

42°34'

42°34'30"

42°35'

42°35'30"

42°36'

42°36'30"

42°37'

42°37'30"

Irrigation Project Components



-0°9'30"
-0°10'
-0°10'30"
-0°11'
-0°11'30"
-0°12'
-0°12'30"
-0°13'
-0°13'30"
-0°14'
-0°14'30"
-0°15'

-0°9'30"
-0°10'
-0°10'30"
-0°11'
-0°11'30"
-0°12'
-0°12'30"
-0°13'
-0°13'30"
-0°14'
-0°14'30"
-0°15'

Hajtweyne

Qamqam

Gobwayn

Intake works-115kW-330m3/hr-70m
Intake (solarised)

Waterpan storage
WATER-PAN
(Storage - 7,500m3)

Hajtweyne Gravity DN200mm
5.8Km (HDPE)

Qamqam Branch DN200mm-2.5Km
(HDPE)

Rising Main DN 315mm-2.4Km
(HDPE)

Gobwayn Gravity DN200mm-1.95Km (HDPE)

Gobwayn Line 1 DN160mm-3.7Km
(HDPE)

Gobwayn Line 2 DN160mm-2.0Km
(HDPE)

- Key locations
- Farms_kismayo
- DN225mm_Gravity line (HDPE)
- Gobwayn_Line 1_DN160mm-3.7Km (HDPE)
- Gobwayn_Line 2_DN160mm-2.0Km (HDPE)
- Gobwayn_Gravity_DN200mm-1.95Km (HDPE)
- Hajtweyne_Gravity_DN200mm-5.8Km (HDPE)
- Qamqam_Branch_DN200mm-2.5Km (HDPE)
- Rising Main_DN 315mm-2.4Km (HDPE)
- <all other values>
- Centers



42°34'

42°34'30"

42°35'

42°35'30"

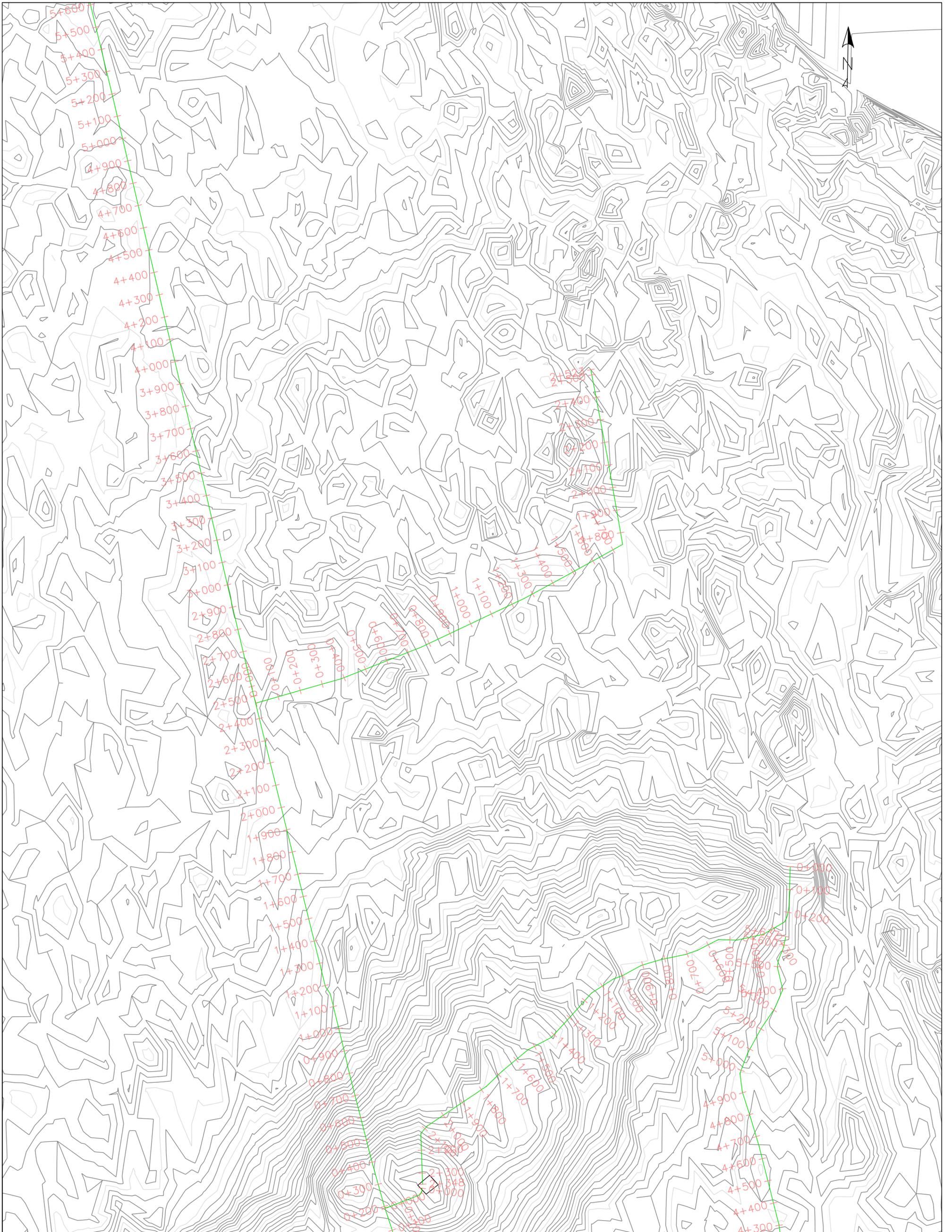
42°36'

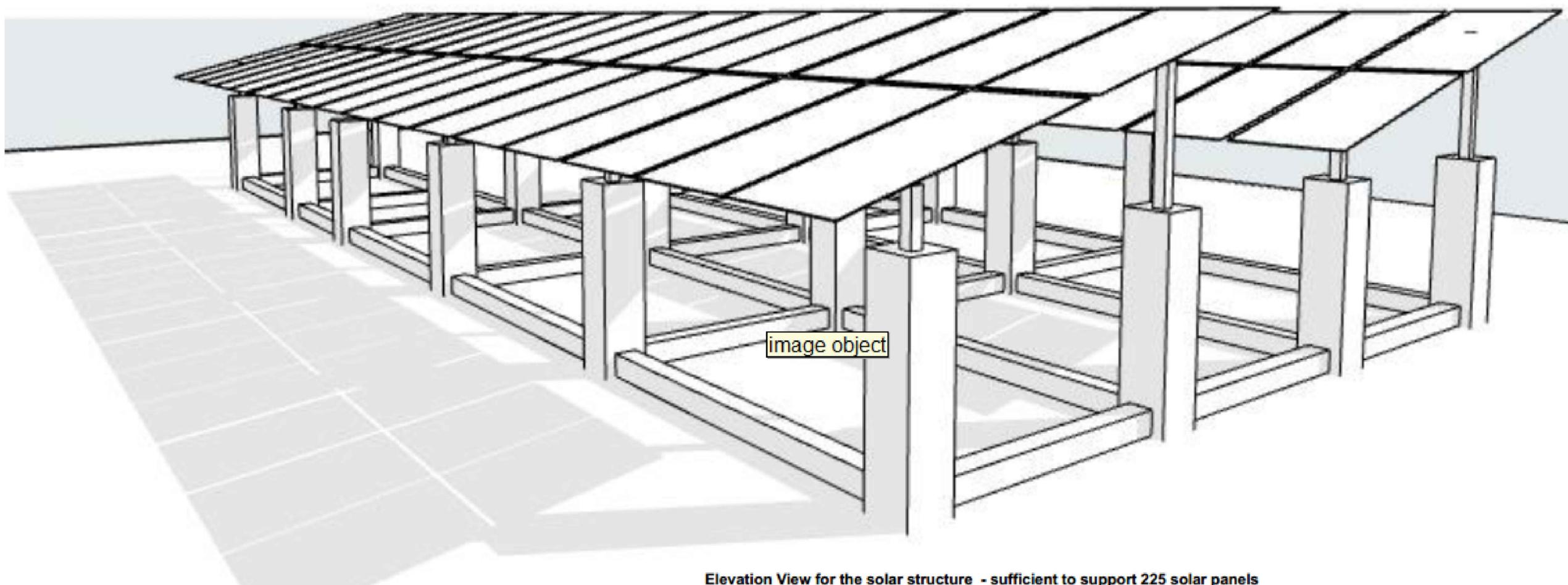
42°36'30"

42°37'

