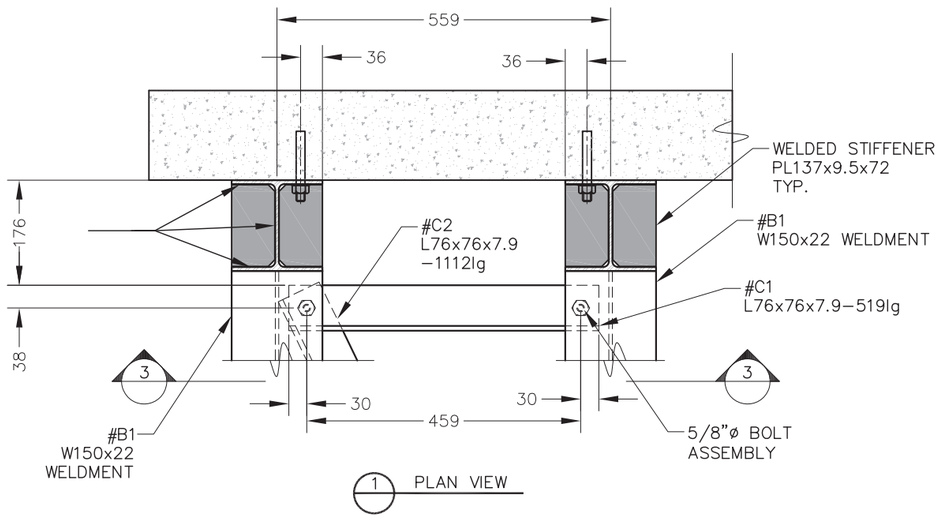
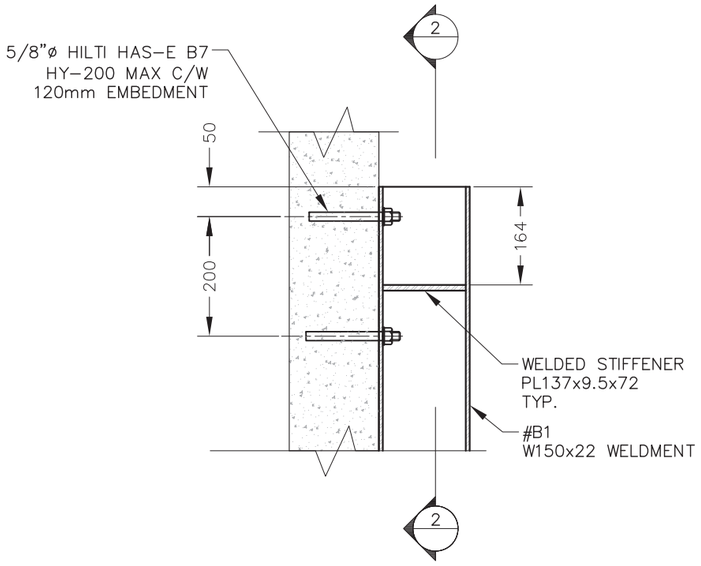
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: BATTERY RISER WALL CHAIR MOUNT

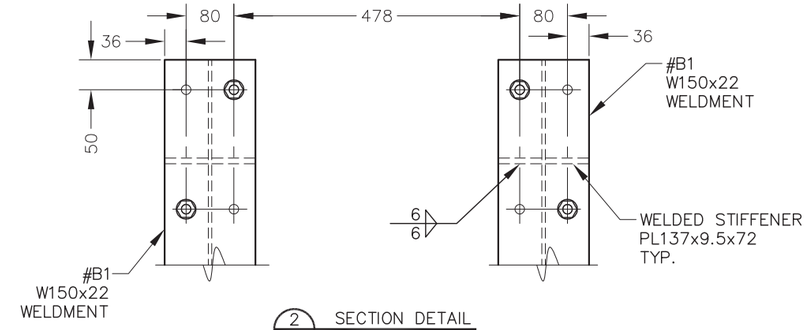
PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S08



