

# CANADIAN COAST GUARD SAFETY MOUNTAIN MCTS SITE CALVERT ISLAND, BC

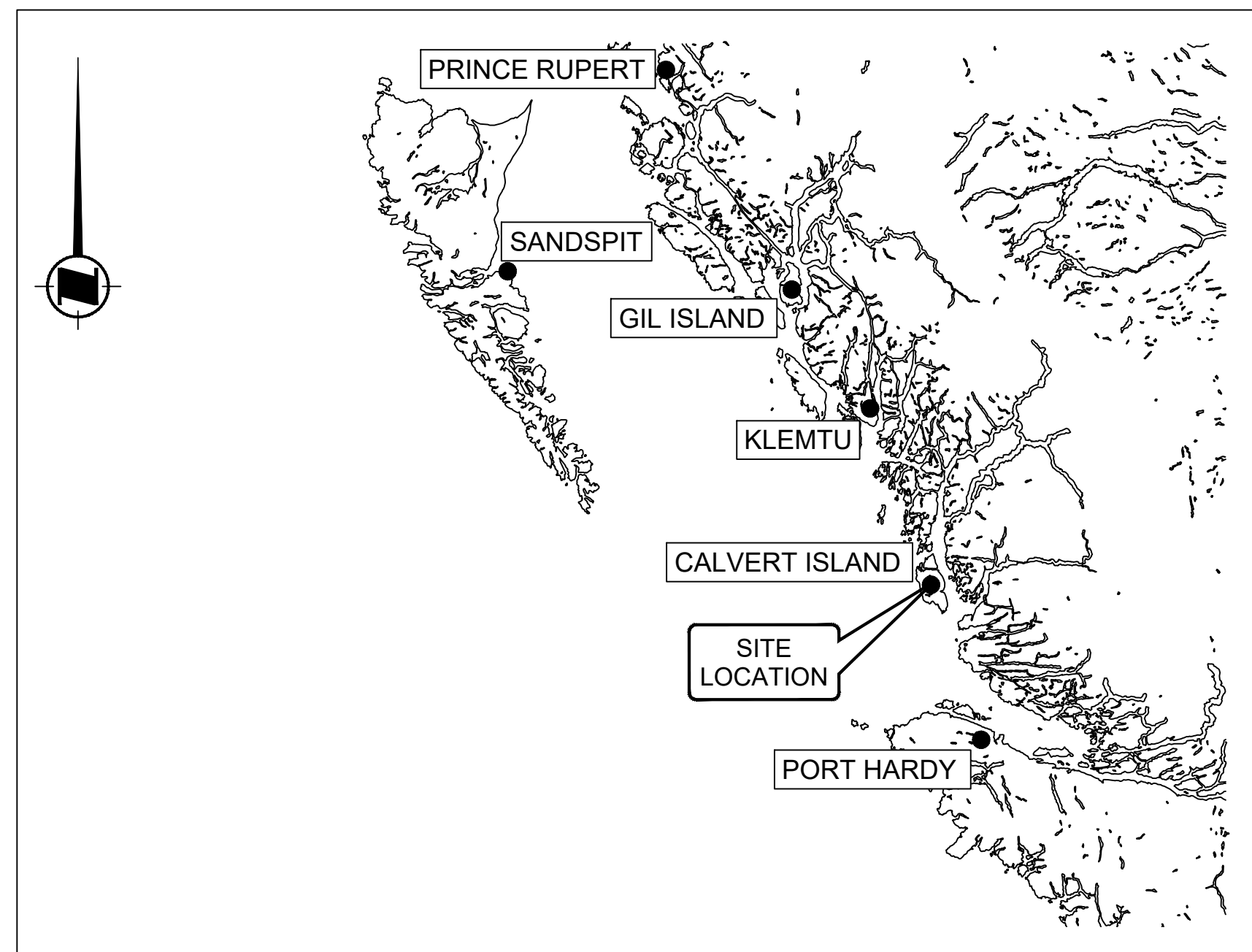
Vendor Information / Sous-traitant

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 2010 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.

DRAWING LIST

SHEET NUMBER	DRAWING NAME
01	COVER SHEET
02	SITE PLAN
03	FOUNDATION PLAN
04	FOUNDATION DETAILS AND ELEVATIONS
05	SITE GRADING PLAN
06	ANTENNA LAYOUT
07	GROUNDING PLAN
08	HELIPAD DETAILS
09	FUEL TANK DETAILS



SITE LOCATION MAP  
NOT TO SCALE



KEY PLAN  
1:150

rev	description	by	date
0	FOR TENDER	GR	2021-05-27

Asset - Actif  
**MCTS TOWER SITE  
SAFETY MOUNTAIN**

Drawing - Dessin  
**COVER SHEET**

Drawn - dessiné	date
GR	2021-05-27
Designed - conception	date
GR	2021-05-27
Checked - vérifié	date
BT	2021-05-27
Approved - approuvé	date
BT	2021-05-27

CCG ref. no. - no. réf. GCC	scale - échelle
8B200-19003	AS SHOWN
Drawing no. - no. dessin	sheet-feuille / rev-rév
WM-628-1003	01/09 0

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File / Fichier: WM-628-1003 SAFETY MOUNTAIN SITE LAYOUT PACKAGE.DWG - Printed / Imprimé: 2021/05/28 9:11

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Vendor Information / Sous-traitant

**LEGEND**

— 491.00 — MAJOR CONTOURS

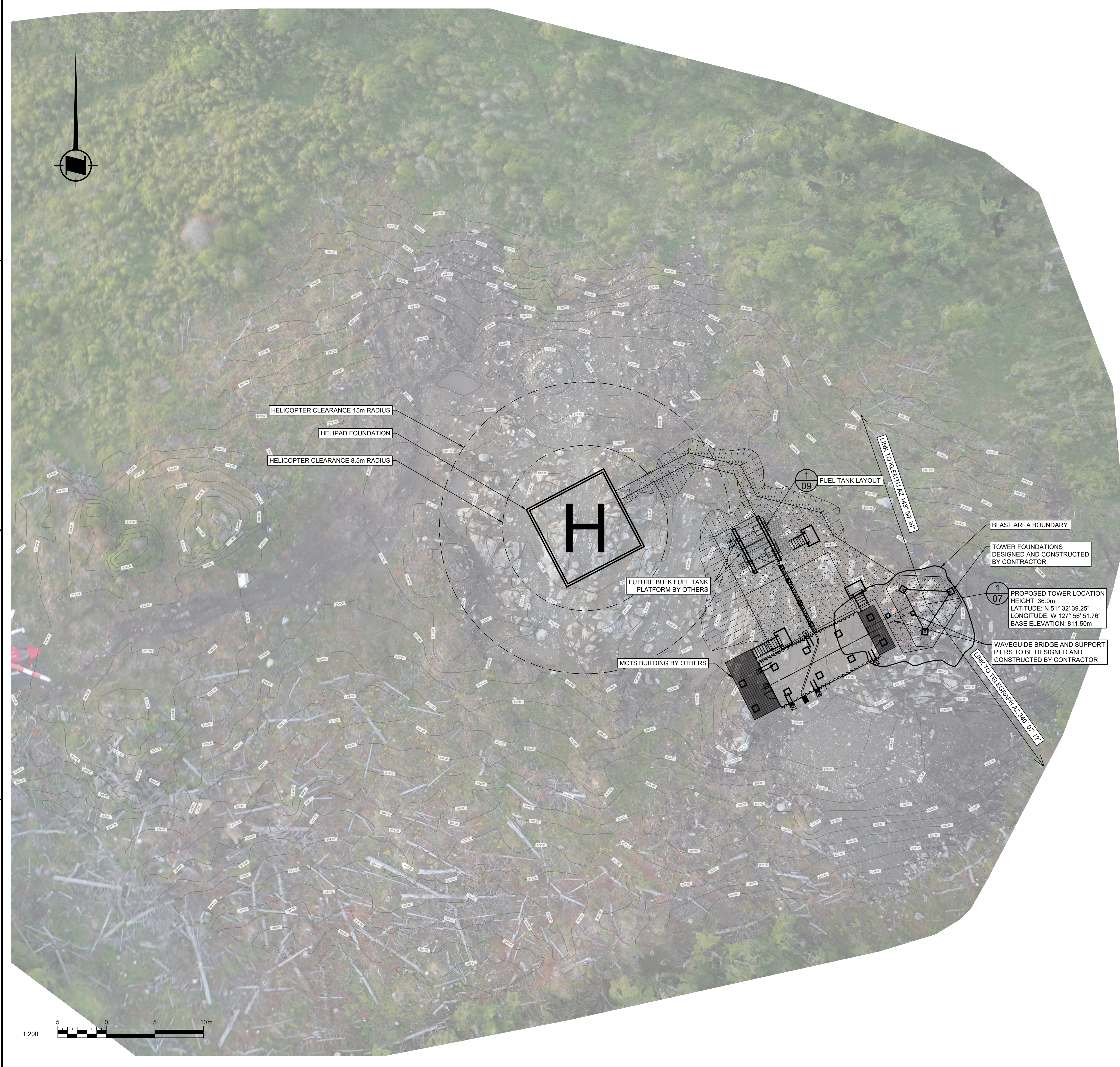
TOPOGRAPHIC CONTOURS BASED ON UAV SURVEY COMPLETED 2020-08-20.

ORTHO-IMAGERY DERIVED FROM UAV SURVEY COMPLETED 2020-08-20.

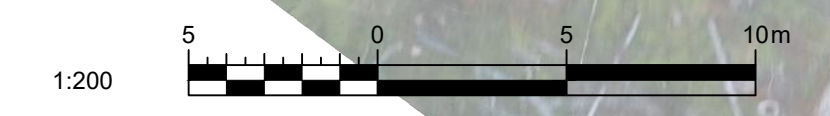
CONTROL INFORMATION BASED ON OBSERVATIONS USING CSRS-PPP SERVICE V2.26.1

VERTICAL DATUM: ELEVATIONS ARE REFERRED TO CGVD 28  
HORIZONTAL DATUM: COORDINATES ARE REFERRED TO NAD 83 CSRS (2010 EPOCH)  
PROJECTION INFORMATION: UTM ZONE 9N

