

**PROJECT TITLE:** Klemtu Communication Tower and Supporting Infrastructure

**SOLICITATION No.:** F1705-211672/A

**DATE:** May 20, 2022

The following changes are effective immediately and form part of the contract documents.

## **DRAWINGS**

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The contract drawings have been revised and re-issued under Revision Number 02.

## **SPECIFICATION REVISIONS**

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### **Section 01 11 00 – Summary of Work**

#### **PART 1 GENERAL**

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

Replace

.1

**.3 Design, supply, and installation of antenna mounts and obstruction lighting;**

with

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

.1

**.3 Supply and installation of Obstruction Lighting;**

delete

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

.1

**.4 Design and supply of associated tower mounts and ice guards.**

Add

##### **1.2 WORK COVERED BY CONTRACT DOCUMENTS**

**.2 Optional work for this contract includes;**

**.3 Design and supply of associated tower mounts and ice guards.**

**Section 13 36 13.13 – Steel Towers****PART 1 GENERAL****1.3.1 SCOPE OF WORK**

Replace

- .1 Work in this section includes the supply of all labour, material, and equipment necessary to complete the following activities:
- .2 **Design, supply, and installation** of antenna mounts for antennas identified in CCG Drawings excluding antennas noted as “future.”

with

- .1 Work in this section includes the **optional** supply of all labour, material, and equipment necessary to complete the following activities:
- .2 **Design and supply** of antenna mounts for antennas identified in CCG Drawings excluding antennas noted as “future.”

**PART 3 GENERAL****3.2 ANTENNA MOUNTS**

Replace

- .1 Antenna mounts for all initial antennas must be **installed** as indicated on CCG Drawings.

with

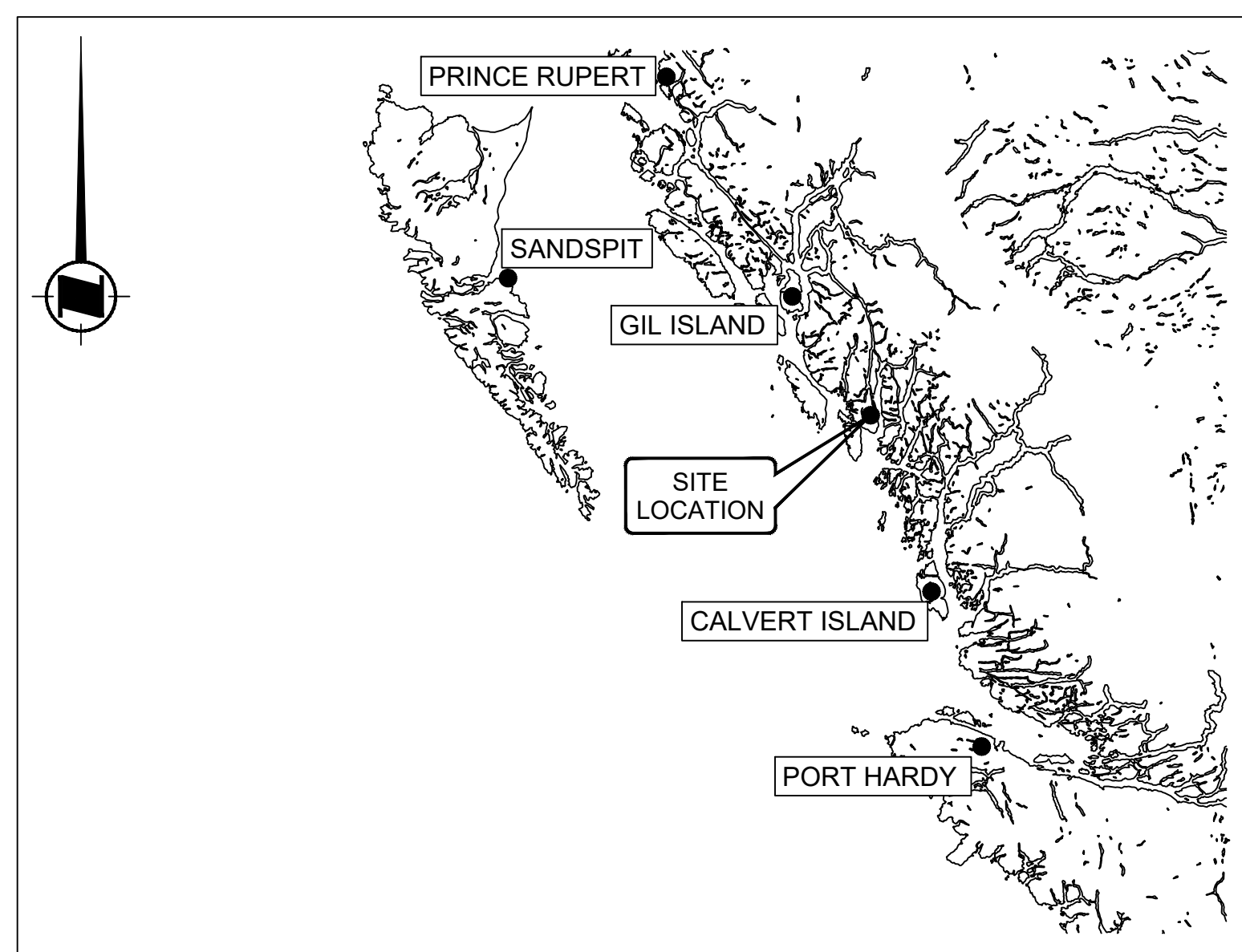
- .1 Antenna mounts for all initial antennas must be **supplied** as indicated on CCG Drawings.

**END OF ADDENDUM NO. 03**

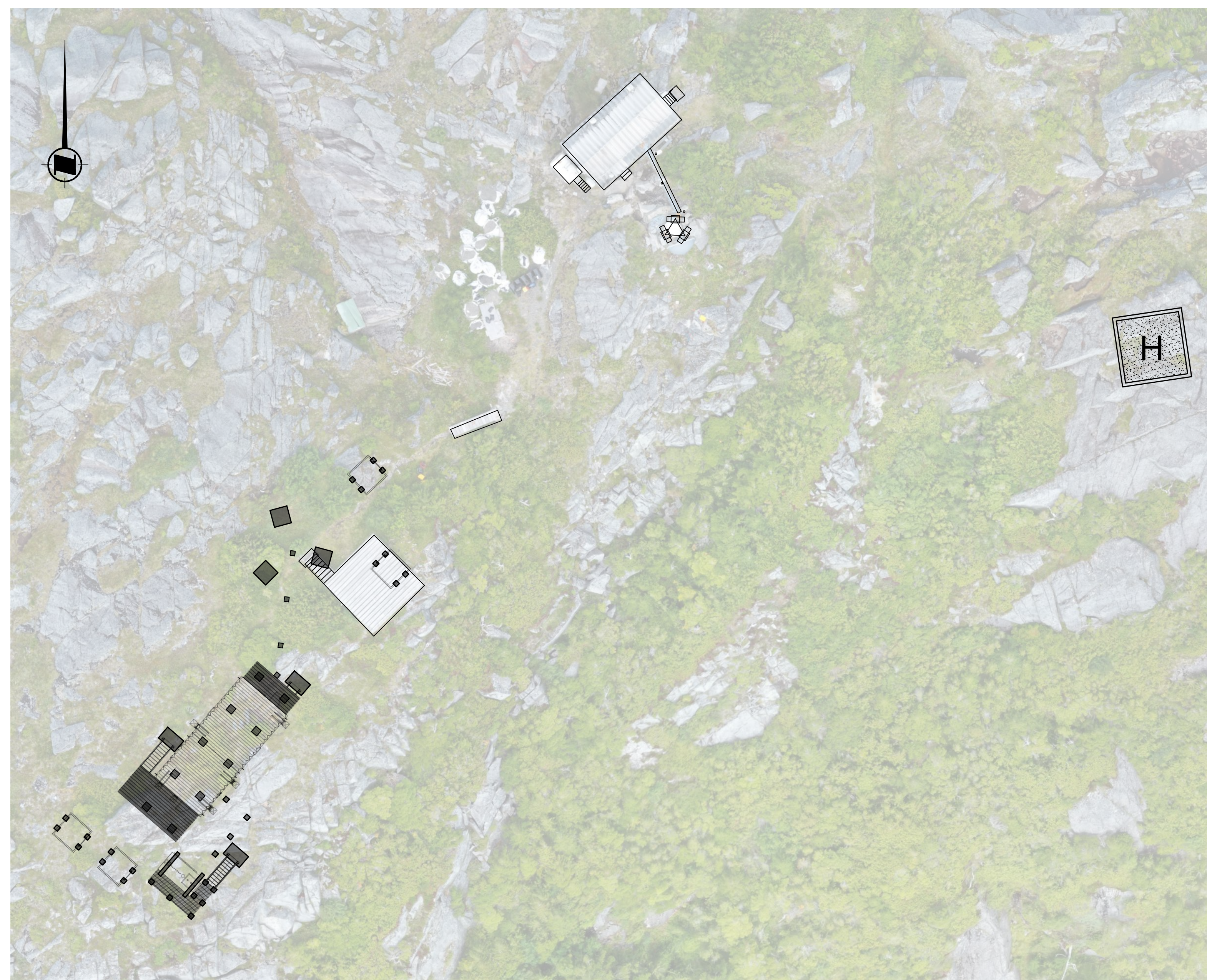
# CANADIAN COAST GUARD KLEMTU MCTS SITE SWINDLE ISLAND, BC

## DRAWING LIST

SHEET NUMBER	DRAWING NAME
01	COVER SHEET
02	SITE PLAN
03	FOUNDATION PLAN
04	OPTIONAL FOUNDATION WORK
05	ANTENNA LAYOUT
06	GROUNDING PLAN
07	HELIPAD DETAILS
08	FUEL TANK AND TEMPORARY BUILDING DETAILS



SITE LOCATION MAP  
NOT TO SCALE



KEY PLAN  
SCALE: 1:250

Vendor Information / Sous-traitant

GENERAL NOTES

1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER APPLICABLE CONSTRUCTION DOCUMENTS. DEVIATION OF PROJECT CONSTRUCTION IS NOT ACCEPTABLE UNLESS INSTRUCTED BY THE ENGINEER.
2. ALL INFORMATION CONCERNING EXISTING SITE CONDITIONS HAVE BEEN TAKEN FROM ORIGINAL DRAWINGS AND SITE MEASUREMENTS. SHOULD INFORMATION OR SITE CONDITIONS DIFFER SIGNIFICANTLY FROM THAT SHOWN, ADVISE CCG ENGINEERING.
3. DO NOT COMMENCE CONSTRUCTION USING THESE DRAWINGS UNLESS NOTED "FOR CONSTRUCTION".
4. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NATIONAL BUILDING CODE 2015 AND REFERENCED STANDARDS THEREIN.
5. DRAWINGS SHOW COMPLETED STRUCTURES ONLY. CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY STRUCTURES AND BRACING FOR CONSTRUCTION LOADING CONDITIONS AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LOADS.
6. IT IS THE DISCRETION OF THE ENGINEER TO CONDUCT INSPECTIONS OR ACCEPT PHOTOS OF REINFORCING PRIOR TO THE PLACEMENT OF CONCRETE.

ISSUED FOR TENDER	SC	2022-05-20
ISSUED FOR TENDER	RH	2022-05-06
ISSUED FOR TENDER	BS	2022-02-28
rev	description	by par date

Asset - Actif

MCTS TOWER SITE  
KLEMTU

Drawing - Dessin

COVER SHEET

drawn - dessiné	date
RH/BS	2022-02-28
designed - conception	date
SC	2022-02-28
checked - vérifié	date
SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet-feuille
WM394-1006	01/08 1

Vendor Information / Sous-traitant

**LEGEND**

— 1195.00 — MAJOR CONTOURS  
— 1194.50 — MINOR CONTOURS

TOPOGRAPHIC CONTOURS BASED ON SITE SURVEYS COMPLETED 2019-08-17 & 2021-09-10 UAV SURVEY COMPLETED 2019-08-17.

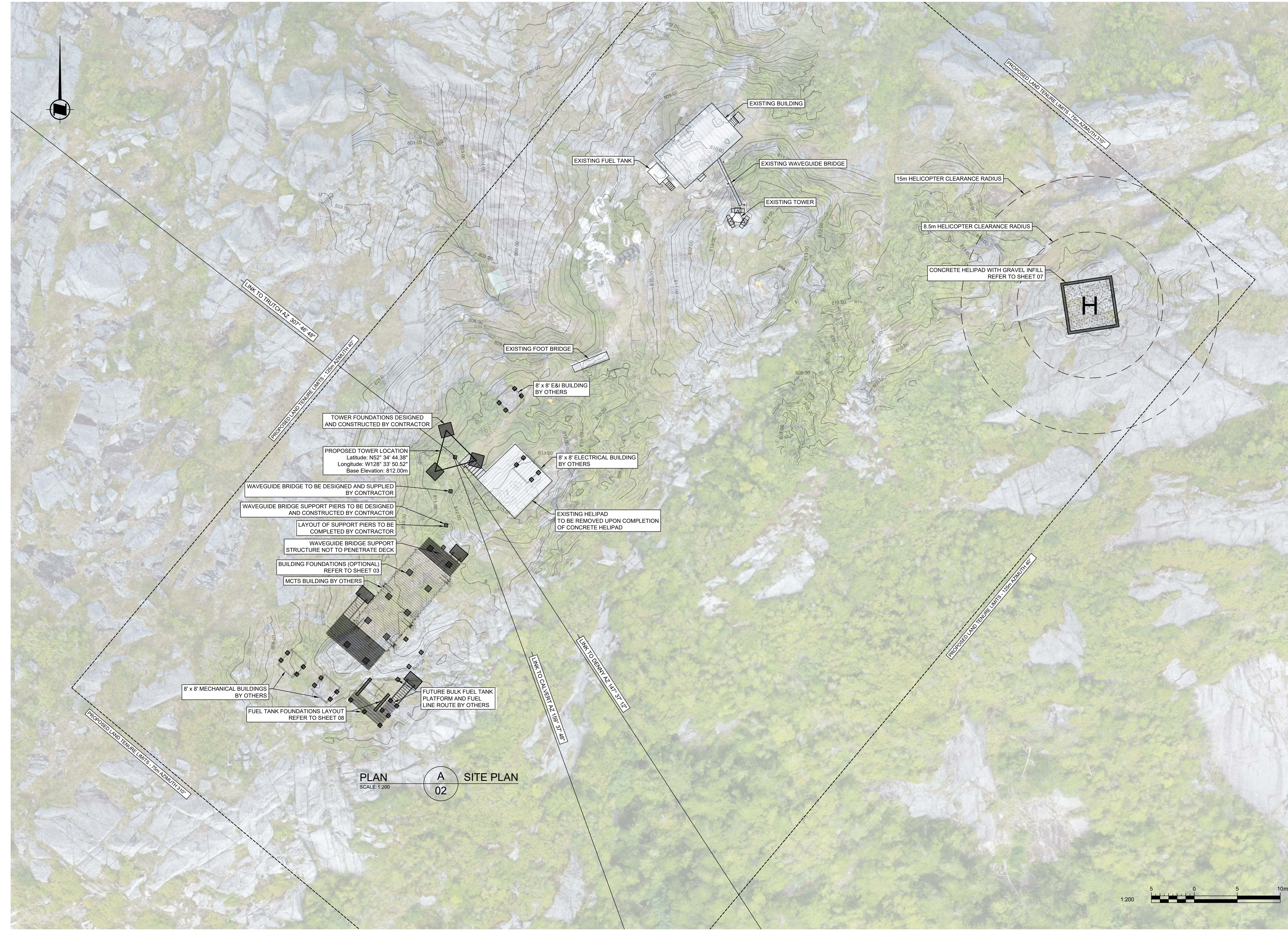
ORTHO-IMAGERY DERIVED FROM UAV SURVEY COMPLETED 2019-08-17.