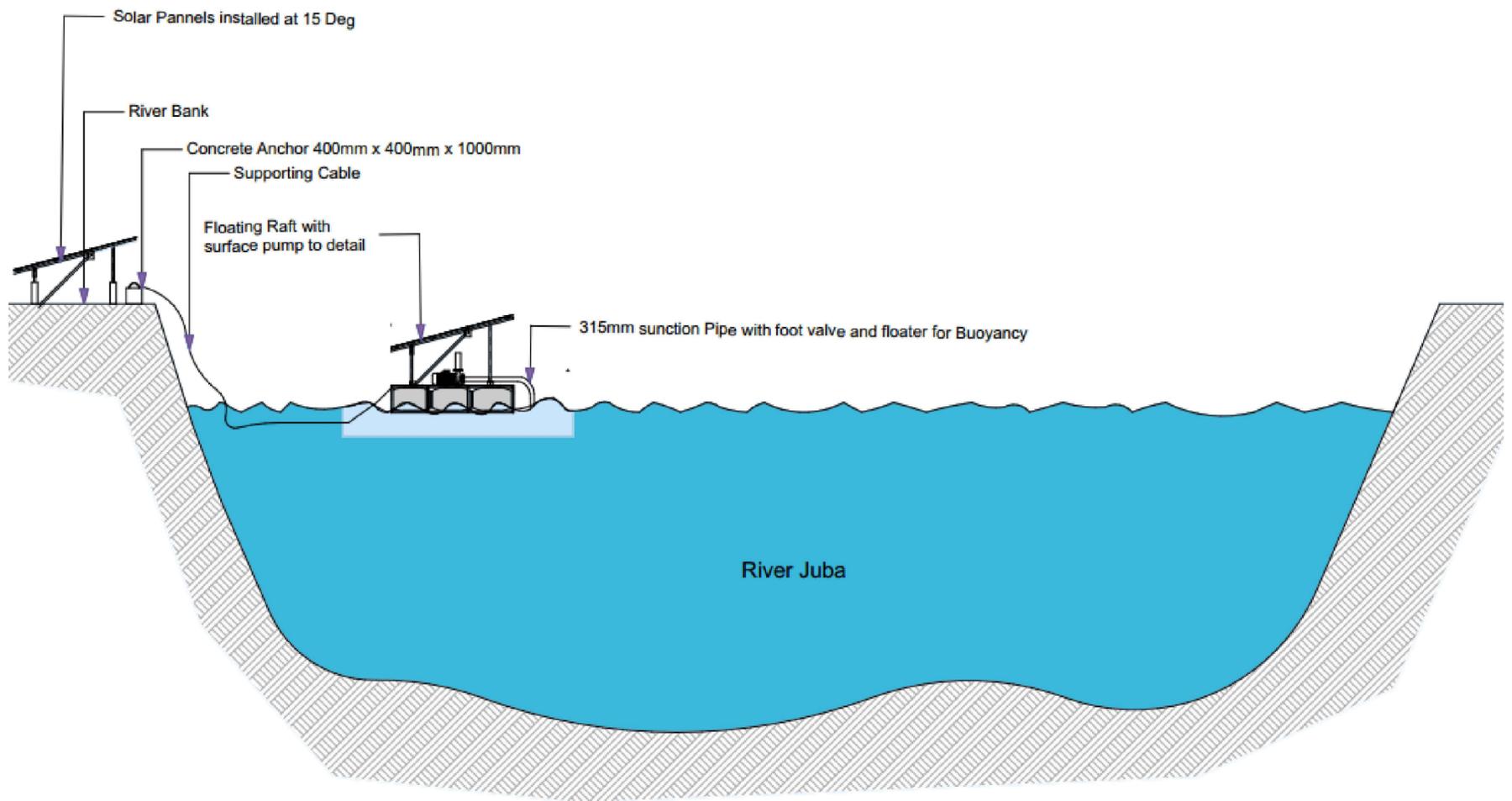
42°37'30"