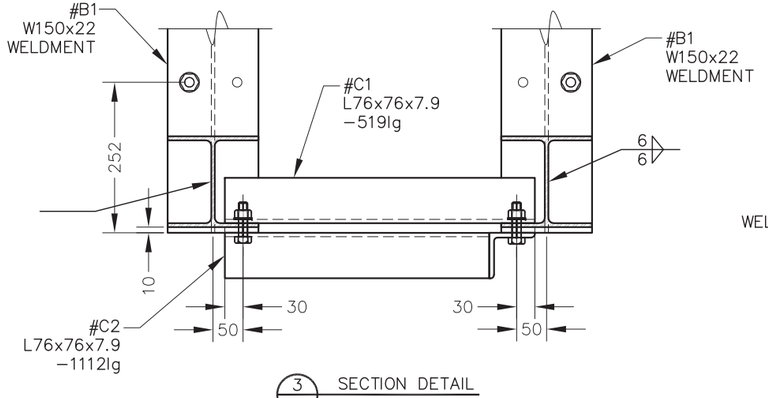
1 PLAN VIEW



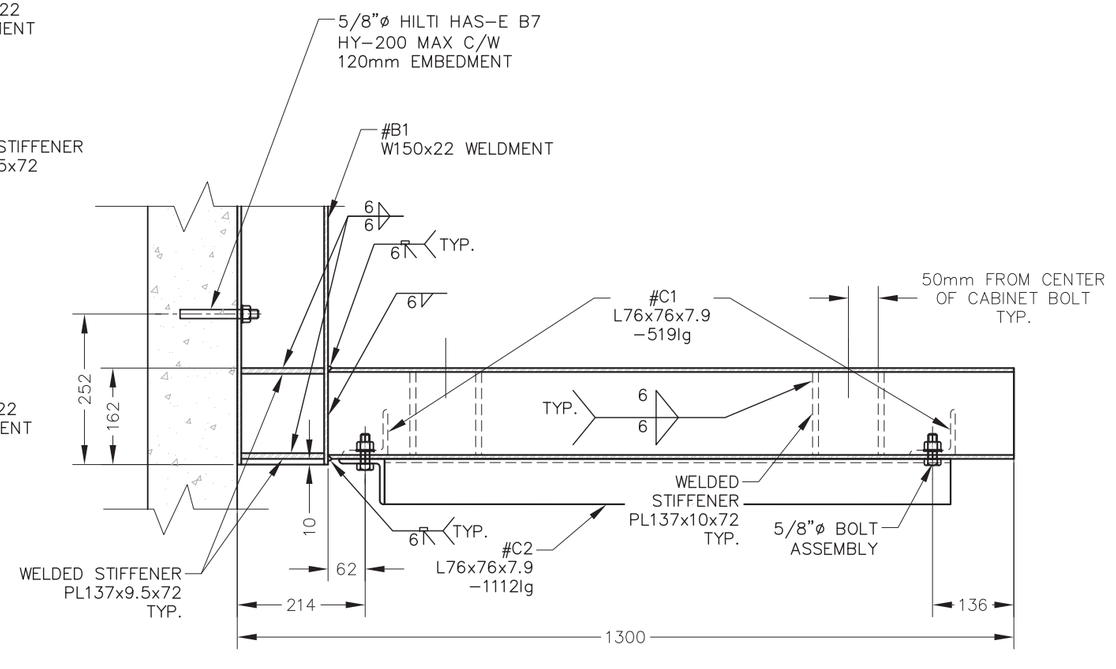
4 SECTION DETAIL



2 SECTION DETAIL



3 SECTION DETAIL



5 SECTION DETAIL

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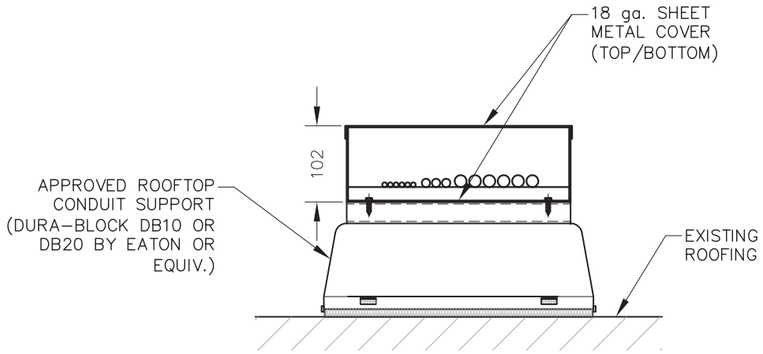
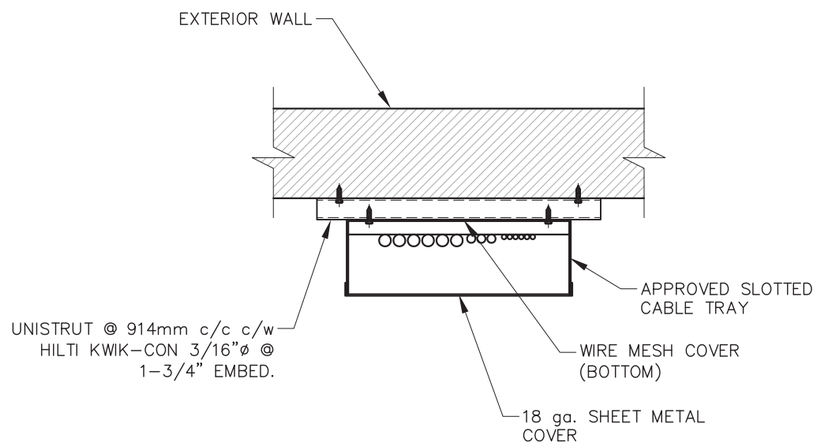
TITLE:
WALL CHAIR MOUNT DETAILS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S09



1 ROOF MOUNTING DETAIL



2 WALL MOUNTING DETAIL

NOTES:

1. CABLE TRAY BY APOLLO SHEET METAL (WESTRAY) OR EQUIVALENT (HOT DIP GALVANIZED SLOTTED STEEL LADDER (18 ga.)
2. CABLE TRAY WIDTHS ARE: 300mm AND SHALL BE SPACED MAX.: 1500mm APART.
3. CONTRACTOR TO PROVIDE ALL ELBOWS, TEES AND OTHER FITTINGS AS REQUIRED TO COMPLETE THE CABLE TRAY ROUTE
4. CABLE TRAY TO BE PAINTED TO MATCH BUILDING AS REQUIRED
5. FOR MOUNTING TO CONCRETE & MASONRY WALL USE HILTI KWIK–CON II 3/16"ø @ 1–3/4" EMBED.
6. CABLE TRAY BENT RADII: 300mm FOR DC=1/2–3/4", FIBER = 3/8"–1/2", LDF2–LDF5; 500mm FOR LDF6, LDF7
7. ANY OPENINGS TO BE SEALED WITH WIRE MESH TO PREVENT RODENT ENTRY.

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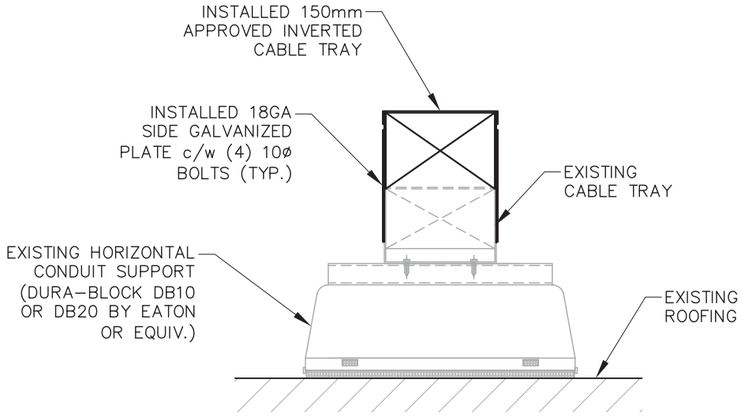
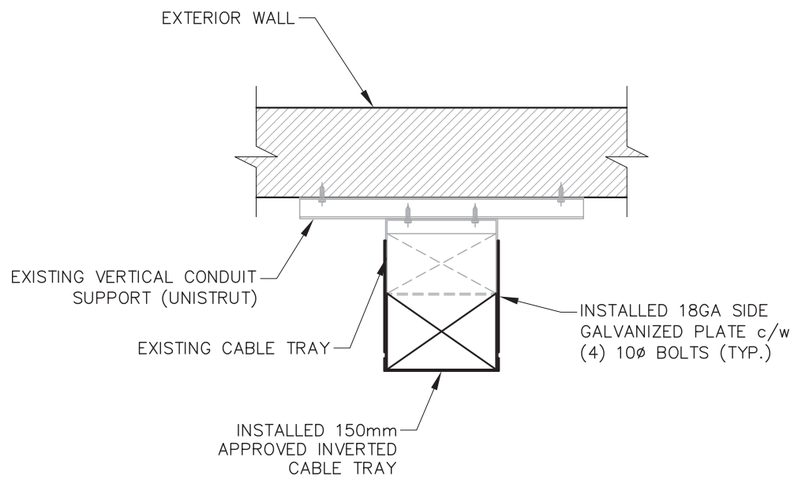
LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: CABLE TRAY DETAIL