CONTROL INFORMATION BASED ON BASELINES TO BUTDALE AND BELLA COOLA ACTIVE CONTROL STATIONS

VERTICAL DATUM: ELEVATIONS ARE REFERRED TO CGVD 28

HORIZONTAL DATUM: COORDINATES ARE REFERRED TO NAD 83 CSRS (2010 EPOCH)

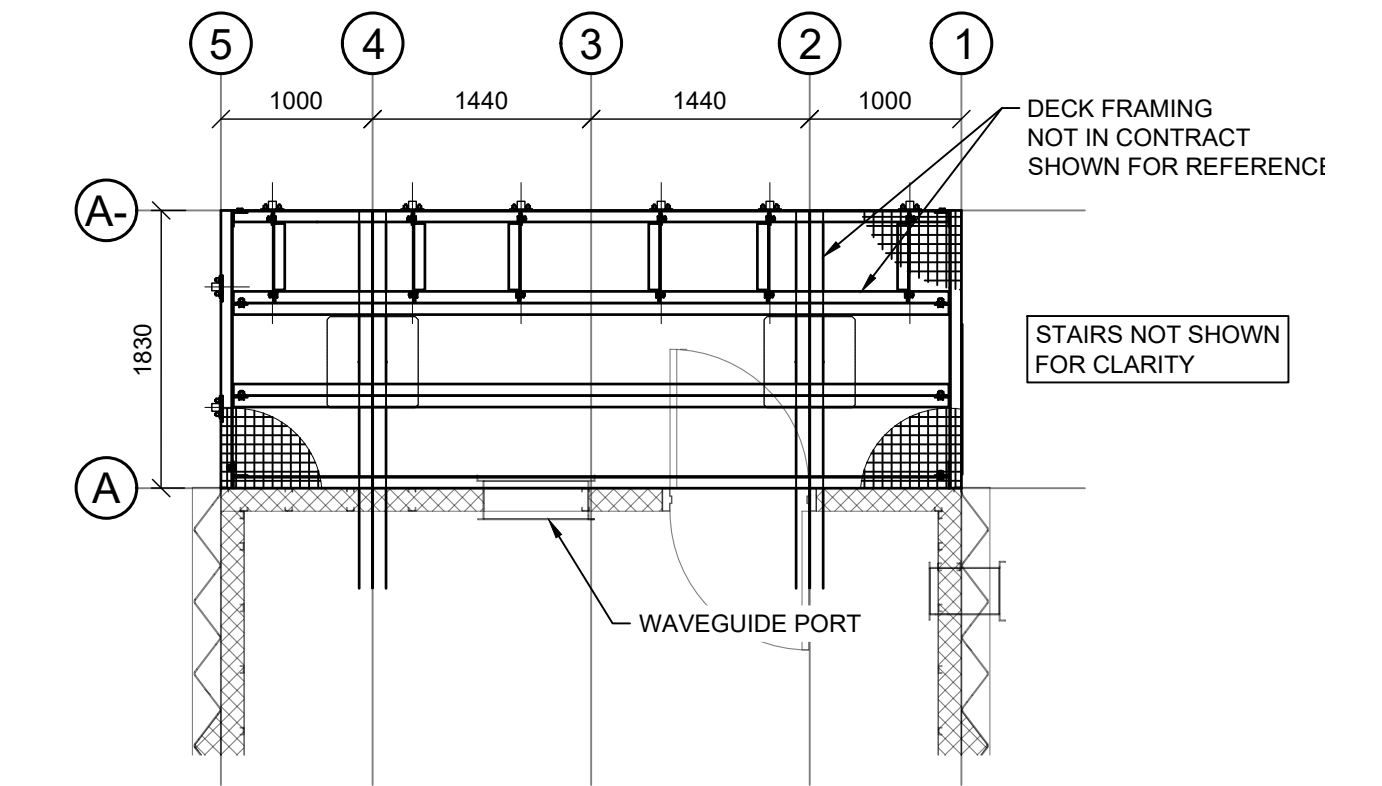
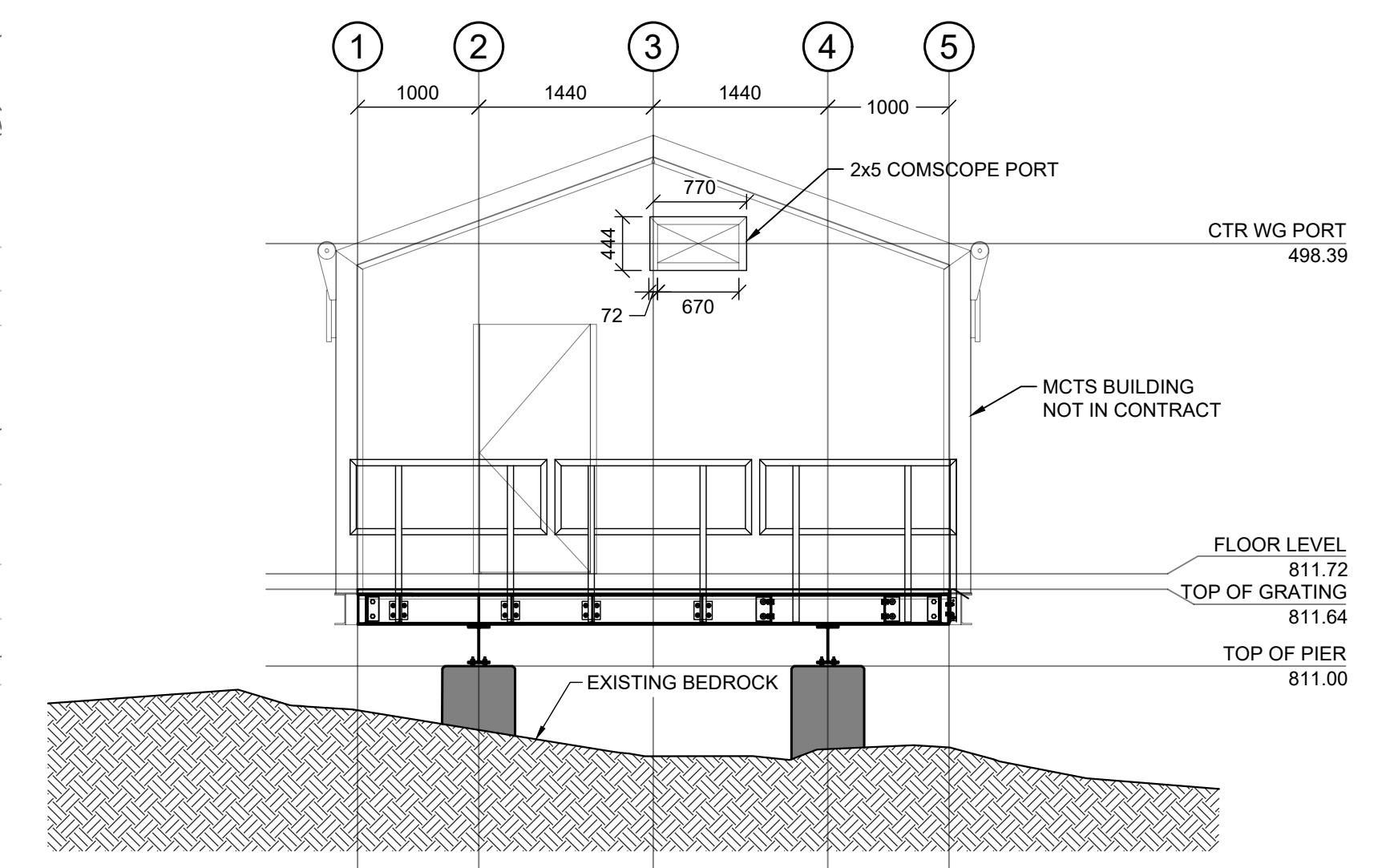
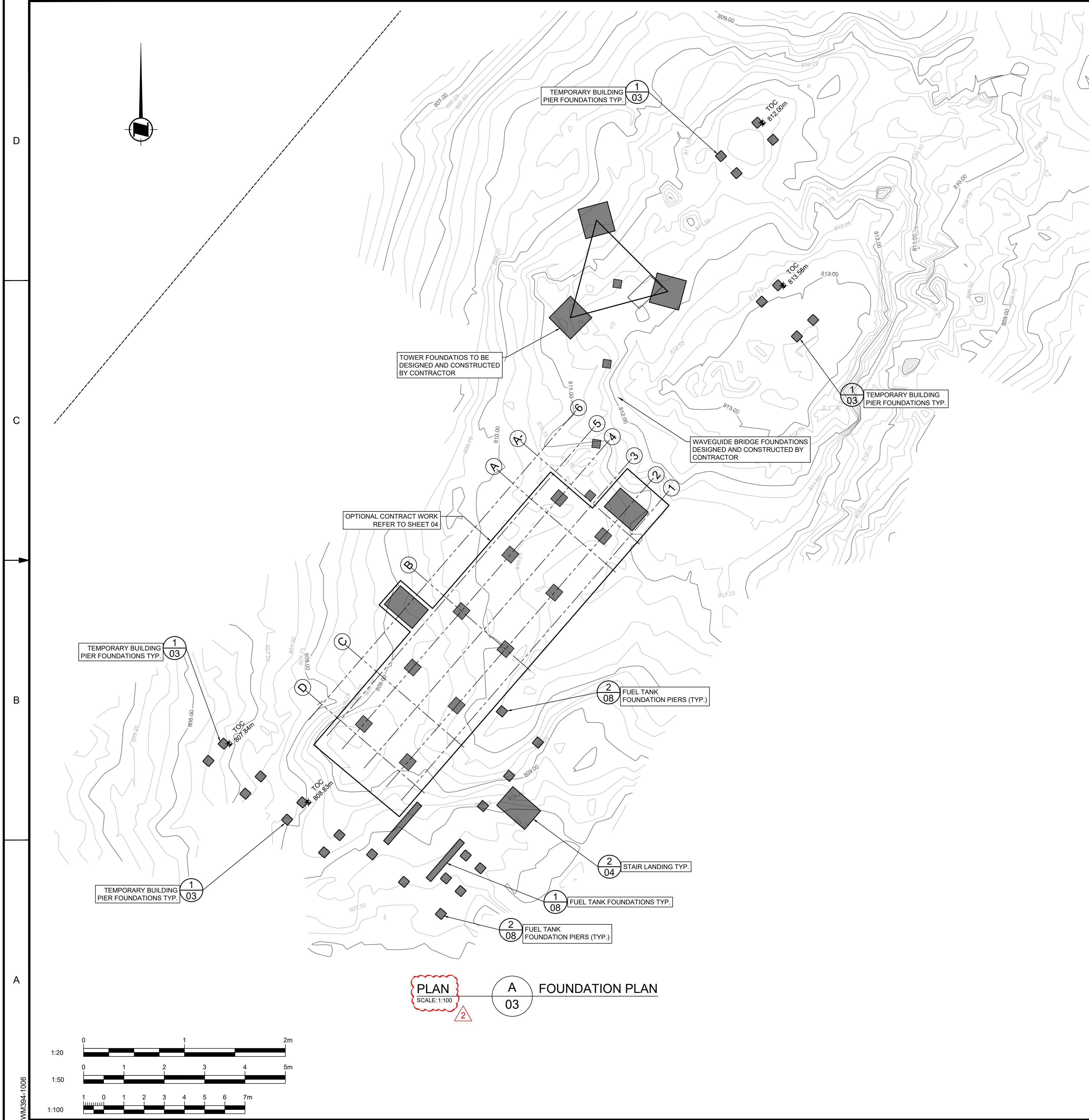
PROJECTION INFORMATION: UTM ZONE 9N



PLAN A SITE PLAN  
SCALE: 1:200  
02

ISSUED FOR TENDER	SC	2022-05-20
ISSUED FOR TENDER	RH	2022-05-06
ISSUED FOR TENDER	BS	2022-02-28
rev	description	by par date

Asset - Actif	
<b>MCTS TOWER SITE KLEMTU</b>	
Drawing - Dessin	
<b>SITE PLAN</b>	
drawn - dessiné	date
RH/BS	2022-02-28
designed - conception	date
SC	2022-02-28
checked - vérifié	date
SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet-feuille
WM394-1006	02/08
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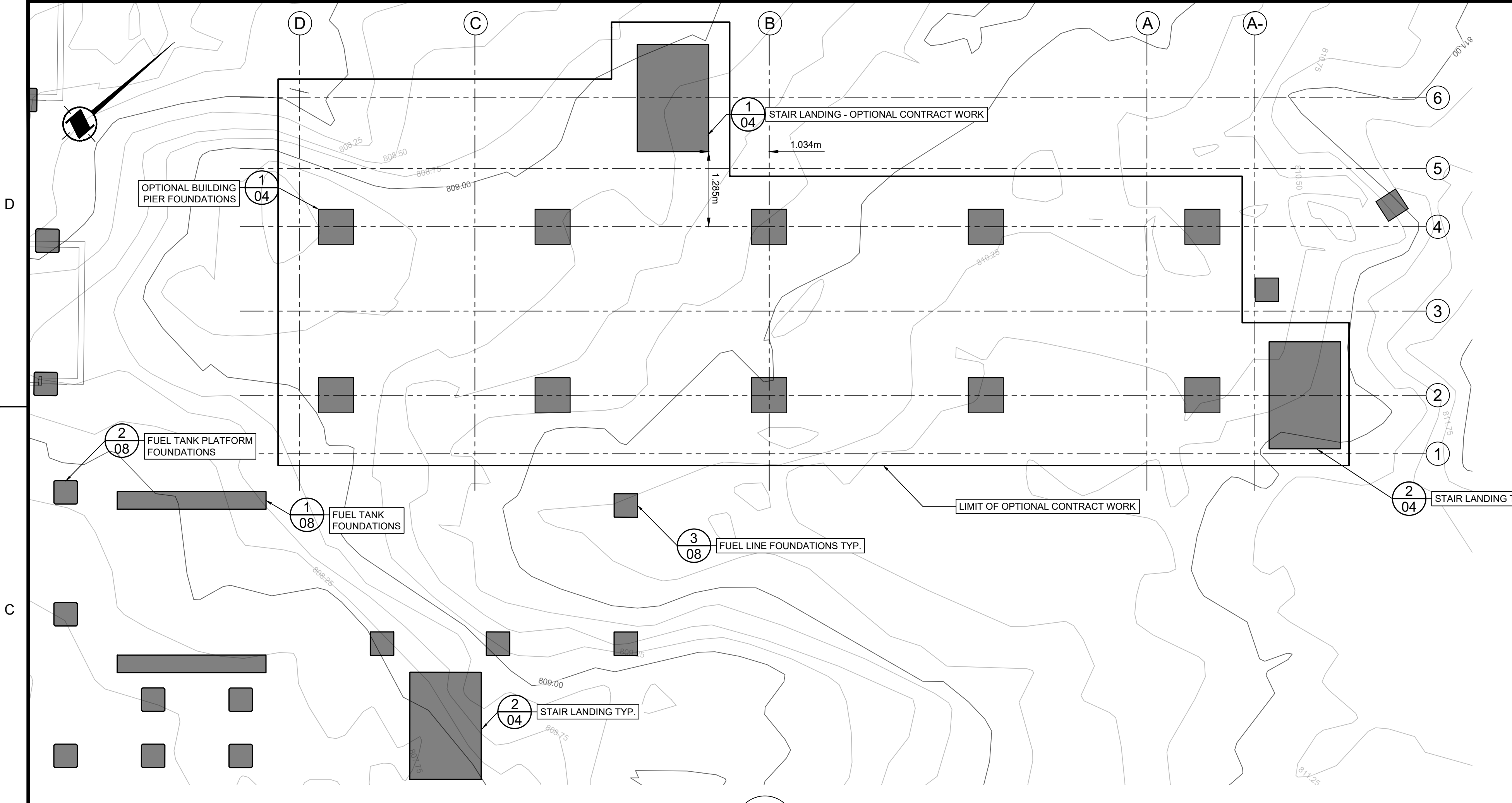