Maxar

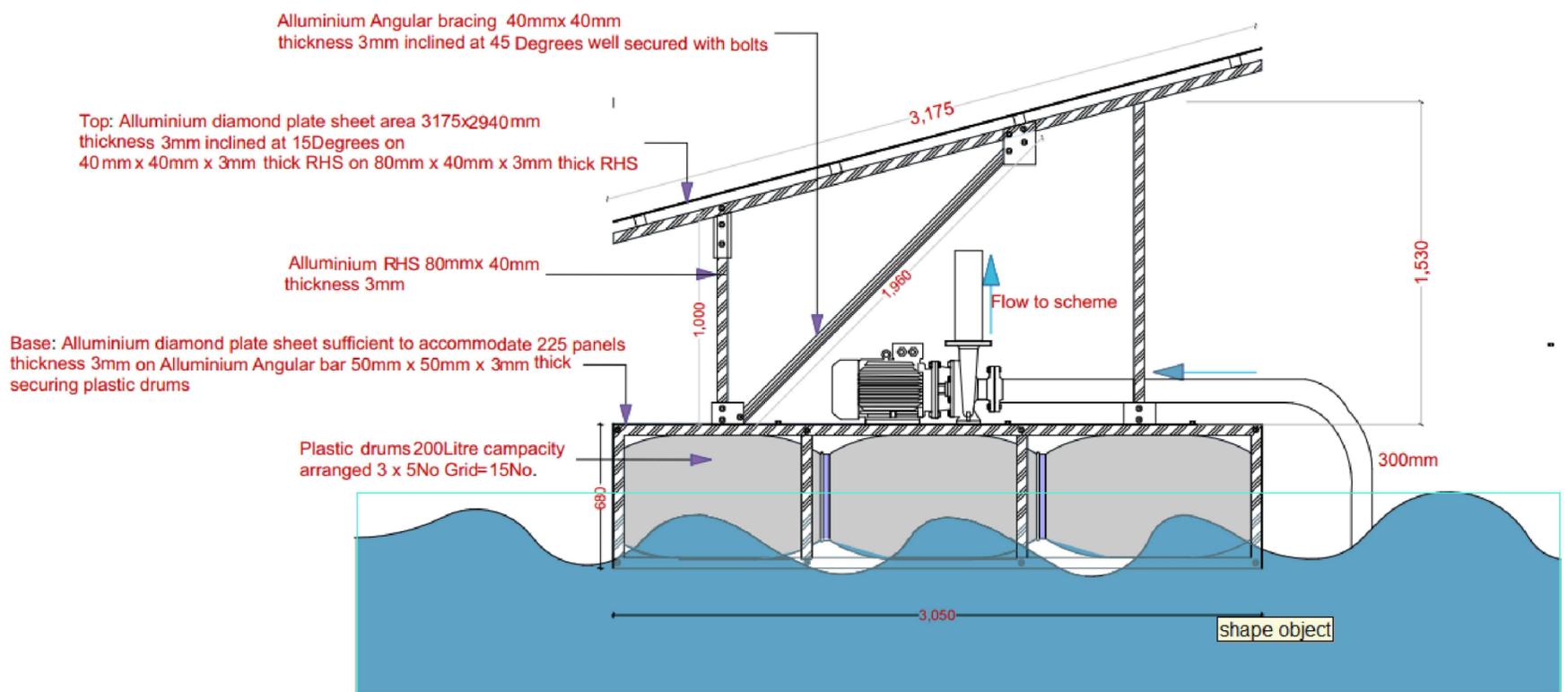




Elevation View for the solar structure - sufficient to support 225 solar panels

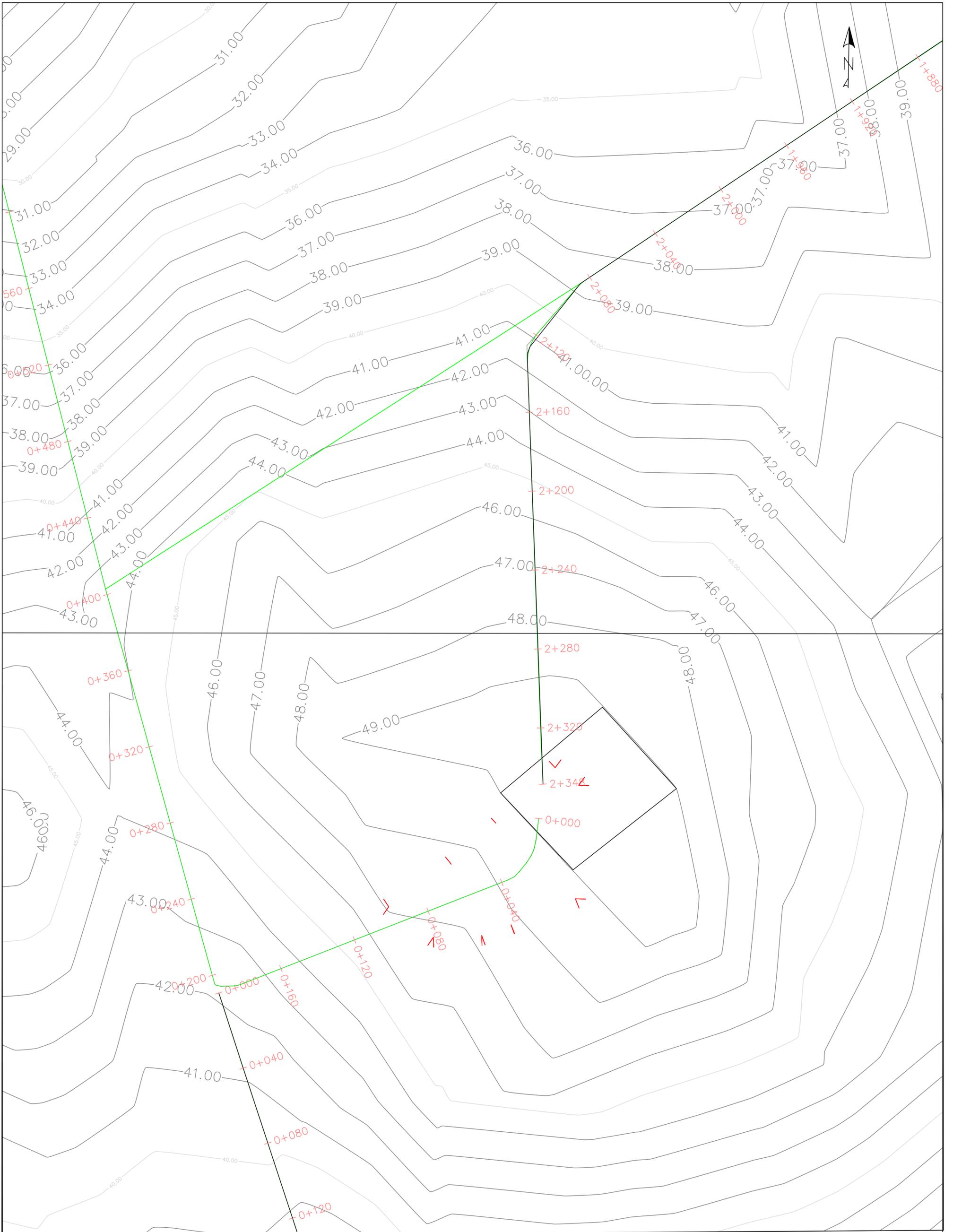


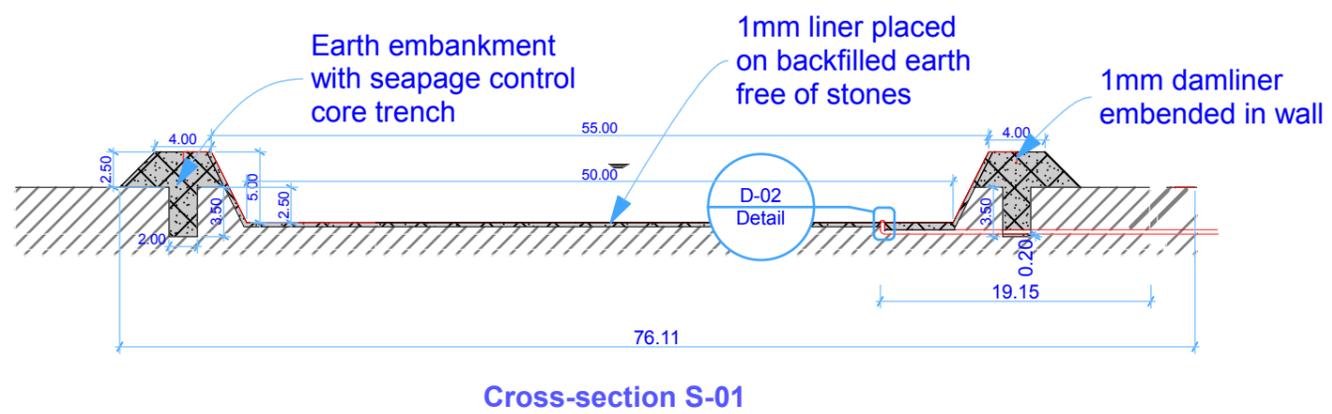
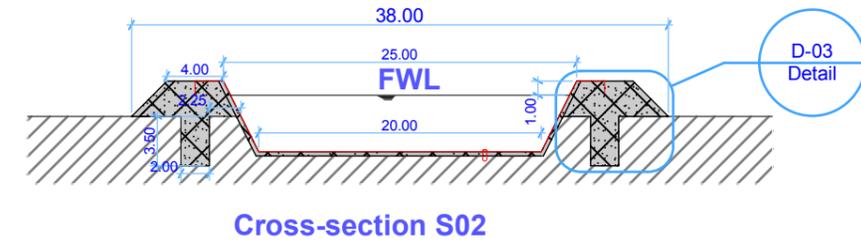
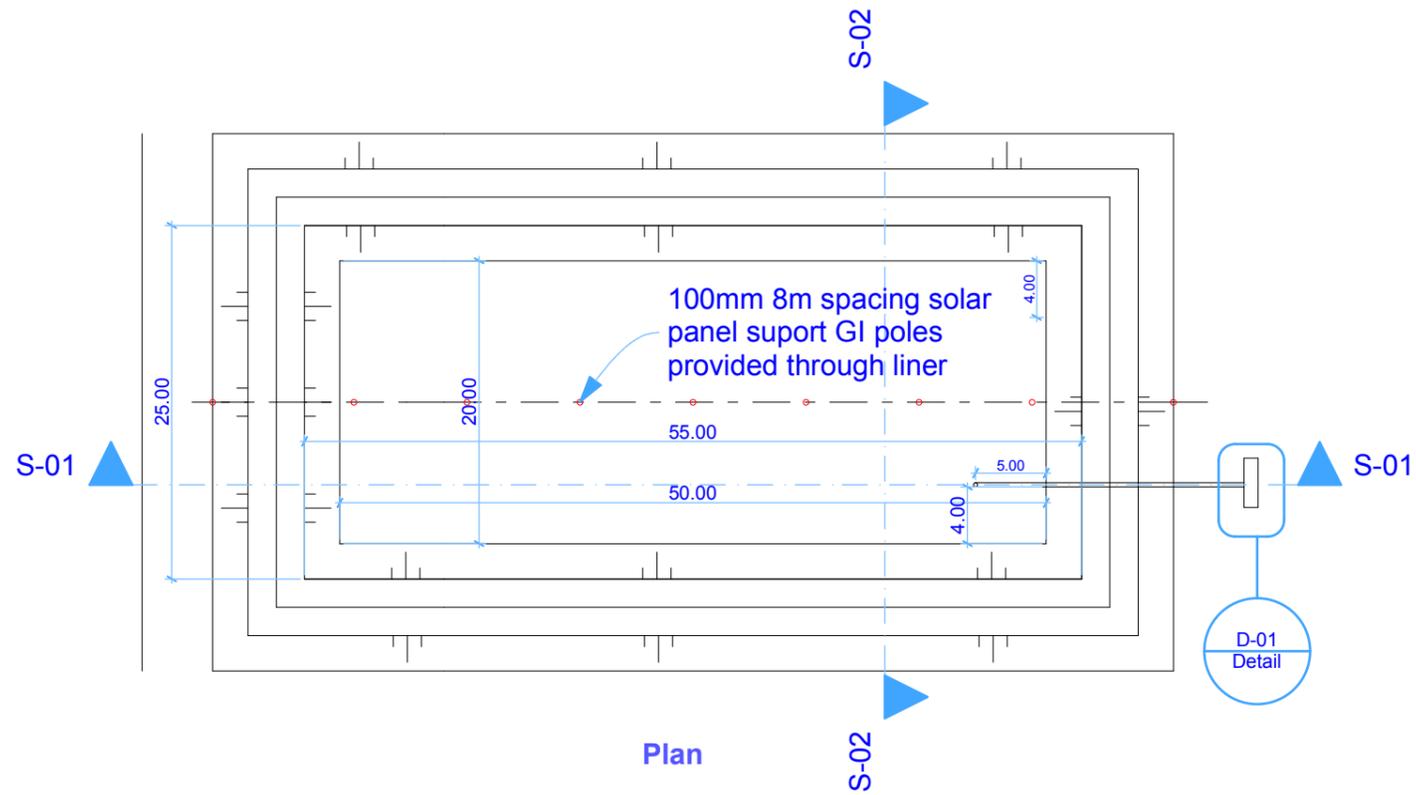
Not to scale (read)