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S10



1 ROOF MOUNTING DETAIL



2 WALL MOUNTING DETAIL

NOTES:

1. CABLE TRAY BY APOLLO SHEET METAL (WESTRAY) OR EQUIVALENT (HOT DIP GALVANIZED SLOTTED STEEL LADDER (18 ga.)
2. CABLE TRAY WIDTHS ARE: 150mm AND SUPPORTS SHALL BE SPACED MAX.: 3000mm APART (ROOF MOUNTED) OR 2000mm APART (WALL MOUNTED).
3. CONTRACTOR TO PROVIDE ALL ELBOWS, TEES AND OTHER FITTINGS AS REQUIRED TO COMPLETE THE CABLE TRAY ROUTE
4. CABLE TRAY TO BE PAINTED TO MATCH BUILDING AS REQUIRED
5. FOR MOUNTING TO CONCRETE & MASONRY WALL USE HILTI KWIK-CON II 3/16"ø @ 1-3/4" EMBED.
6. CABLE TRAY BENT RADII: 300mm FOR DC=1/2-3/4", FIBER = 3/8"-1/2", LDF2-LDF5; 500mm FOR LDF6, LDF7
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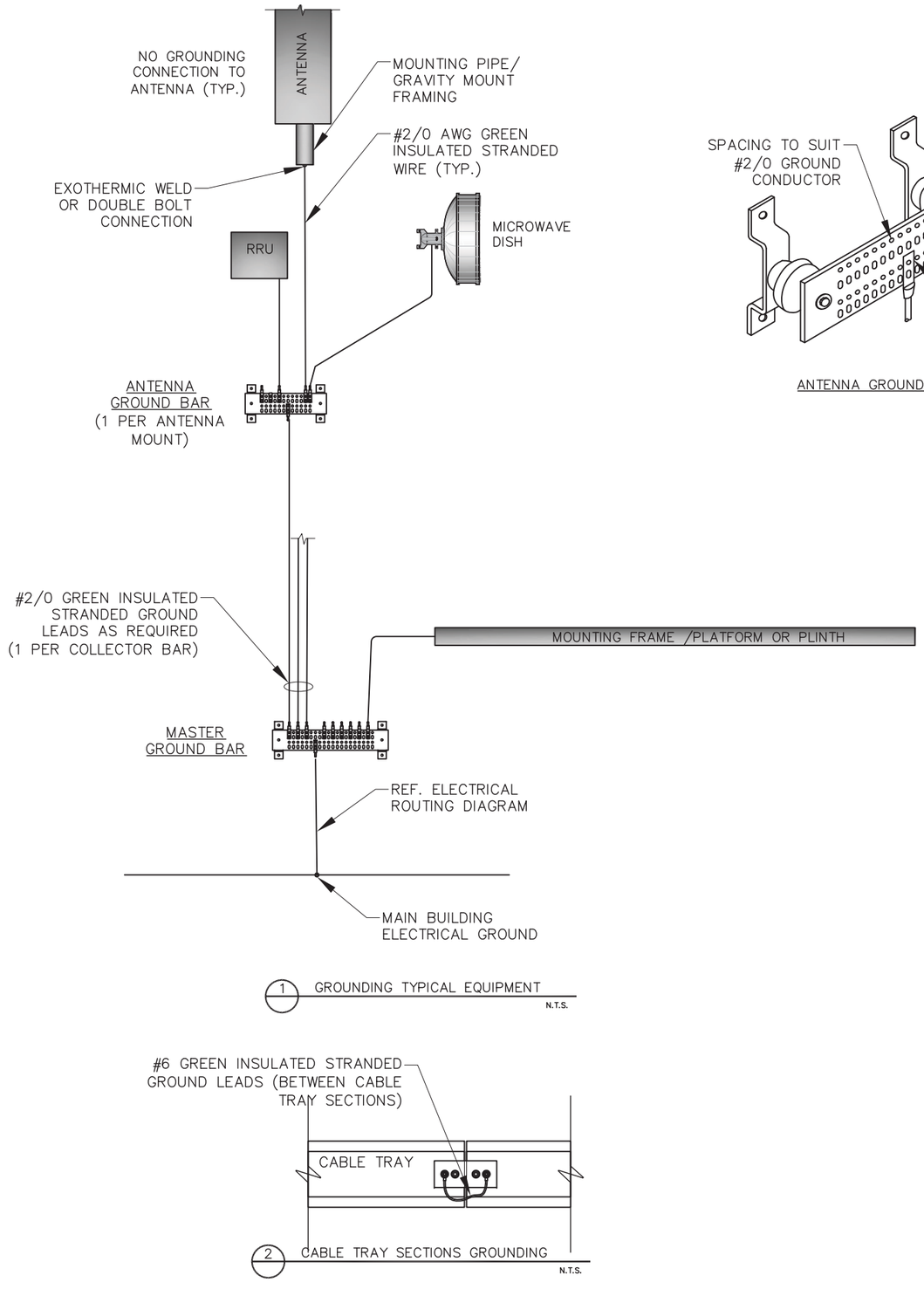
LOCATION: 7216 MARY AVE., BURNABY, BC