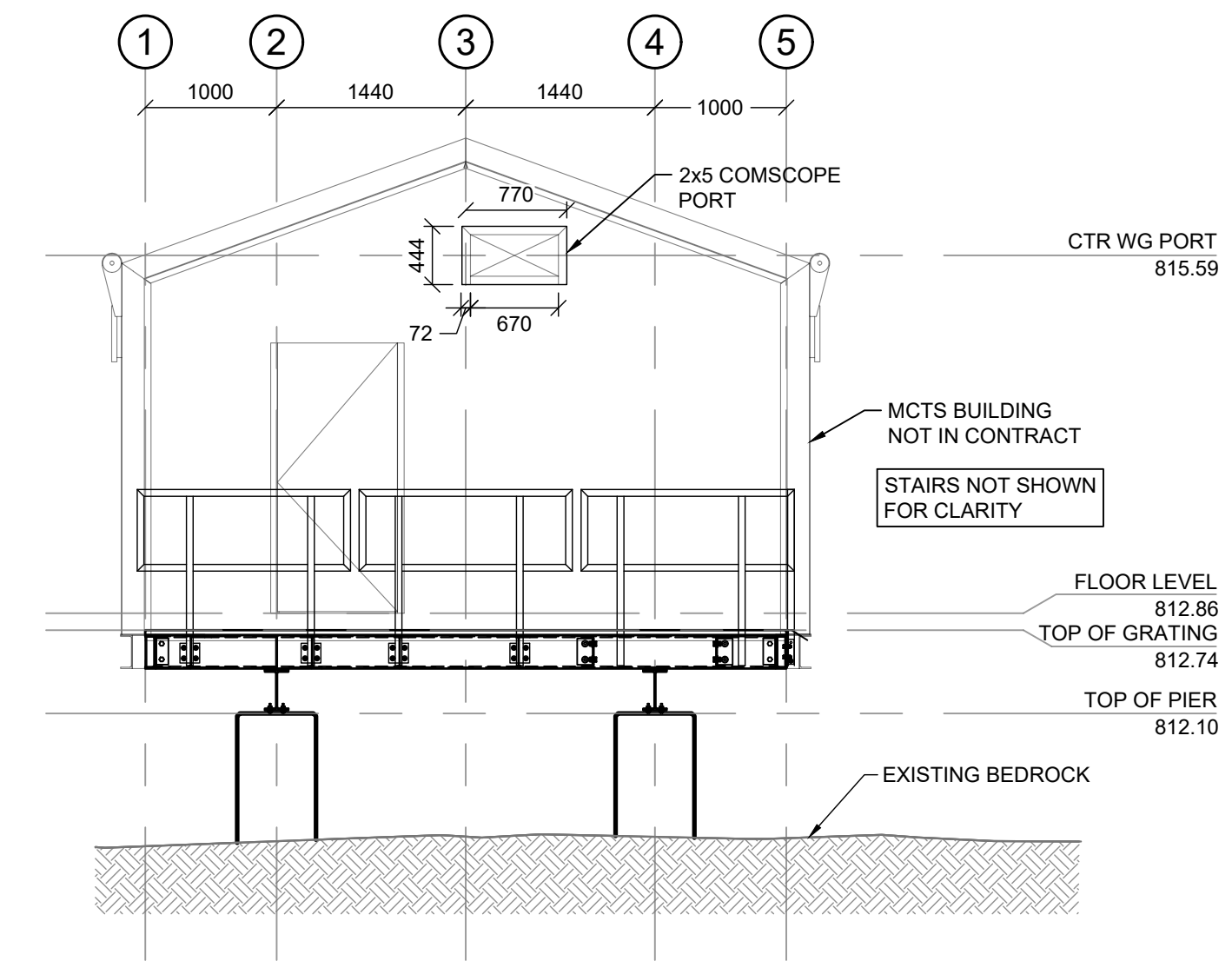
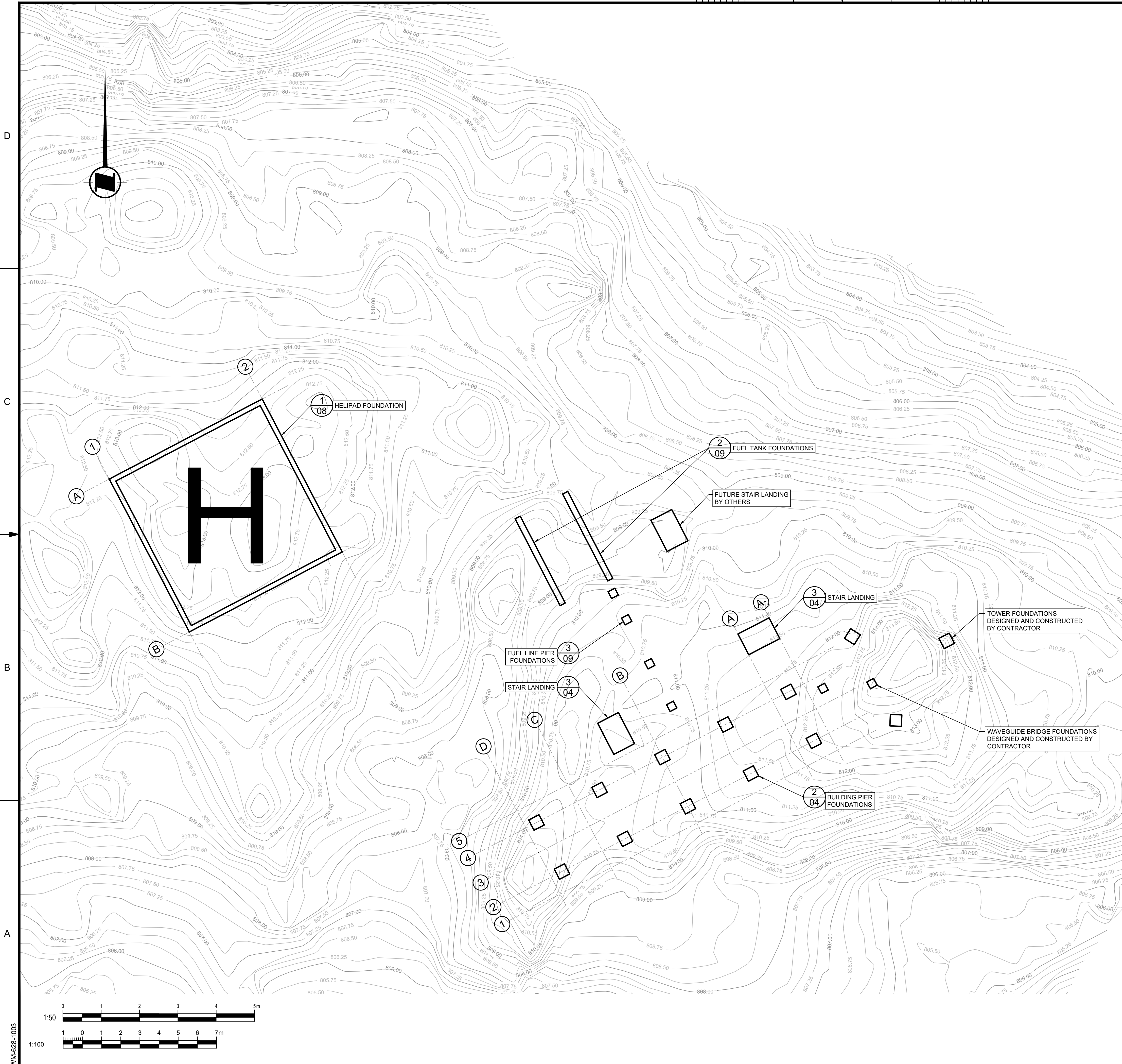
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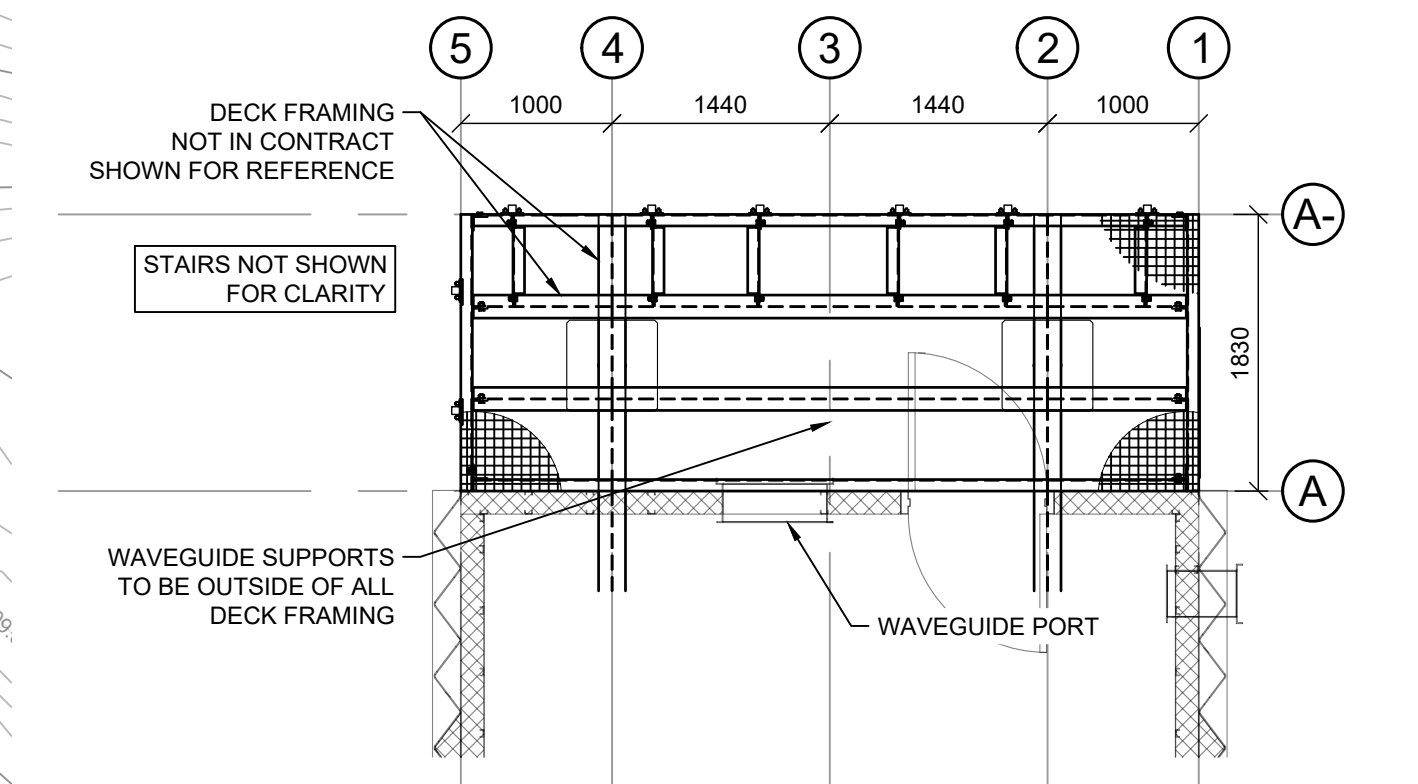
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Drawing - Dessin			
<b>SITE PLAN</b>			
Drawn - dessiné		date	
GR		2021-05-27	
Designed - conception		date	
GR		2021-05-27	
Checked - vérifié		date	
BT		2021-05-27	
Approved - approuvé		date	
BT		2021-05-27	
CCG ref. no. - no. réf. GCC		scale - échelle	
8B200-19003		AS SHOWN	
Drawing no. - no. dessin		sheet-feuille	rev-rév
WM-628-1003		02/09	0