FLOATING RAFT DETAILS

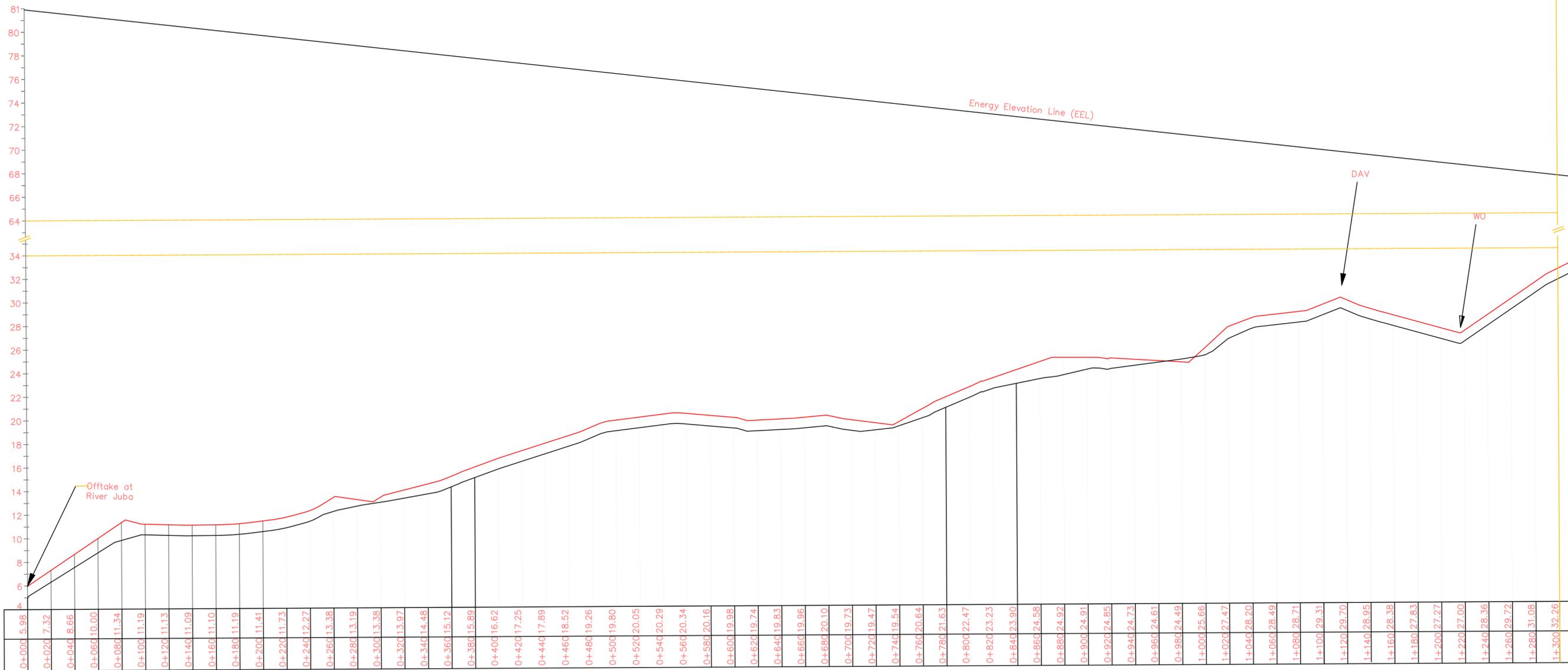
NOT TO SCALE - Read the diagram

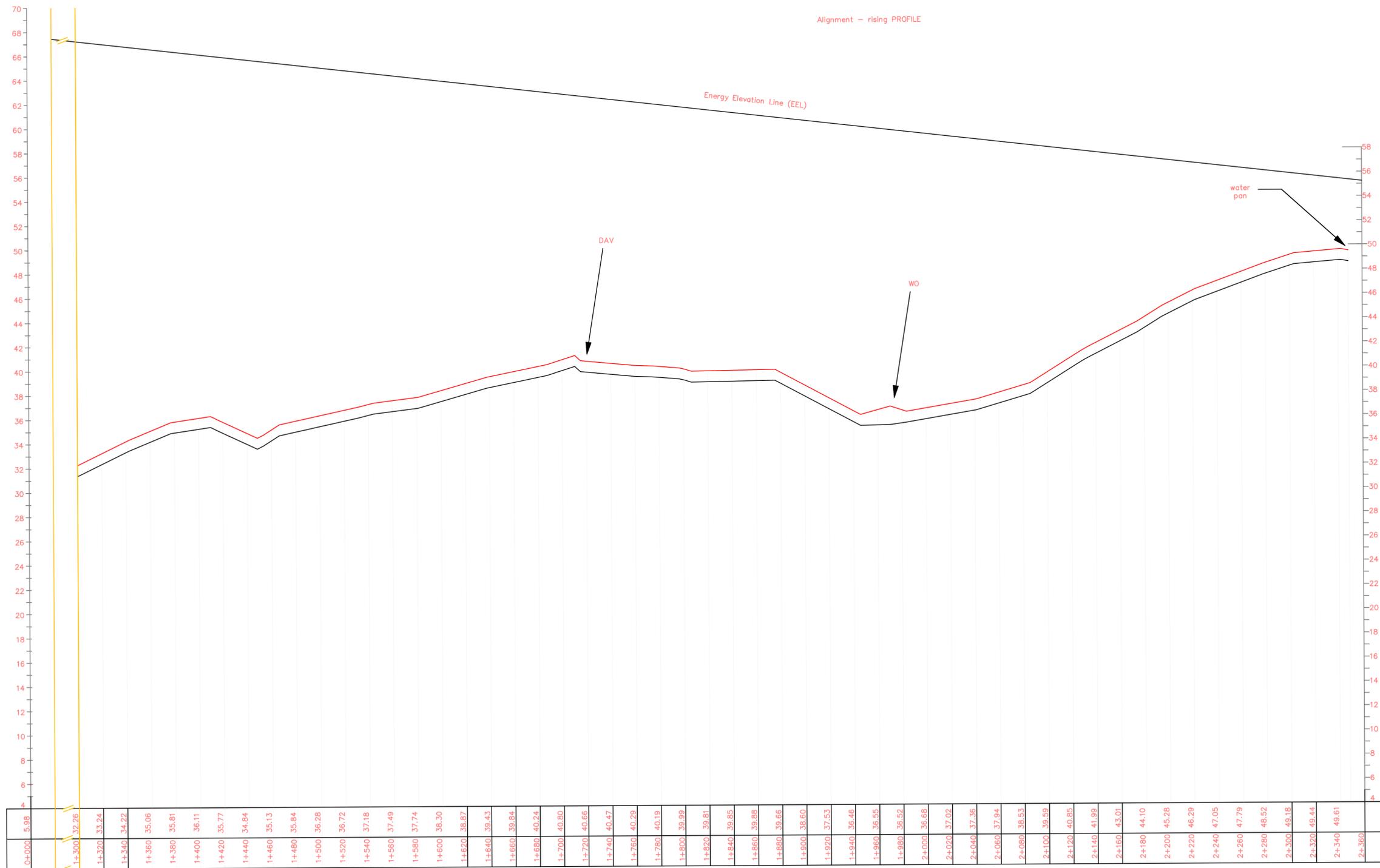




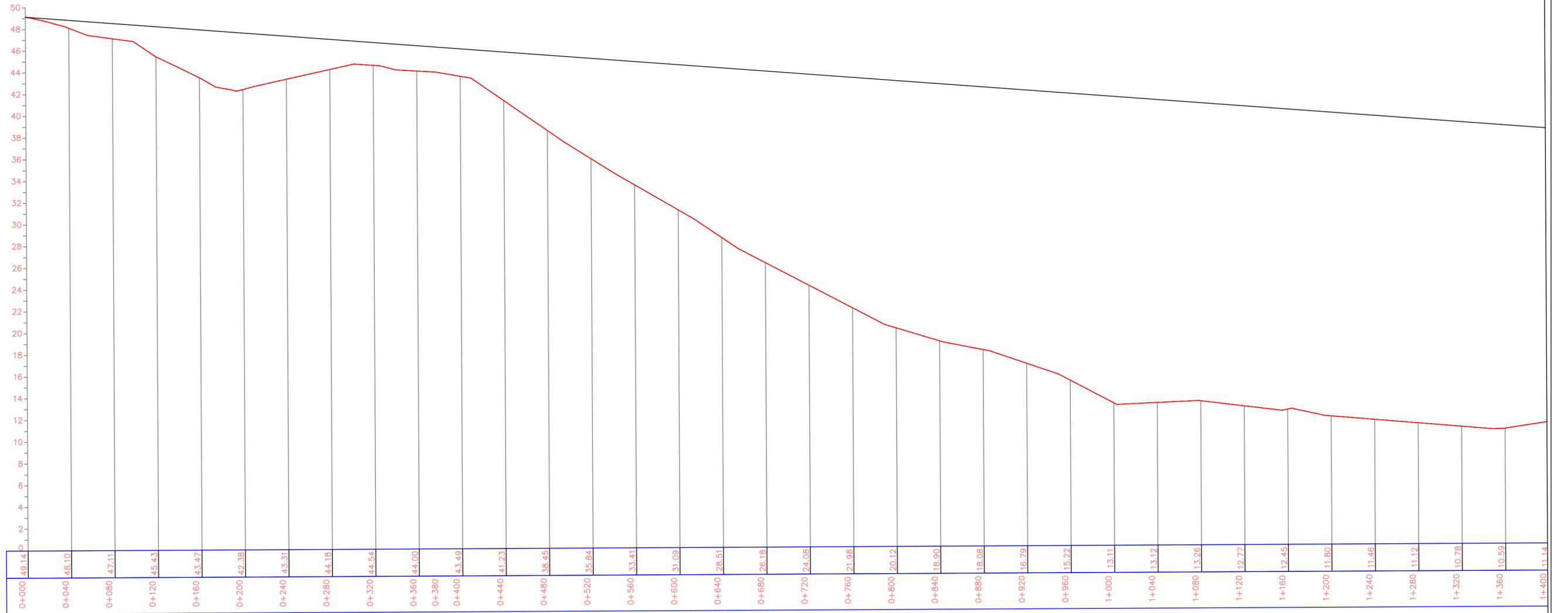


Alignment – rising PROFILE