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ISSUED FOR TENDER	BS	2022-02-28	
rev	description	by	date

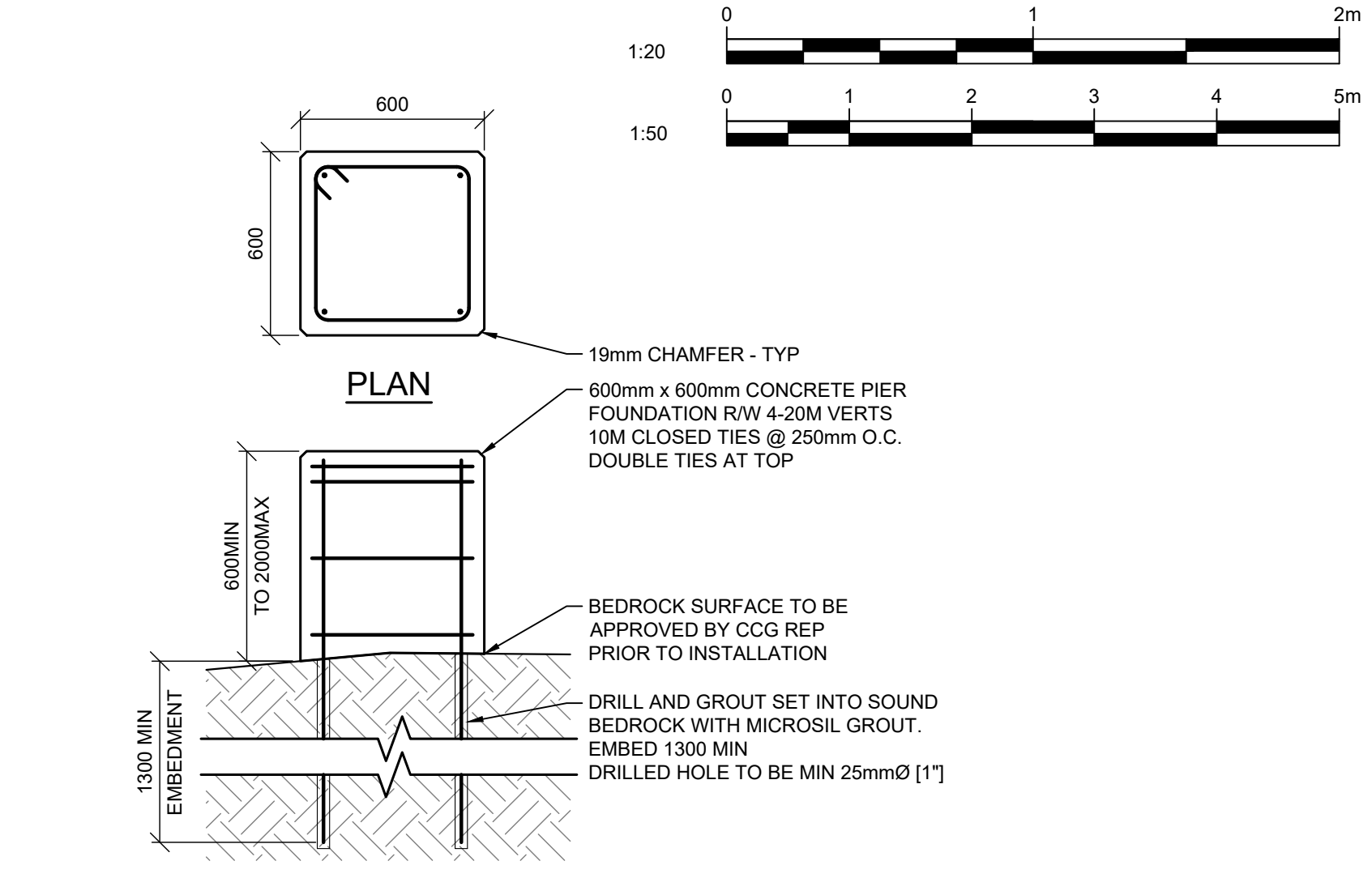
Asset - Actif  
**MCTS TOWER SITE  
KLEMTU**

Drawing - Dessin  
**FOUNDATION PLAN**

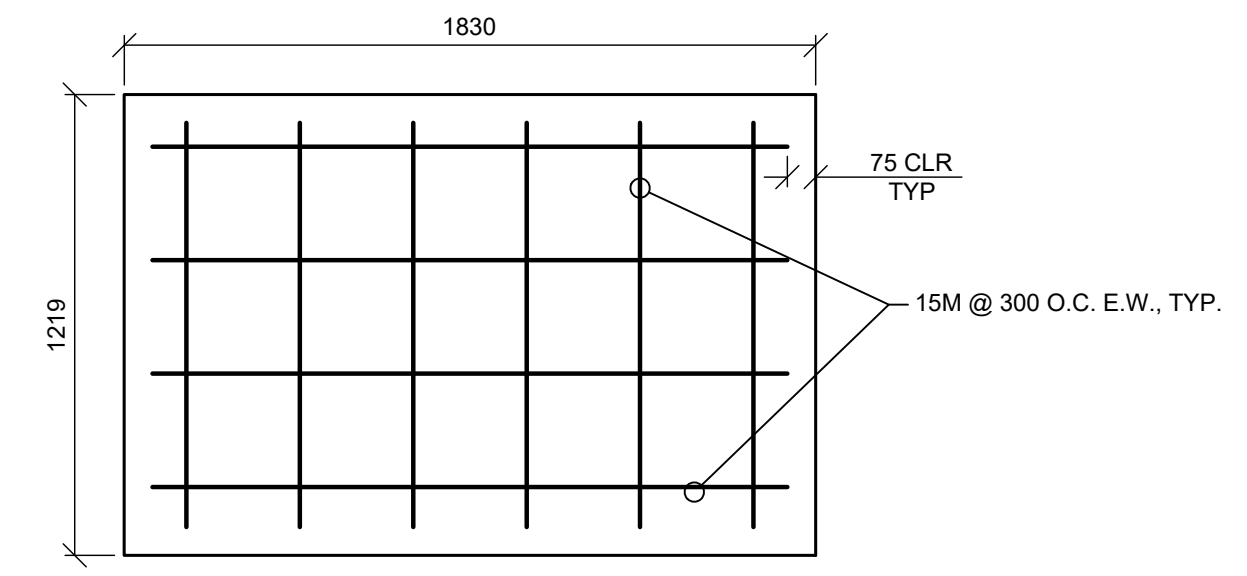
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designed - conception	date
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SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet/feuille
WM394-1006	03/08
	rev-rév
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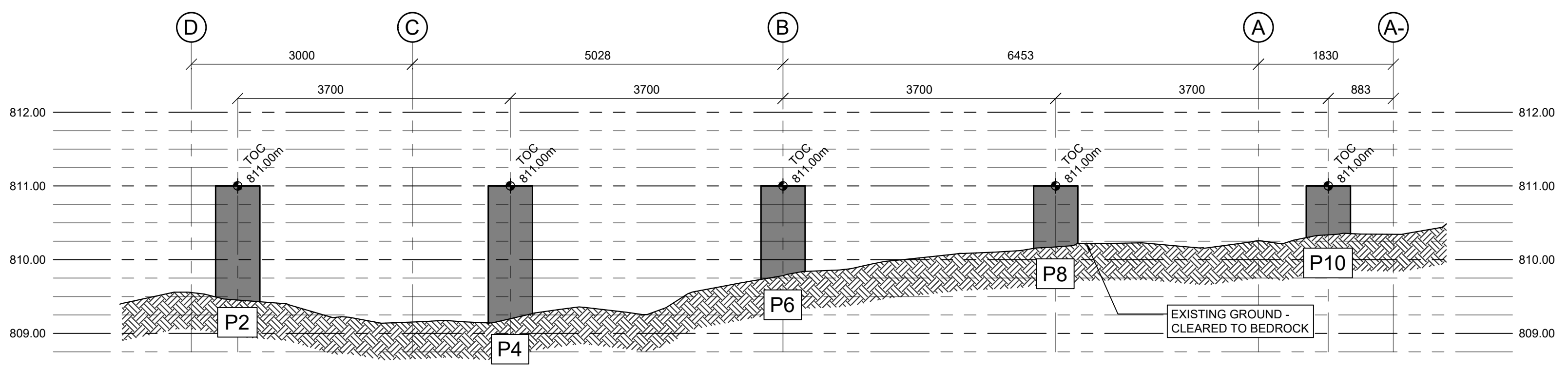
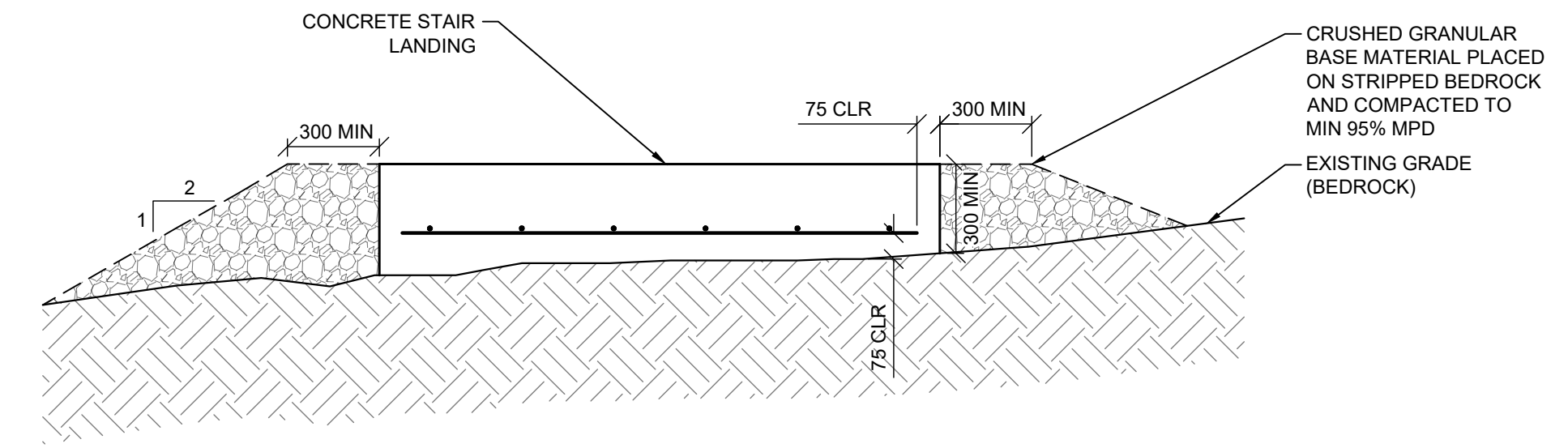
PLAN A 04 FOUNDATION PLAN  
SCALE: 1:50



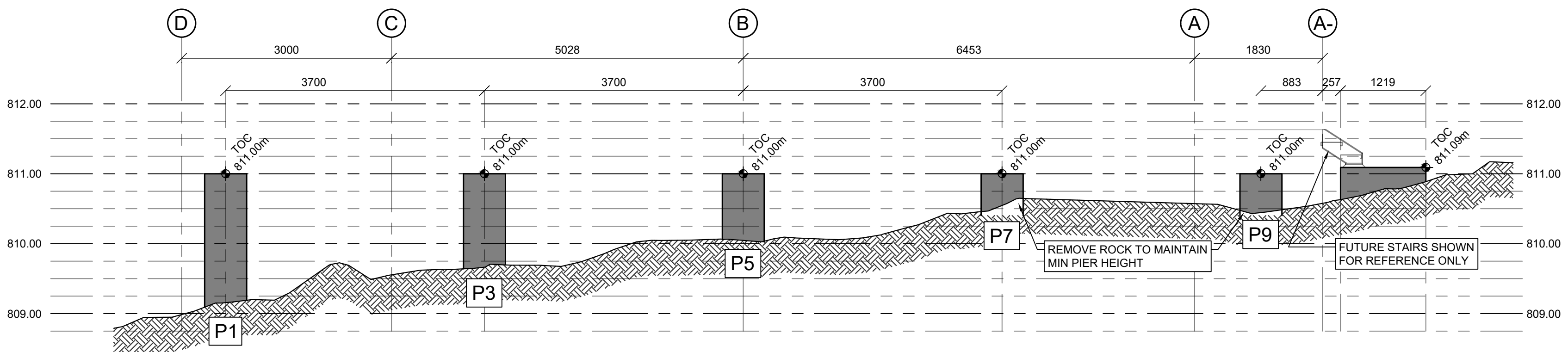
DETAIL 1 04 BUILDING PIER FOUNDATION  
SCALE: 1:20