ELEVATION A WAVEGUIDE ENTRY PORT  
SCALE: 1:50



PLAN 1 DECK FRAMING  
SCALE: 1:50

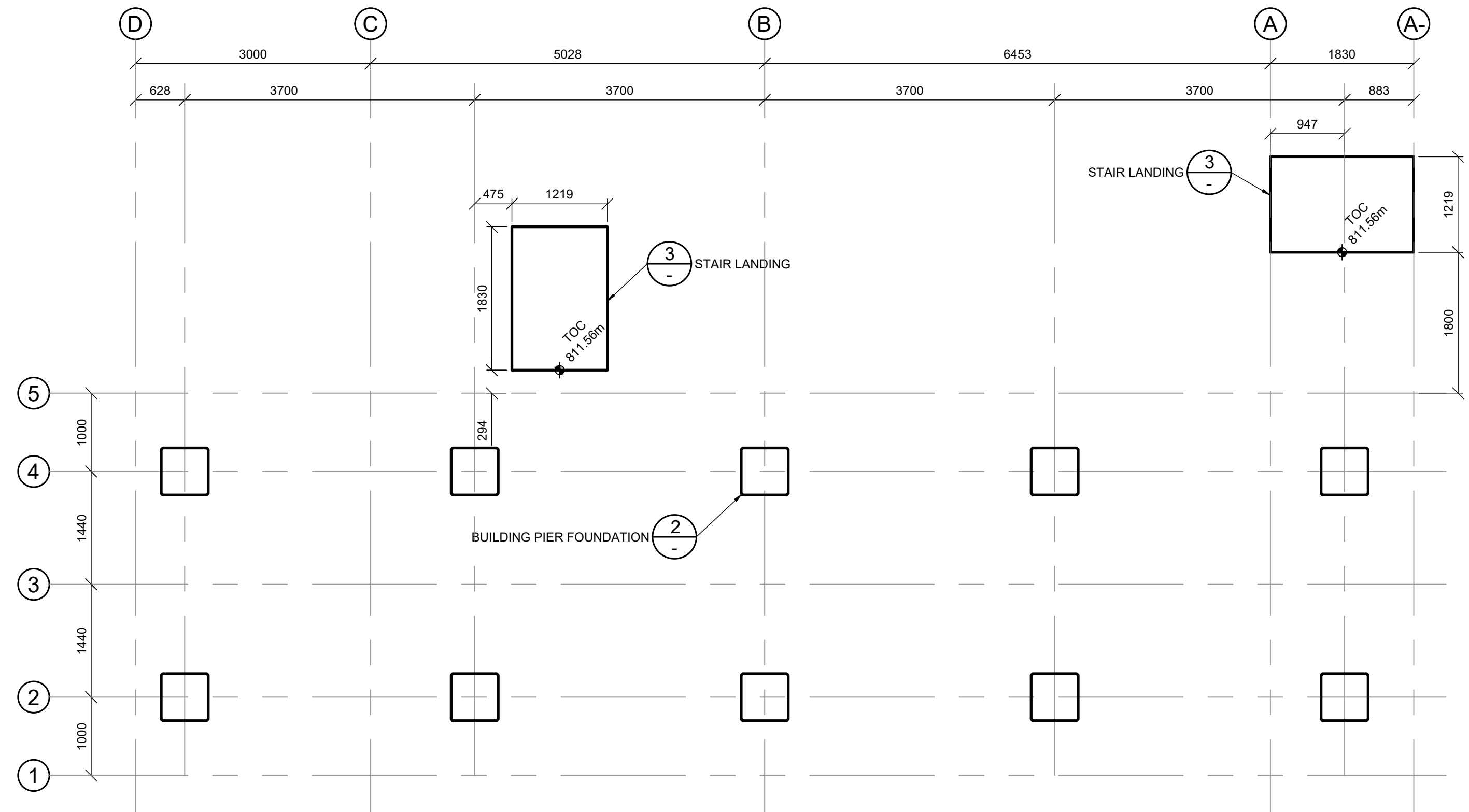
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Asset - Actif			
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Drawing - Dessin			
<b>FOUNDATION PLAN</b>			
Drawn - dessiné			date
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Designed - conception			date
GR			2021-05-27
checked - vérifié			date
BT			2021-05-27
approved - approuvé			date
BT			2021-05-27
CCG ref. no. - no. réf. GCC		scale - échelle	
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drawing no. - no. dessin		sheet/feuille	rev/rév
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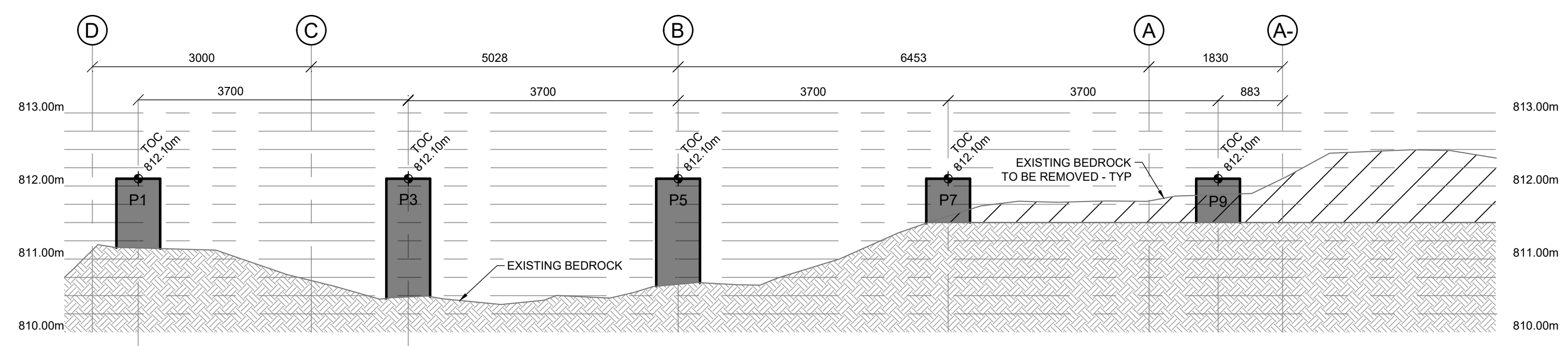
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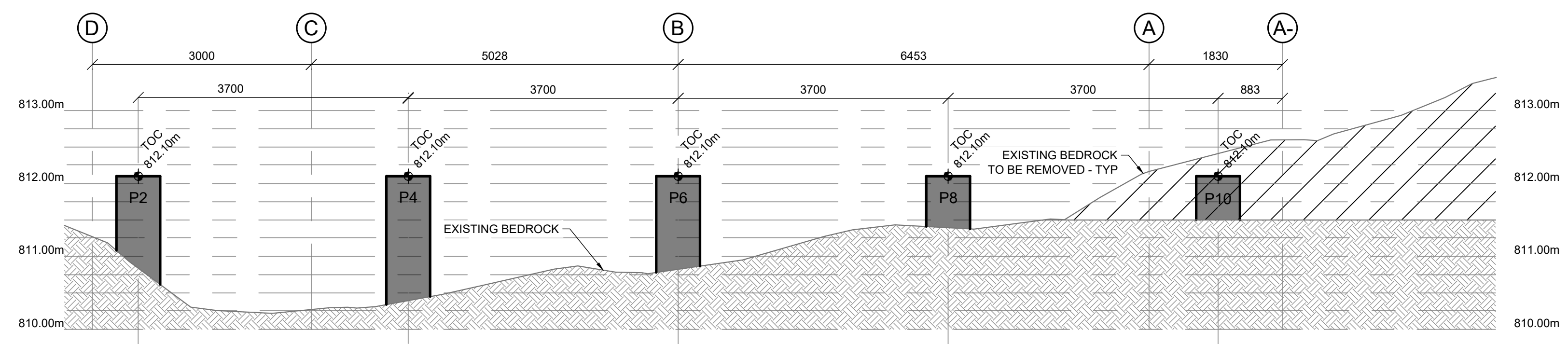
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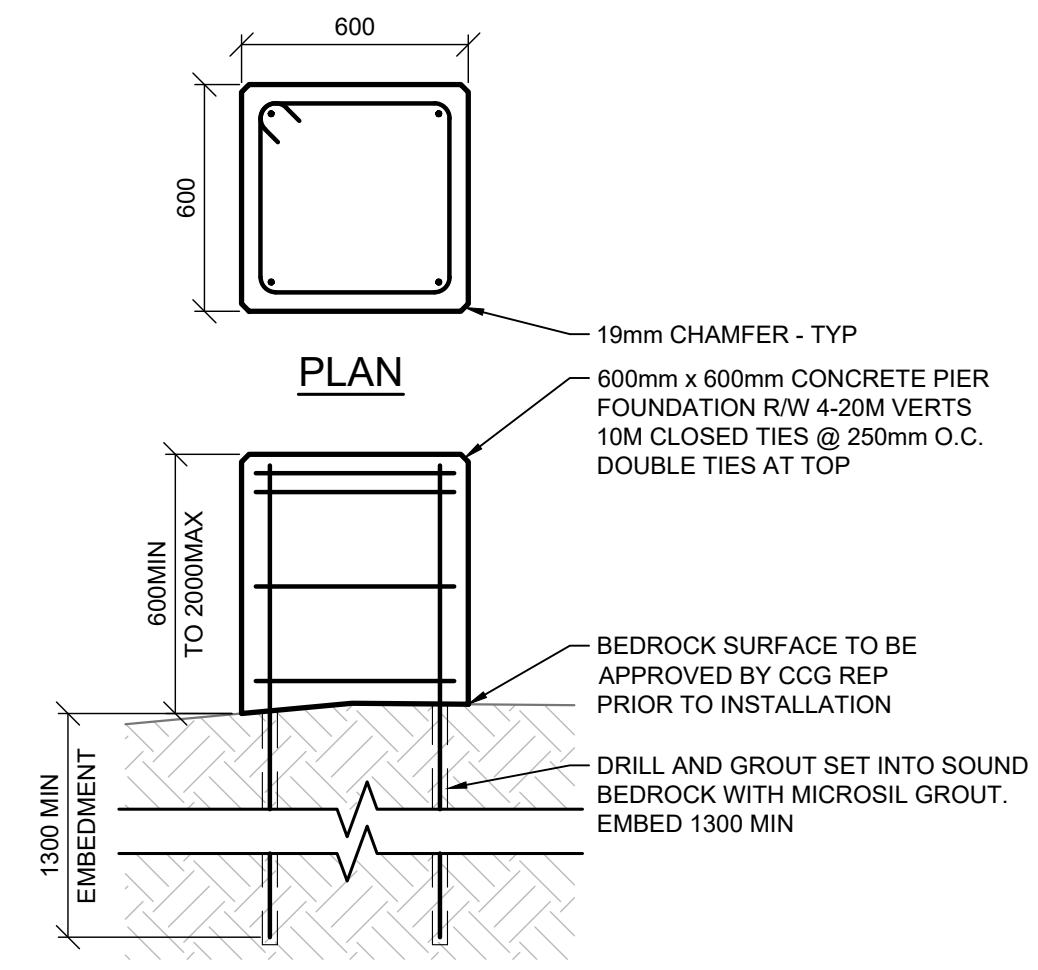
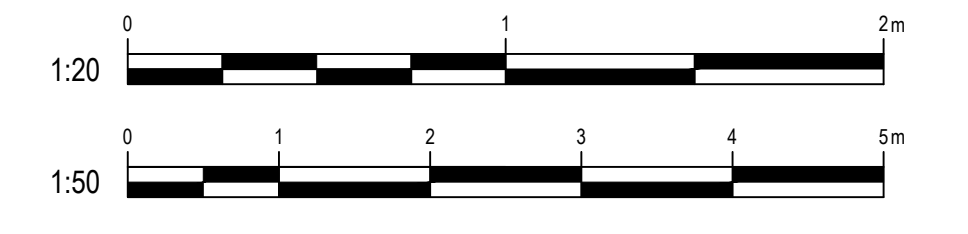
**PLAN** 1 BUILDING PIER FOUNDATIONS  
SCALE: 1:50