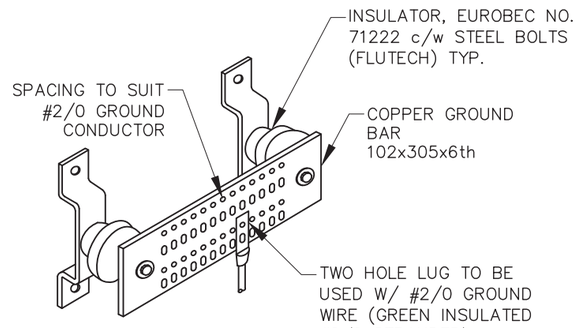
TITLE: CABLE TRAY MODIFICATION DETAILS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	S11

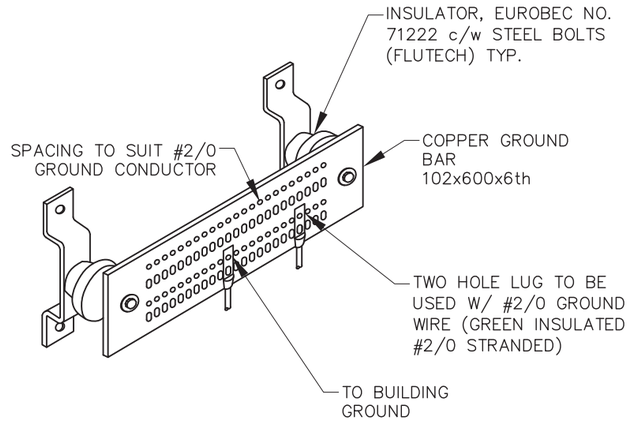


1 GROUNDING TYPICAL EQUIPMENT
N.T.S.

2 CABLE TRAY SECTIONS GROUNDING
N.T.S.



ANTENNA GROUND BAR



MASTER GROUND BAR

3 GROUNDING BAR DETAILS
N.T.S.

GROUNDING NOTES:

1. ALL HOLES MUST BE SUITABLE FOR CONNECTIONS OF THE LUGS.
2. COVER TIPS, LUGS AND COPPER GROUND BARS WITH "PENETROX E" FROM "BURNDY" OR "KOPR-SHIELD" FROM "T&B"
3. INSTALL 2-HOLE COMPRESSION LUGS "BURNDY/HYTUG TYPE YAL2T FOR GROUND CONDUCTORS C/W DURIUM BOLTS, NUTS AND WASHERS OR EQUIVALENT.
4. THE MGB SHALL INCLUDE HOLES FOR 2 #2/0 CABLES.
5. ALL GROUNDING CONNECTIONS TO CONFORM TO MANUFACTURERS AND FREEDOM MOBILE (FREEDOM MOBILE) 'GREENFIELD TECHNICAL SPECIFICATIONS'.

DC CABLE SIZE

16m (50') TO 45m (150') – #10 AWG
45m (151') TO 75m (250') – #8 AWG
75m (251') TO 95m (310') – #6 AWG

FIBRE OPTIC

1. FIBRE OPTIC BENDING RADIUS SHALL BE AS PER MANUFACTURER RECOMMENDATION.
2. ALL SWEEP ELBOWS TO ACCOMMODATE FIBRE OPTIC INSTALLATION.

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LOCATION: 7216 MARY AVE., BURNABY, BC

TITLE: EQUIPMENT DETAILS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	E01

GENERAL NOTES:

1. PROVIDE ALL LABOUR AND MATERIAL AS SHOWN AND AS REQUIRED TO COMPLETE THIS PROJECT AND PRESENT IT AS FULLY OPERATIONAL TO THE SATISFACTION OF THE OWNER.
2. COMPLY WITH THE LATEST ISSUES OF ALL APPLICABLE ELECTRICAL CODES, STANDARDS AND REGULATIONS.
3. OBTAIN ALL PERMITS, PAY ASSOCIATED FEES AND SCHEDULE INSPECTION.
4. ALL MATERIALS SHOWN ON DRAWINGS ARE NEW CSA APPROVED AND CSA LABELED.
5. INSTALL ALL THE REQUIRED GROUNDING SYSTEMS AS OUTLINED, INCLUDING INSTALLATION TESTING AND RECORD ALL RESULTS.
6. CONTRACTOR MAY PROPOSE MATERIALS AND METHODS OTHER THAN THE ONES SPECIFIED. APPROVAL OF THE ENGINEER AND OWNER MUST BE OBTAINED BEFORE SUCH MATERIALS AND METHODS ARE UTILIZED.
7. WORK REQUIRING FULL OR PARTIAL SHUTDOWN OF THE SITE ELECTRICAL SYSTEM TO MODIFY OR CONNECT EQUIPMENT IS PERMITTED ONLY DURING PERIODS SPECIFIED IN A WRITTEN AGREEMENT WITH THE OWNER OR BUILDING REPRESENTATIVE.
8. THE CONTRACTOR SHALL OBTAIN OWNERS APPROVAL FOR VARIOUS ELECTRICAL SERVICES CONDUITS ROUTING BEFORE PROCEEDING WITH WORK. VARIOUS RUNS TO BE RELOCATED AS PER OWNERS OR BUILDING REPRESENTATIVE SPECIFIC REQUIREMENTS AT NO ADDITIONAL COST.
9. ALL EQUIPMENTS SHALL BE LABELED WITH LAMACOID LABELS
10. BIDDERS FINDING DISCREPANCIES IN, OR OMISSIONS FROM DRAWINGS, SPECIFICATIONS OR OTHER DOCUMENTS, OR HAVING ANY DOUBTS AS TO THE MEANING OR INTENT OF ANY PART THEREOF, SHOULD AT ONCE NOTIFY THE ENGINEER WHO WILL SEND WRITTEN INSTRUCTIONS OR EXPLANATIONS TO ALL BIDDERS. NO ALLOWANCE WILL SUBSEQUENTLY BE MADE FOR FAILURE TO NOTIFY ENGINEER.
11. PROVIDE AS-BUILT DRAWINGS MARKED UP WITH INSTALLATION DETAILS IF DIFFER FROM PROPOSAL.
12. THE CONTRACTOR SHALL GUARANTEE IN WRITING ALL MATERIAL AND EQUIPMENT SUPPLIED BY HIM AGAINST DEFECTS IN WORKMANSHIP AND MATERIAL FOR A PERIOD OF TWELVE MONTHS AFTER FINAL ACCEPTANCE OF THE WORK. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY MATERIALS AND EQUIPMENT DEVELOPING SUCH DEFECTS WITHIN THAT TIME PROMPTLY ON DUE NOTICE GIVEN TO HIM BY THE OWNER, OR OWNER'S REPRESENTATIVE, AT NO ADDITIONAL EXPENSE TO THE OWNER.