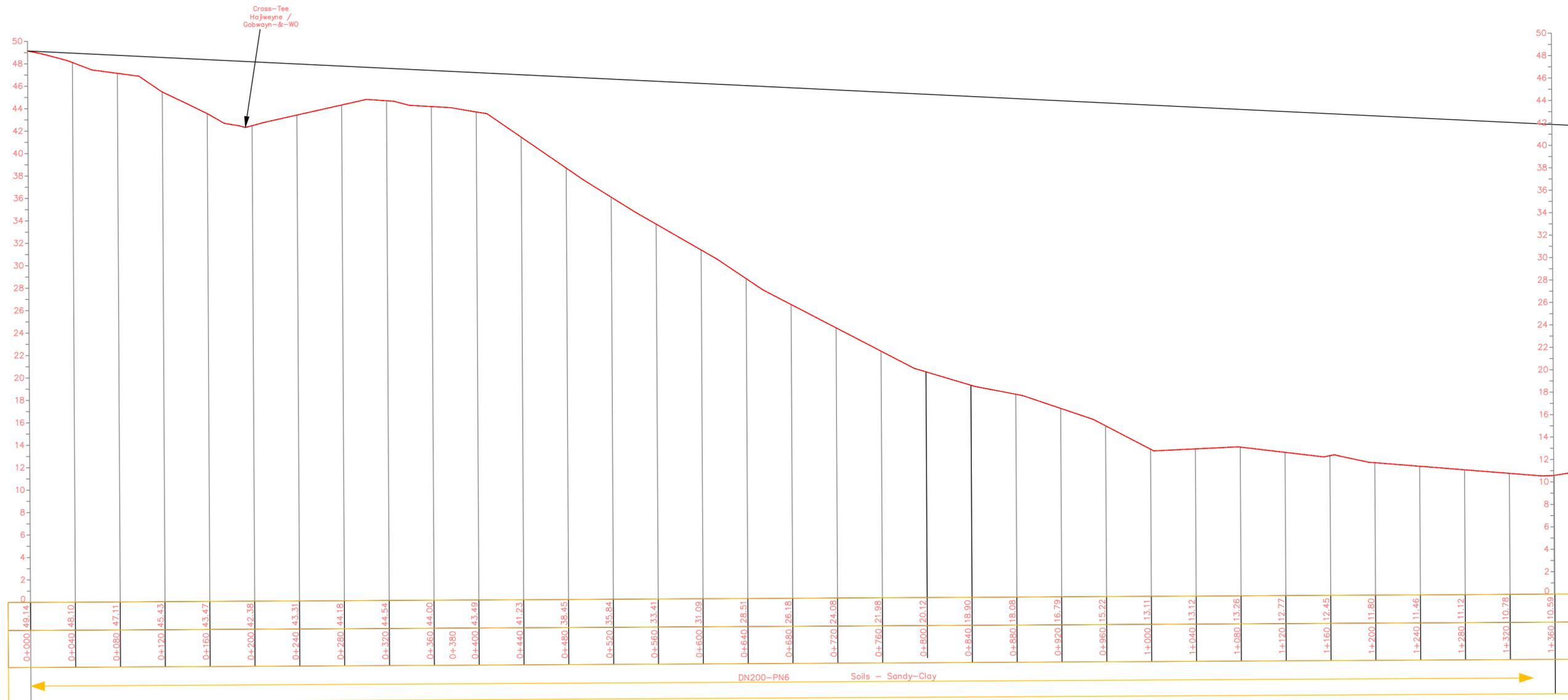


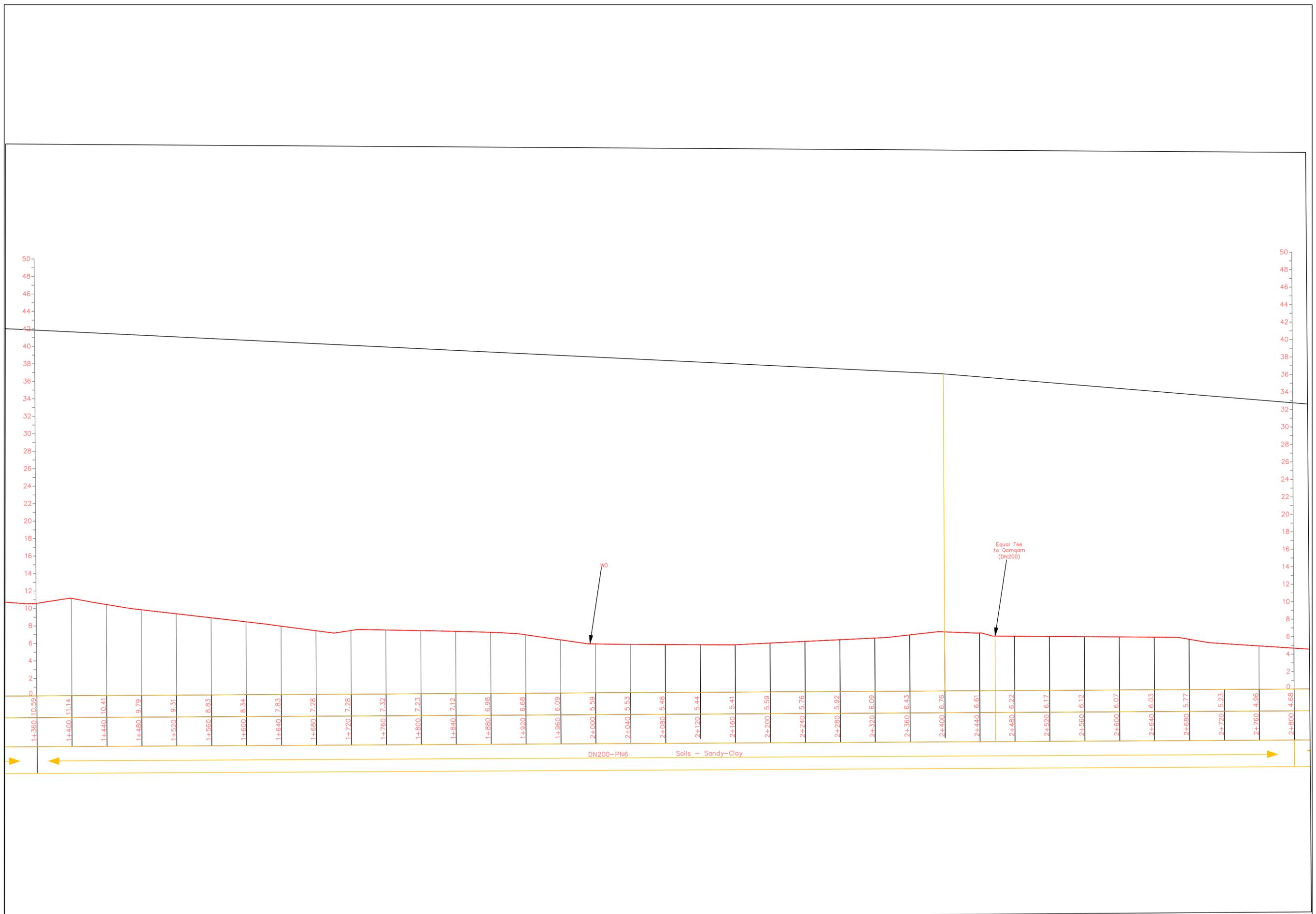


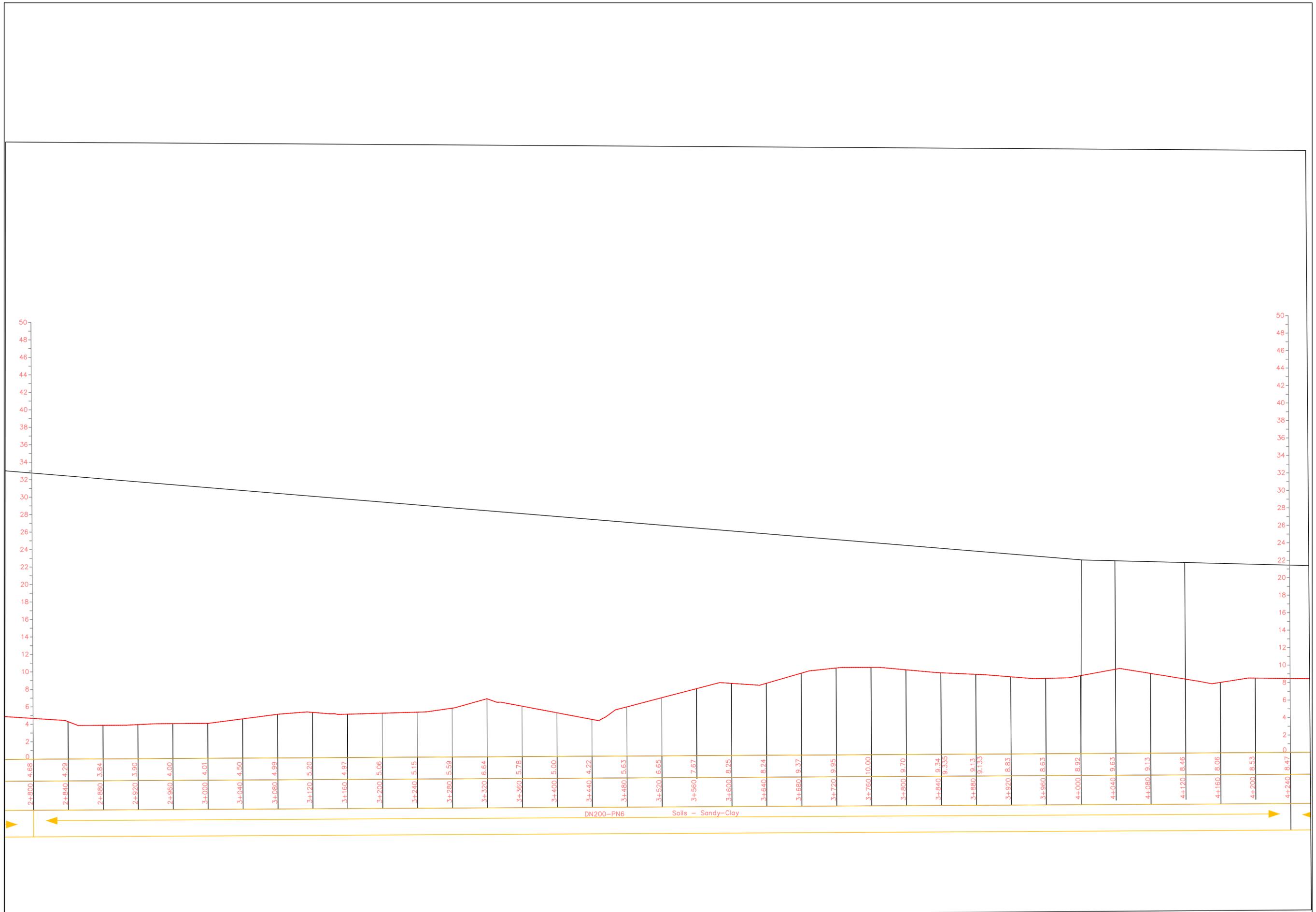
Alignment – Hajihaji PROFILE

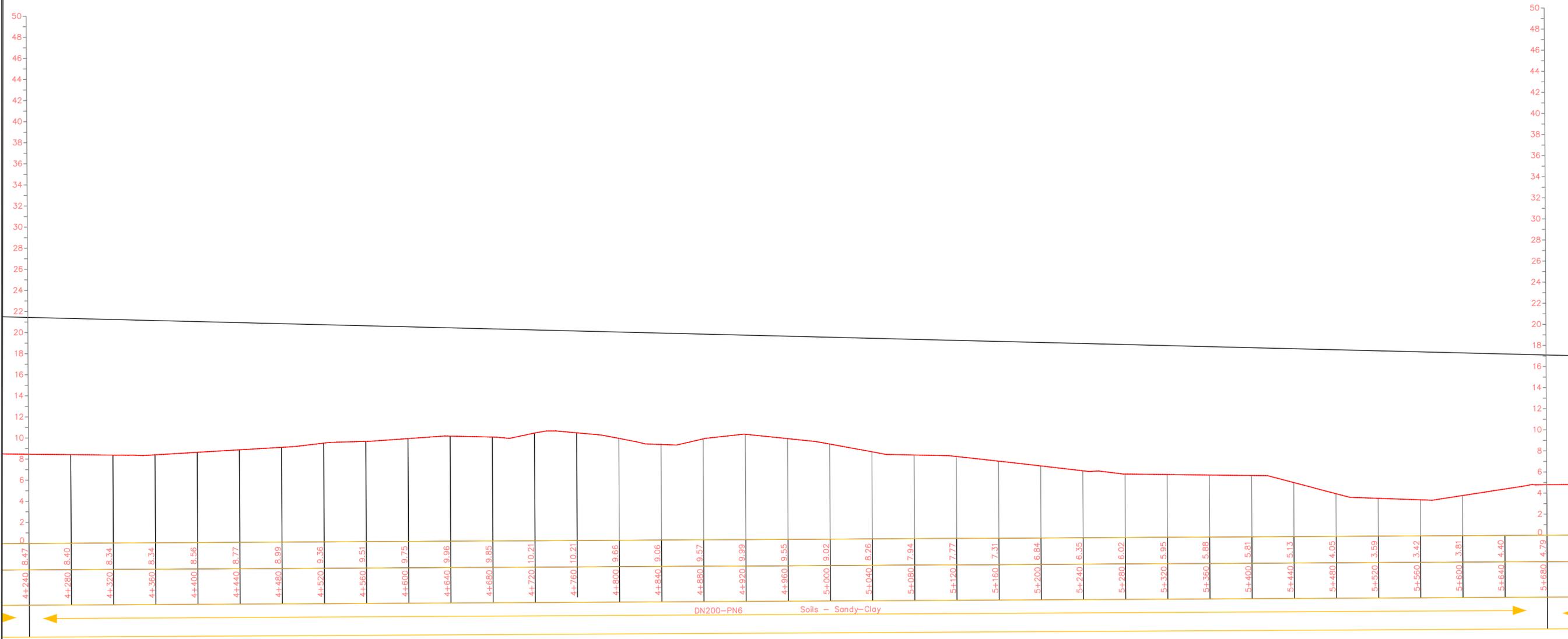