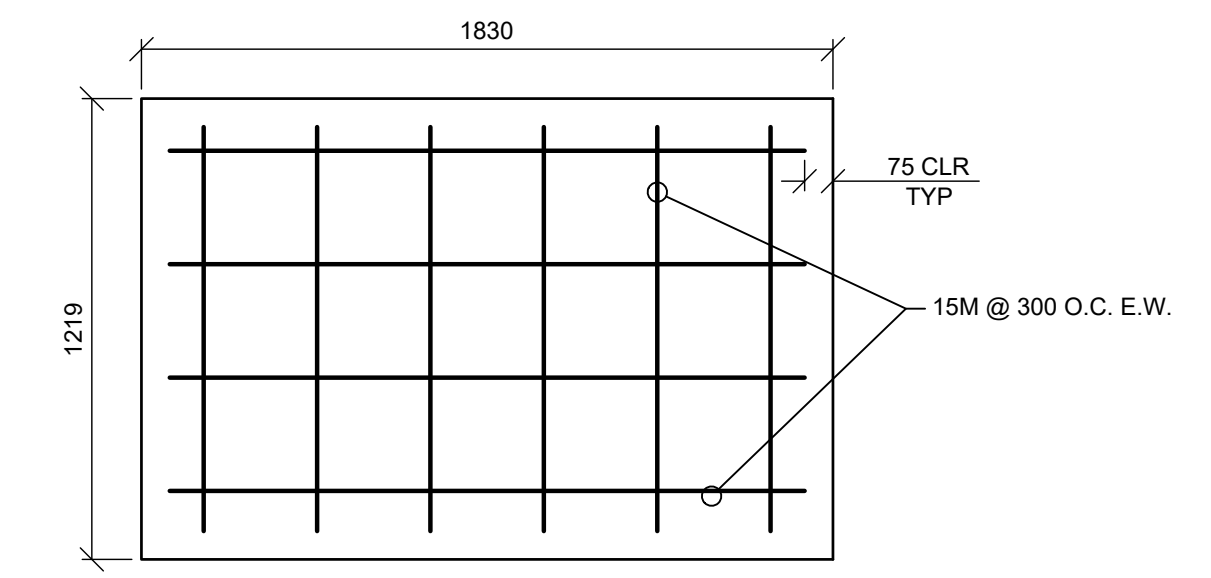
**SECTION A** BUILDING PIER FOUNDATIONS - GRIDLINE 4  
SCALE: 1:50



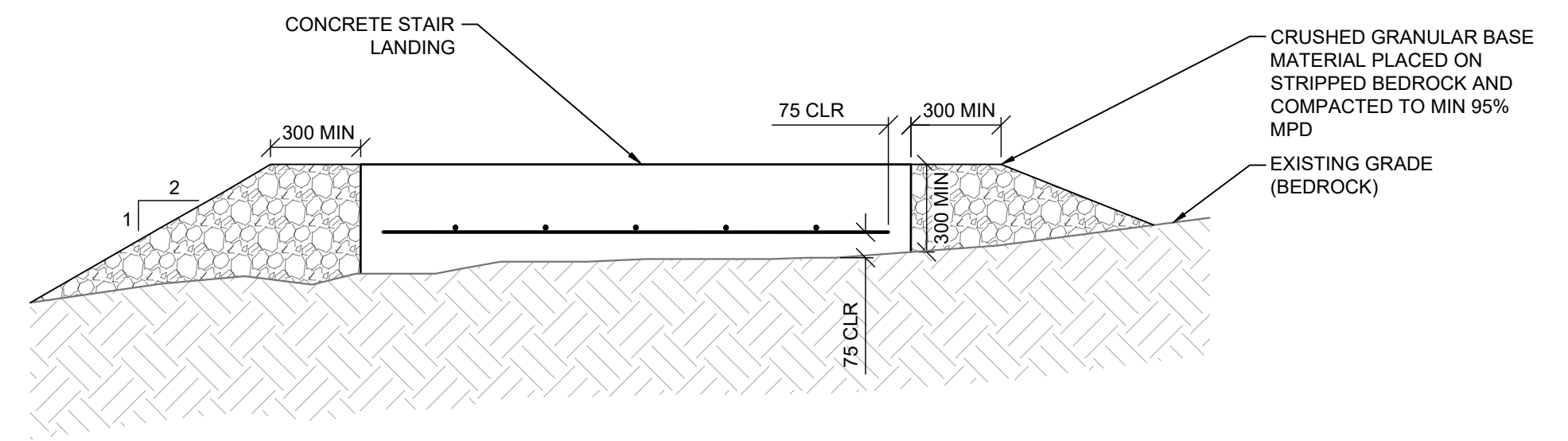
**SECTION B** BUILDING PIER FOUNDATIONS - GRIDLINE 2  
SCALE: 1:50



**DETAIL 2** BUILDING PIER FOUNDATION  
SCALE: 1:20



**DETAIL 3** STAIR LANDING  
SCALE: 1:20



**DETAIL 3** STAIR LANDING  
SCALE: 1:20

rev	description	by	date
0	FOR TENDER	GR	2021-05-27
Asset - Actif			
<b>MCTS TOWER SITE SAFETY MOUNTAIN</b>			
Drawing - Dessin			
<b>FOUNDATION DETAILS AND ELEVATIONS</b>			
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GR		2021-05-27	
designed - conception		date	
GR		2021-05-27	
checked - vérifié		date	
BT		2021-05-27	
approved - approuvé		date	
BT		2021-05-27	
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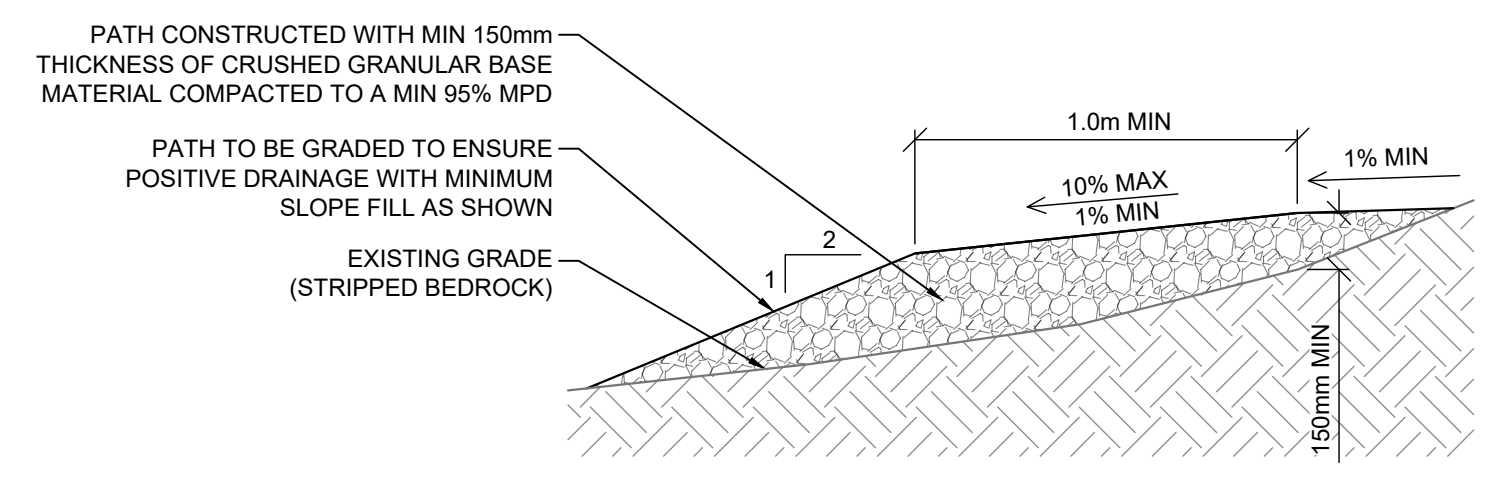
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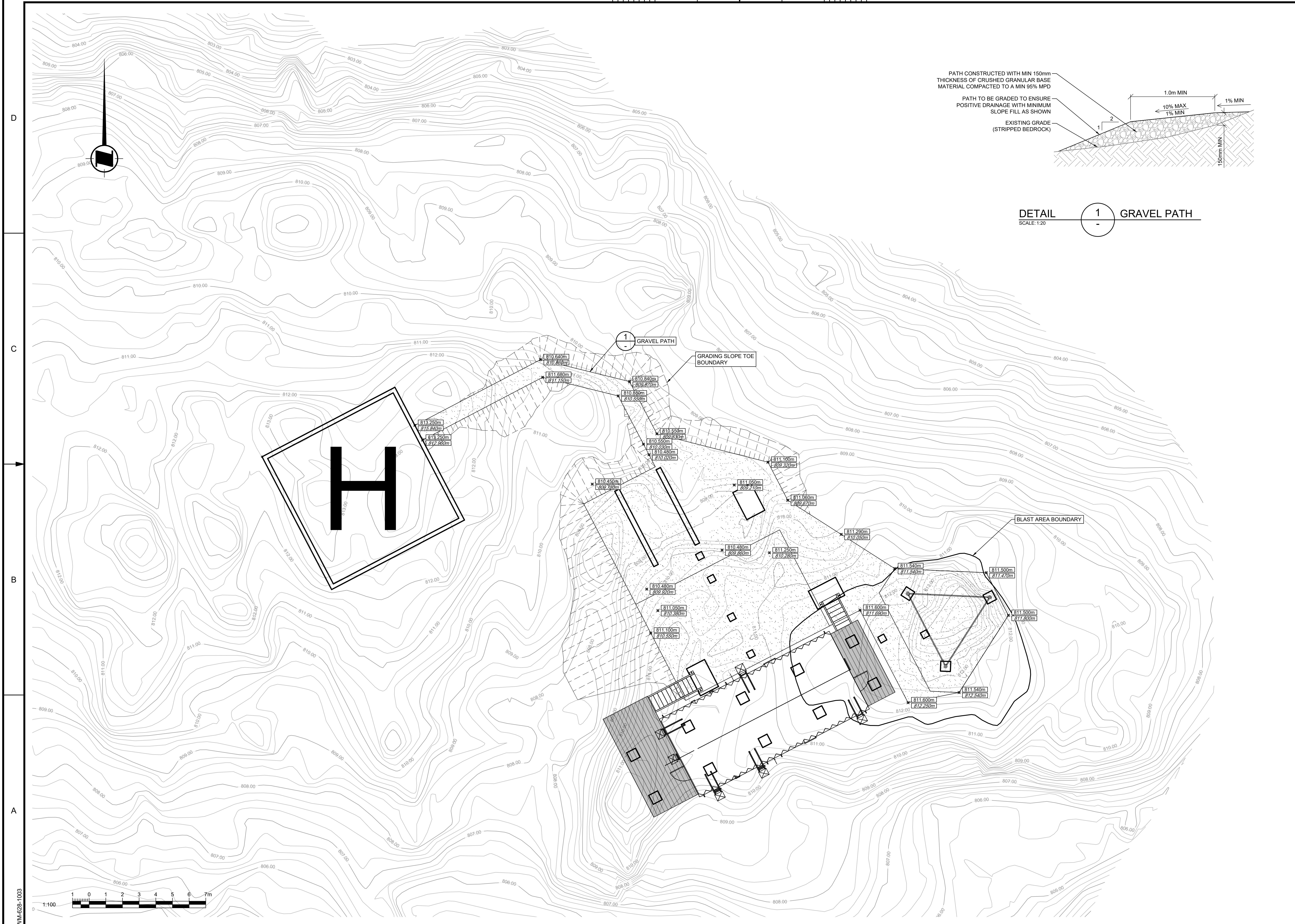
Vendor Information / Sous-traitant

**LEGEND**

000.000m	FINISHED GRADE
000.000m	EXISTING GRADE
810.00	MAJOR CONTOURS (1m INTERVAL)
810.50	MINOR CONTOURS (0.25m INTERVAL)



DETAIL 1 GRAVEL PATH  
SCALE: 1:20



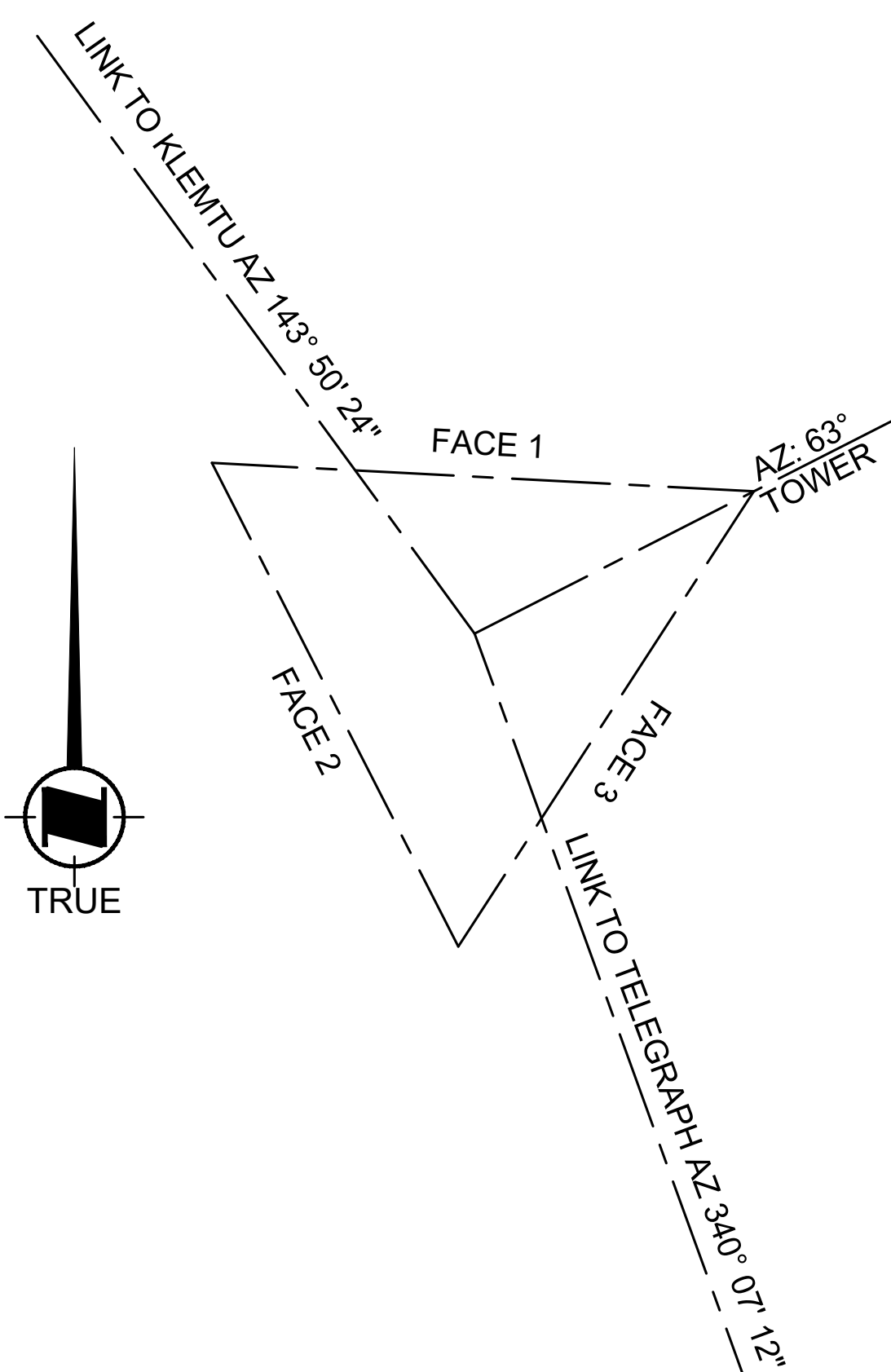
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rev	description	by	date
Asset - Actif			
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Drawing - Dessin			
<b>SITE GRADING PLAN</b>			
Drawn - dessiné		date	
GR		2021-05-27	
Designed - conception		date	
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CCG ref. no. - no. réf. GCC		scale - échelle	
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drawing no. - no. dessin		sheet-feuille	rev-rév
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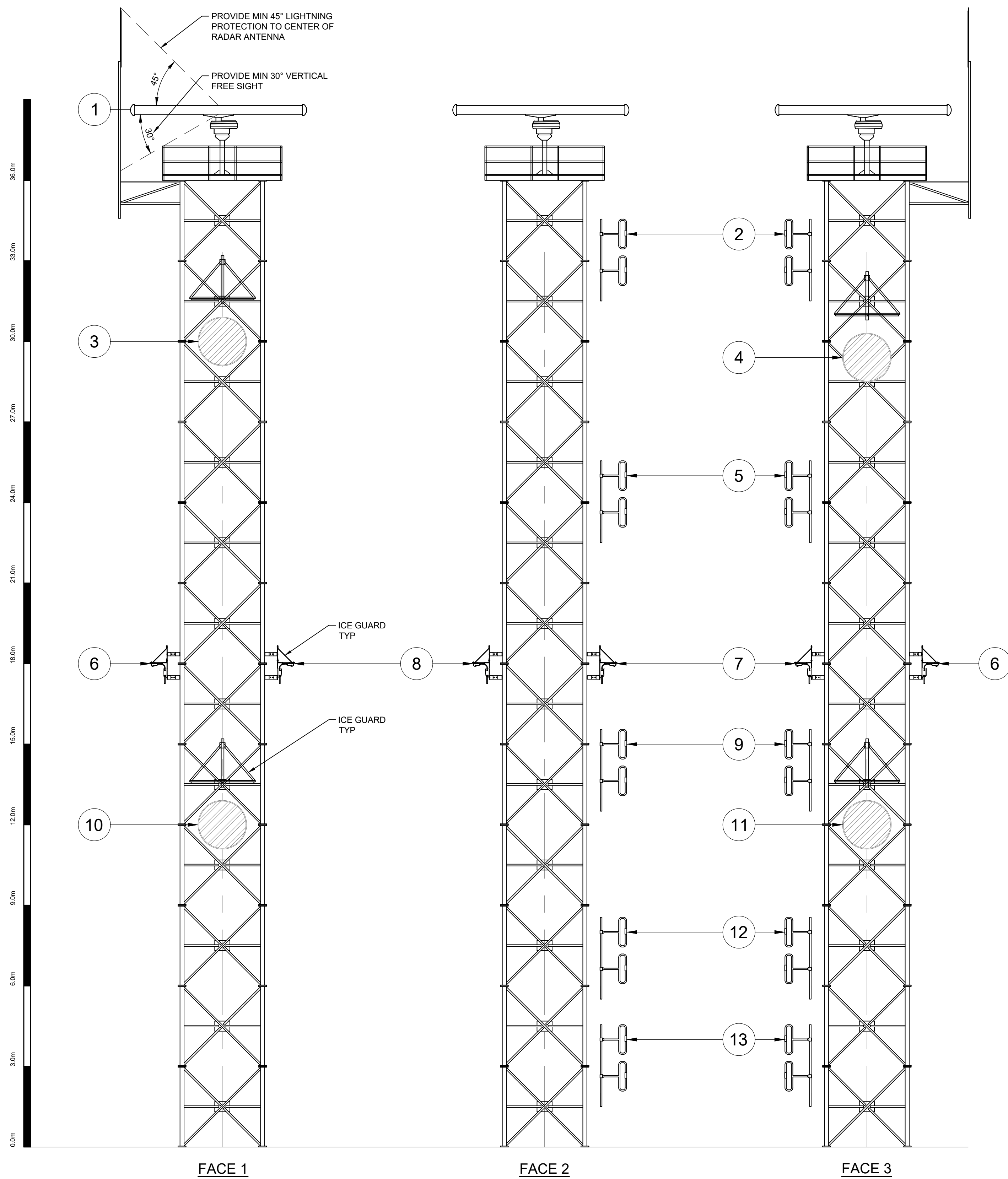




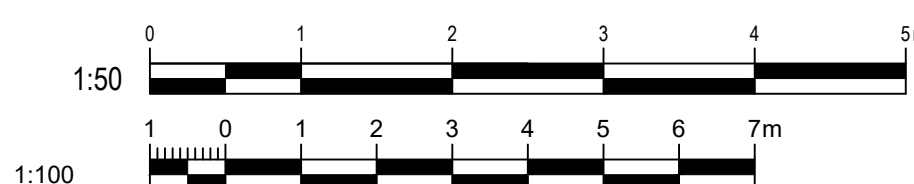
PLAN  
SCALE: 1:50  
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TOWER ORIENTATION