WIRES AND CABLES

1. ALL SIZES SHOWN ARE AWG FOR COPPER CONDUCTORS AND CABLES.
2. FOR EARTHING AND BONDING USE COPPER CONDUCTORS ONLY.
3. TECK 90 OR COREFLEX CABLES MAY BE USED WHERE COST EFFECTIVE.
4. INSULATION SHALL BE TYPE RW90.
5. CONDUCTORS INSTALLED UNDER EARTHING SHALL HAVE RWU75 OR RWU90 INSULATION.

PANELBOARDS AND CIRCUIT BREAKERS

1. UNLESS NOTED OTHERWISE BREAKERS SHALL BE RATED FOR 10.000A SYMMETRICAL INTERRUPTING CAPACITY OR MATCH EXISTING STANDARDS.
2. BREAKERS SHALL BE MOLDED CASE AUTOMATIC THERMAL MAGNETIC TRIPPING TYPE UNLESS NOTED OTHERWISE.

DISCONNECT SWITCHES AND FUSES

1. DISCONNECT SWITCHES SHALL CONFORM TO CSA C22.2 NO. 4.
2. FUSE HOLDERS SHALL BE IN ACCORDANCE WITH CSA C22.2 NO. 39.
3. FUSES SHALL CONFORM TO CSA C22.2 NO. 106-M1985
4. DISCONNECT SWITCHES, FUSED AND NON-FUSED TYPE SHALL BE QUICK MAKE, QUICK BREAK ACTION IN EEMAC 1 ENCLOSURE FOR INDOOR INSTALLATION AND EEMAC 3 FOR OUTDOOR INSTALLATION UNLESS NOTED OTHERWISE.

EARTHING

1. PROVIDE EARTHING AND BONDING OF EQUIPMENT AS SHOWN AND AS REQUIRED BY CSA C22.2 NO.41-M1987, COMBINED WITH IEC 601024-1, IEEE 142 AND IEC 364 SERIES.
2. ALL CONDUCTORS USED ARE FOR EARTHING AND BONDING SHALL BE COPPER WITH GREEN INSULATION.
3. ALL LUGS FOR CONDUCTOR SIZES LARGER THAN #10 AWG SHALL BE TWO HOLE LONG BARREL COMPRESSION TYPE TIN PLATED COPPER.
4. EARTHING BARS SHALL BE MADE OF COPPER ALLOY 110, SIZED AND DRILLED FOR LUG CONNECTIONS.
5. IN ORDER TO MITIGATE HIGH FREQUENCY NOISE ALL EARTHING AND BONDING CONDUCTORS SHALL BE RUN AS STRAIGHT AS POSSIBLE WITH MINIMUM NUMBER OF BENDS. AVOID SHARP (90°) BENDS. MINIMUM BENDING RADIUS TO BE 300mm. LOOPING OF EARTHING AND BONDING WIRES SHALL BE AVOIDED.
6. ANTI-OXIDENT COMPOUND (NO-OX-ID) SHALL BE APPLIED TO ALL CONNECTIONS WHERE DISSIMILAR METALS COME IN CONTACT AND TO ALL CONDUCTOR ENDS BEEN LUGGED.

ELECTRICAL INSTALLATION NOTES:

1. PULL BOXES REQUIRED FOR RUNS OVER 150ft.
2. ELECTRICAL CONTRACTOR TO SUPPLY & INSTALL OUTDOOR MOTION-DETECTOR WORK LIGHT AND ELECTRICAL OUTLET AT EQUIPMENT LOCATION FOR USE BY CUSTOMER TECHNICIAN.
3. CONTRACTOR SHALL PROVIDE AND INSTALL ONE (1) #2 RW90 STRANDED, GREEN JACKETED, TINNED GROUND WIRE FROM THE EXISTING MAIN GROUND TO THE EQUIPMENT BUS BAR (MGB).
4. CONTRACTOR SHALL PROVIDE & INSTALL ONE (1) #2 STRANDED, GREEN JACKETED, TINNED GROUND WIRE FROM EACH SECTOR BUS BAR (AGB) AND THE MICROWAVE BUS BAR TO THE MGB.
5. GROUND ROD: COPPER CLAD STEEL GROUND ROD.
6. GROUND WIRE: GREEN JACKETED. THE BEND RADIUS SHALL BE NOT LESS THAN 8 INCHES.
7. NO-OX IS TO BE USED BETWEEN THE GROUND LUG AND BUS BAR. INSTALL LUGS ON FRONT OF BUS BAR. OVAL HOLES ARE NOT PERMITTED. BOLTS, WASHERS AND NUTS TO BE STAINLESS STEEL. PROPER SIZE 3/8"ø STAINLESS STEEL HARDWARE.
8. ALL HORIZONTAL MUST BE UV RESISTANT SCHEDULE 80 PVC; VERTICAL CONDUIT CAN BE SCHEDULE 40.
9. MEGGAR ALL FEEDERS AND PROVIDE WRITTEN RECORD OF ALL READINGS.