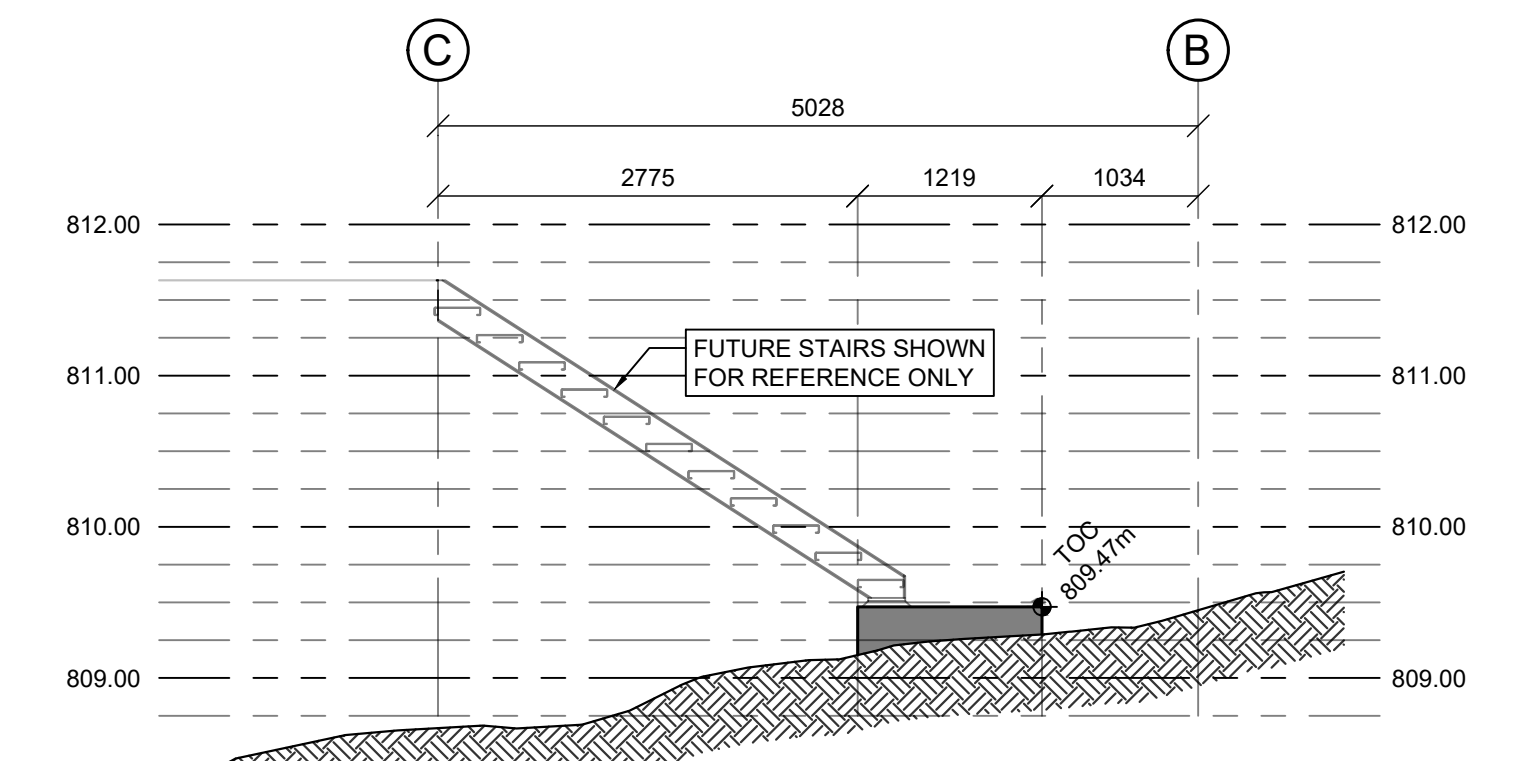
DETAIL 2 04 STAIR LANDING  
SCALE: 1:20



SECTION A 04 BUILDING PIER FOUNDATIONS - GRIDLINE 4  
SCALE: 1:50



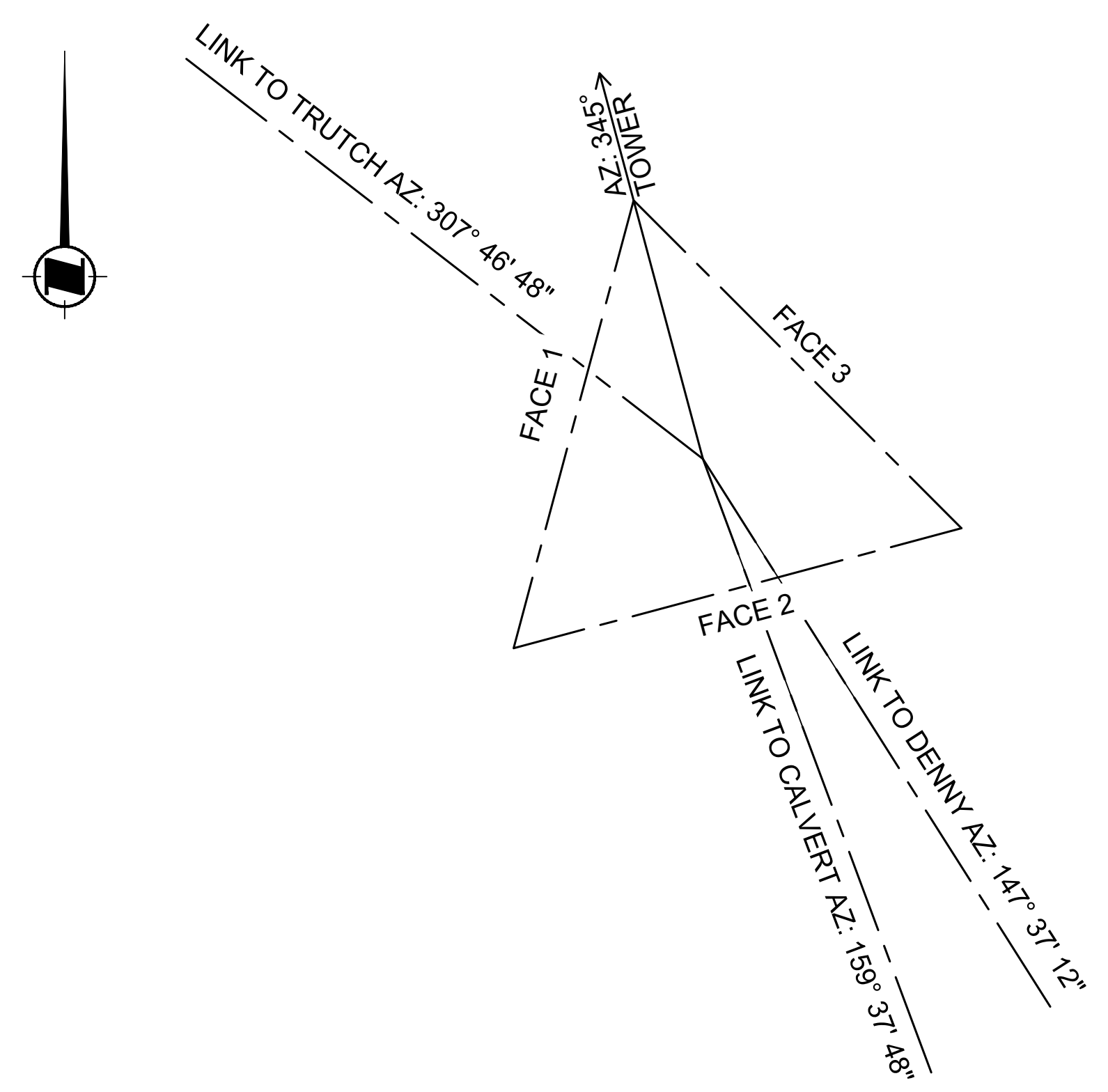
SECTION B 04 BUILDING PIER FOUNDATIONS AND STAIR LANDING - GRIDLINE 2  
SCALE: 1:50



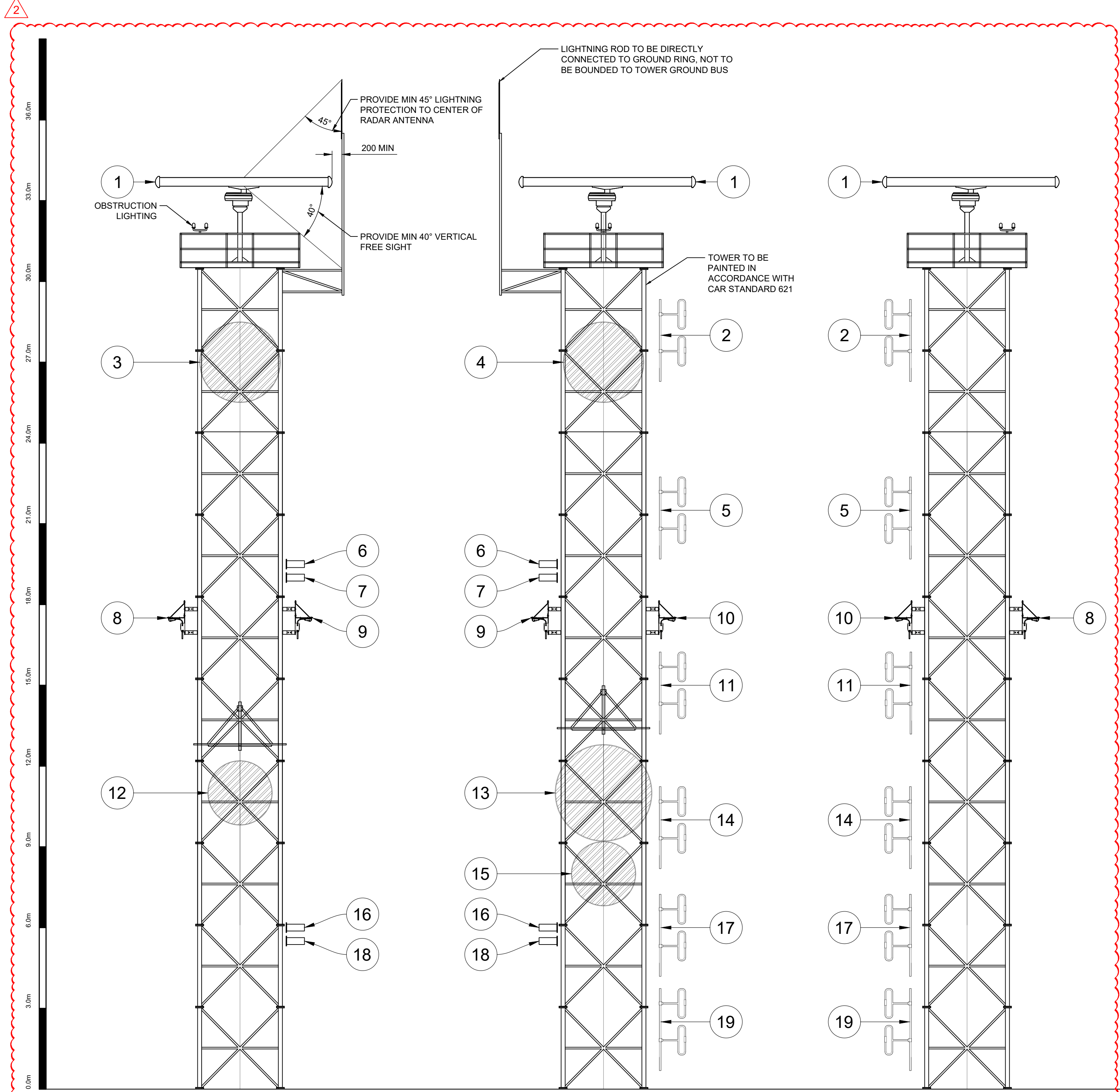
SECTION C 04 BUILDING STAIR LANDING - GRIDLINE 6  
SCALE: 1:50

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ISSUED FOR TENDER	BS	2022-02-28
rev	description	by par date

Asset - Actif	
<b>MCTS TOWER SITE KLEMTU</b>	
Drawing - Dessin	
<b>OPTIONAL FOUNDATION WORK</b>	
drawn - dessiné	date
RH/BS	2022-02-28
designed - conception	date
SC	2022-02-28
checked - vérifié	date
SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet-feuille
WM394-1006	04/08
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**A**  
**05**  
TOWER ORIENTATION



**A**  
**05**  
TOWER ANTENNA LAYOUT  
SCALE: 1:100

**ANTENNA SCHEDULE - KLEMTU**

ANTENNA (#)	USER	ELEV	SYSTEM	ANTENNA MODEL	MAKE	INITIAL OR FUTURE	AZIMUTH	Tx-LINE	ANTENNA MOUNT TYPE
1	CCG	30.0m	RADAR	21' HG-HP-F-38	TERMA	FUTURE	OMNI	EWP85 DATA (INST 12PR-18 SPOS XLPE/PVC AIA) DATA (INST 8PR-18 SPOS XLPE/PVC AIA) POWER (VFD12-0311KV)	PLATFORM
2	CCG	28.0m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT
3	CCG	27.0m	MICROWAVE MAIN F. TRUTCH	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	307.78	EWP63	FACE MOUNT
4	CCG	27.0m	MICROWAVE MAIN F. CALVERT	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	159.63	EWP63	FACE MOUNT
5	CCG	21.5m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT
6	DFO	19.5m	DFO UHF	307R	SINCLAIR	FUTURE	TBD	LDF4-50	LEG MOUNT
7	DFO	19.0m	DFO UHF	307R	SINCLAIR	FUTURE	TBD	LDF4-50	LEG MOUNT
8	CCG	17.5m	CAMERA 1 (HEATED)	IN HOUSE	IN HOUSE	INITIAL	345	CAT6 (ARMOURED) POWER (IA18-02PA4)	LEG MOUNT
9	CCG	17.5m	CAMERA 2	IN HOUSE	IN HOUSE	INITIAL	225	CAT6 (ARMOURED)	LEG MOUNT
10	CCG	17.5m	CAMERA 3	IN HOUSE	IN HOUSE	INITIAL	105	CAT6 (ARMOURED)	LEG MOUNT
11	CCG	15.0m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT
12	CCG	11.0m	MICROWAVE DIV. F. TRUTCH w/ ICE GUARD	USX8-6W	ANDREWS/COMMSCOPE	INITIAL	307.78	EWP63	FACE MOUNT
13	CCG	11.0m	MICROWAVE DIV. F. CALVERT w/ ICE GUARD	USX12-6W	ANDREWS/COMMSCOPE	INITIAL	159.63	EWP63	FACE MOUNT
14	CCG	10.0m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT
15	CCG	8.0m	MICROWAVE F. DENNY	HX8-6W	ANDREWS/COMMSCOPE	INITIAL	147.62	EWP63	FACE MOUNT
16	RCMP	6.0m	RCMP UHF F. CALVERT	307R	SINCLAIR	INITIAL	160.00	LDF4-50	LEG MOUNT
17	CCG	6.0m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT
18	RCMP	5.5m	RCMP UHF F. BELLA BELLA	307R	SINCLAIR	INITIAL	150.00	LDF4-50	LEG MOUNT
19	DFO	2.5m	TBD	872F-70HDB	COMPROD	INITIAL	80.00	LDF4-50	LEG MOUNT

Vendor Information / Sous-traitant

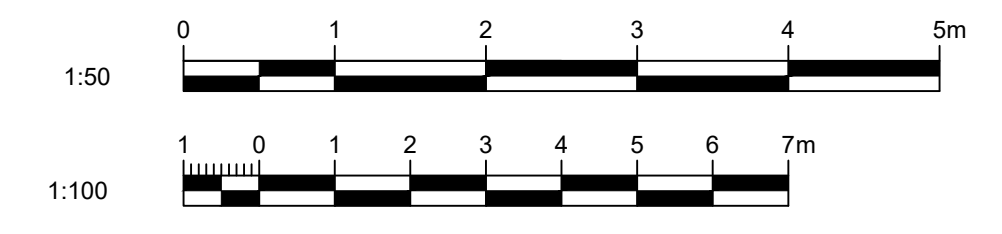
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ISSUED FOR TENDER	RH	2022-05-06
ISSUED FOR TENDER	BS	2022-02-28
rev	description	by par date
Asset - Actif		