ANTENNA SCHEDULE - SAFETY MOUNTAIN

ANTENNA (#)	USER	ELEV	SYSTEM	ANTENNA MODEL	MAKE	INITIAL OR FUTURE	AZIMUTH	Tx-LINE	ANTENNA MOUNT TYPE
1	CCG	36.0m	RADAR	21' HG-HP-F-38	TERMA	INITIAL	OMNI	EWP85	PLATFORM
2	CCG	34.0m	VHF Ch16	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
3	CCG	30.0m	MICROWAVE MAIN F. KLEMTU	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	143.8	EWP63 x2	FACE MOUNT
4	CCG	29.4m	MICROWAVE MAIN F. TELEGRAPH	USX10-6W	ANDREWS/COMMSCOPE	INITIAL	340.1	EWP63 x2	FACE MOUNT
5	CCG	25.0m	VHF Rx	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
6	CCG	18.0m	CAMERA 1	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
7	CCG	18.0m	CAMERA 2	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
8	CCG	18.0m	CAMERA 3	IN HOUSE	IN HOUSE	INITIAL		CAT6	LEG MOUNT
9	CCG	15.0m	VHF Tx	872F-HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
10	CCG	12.0m	MICROWAVE DIV. F. KLEMTU	USX12-6W	ANDREWS/COMMSCOPE	INITIAL	143.8	EWP63 x2	FACE MOUNT
11	CCG	12.0m	MICROWAVE DIV. F. TELEGRAPH	USX12-6W	ANDREWS/COMMSCOPE	INITIAL	340.1	EWP63 x2	FACE MOUNT
12	CCG	8.0m	VHF Tx	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT
13	TBD	4.0m	FUTURE 3rd PARTY	872F-70HDB	COMPROD	INITIAL	180.0	LDF4 x1	LEG MOUNT



ELEVATION  
SCALE: 1:100  
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TOWER ANTENNA LAYOUT



0	FOR TENDER	GR	2021-05-27
rev	description	by	date

Asset - Actif  
MCTS TOWER SITE  
SAFETY MOUNTAIN

Drawing - Dessin  
ANTENNA LAYOUT

Drawn - dessiné	GR	date	2021-05-27
Designed - conception	CS	date	2021-05-27
Checked - vérifié	AW	date	2021-05-27
Approved - approuvé	AW	date	2021-05-27
CCG ref. no. - no. réf. GCC	8B200-19003	scale - échelle	AS SHOWN
Drawing no. - no. dessin	WM-628-1003	sheet-feuille	rev-rév
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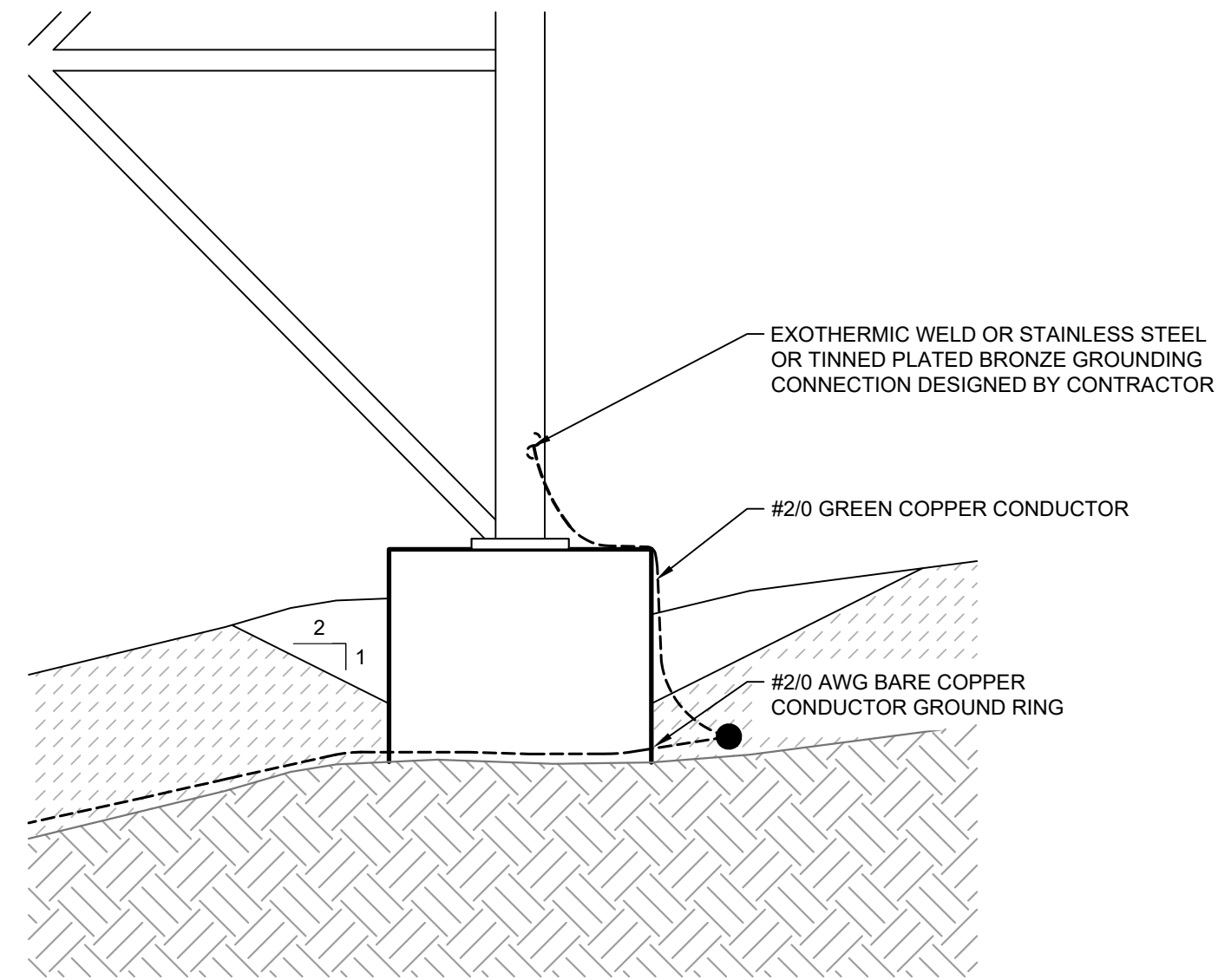


- Vendor Information / Sous-traitant
- ALL BURIED GROUNDING CONDUCTORS SHALL BE #2/0 AWG, BARE, STRANDED TINNED OR UN-TINNED.
  - ALL SPLICES SHALL BE MADE THROUGH IRREVERSIBLE COMPRESSION TYPE CONNECTORS, DESIGNED FOR USE WITH GROUNDING.
  - ABOVE-GROUND BONDING CONDUCTORS SHOULD BE JACKETED, WHENEVER 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 CONCRETE 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 45° 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 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 CONCRETE 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 CONCRETE ON ALL SIDES.
  - ANY SURFACE INSTALLED GROUNDING EQUIPMENT SHALL HAVE CONCRETE SHAPED TO PREVENT TRIPPING HAZARDS.

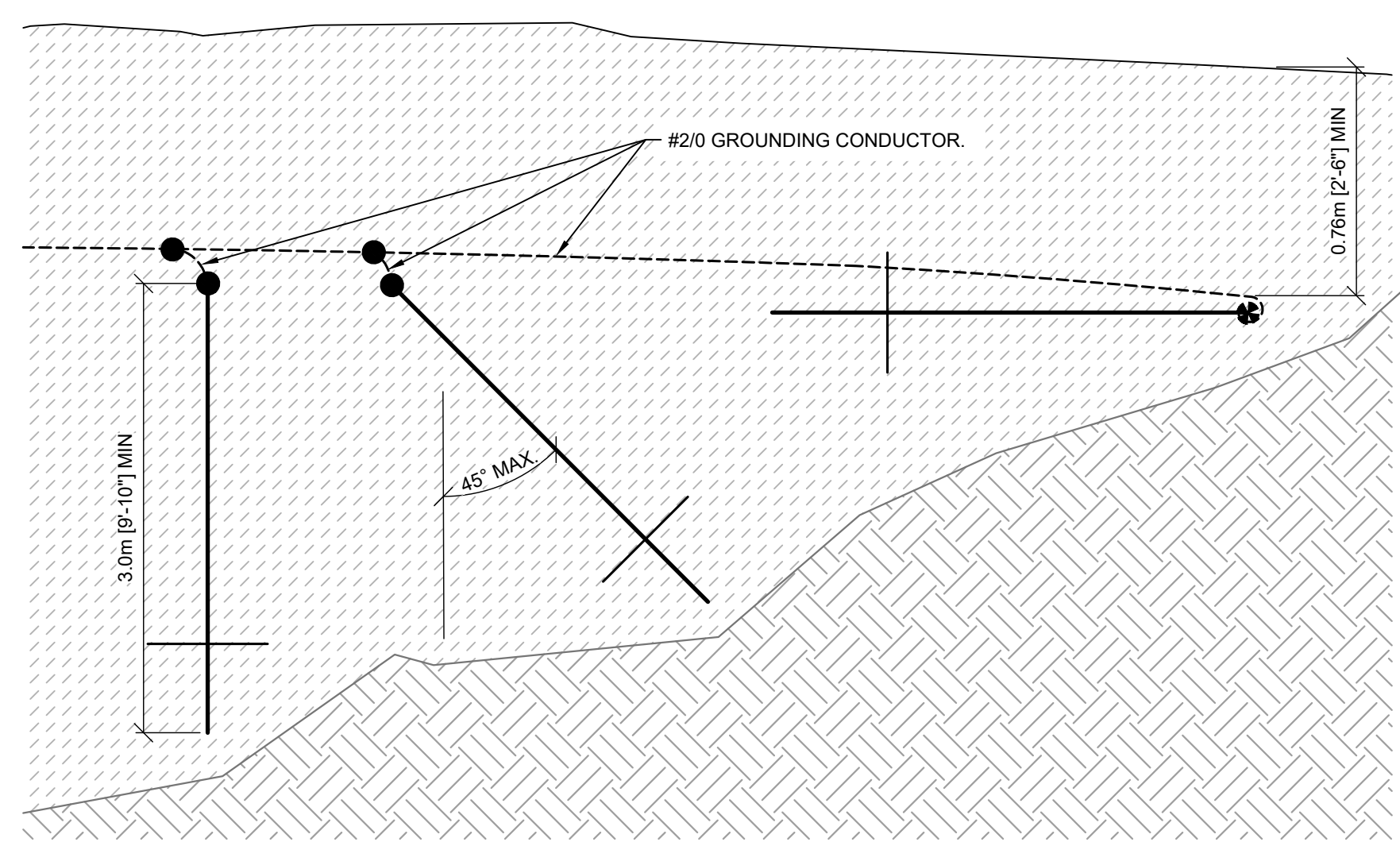
- LEGEND
- JUNCTION
  - ⊗ GROUND ROD
  - GROUND CONDUCTOR



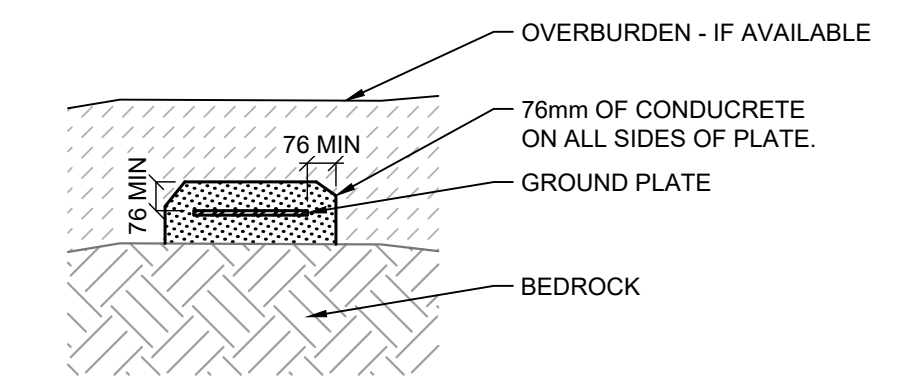
PLAN  
SCALE: 1:100  
1 GROUNDING PLAN



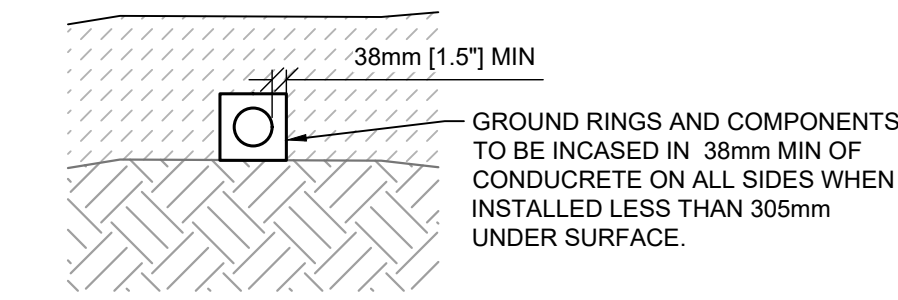
DETAIL  
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2 TRANSITION TO ABOVE GRADE



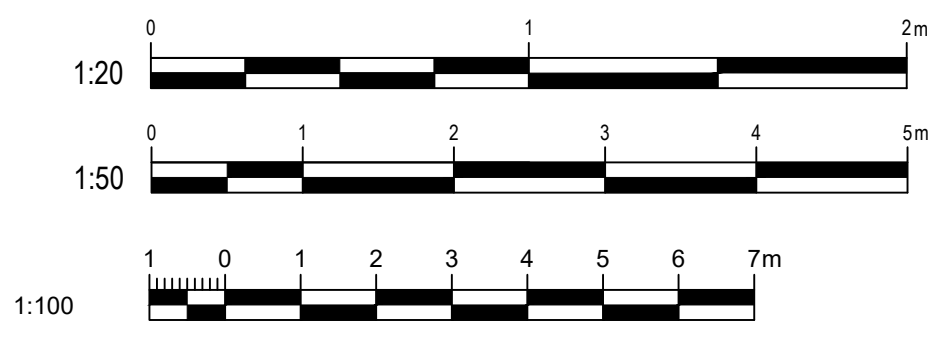
DETAIL  
SCALE: 1:20  
3 ANGLED GROUND ROD INSTALLATION