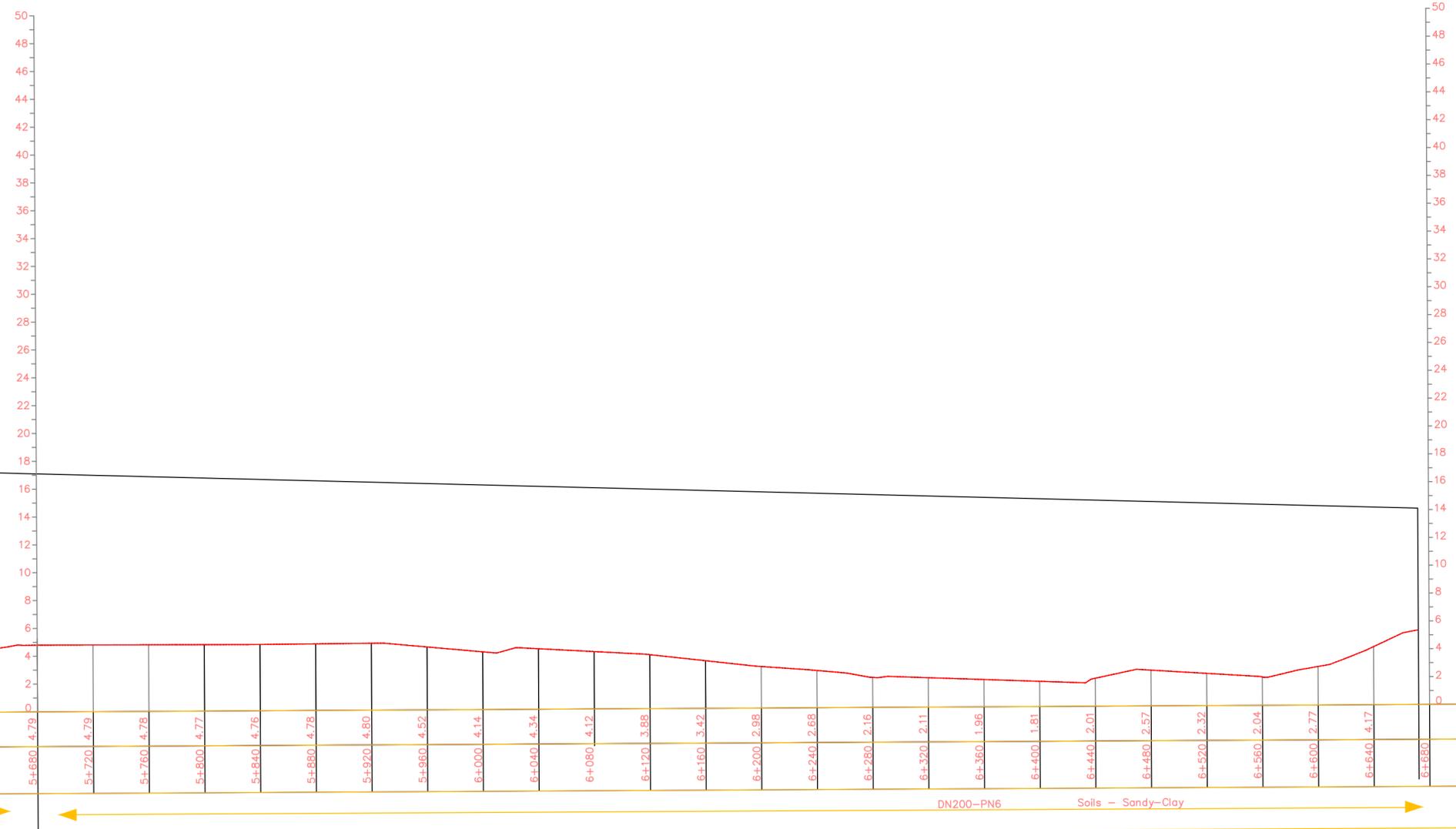
Alignment - Hajhaji PROFILE











Project Name:
Promoting Climate-resilient Food Security in Southern Somalia Project

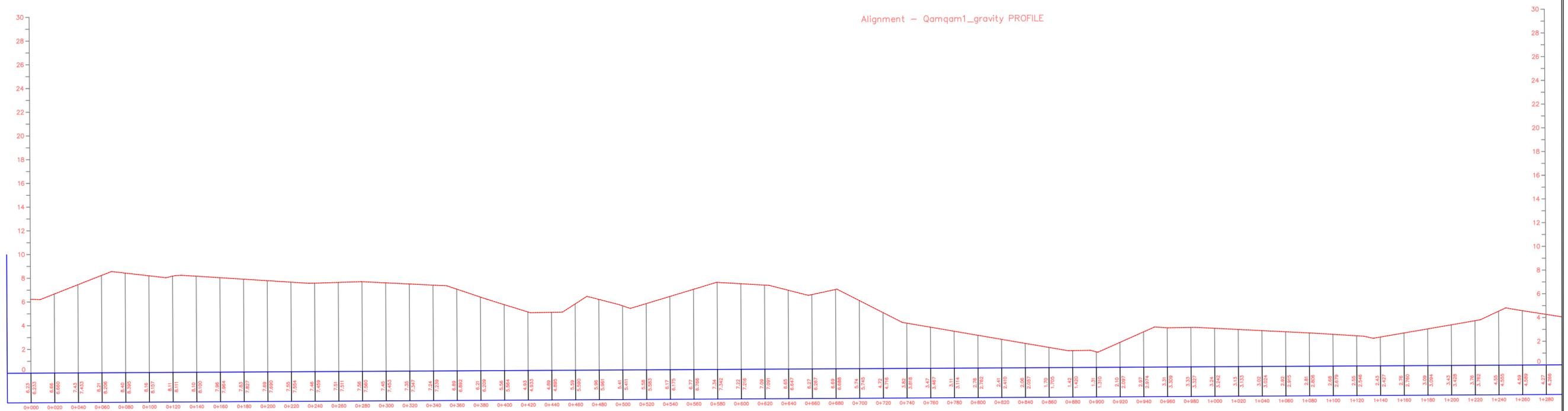