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VANCOUVER - EDMONTON - CALGARY

LOCATION:
7216 MARY AVE., BURNABY, BC

TITLE:
EQUIPMENT DETAILS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	E02

GENERAL NOTES:

1. THE MOST RECENT ISSUES OF ANY STANDARDS, CODES OR REGULATIONS MENTIONED IN THE DRAWINGS PROVIDED MUST BE USED, UNLESS INDICATED OTHERWISE IN THE SPECIFICATIONS.
2. ALL WORKMANSHIP MUST CONFORM TO THE REQUIREMENTS OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODE, APPLICABLE LOCAL BUILDING CODES, AND CSA STANDARDS.
3. THE CONTRACTOR'S RESPONSIBILITY INCLUDES:
   a. – OBTAINING APPROVALS FROM ALL REQUIRED LOCAL AUTHORITIES.
   b. – SAFEGUARD ALL EXIST. STRUCTURES AFFECTED BY THIS CONSTRUCTION.
   c. – OBTAINING ALL FIELD MEASUREMENTS REQUIRED FOR FABRICATION.
4. PRESERVE FIRE RATING WHEN PENETRATING, CEILINGS, FLOORS AND WALLS.
5. DRAWINGS ARE NOT TO BE SCALED.
6. ADEQUATE PROTECTION (PLYWOOD SHEETS) MUST BE PROVIDED BY THE CONTRACTOR ON THE EXISTING ROOF FOR THE ENTIRE DURATION OF CONSTRUCTION, TO AVOID DAMAGE TO THE EXISTING ROOFING. CONSTRUCTION LOADS MUST NOT EXCEED A CONCENTRATED LOAD OF 1.3kN OR UNIFORM DISTRIBUTED LOAD OF 1.0 kPa.
7. ALL SHOP AND INSTALLATION DRAWINGS MUST BE SUBMITTED TO ROEHAMPTON COMMUNICATIONS LTD. BY THE CONTRACTOR, FOR REVIEW PRIOR TO FABRICATION OF THE MATERIALS.
8. CORE DRILLING IN AREAS OCCUPIED BY TENANTS SHALL BE COORDINATED WITH THE BUILDINGS OWNER/MANAGER, AND MAY BE REQUIRED TO BE COMPLETED OUTSIDE OF NORMAL WORKING HOURS. SERVICES DAMAGED MUST BE REPAIRED BY THE CONTRACTOR, AT HIS OWN EXPENSE.
9. CORE DRILLING MUST NOT BE DONE UNTIL AN X–RAY INSPECTION PAID FOR BY THE CONTRACTOR, HAS BEEN COMPLETED TO DETERMINE THE PROPER LOCATION FOR THE PENETRATION. CORE DRILLING IS NOT ALLOWED IN COLUMN CAP AREAS.
10. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND DETAILS ON THE STRUCTURAL DRAWINGS FOR COMPATIBILITY WITH ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS BEFORE COMMENCING WITH THE WORK.
11. THE CONTRACTOR SHALL INFORM THE ENGINEER IN WRITING DURING THE BIDDING PERIOD OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS OR IN SPECIFICATIONS, UPON RECEIPT OF SUCH INFORMATION THE ENGINEER WILL PROVIDE ADDITIONAL INSTRUCTIONS, ANY SUCH DISCREPANCY, OMISSION OR VARIATION NOT REPORTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND CORRECTIVE WORK SHALL BE PERFORMED AS DIRECTED BY THE ENGINEER.
12. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.
13. ENGINEERING SERVICES PRESENTED ON THESE DRAWINGS ARE FOR PERMANENT STRUCTURE ONLY, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING REQUIRED FOR STRUCTURE STABILITY AND FOR CONSTRUCTION LOADING UNTIL THE PROJECT IS COMPLETED.

CONCRETE NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, AND APPLICABLE STANDARDS.
2. REINFORCING STEEL MUST BE GRADE 400 DEFORMED BARS TO CAN/CSA G30.18, UNLESS NOTED OTHERWISE. CONCRETE COVER TO BE 3" (MIN.)
3. WELDED STEEL WIRE FABRIC MUST HAVE A MINIMUM YIELD STRENGTH OF 450 MPa AND CONFORM TO CSA G30.5. (PROVIDE IN FLAT SHEETS ONLY)
4. BEND AND DETAIL REINFORCING STEEL AS INDICATED IN THE REINFORCING STEEL MANUAL OF STANDARD PRACTICE BY THE REINFORCING STEEL INSTITUTE OF CANADA.
5. CAST IN PLACE CONCRETE TO HAVE A 28 DAY MINIMUM COMPRESSIVE STRENGTH OF 30 MPa UNLESS NOTED OTHERWISE.
6. SLUMP AT POINT OF DISCHARGE TO BE 75mm.
7. ALL CONCRETE EXPOSED TO FREEZING AND THAWING OR DE–ICING CHEMICALS MUST CONTAIN ENTRAINED AIR.
8. ALL CONCRETE EXPOSED CORNER EDGES SHALL BE CHAMFERED 1" x 1".
9. ALL GROUT USED SHALL BE NON–SHRINKING WATERPROOF, INSTALLED TO MANUFACTURES INSTRUCTIONS, UNLESS SPECIFIED OTHERWISE.
10. NO MORE THAN 120 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY THE TESTING AGENCY AND THE STRUCTURAL ENGINEER, CONTRACTOR'S SUPERINTENDENT TO MONITOR THIS PERIOD, TESTING AGENCY HAS THE AUTHORITY TO REJECT CONCRETE IF NOT IN ACCORDANCE WITH SPECIFICATIONS.

STEEL STUDS AND JOISTS NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PROVINCIAL BUILDING CODES, APPLICABLE BY–LAWS AND LOCAL CODES.
2. MATERIAL TO CONFORM TO ASTM A446 STANDARD SPECIFICATION FOR STEEL SHEET, HOT DIP GALVANIZED.
3. BRIDGING TO BE PROVIDED AT 5ft c/c FOR STUDS, UNLESS INDICATED OTHERWISE.
4. BRIDGING TO BE PROVIDED @ 7ft c/c FOR JOISTS, UNLESS INDICATED OTHERWISE.
5. INSTALLATION MUST MEET THE REQUIREMENTS SET OUT IN THE MANUFACTURERS SPECIFICATIONS AND REQUIREMENTS.