DETAIL  
SCALE: 1:20  
4 GROUND PLATE DETAIL



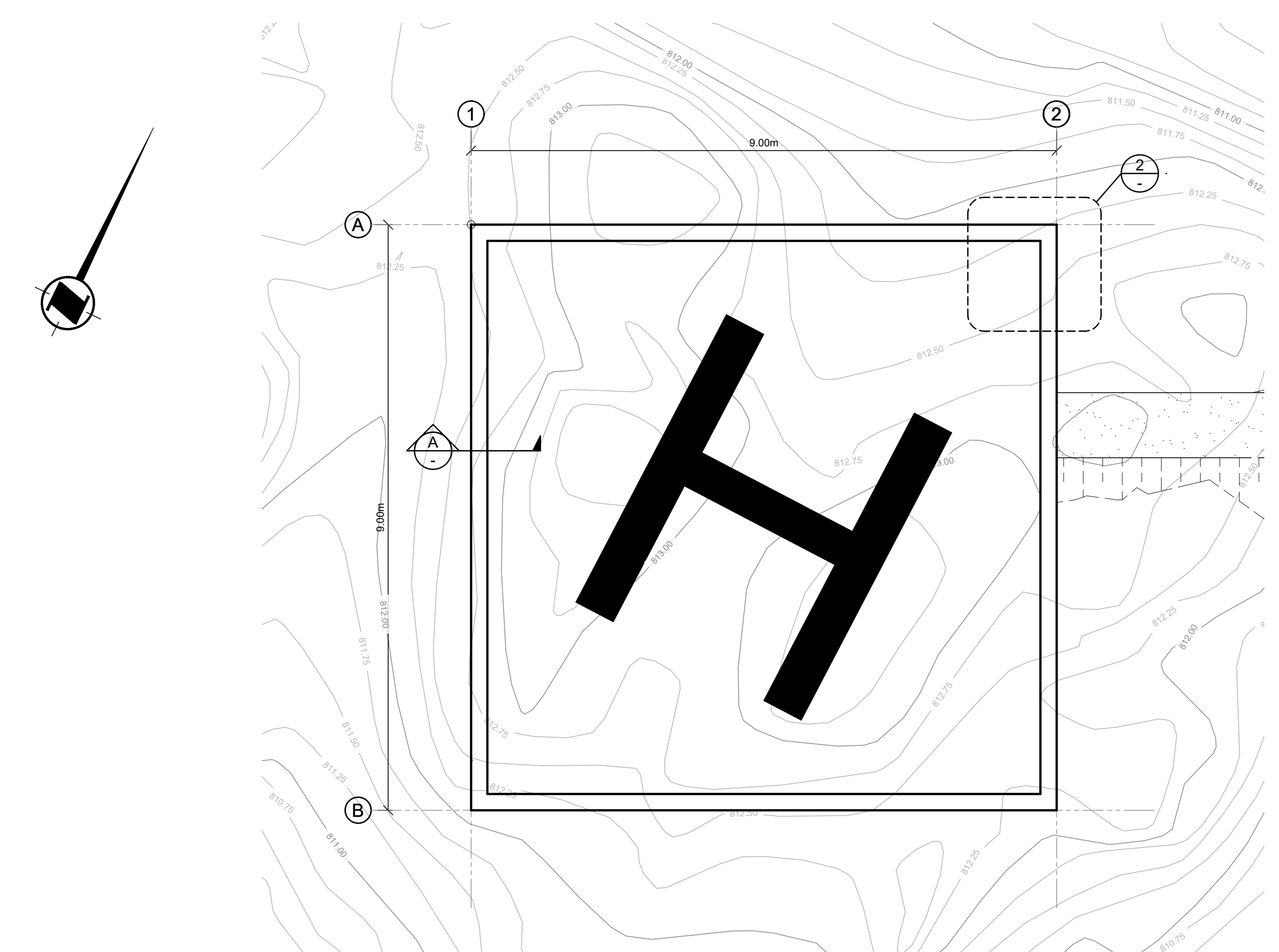
DETAIL  
SCALE: 1:20  
5 TRENCH WITH GEM DETAIL



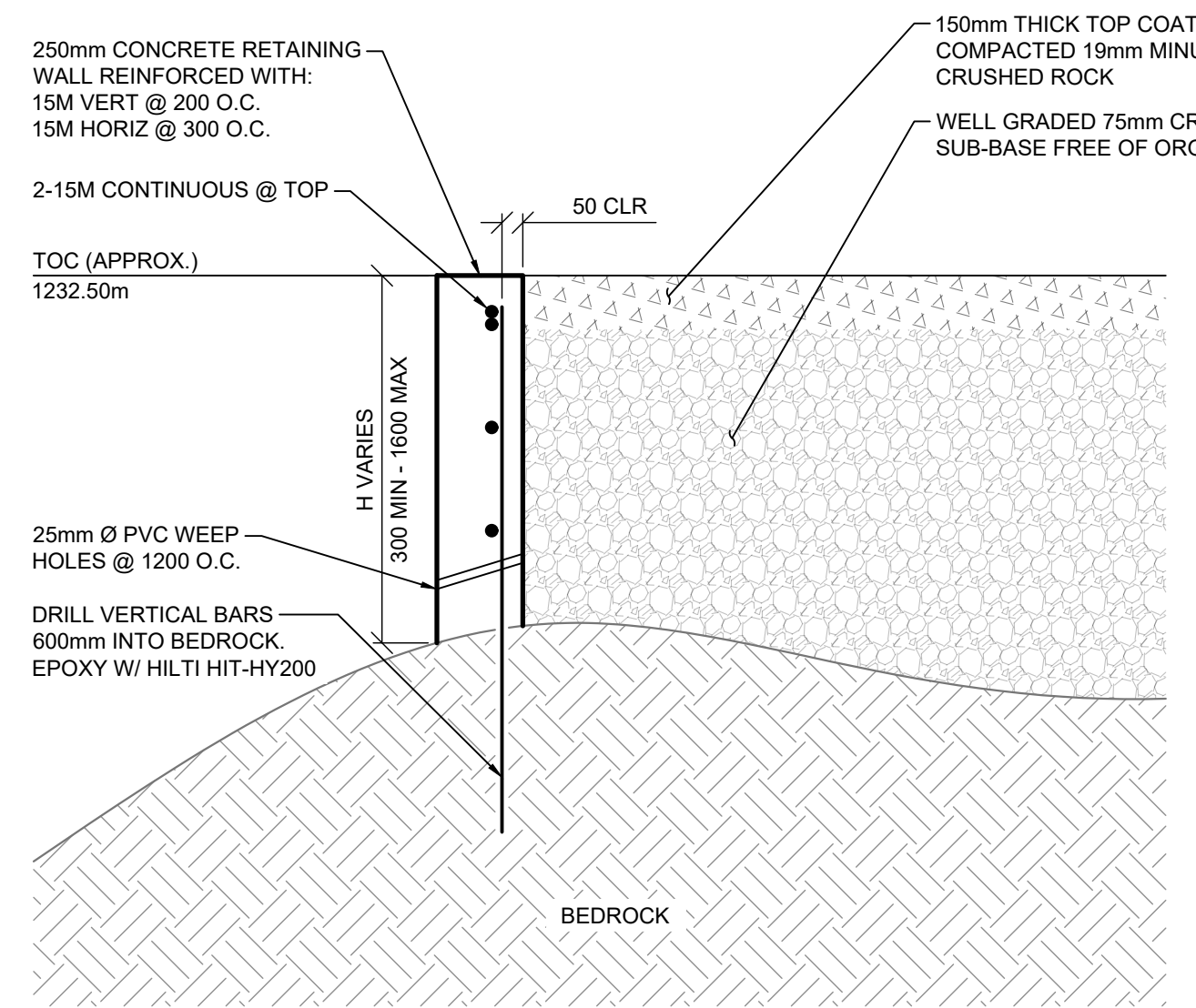
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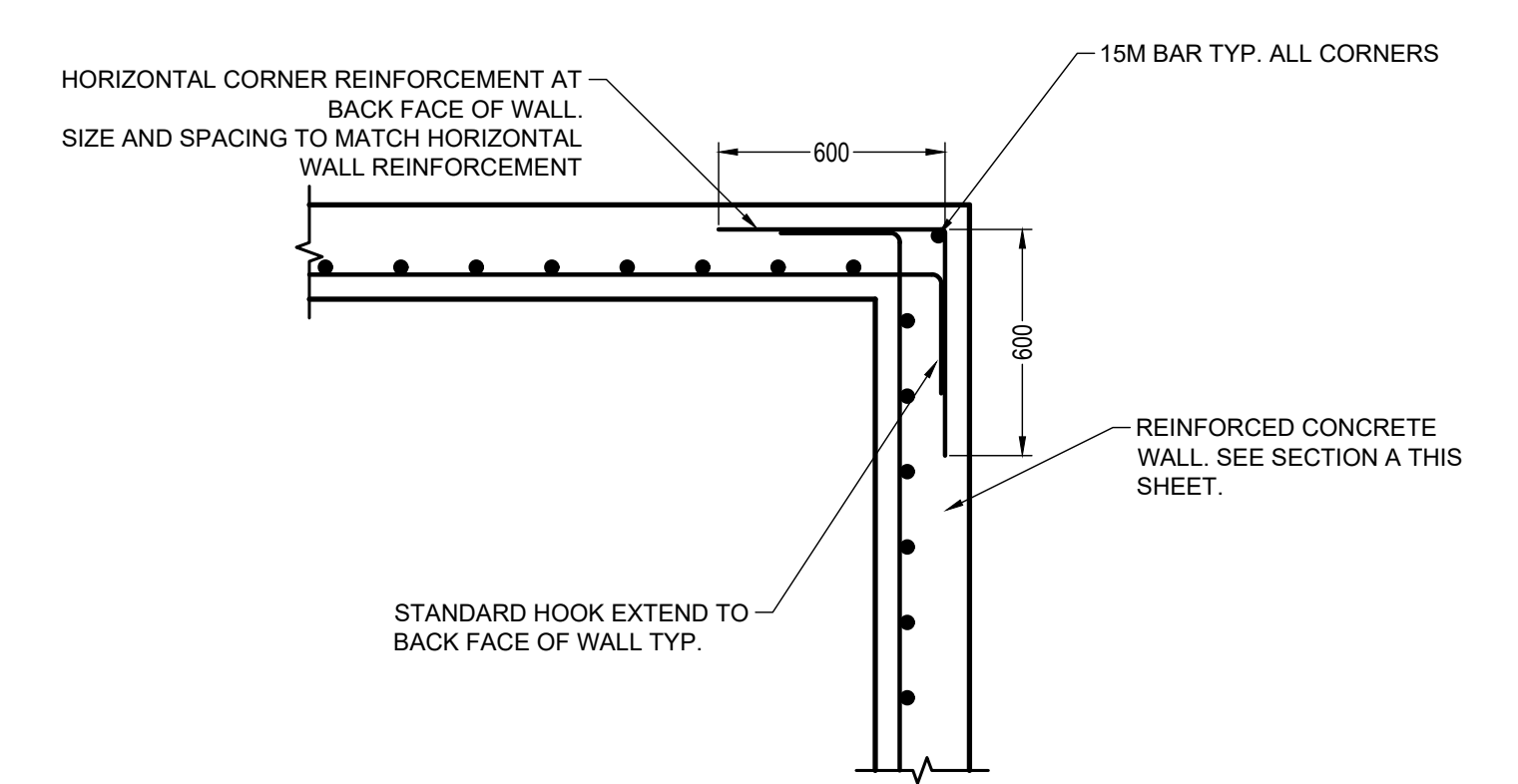
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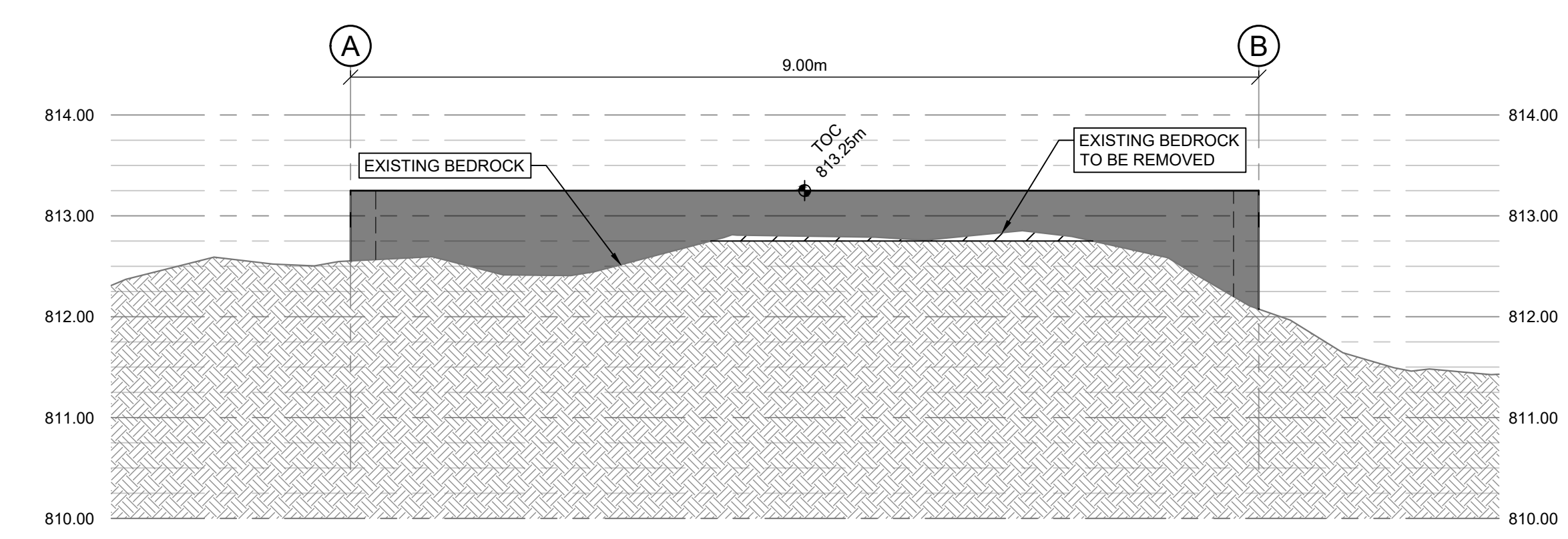
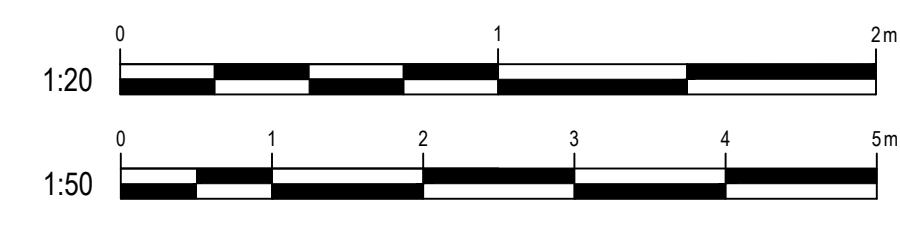
**PLAN**  
SCALE: 1:50  
**1 HELIPAD FOUNDATION**  
03