Client
giz Promoting Climate-resilient Food Security in Southern Somalia Project **CFSP**

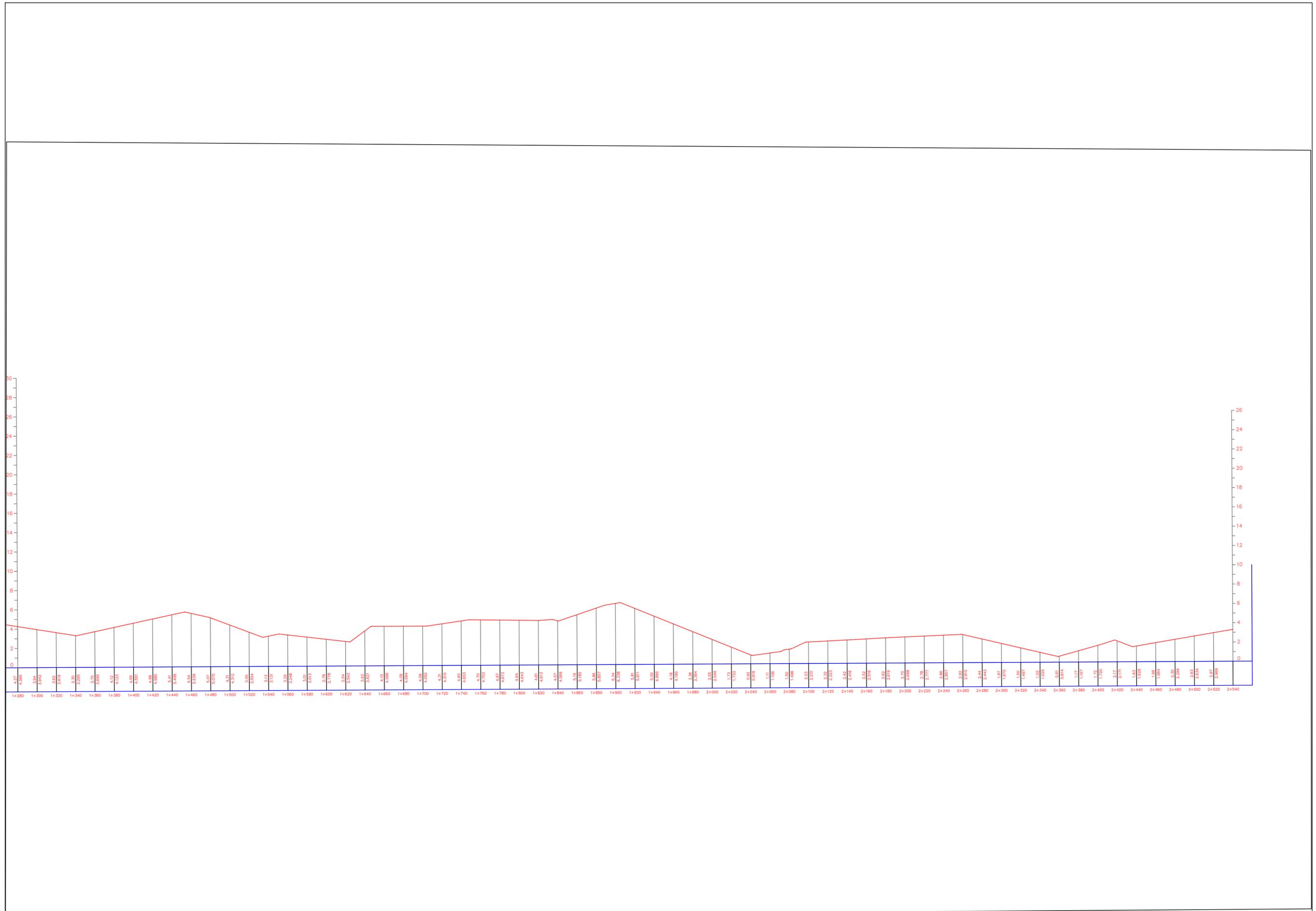
Consultant
NIRAS AFRICA

Drawn by:	
Designed by:	
Checked by:	
Approved by:	