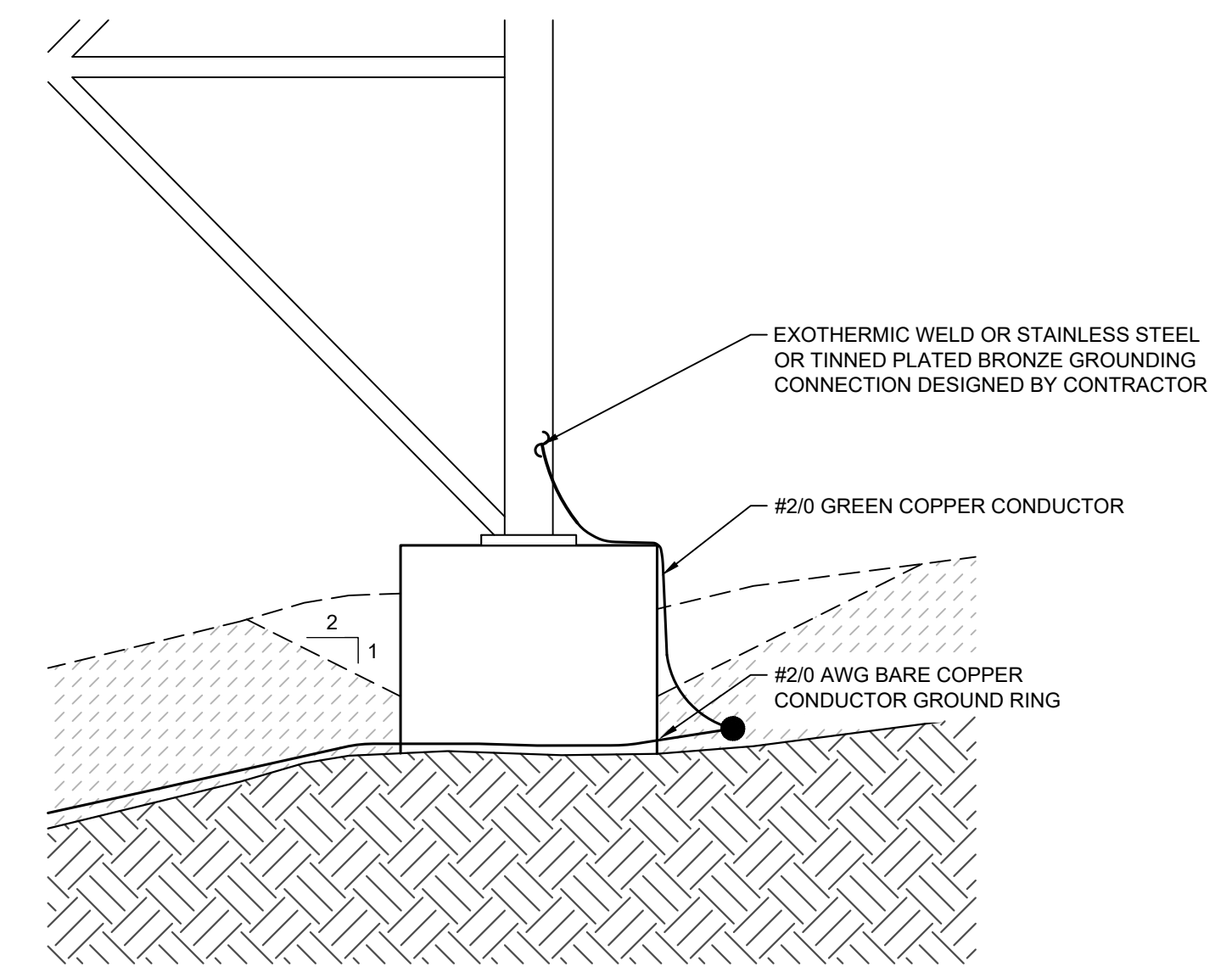
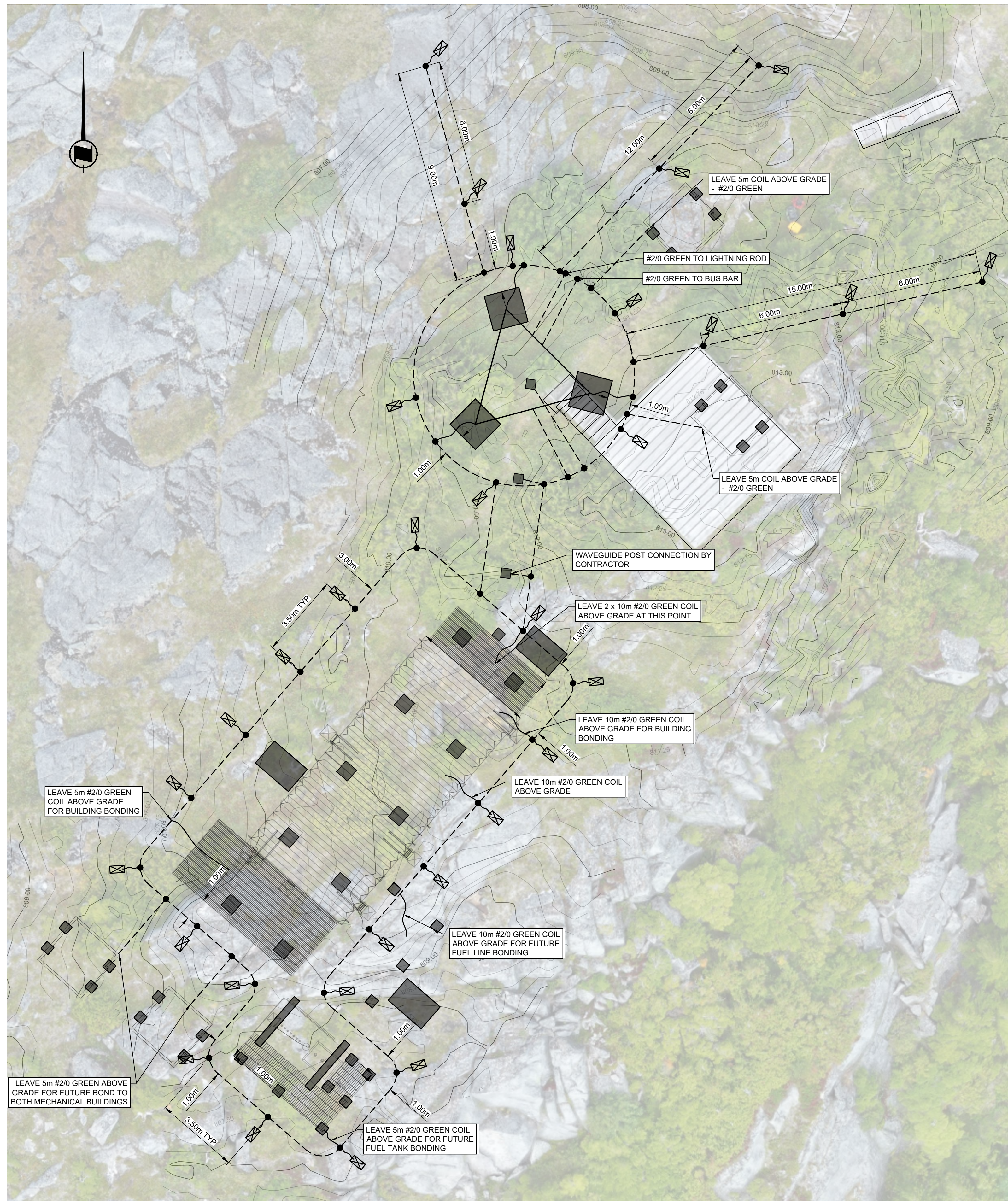
**MCTS TOWER SITE  
KLEMTU**

Drawing - Dessin

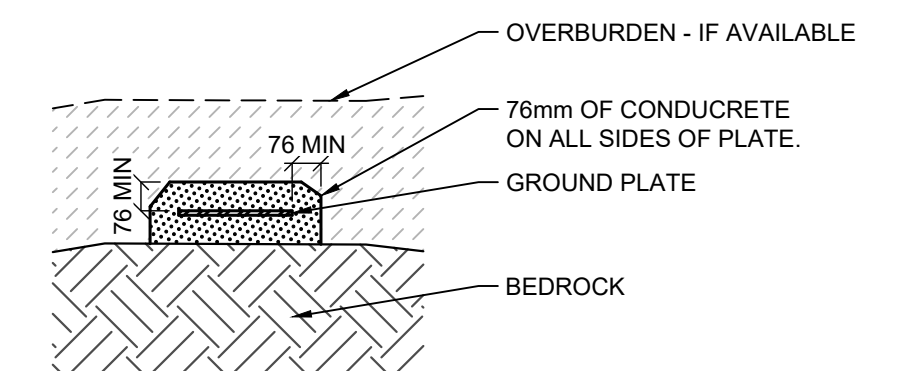
**ANTENNA LAYOUT**

drawn - dessiné	date
RH/BS	2022-02-28
designed - conception	date
CS	2022-02-28
checked - vérifié	date
SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet/feuille
WM394-1006	05/08
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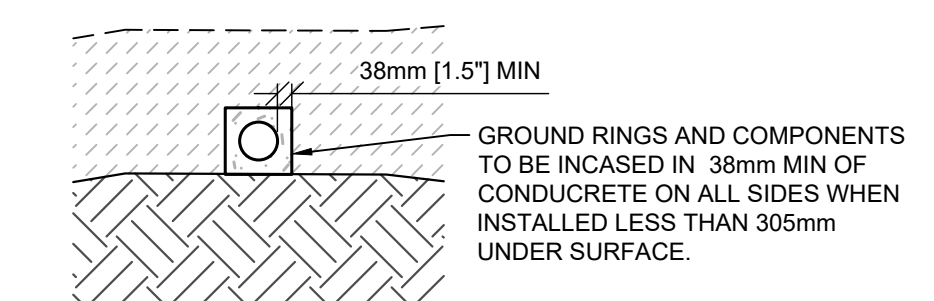




DETAIL 1 TRANSITION TO ABOVE GRADE  
SCALE: 1:20



DETAIL 2 GROUND PLATE DETAIL  
SCALE: 1:20



DETAIL 3 TRENCH WITH GEM DETAIL  
SCALE: 1:20

- Vendor Information / Sous-traitant
- ALL BURIED GROUNDING CONDUCTORS SHALL BE #2/0 AWG, BARE, STRANDED TINNED OR UN-TINNED.
  - ALL SPLICES SHALL BE MADE THROUGH IRREVERSIBLE COMPRESSION TYPE CONNECTORS, DESIGNED FOR USE WITH GROUNDING.
  - ABOVE-GROUND BONDING CONDUCTORS SHOULD BE JACKETED, WHENEVER PRACTICAL.
  - SHARP BENDS SHALL BE AVOIDED, WITH A MINIMUM RADIUS OF 203mm.
  - BUILDING SHALL BE BONDED TO THE GROUND RING IN AT LEAST TWO POINTS, WITH AS MUCH PHYSICAL SEPARATION AS PRACTICAL.
  - GROUND RINGS SHALL BE BURIED TO A DEPTH OF 762mm WHERE PRACTICAL. WHEN NOT PRACTICAL TO BURY BELOW 305mm, 38mm OF CONDUCRETE SHALL BE UTILIZED ON ALL SIDES OF THE GROUND COMPONENT. ANY VARIATIONS ARE TO BE DOCUMENTED AS PART OF RED-LINE MARKUPS.
  - WHEN ADJUSTING GROUND LOOP FROM DIFFERENT DEPTHS, MINIMUM BEND RADIUS OF NOTE 4 SHALL BE ADHERED TO.
  - GROUND RINGS SHALL BE A MINIMUM OF 610mm FROM FOUNDATIONS OF BUILDING AND TOWERS, OR GREATER WHERE SPECIFIED IN THE DRAWINGS.
  - GROUND RODS SHALL BE COPPER OR COPPER CLAD, 3m LENGTH AND 19.05mm DIAMETER.
  - GROUND RODS SHALL BE SPACED 3m TO 4.5m APART AROUND THE GROUND RING.
  - THE UPPER END OF THE GROUND ROD SHALL BE BURIED TO THE DEPTH OF THE GROUND RING TO ALLOW FOR EASY BONDING.
  - GROUND RODS SHALL BE INSTALLED VERTICALLY WHERE PRACTICAL. RODS MAY BE INSTALLED HORIZONTALLY OR AT AN ANGLE OF 45° FROM VERTICAL, AND PERPENDICULAR TO THE BUILDING. ORIENTATION VARIATION AND DEPTHS MUST BE DOCUMENTED AS PART OF RED-LINE MARKUPS.
  - RODS ARE PREFERRED TO BE INSTALLED AS CLOSE TO VERTICAL AS POSSIBLE THROUGH HAMMER DRILLING. IF RODS CANNOT BE INSTALLED WITHOUT DEFORMING, THEY SHALL BE INSTALLED HORIZONTALLY AS DEEP AS PRACTICAL.
  - HORIZONTAL GROUND RODS ON RADIALS WILL BE INSTALLED PERPENDICULAR TO RADIAL.
  - RODS ARE NOT TO BE INSTALLED IN PRE DRILLED HOLES.
  - IF GROUND RODS ARE INSTALLED LESS THAN 305mm DEEP, THEY SHALL BE ENCASED IN 38mm OF CONDUCRETE ON ALL SIDES.
  - GROUND RODS CAN BE SUBSTITUTED WITH GROUND PLATES, WHERE SITUATIONS DO NOT ALLOW FOR INSTALLATION OF GROUND RODS.
  - COPPER GROUND PLATES SHALL BE 1.5mm THICK AND COPPER-CLAD STEEL SHALL BE 6.4mm MINIMUM.
  - GROUND PLATES SHALL HAVE 0.186m<sup>2</sup> MINIMUM SURFACE EXPOSED TO BACKFILL MATERIAL.
  - IF GROUND PLATES ARE INSTALLED LESS THAN 305mm DEEP, THEY SHALL BE ENCASED IN 76mm OF CONDUCRETE ON ALL SIDES.
  - ANY SURFACE INSTALLED GROUNDING EQUIPMENT SHALL HAVE CONDUCRETE SHAPED TO PREVENT TRIPPING HAZARDS.

- LEGEND
- JUNCTION
  - ⊗ GROUND ROD
  - ⊗ GROUND PLATE
  - GROUND CONDUCTOR

△	ISSUED FOR TENDER	SC	2022-05-20
△	ISSUED FOR TENDER	RH	2022-05-06
0	ISSUED FOR TENDER	BS	2022-02-28
rev	description	by	date

Asset - Actif

**MCTS TOWER SITE**  
**KLEMTU**

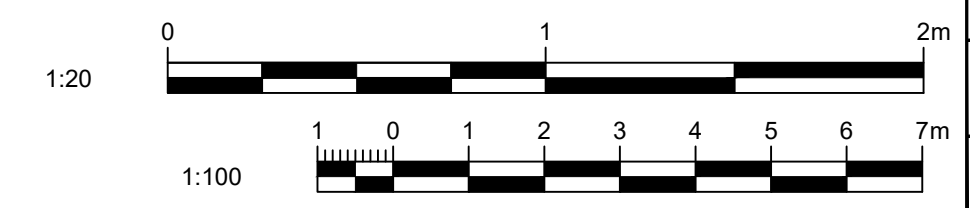
Drawing - Dessin

**GROUNDING PLAN**

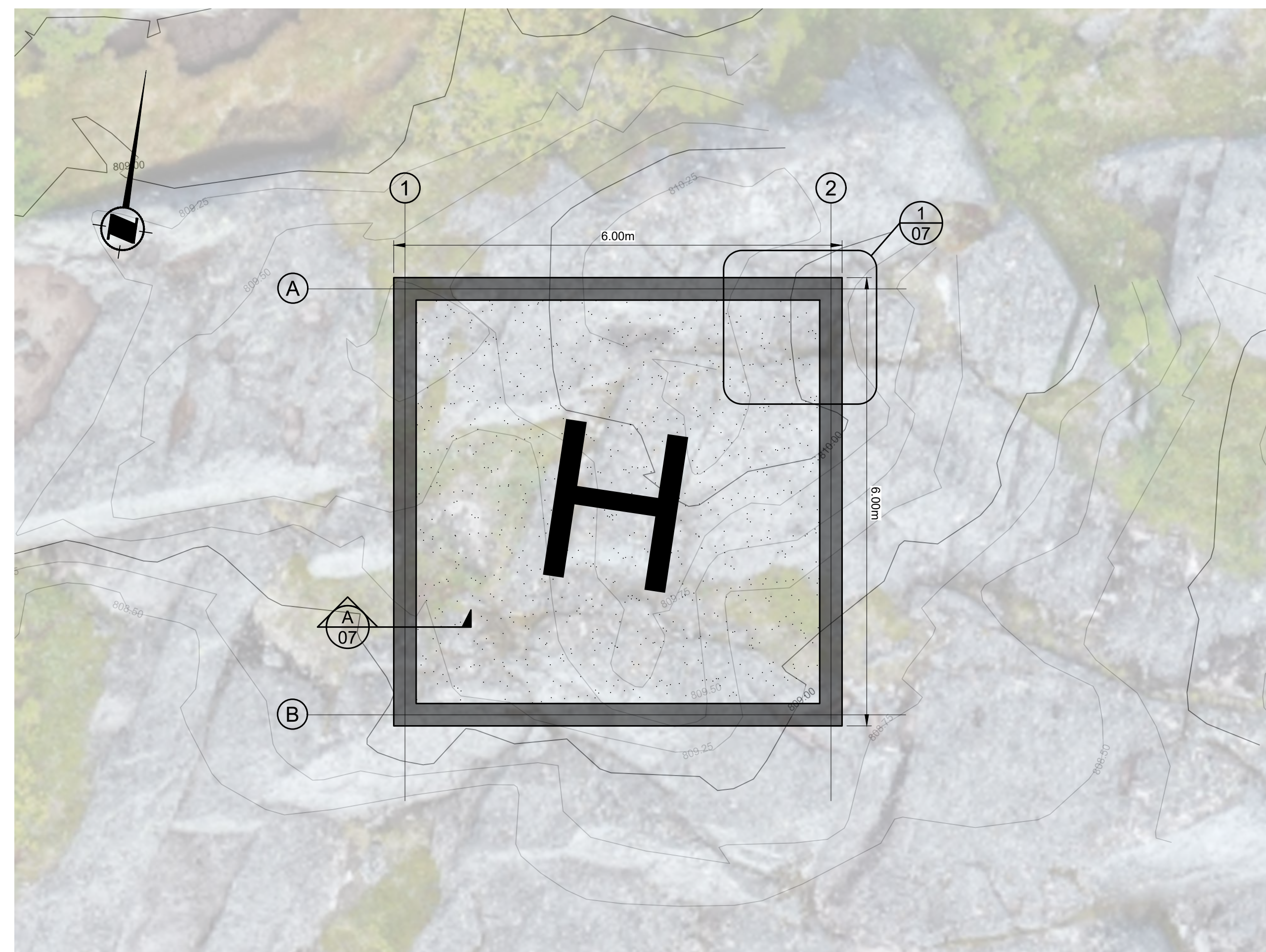
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RH/BS	2022-02-28
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SC	2022-02-28
approved - approuvé	date
AW	2022-02-28

CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet/feuille
WM394-1006	06/08
	rev-rév
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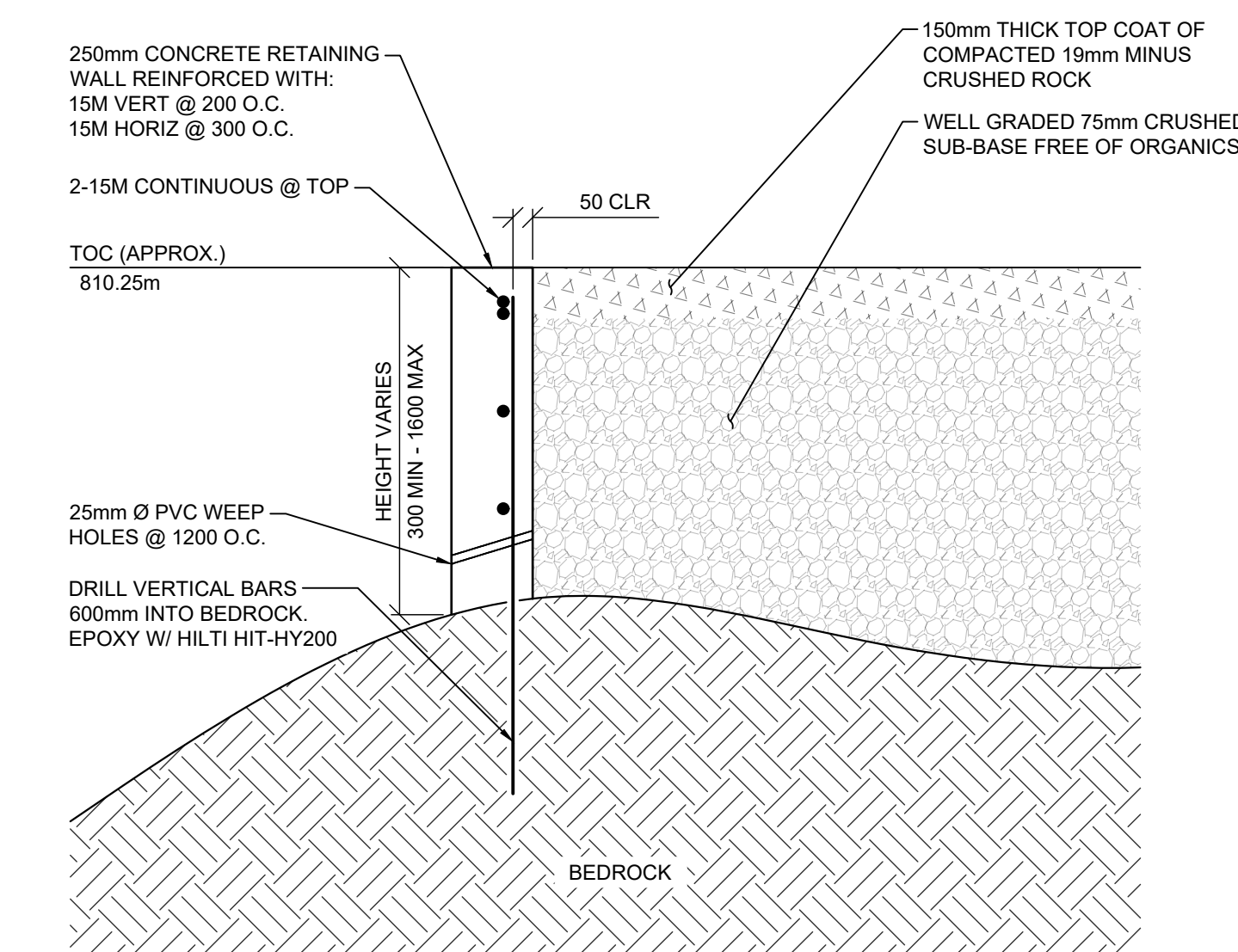
PLAN A GROUNDING PLAN  
SCALE: 1:100



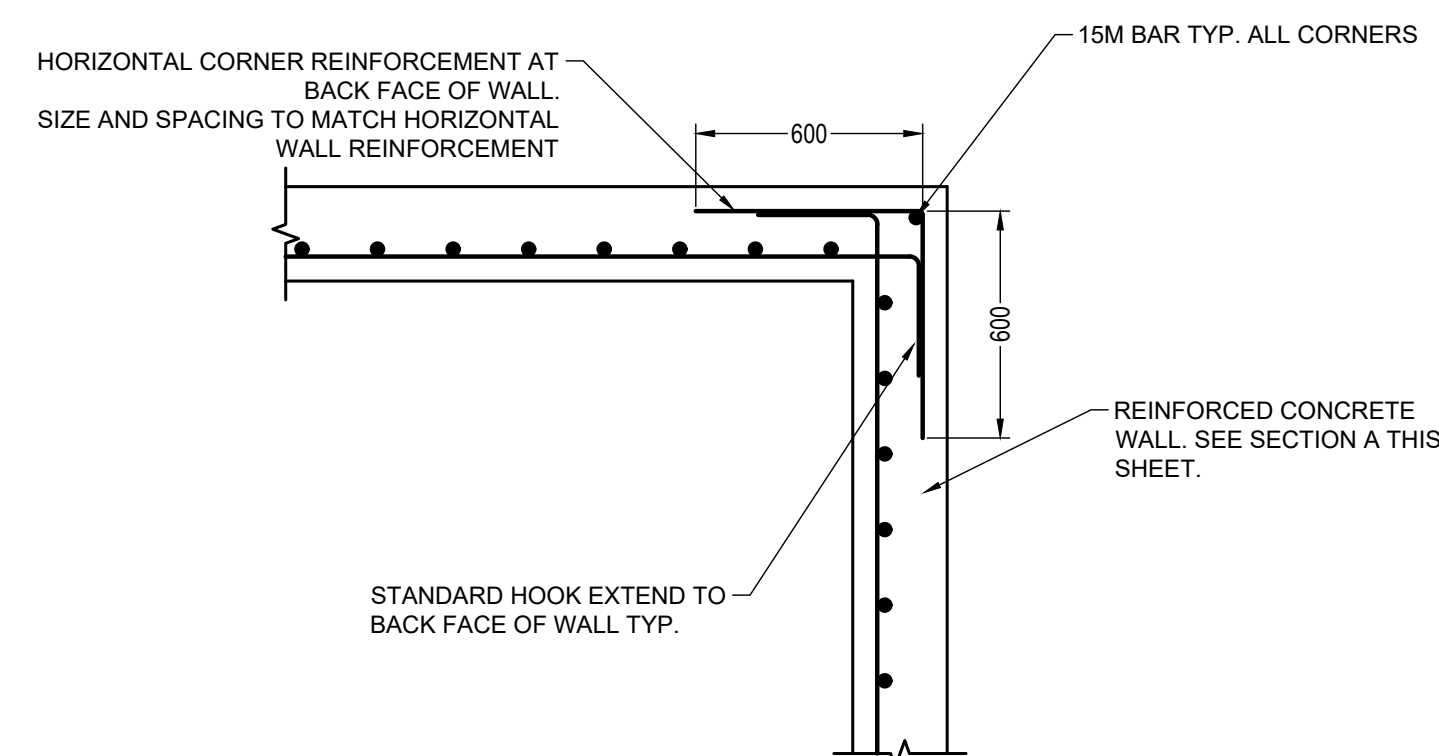




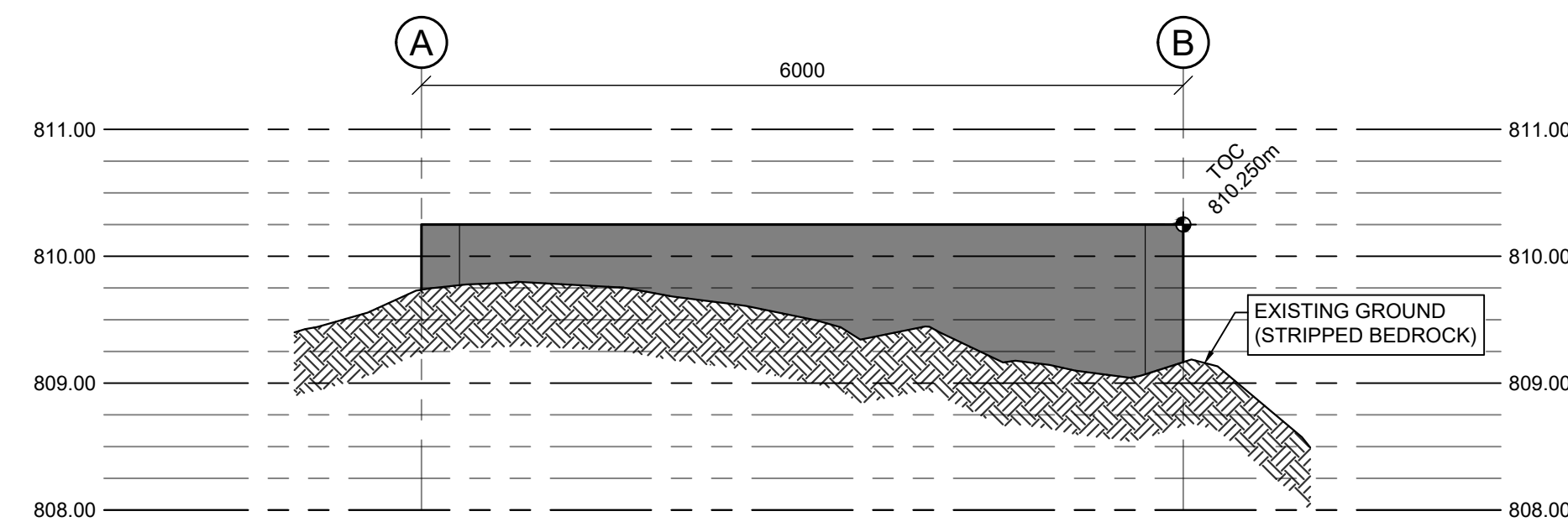
PLAN  
SCALE: 1:50  
A HELIPAD FOUNDATION  
07



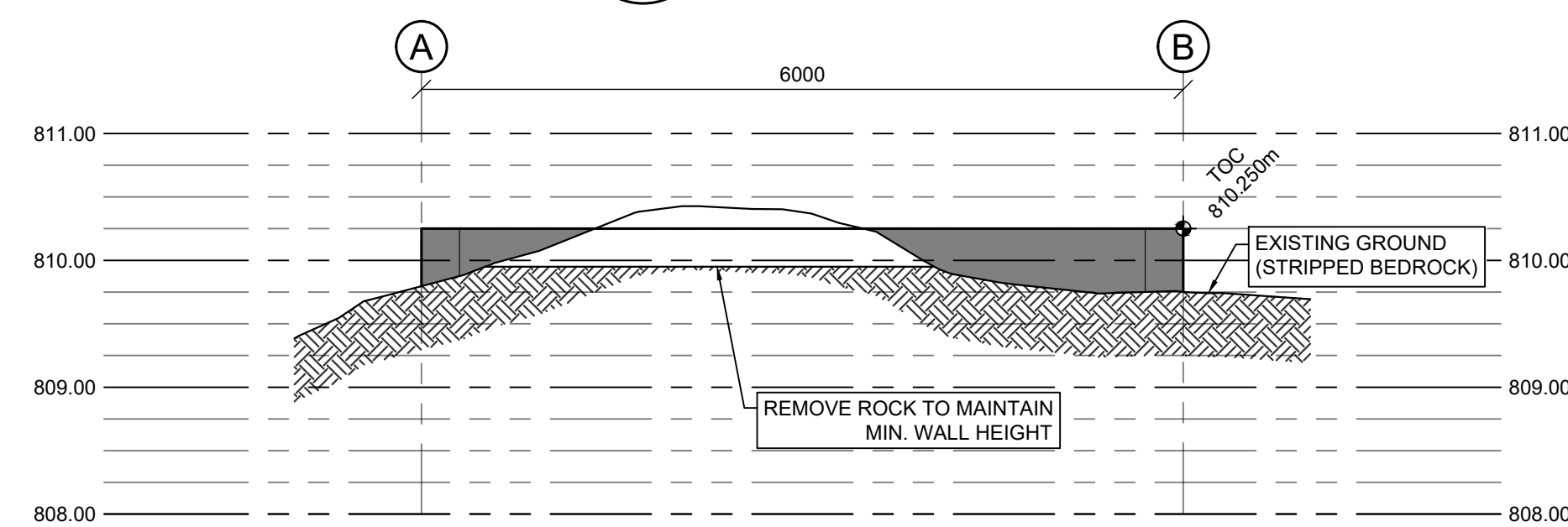
SECTION  
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A HELIPAD WALL  
07



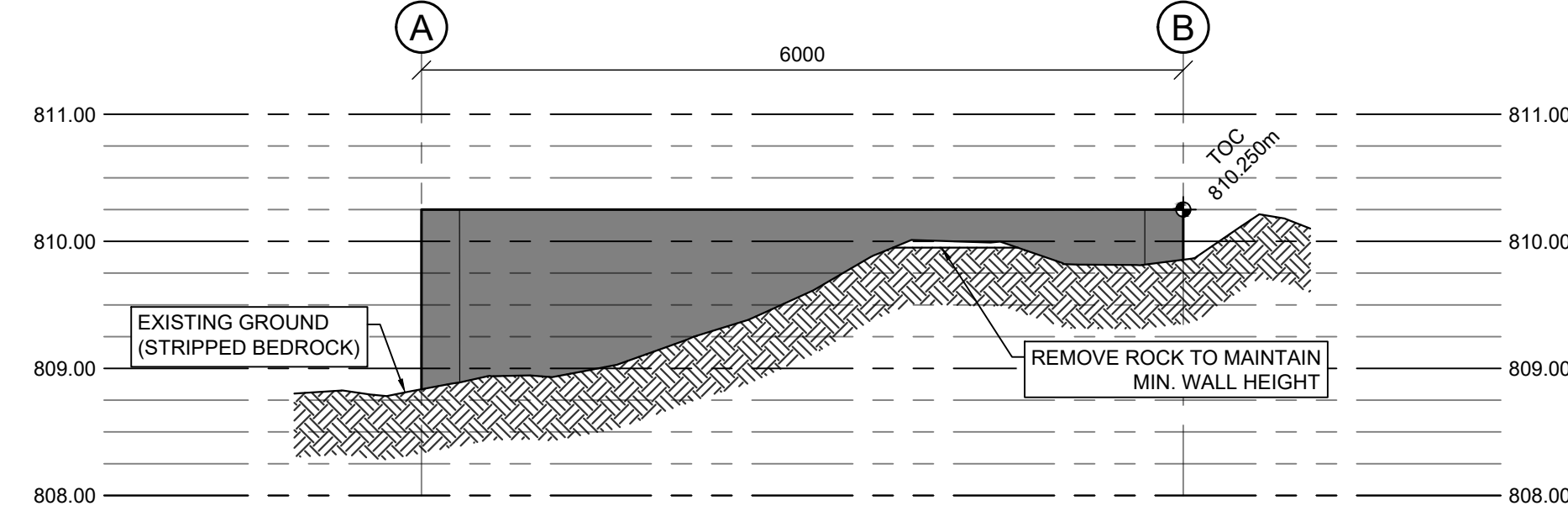
DETAIL  
SCALE: 1:20  
1 HELIPAD CORNER  
07