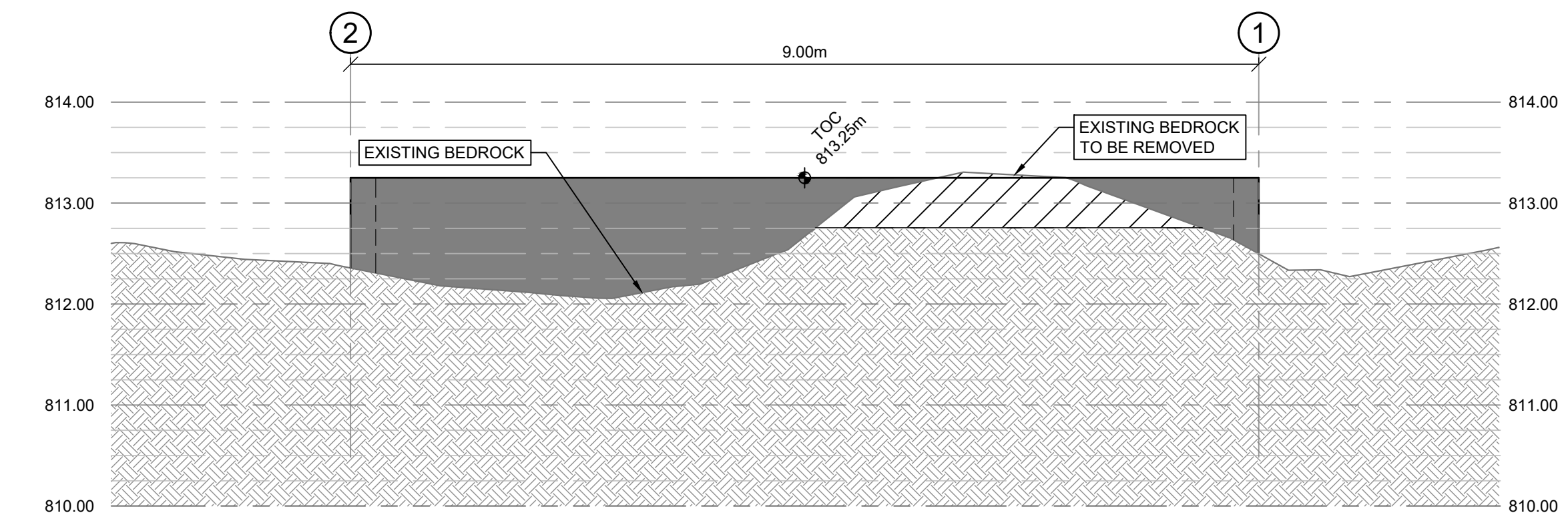
**SECTION A HELIPAD WALL**  
SCALE: 1:20



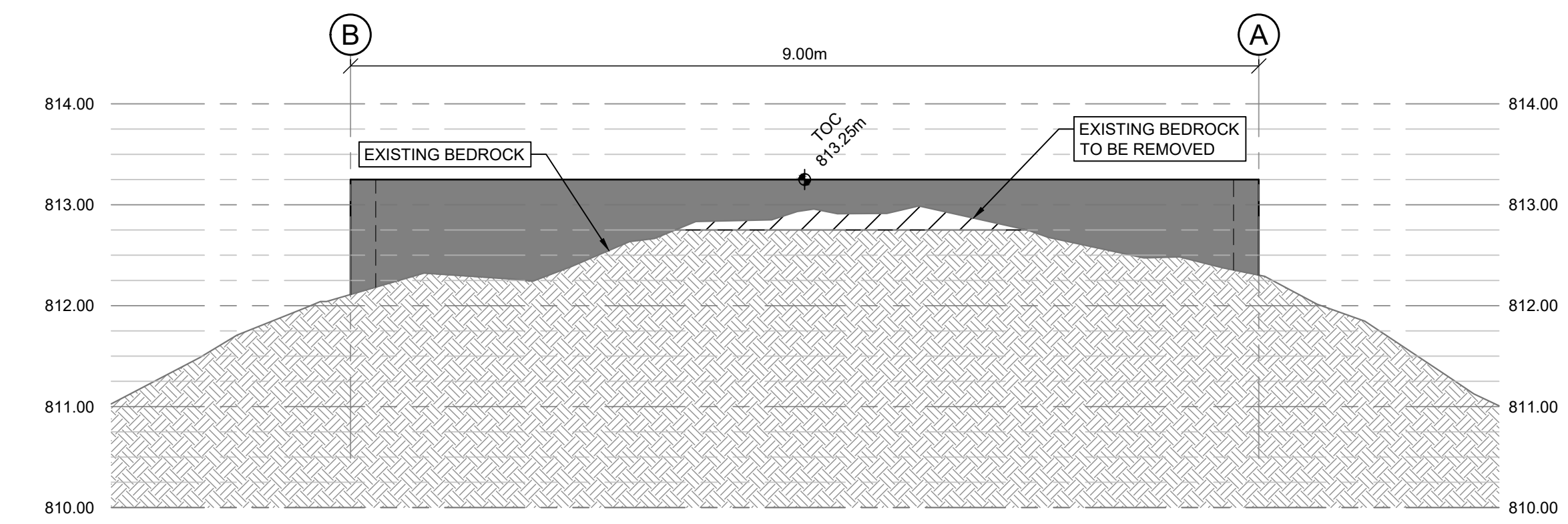
**DETAIL 2 HELIPAD CORNER**  
SCALE: 1:20



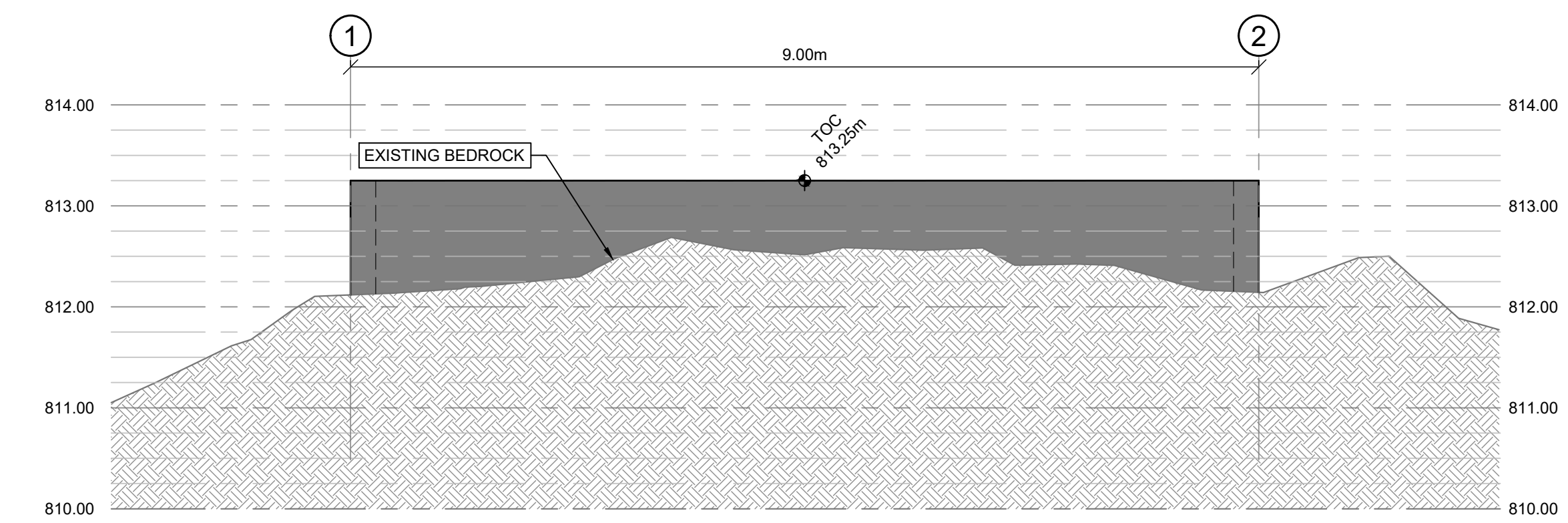
**ELEVATION B GROUND PROFILE AT GRIDLINE 1**  
SCALE: 1:50