STRUCTURAL STEEL NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, AND APPLICABLE STANDARDS AS LISTED IN CORRESPONDING SECTION.
2. ALL STRUCTURAL STEEL TO CONFORM TO CAN3–G40.21, GRADE 300W, RHSS TO MEET REQUIREMENTS OF G40.21, CLASS H, GRADE 350W.
3. ALL WELDING SHALL BE COMPLETED IN ACCORDANCE WITH APPLICABLE CSA STANDARDS AND PERFORMED BY A FABRICATOR CERTIFIED TO CSA W47.1 TO DIVISION 1 OR 2.1.
4. ALL BOLTS TO CONFORM TO ASTM SPECIFICATION A325, PROPERLY SIZED FOR THE APPLICATION, AND THE THREADS TO BE EXCLUDED FROM THE SHEAR PLANE.
5. HOLES ADDITIONAL TO THOSE SHOWN ON STRUCTURAL DRAWINGS ARE NOT PERMITTED IN ANY STRUCTURAL MEMBER.
6. ALL STRUCTURAL STEEL TO BE HOT DIP GALVANIZED.
7. APPLY (3) COATS OF ZINC RICH PAINT TO ALL DAMAGED GALVANIZED SURFACES.
8. FIELD MODIFICATIONS SUCH AS DRILLING OF HOLES AND WELDING TO BE AVOIDED, UNLESS SPECIFIED OTHERWISE.
9. INSTALLATION OF ADHESIVE AND MECHANICAL CONCRETE OR MASONRY ANCHORS SHALL CONFORM WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
10. MINIMUM DISTANCE FROM HOLE CENTER TO EDGE SHALL BE:

BOLT DIAM.	SHEARED EDGE	ROLLED EDGE	HOLE
1/2"ø	25 mm	19 mm	14.3ø mm
5/8"ø	30 mm	22 mm	17.5ø mm
3/4"ø	35 mm	26 mm	20.6ø mm

NUT ROTATION FROM SNUG–TIGHT CONDITION* (TURN–OF–NUT– PRETENSION)

BOLT LENGTH**	DISPOSITION OF OUTER FACE OF BOLTED PARTS	
	BOTH FACES NORMAL TO BOLT AXIS OR ONE FACE NORMAL TO AXIS AND OTHER FACE SLOPED 1:20 MAX. (BEVELED WASHERS NOT USED)***	BOTH FACES SLOPED 1:20 MAX. FROM NORMAL TO BOLT AXIS (BEVELED WASHERS NOT USED)***
<= 4x BOLT DIA.	1/3 TURN	3/4 TURN
> 4x BOLT DIA. <= 8x BOLT DIA. OR 200mm	1/2 TURN	
> 8x BOLT DIA. OR 200mm	2/3 TURN	

* TABLE 8 OF CAN/CSA–S16–14
NUT ROTATION IS RELATIVE TO BOLT REGARDLESS OF WHETHER THE NUT OR BOLT IS TURNED.
TOLERANCE OF ROTATION ±30°. THIS TABLE APPLIES TO COARSE–THREADED HEAVY–HEX STRUCTURAL BOLTS OF ALL SIZES AND LENGTHS USED WITH HEAVY–HEX SEMI–FINISHED NUTS.

** BOLT LENGTH IS MEASURED FROM THE UNDERSIDE OF THE HEAD TO THE EXTREME END OF POINT.

*** BEVELLED WASHERS ARE NECESSARY WHEN A490M OR A490 BOLTS ARE USED.

ANTENNA AND WAVEGUIDE NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION.
2. INSTALL WAVEGUIDE TO MANUFACTURERS INSTRUCTIONS. (SUPPORT INTERVALS TO BE 1 METER MAXIMUM).
3. ALL AREAS AFFECTED BY ROUTING OF WAVE–GUIDE OR CONDUITS MUST BE REHABILITATED TO ORIGINAL CONDITION UPON COMPLETION.

ROOFING NOTES:

1. BEFORE STARTING WORK ON ROOF, CONTRACTOR IS TO COMPLETE A "CUT TEST", TO DETERMINE THE CONDITION AND TYPE OF THE EXISTING ROOFING.
2. REMOVE EXISTING ROOFING AS REQUIRED TO ALLOW FOR THE INSTALLATION OF RHSS AND BASE PLATE, KEEP OPENING TO A MINIMUM.
3. ONCE INSTALLATION IS COMPLETE, MAKE GOOD THE EXISTING ROOFING & INSULATION.
4. PROVIDE SUFFICIENT TEMPORARY PROTECTION OF ROOF PENETRATIONS, PRIOR TO ROOFING REINSTATEMENT, TO PREVENT WATER FROM ENTERING THE EXISTING BUILDING.
5. ALL WORK SHALL CONFORM TO ALL AUTHORITIES HAVING JURISDICTION AND TO THE FREEDOM MOBILE SPECIFICATION. WORKMANSHIP TO PROVIDE A CLEAN APPEARANCE OF THE FINISHED WORK.

INVERTED ROOF

1. WHERE EXISTING ROOFING IS BITUMEN OR ASPHALTIC BASED, SUPPLY A NEW 3FT x 3FT RUBBERIZED MEMBRANE. TORCH DOWN TO EXISTING. AT UNDERSIDE OF BASE PLATE PROVIDE RUBBERIZED PLASTIC CEMENT, COMPATIBLE WITH MEMBRANE. WATERPROOF ANCHOR BOLT AREAS.

STANDARD BUILT UP ROOF

2. CUT OPENING IN ROOF ADEQUATE TO ALLOW FOR THE INSTALLATION OF THE RHSS AND BASE PLATE. FOLLOWING INSTALLATION, PROVIDE 22 Ga. GALVANIZED SHEET METAL, PITCH POCKET, 18" SQUARE x 5" HIGH. FILL AFTER ASSEMBLY IS COMPLETE. FLASH INTO EXISTING WATERPROOFING ON ROOF.

WOOD FRAMING & STRUCTURAL TIMBER NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODES AND APPLICABLE STANDARDS.
2. PLYWOOD SHALL BE DOUGLAS FIR CONFIRMING TO CAN/CSA–0121.
3. ALL FRAMING MEMBERS SHALL BE DOUGLAS FIR–LARCH NO.1 / NO.2 GRADE.
4. STEEL HARDWARE SHALL BE ASTM A36 OR BETTER. BOLTS SHALL BE ASTM A307.
5. NAILS TO CONFORM TO CSA B111–1974. GALVANIZED FOR EXTERIOR LOCATIONS AND TREATED LUMBER. NAILING OF FRAMING PER PROVINCIAL BUILDING CODES AND APPLICABLE STANDARDS.