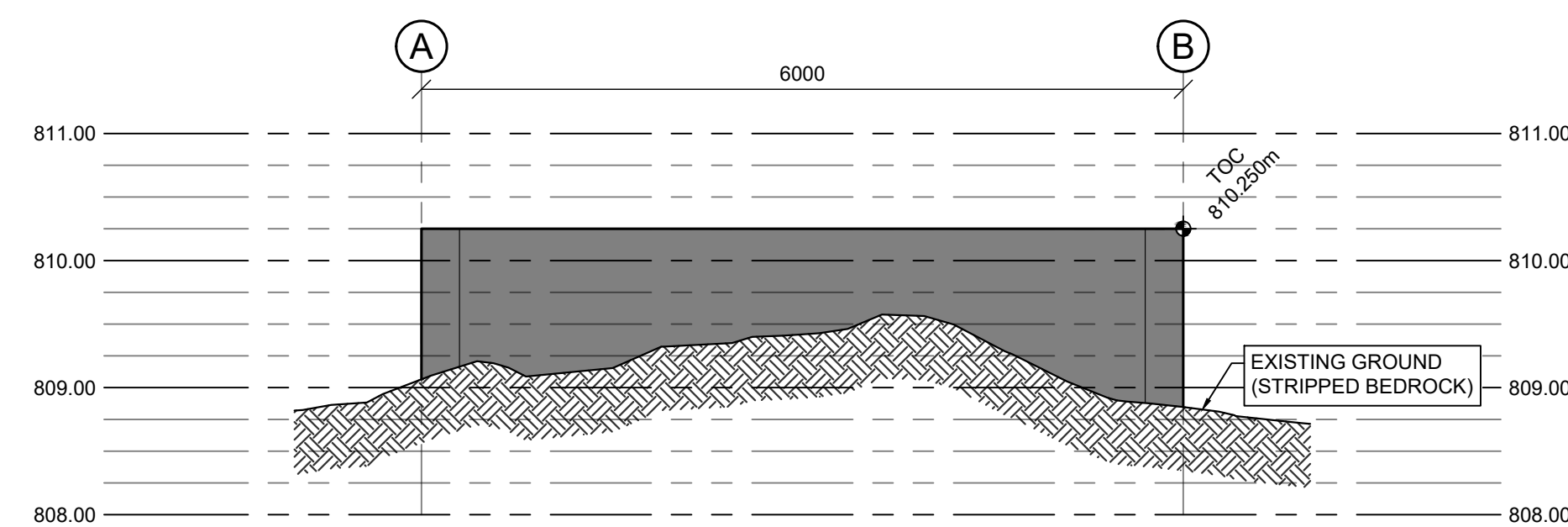
ELEVATION A  
SCALE: 1:50  
07 GROUND PROFILE AT GRIDLINE 1



ELEVATION B  
SCALE: 1:50  
07 GROUND PROFILE AT GRIDLINE A



ELEVATION C  
SCALE: 1:50  
07 GROUND PROFILE AT GRIDLINE 2



ELEVATION D  
SCALE: 1:50  
07 GROUND PROFILE AT GRIDLINE B

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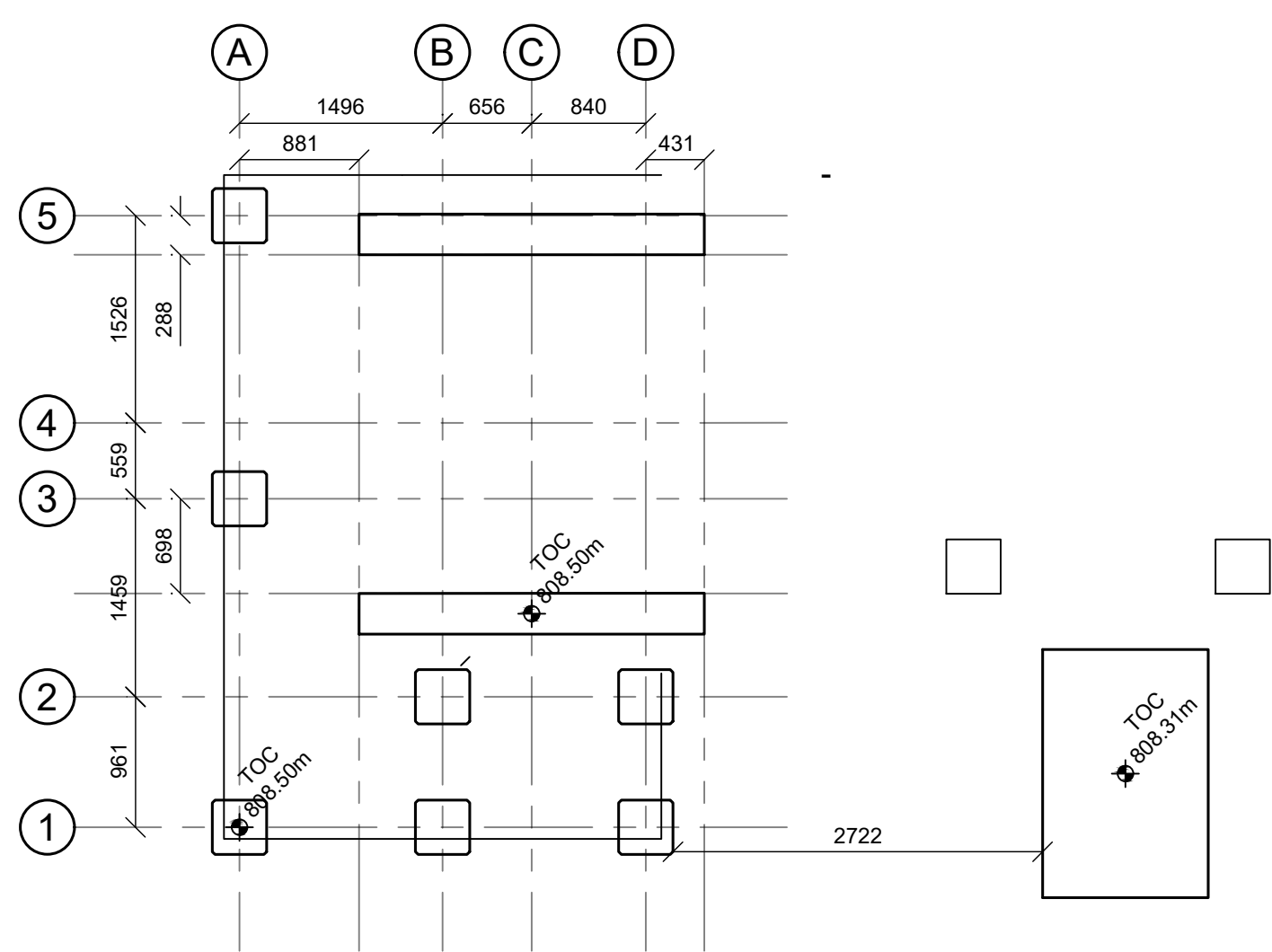
Asset - Actif

MCTS TOWER SITE  
KLEMTU

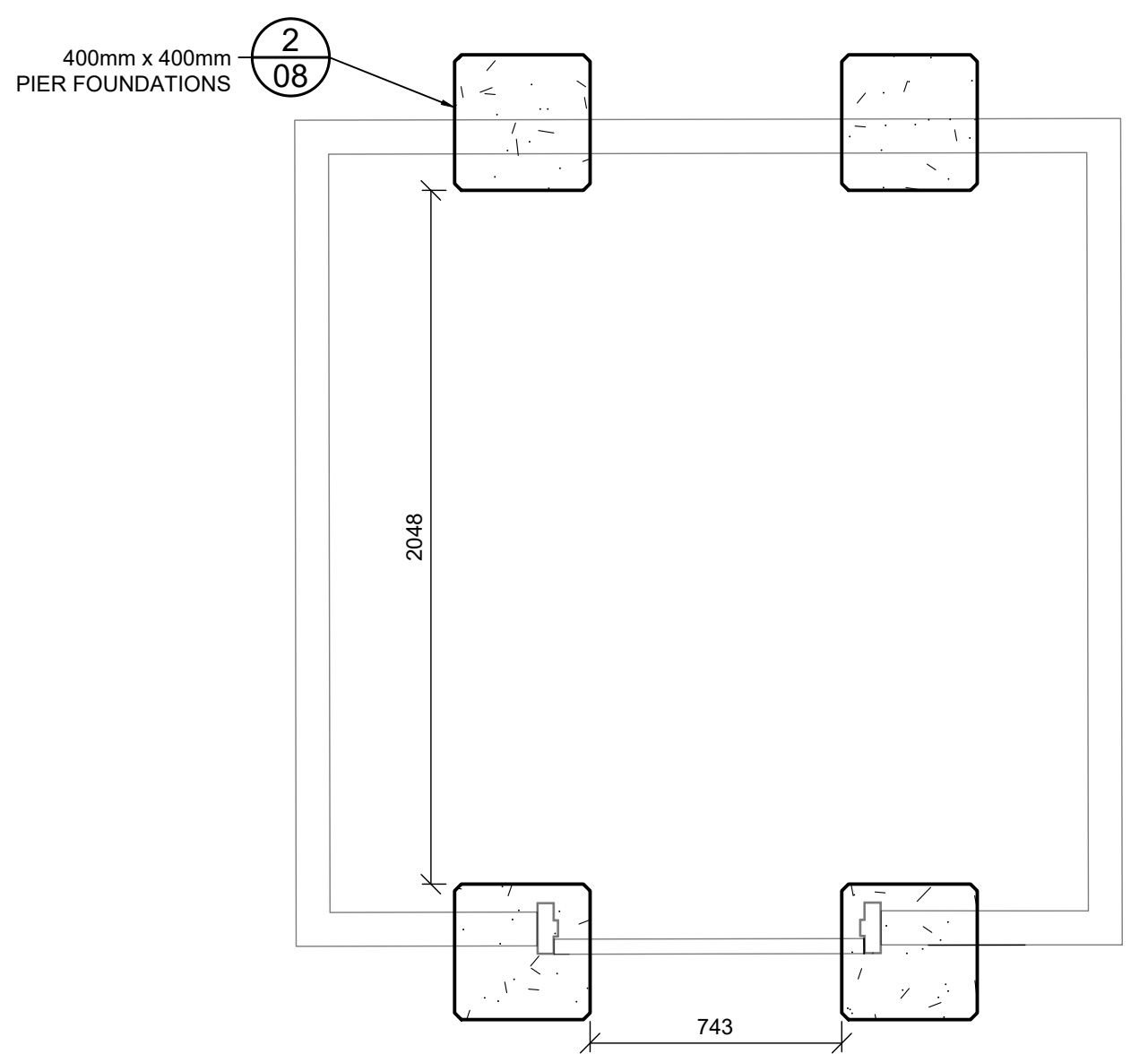
Drawing - Dessin

HELIPAD DETAILS

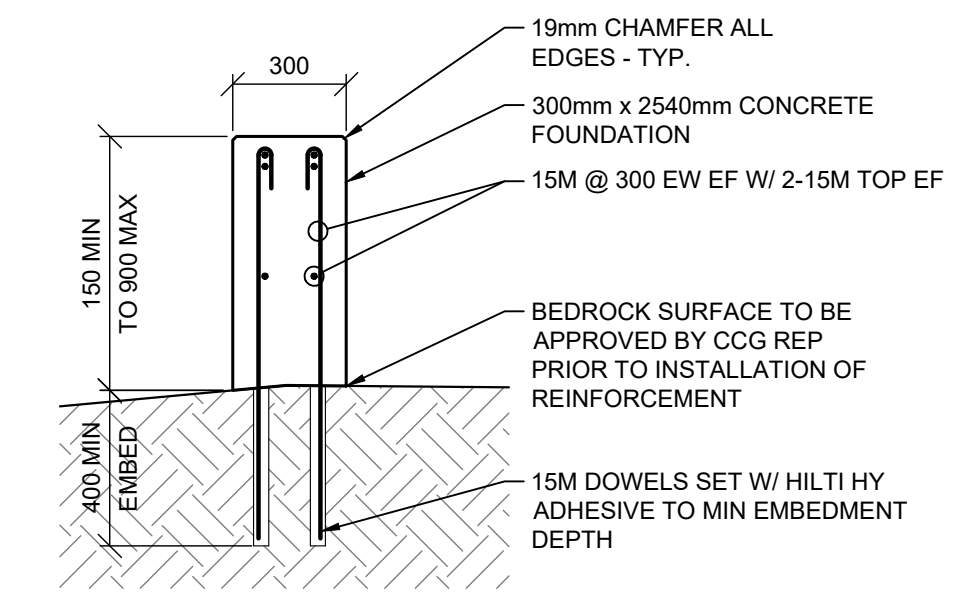
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drawing no. - no. dessin	sheet/feuille rev-rév
WM394-1006	07/08 1



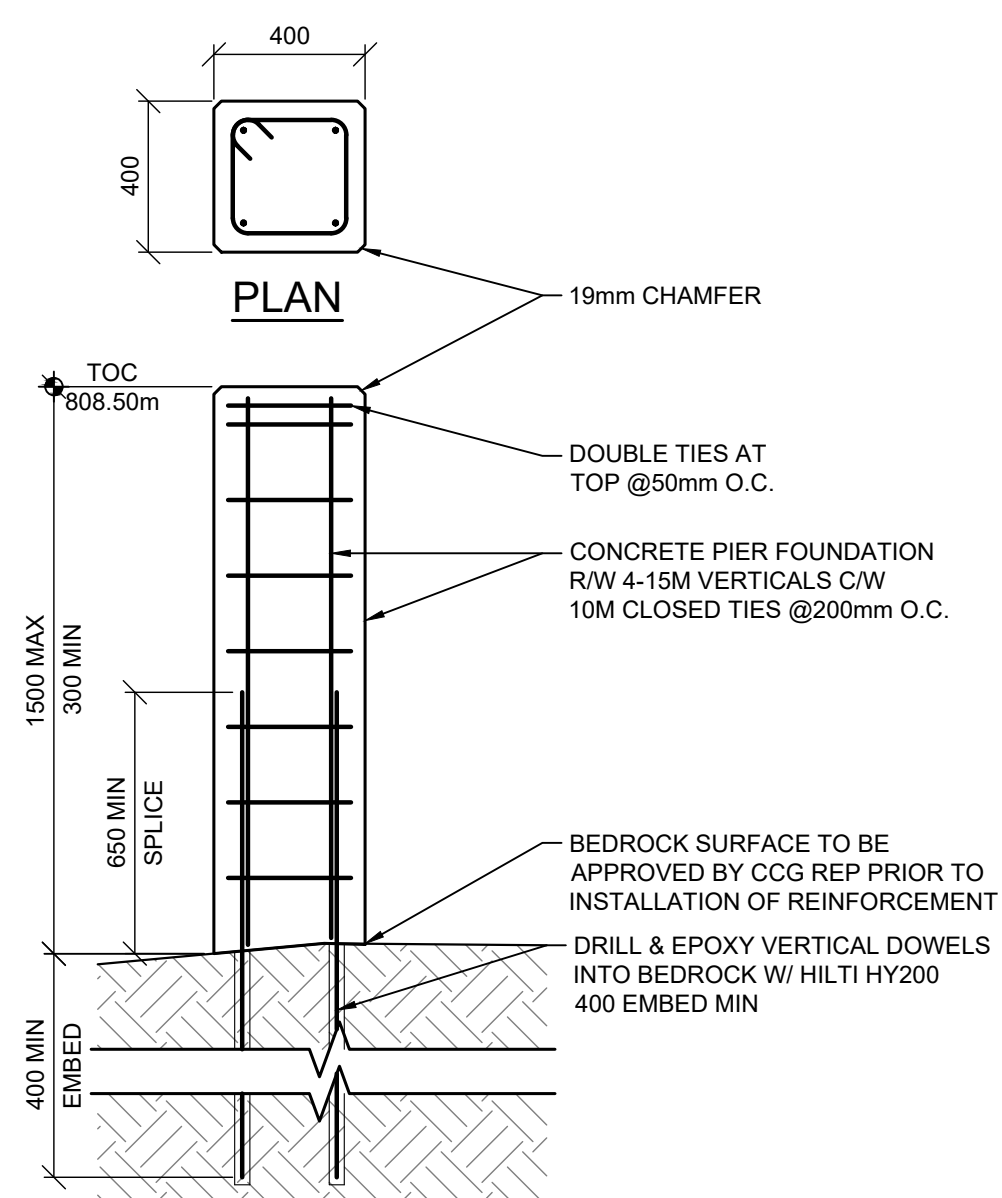
PLAN B 08  
SCALE: 1:50  
FUEL TANK AND PLATFORM FOUNDATIONS