**ELEVATION C GROUND PROFILE AT GRIDLINE A**  
SCALE: 1:50



**ELEVATION D GROUND PROFILE AT GRIDLINE 2**  
SCALE: 1:50

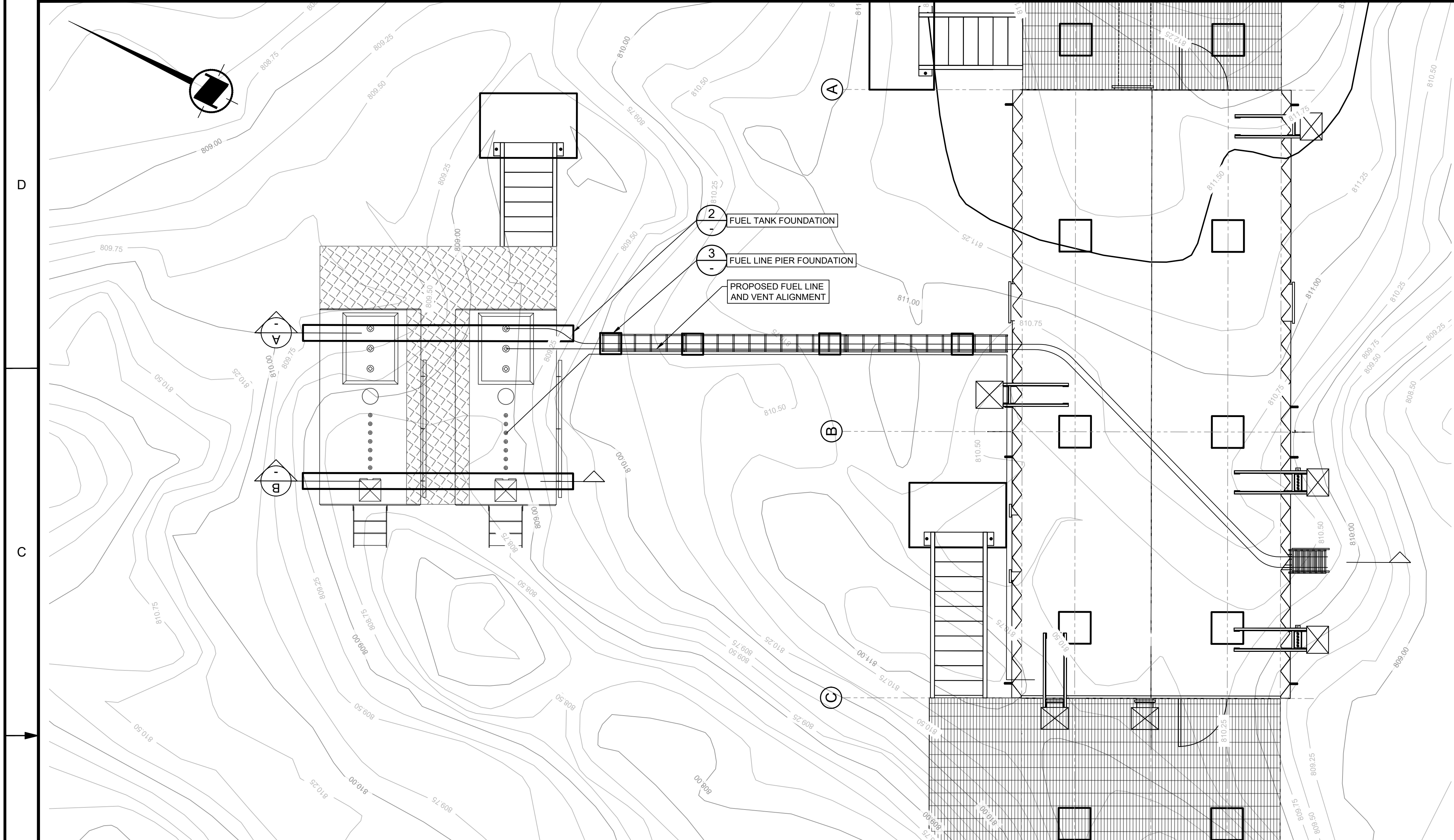


**ELEVATION E GROUND PROFILE AT GRIDLINE B**  
SCALE: 1:50

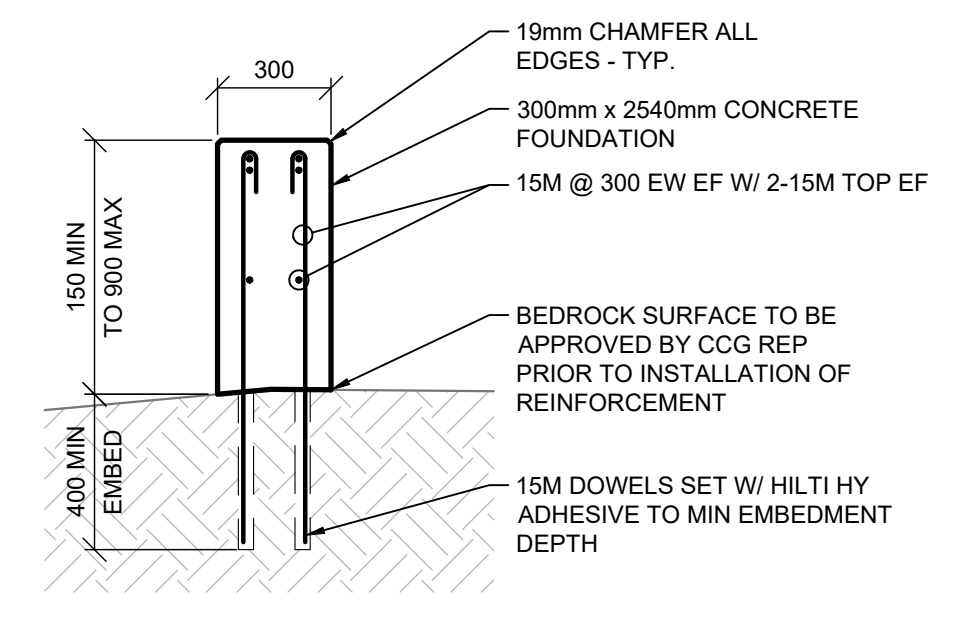
0	FOR TENDER	GR	2021-05-27
rev	description	by	date
Asset - Actif			
<b>MCTS TOWER SITE SAFETY MOUNTAIN</b>			
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File / Fichier: WM-628-1003 SAFETY MOUNTAIN SITE LAYOUT PACKAGE.DWG - Printed / Imprimé: 2021/05/28 9:11  
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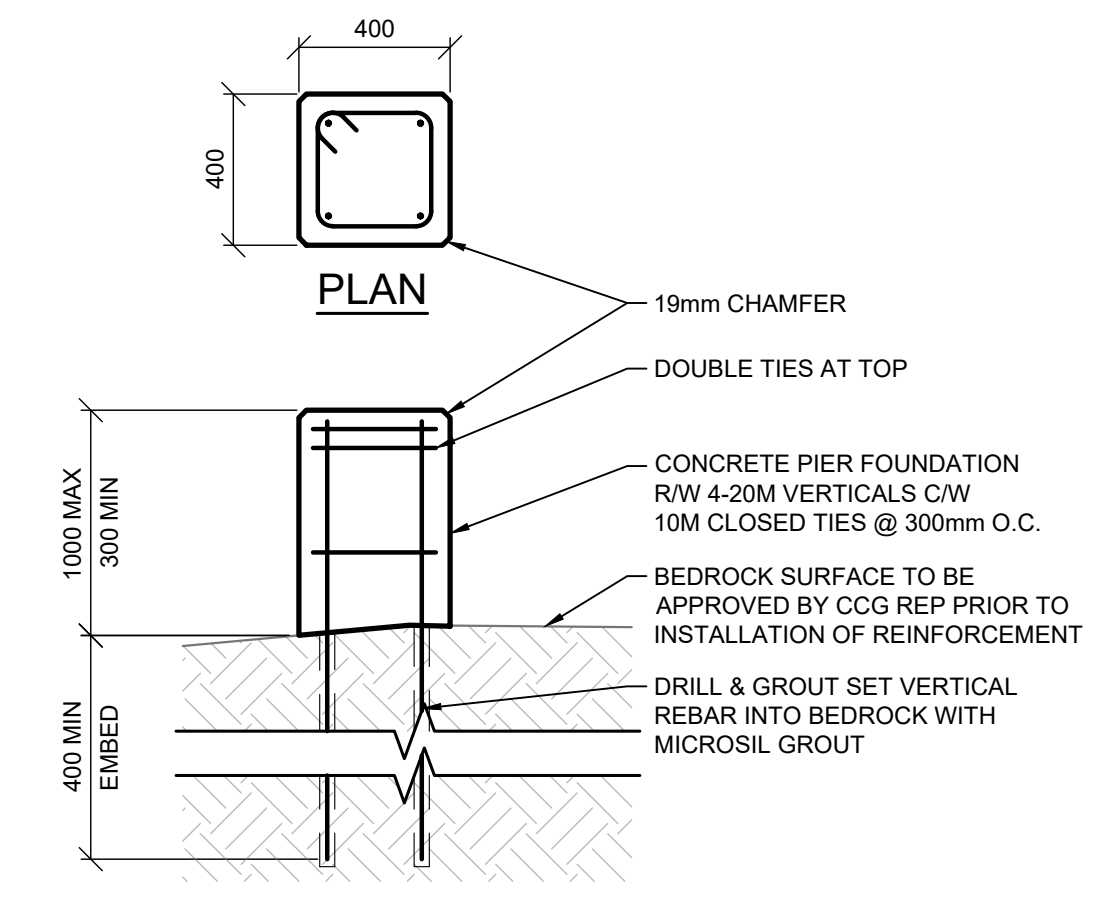




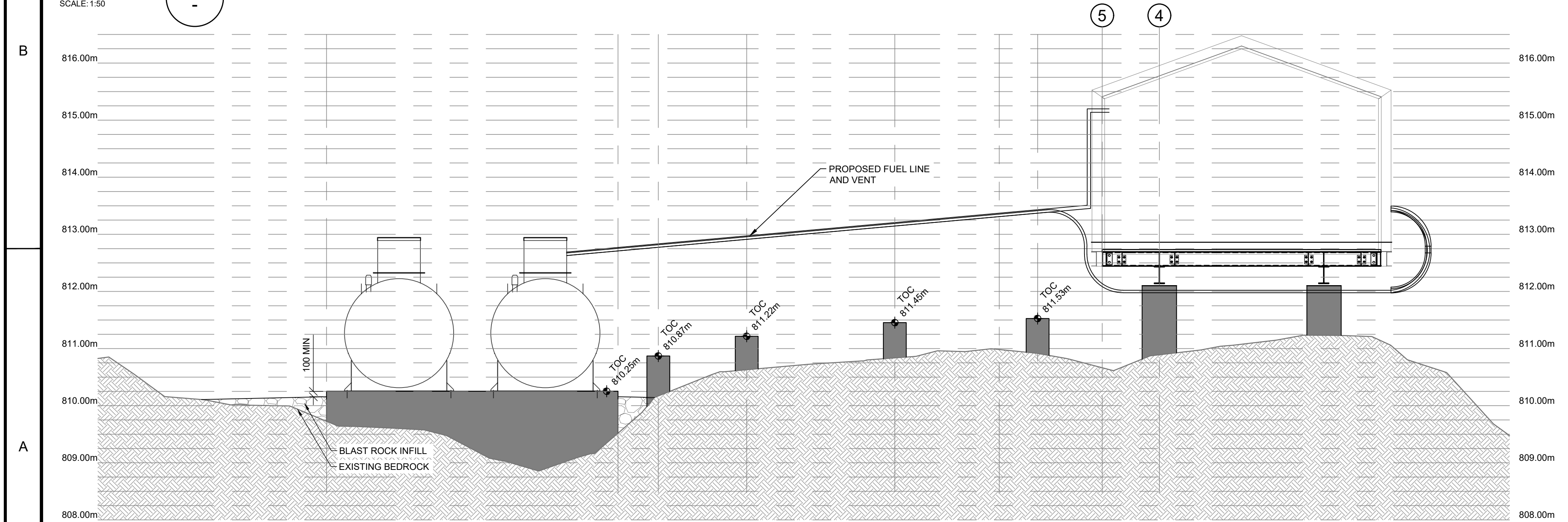
**PLAN 1 FUEL TANK LAYOUT**  
SCALE: 1:50



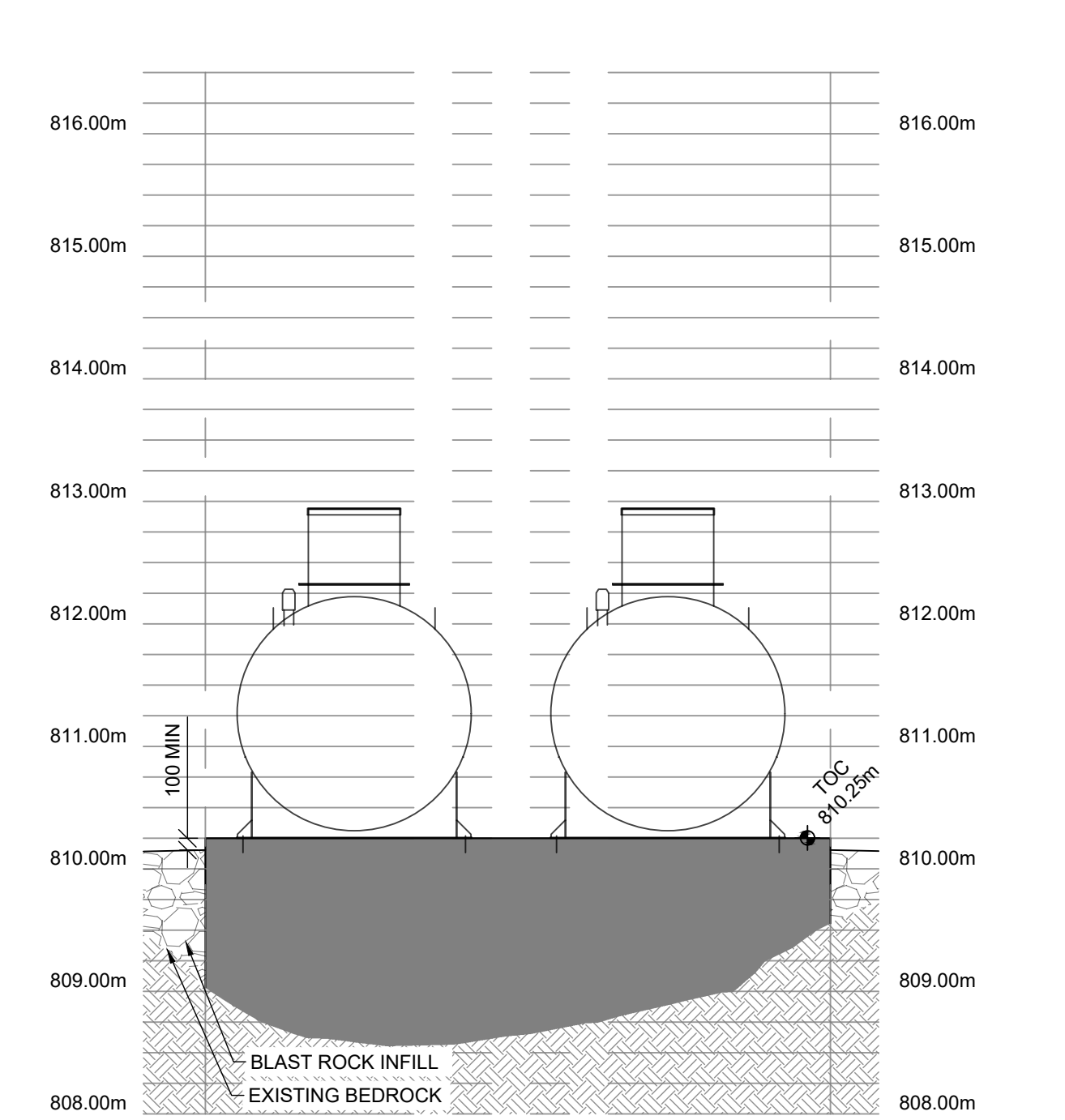
**DETAIL 2 FUEL TANK FOUNDATION**  
SCALE: 1:20



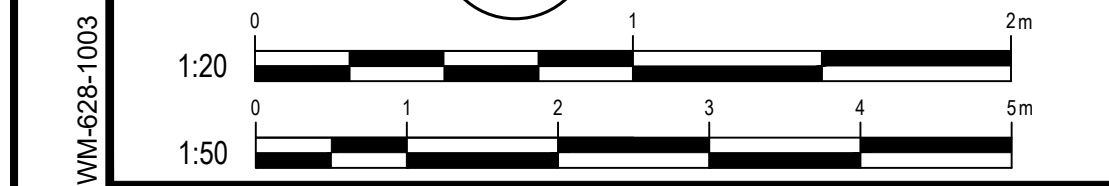
**DETAIL 3 FUEL LINE PIER FOUNDATION**  
SCALE: 1:20



**SECTION A FUEL ALIGNMENT AND EAST FUEL TANK FOUNDATION**  
SCALE: 1:50



**SECTION B WEST FUEL TANK FOUNDATION**  
SCALE: 1:50



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rev	description	by	date
Asset - Actif			
<b>MCTS TOWER SITE SAFETY MOUNTAIN</b>			
Drawing - Dessin			
<b>FUEL TANK DETAILS</b>			
drawn - dessiné		date	
GR		2021-05-27	
designed - conception		date	
SC		2021-05-27	
checked - vérifié		date	
BT		2021-05-27	
approved - approuvé		date	
BT		2021-05-27	
CCG ref. no. - no. ref. GCC		scale - échelle	
8B200-19003		AS SHOWN	
drawing no. - no. dessin		sheet-feuille	rev-rév
WM-628-1003		09/09	0

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