MASONRY NOTES:

1. ALL WORKMANSHIP MUST BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FREEDOM MOBILE SPECIFICATION, PROVINCIAL BUILDING CODES .
2. UTILIZE TYPE 'S' MORTAR FOR ALL INTERIOR AND EXTERIOR LOAD BEARING WALLS, CONFORM TO CSA STANDARD A179.
3. ALL METAL MATERIALS USED IN MASONRY TO BE HOT DIP GALVANIZED.
4. VERTICAL MASONRY CONTROL JOINTS TO BE INSTALLED AT INTERVALS LESS THAN 3 TIMES THE WALL HEIGHT WITH MAXIMUM SPACING OF 39'–4".
5. PROVIDE ALL REQUIRED TEMPORARY SHORING TO EXISTING MASONRY WALLS WHEN CUTTING NEW OPENINGS.

FIRE STOPPING & SEALING NOTES:

1. ALL EXISTING AND NEW OPENINGS LOCATED IN THE EQUIPMENT ROOM AND ALONG CABLE ROUTINGS, MUST BE SEALED AND FIRE STOPPED WITH TWO HOUR FIRE RATING AS REQUIRED USING TREMCO FIRESTOP SYSTEM.

CLIENT:

CARRIER:

Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
25 Feb 2020

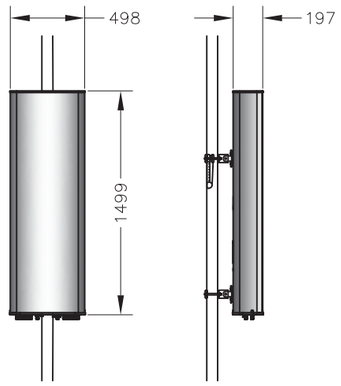
NO.	BY	DESCRIPTION	DATE
5			
4			
3			
2			
1			
0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

ROEHAMPTON WEST
1112 WEST PENDER ST,
SUITE 908
VANCOUVER, BC V6E 2S1
TEL.: (778)300-1233
VANCOUVER - EDMONTON - CALGARY

LOCATION:
7216 MARY AVE., BURNABY, BC

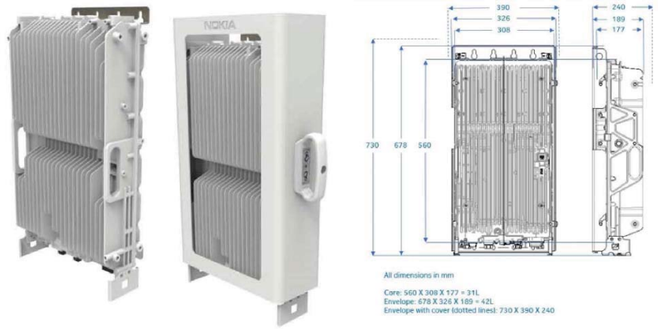
TITLE:
EQUIPMENT DETAILS

PROJECT NAME:	PROJECT NO:	DWG. NO:
LTE/FUTURE OVERLAY UPGRADE	BVA0202A	N01

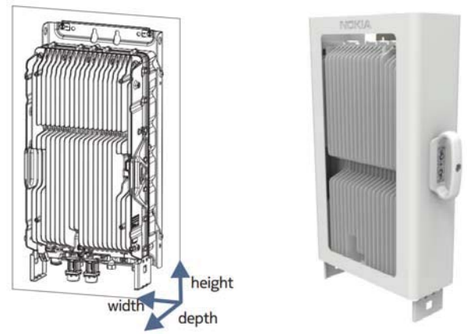


FFV4-65A-R6
Height/Width/Depth: 1499x498x197mm
Weight: 32.7kg

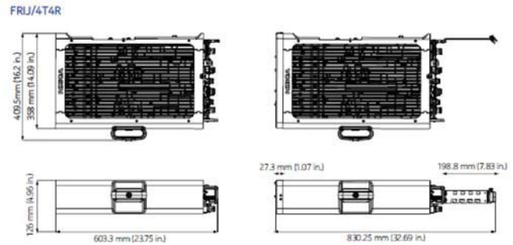
1 RF ANTENNA DETAIL
N.T.S.



AHLOA
Height/Width/Depth: 730x240x390mm
Weight: 38kg

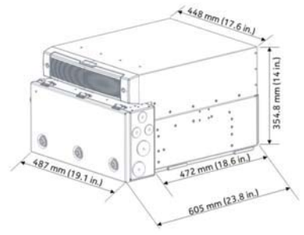


AHFIB
Height/Width/Depth: 675x327x165mm
Weight: 30kg

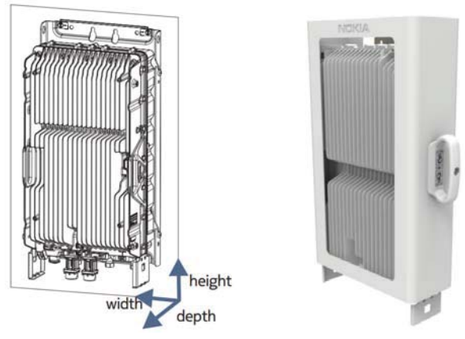


FRIJ
Height/Width/Depth: 603x126x409mm
Weight: 24.5kg

AHHB
Height/Width/Depth: 428x327x184mm
Weight: 15.7kg



AIRSCALE BBU
Height/Width/Depth: 487x605x355mm
Weight: 30kg



AHBCC
Height/Width/Depth: 675x327x205mm
Weight: 38kg

2 RRU's
N.T.S.

CLIENT:

CARRIER: Freedom mobile

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. PUSZYNSKI
32752
17 Mar 2020

NO.	BY	DESCRIPTION	DATE
5			
4			
3			
2			
1	NN	ANTENNA UPDATE	17 MAR 20
0	AF	ISSUED FOR CONSTRUCTION	25 FEB 20

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TEL: (778)300-1233
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