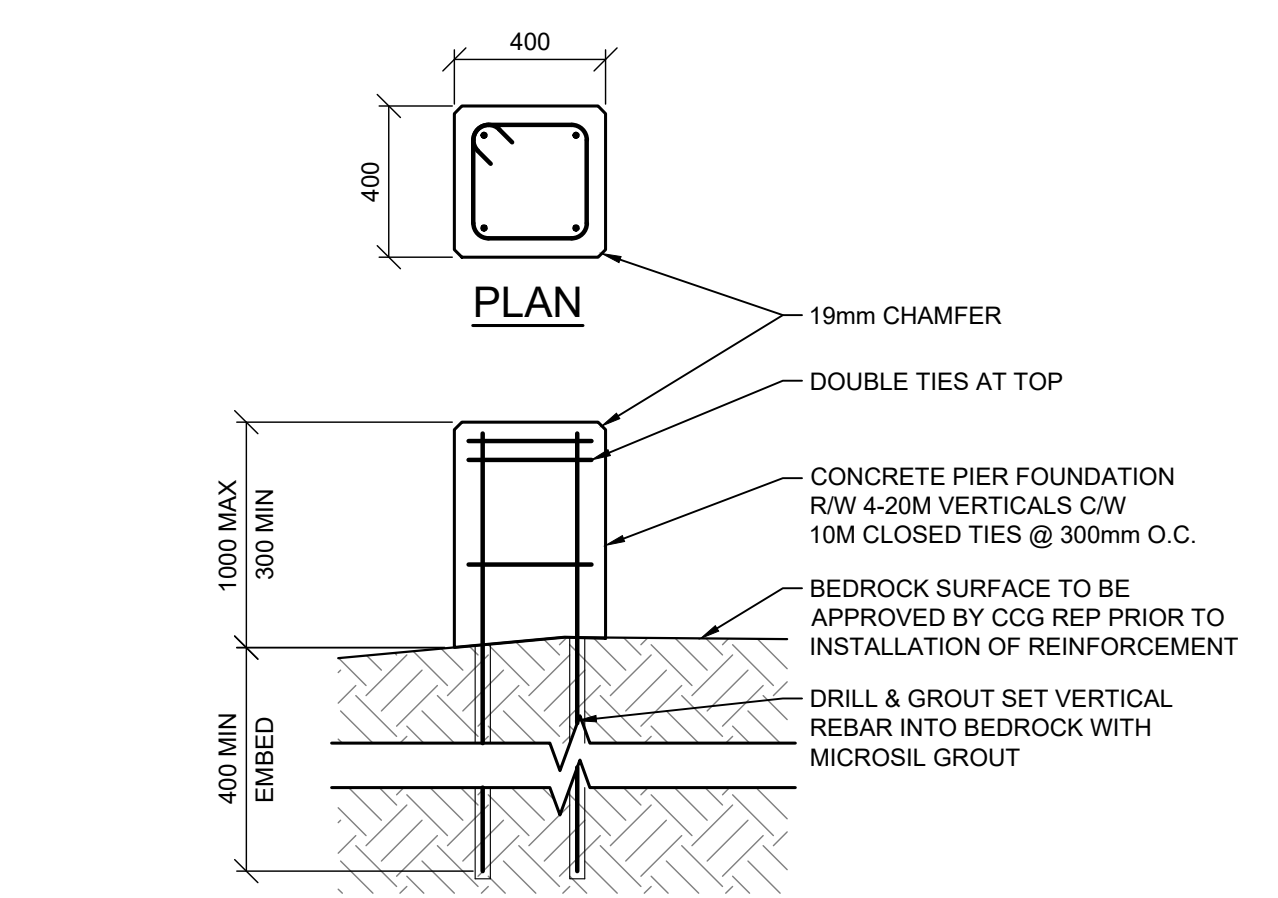
DETAIL 4 08  
SCALE: 1:20  
TEMPORARY BUILDING FOUNDATION LAYOUT



DETAIL 1 08  
SCALE: 1:20  
FUEL TANK FOUNDATION

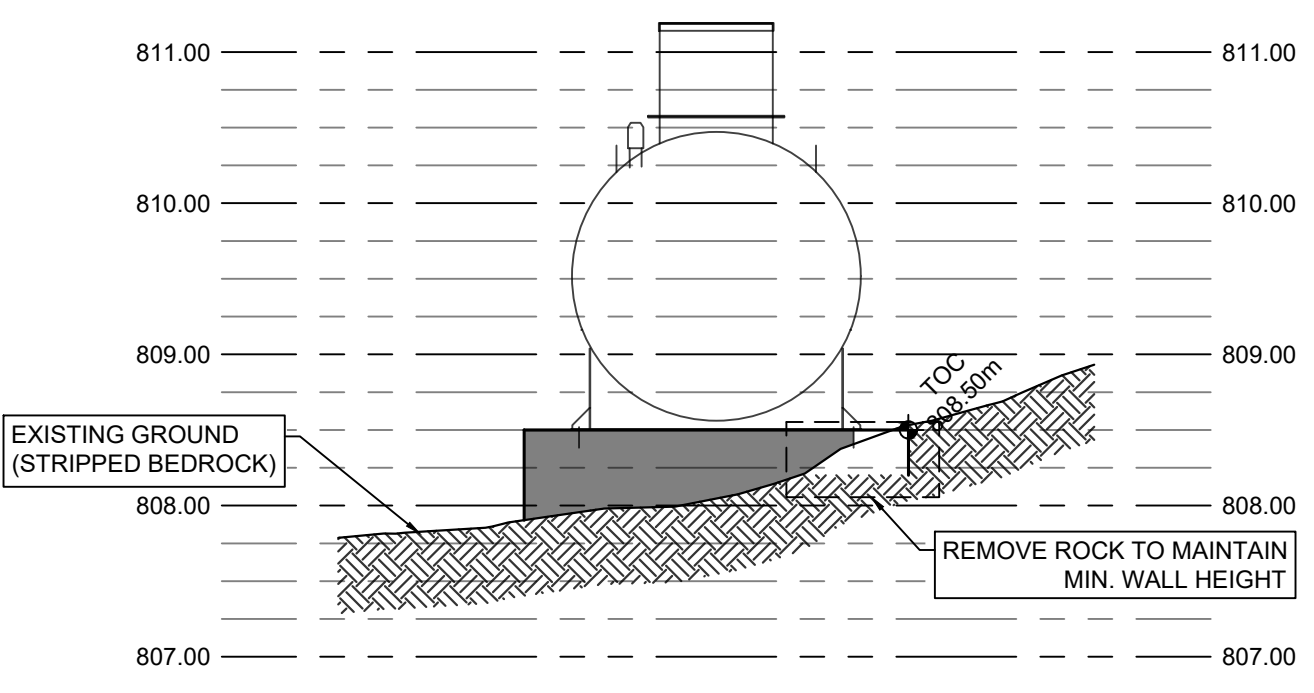


DETAIL 2 08  
SCALE: 1:20  
400mm x 400mm PIER FOUNDATION

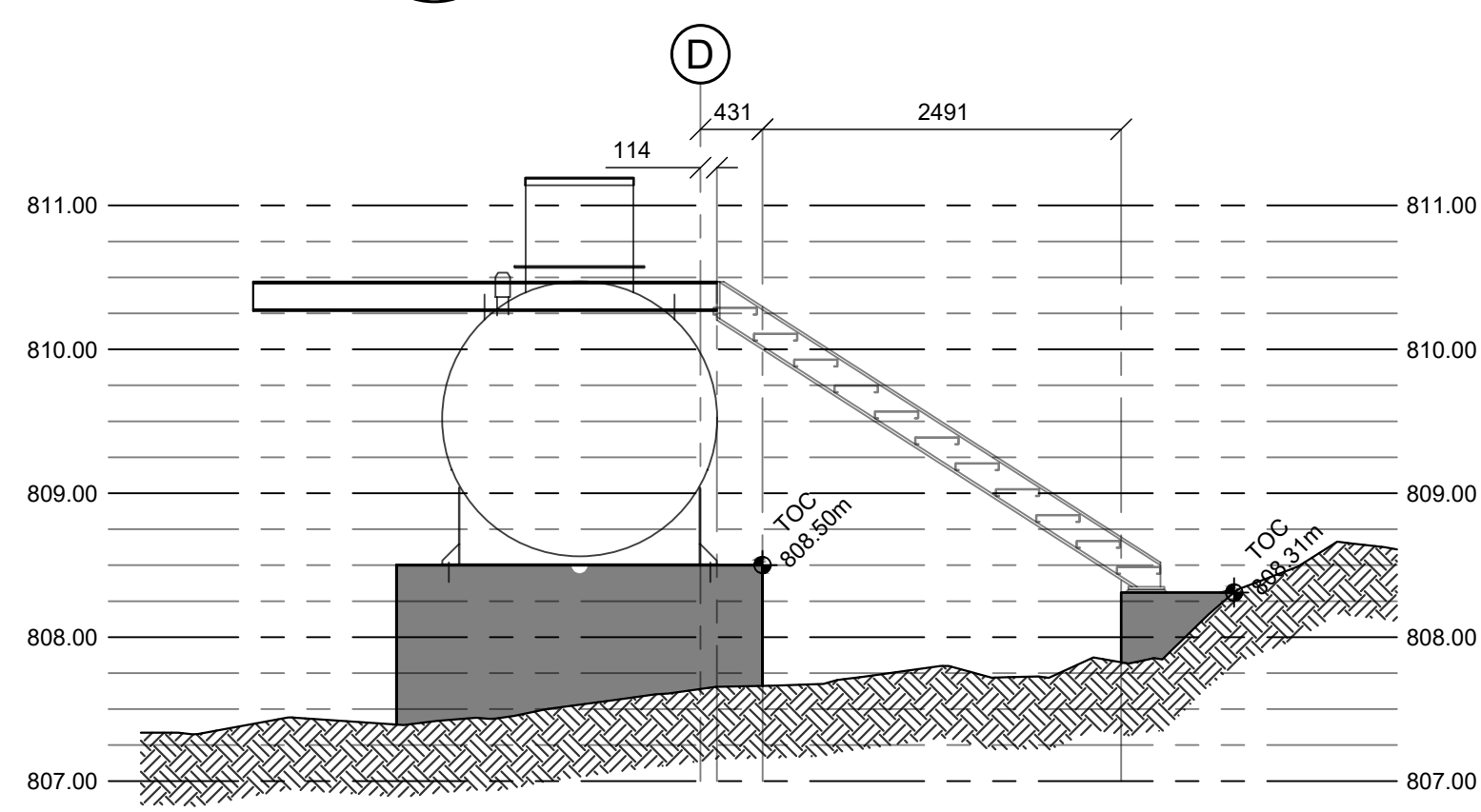


DETAIL 3 08  
SCALE: 1:20  
FUEL LINE PIER FOUNDATION

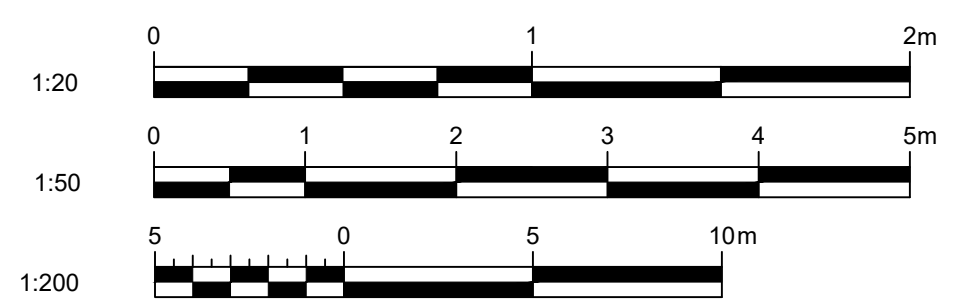
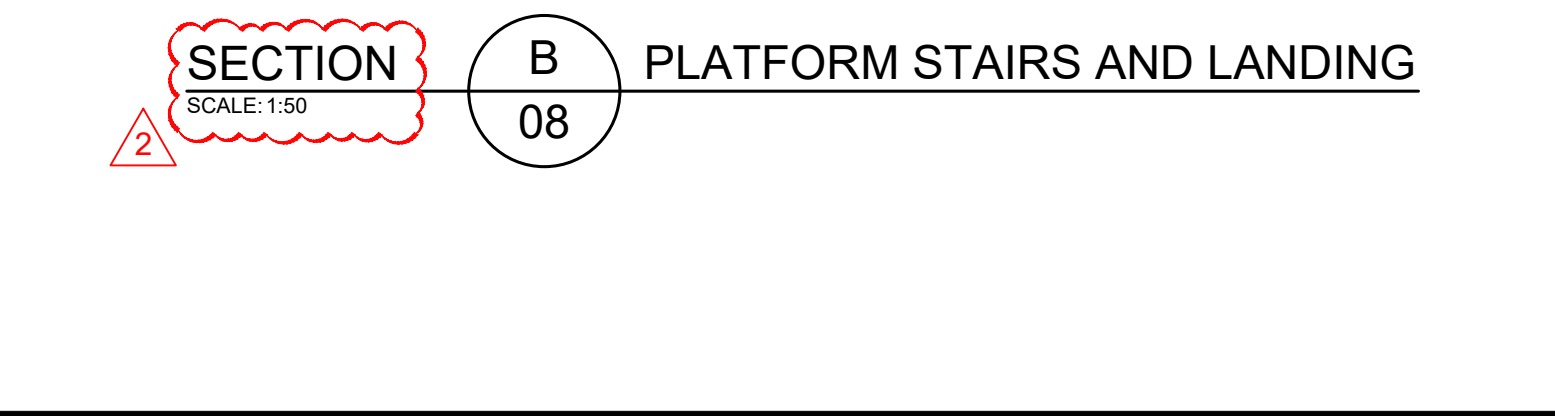
PLAN A 08  
SCALE: 1:50  
FUEL TANK LAYOUT



SECTION A 08  
SCALE: 1:50  
NORTHEAST FUEL TANK FOUNDATION



SECTION B 08  
SCALE: 1:50  
PLATFORM STAIRS AND LANDING



ISSUED FOR TENDER	SC	2022-05-20
ISSUED FOR TENDER	RH	2022-05-06
ISSUED FOR TENDER	BS	2022-02-28
rev	description	by par date

Asset - Actif  
**MCTS TOWER SITE**  
**KLEMTU**  
Drawing - Dessin  
**FUEL TANK AND TEMPORARY BUILDING DETAILS**

drawn - dessiné	date
RH	2022-02-28
designed - conception	date
BT	2022-02-28
checked - vérifié	date
SC	2022-02-28
approved - approuvé	date
AW	2022-02-28
CCG ref. no. - no. ref. GCC	scale - échelle
N6247-20010	AS NOTED
drawing no. - no. dessin	sheet/feuille
WM394-1006	08/08 1