Drawing Title:
OPTION A: Gobwayn Gravity line from Qamqam waterpan)
Sheet 2 of 3

Alignment - Qamqam1_gravity PROFILE





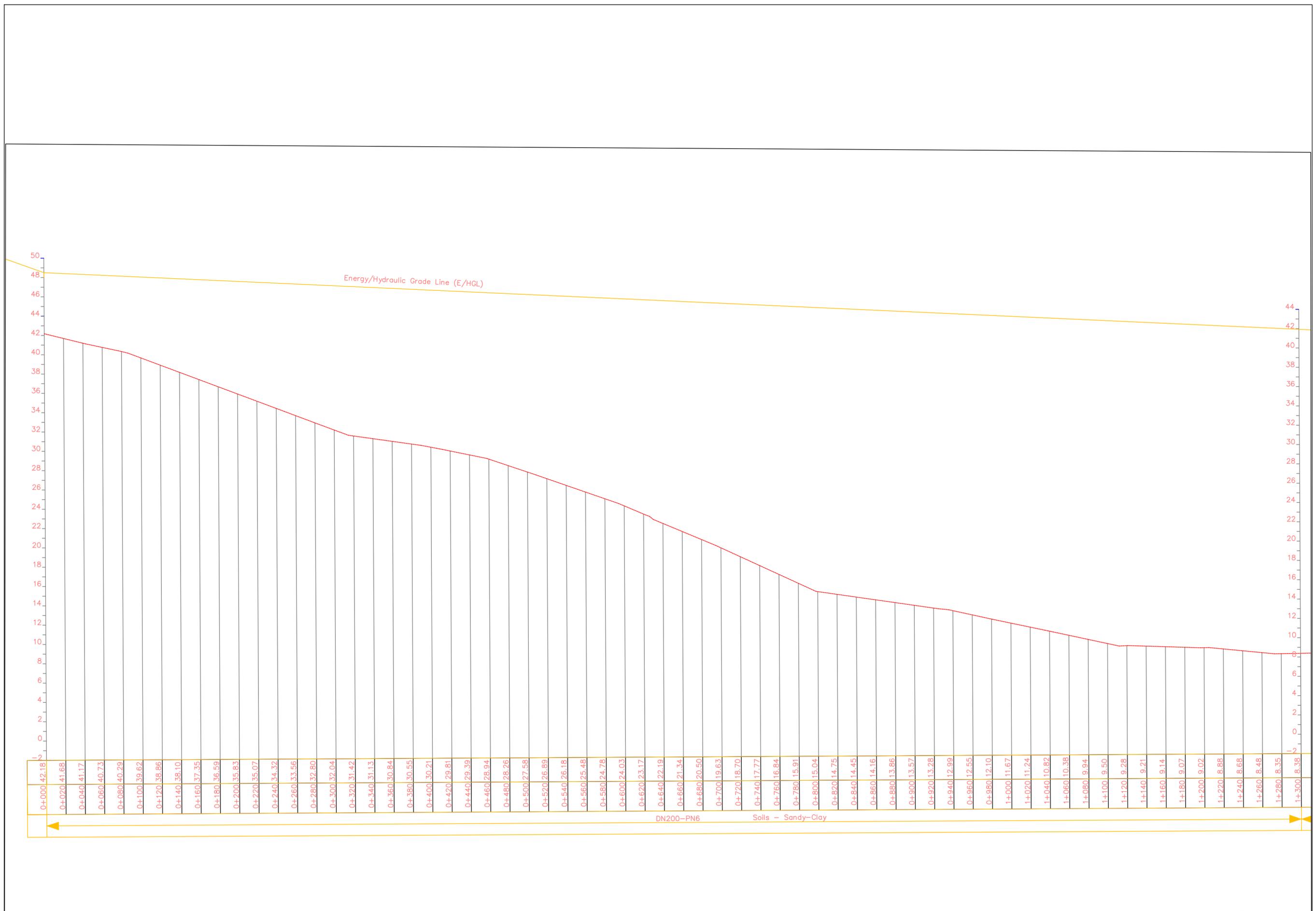
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Promoting Climate-resilient Food Security in Southern Somalia Project

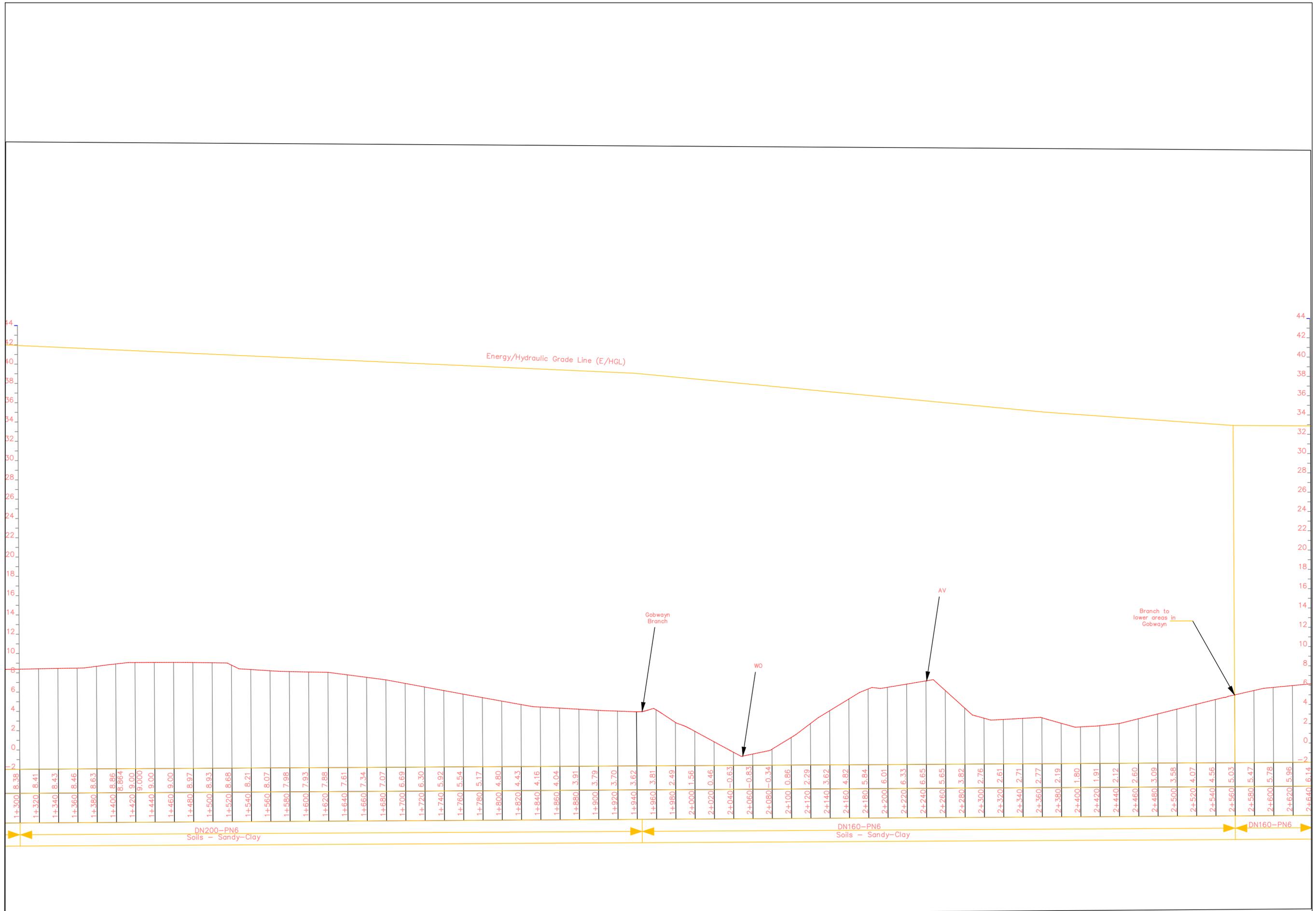
Client
 Promoting Climate-resilient Food Security in Southern Somalia Project

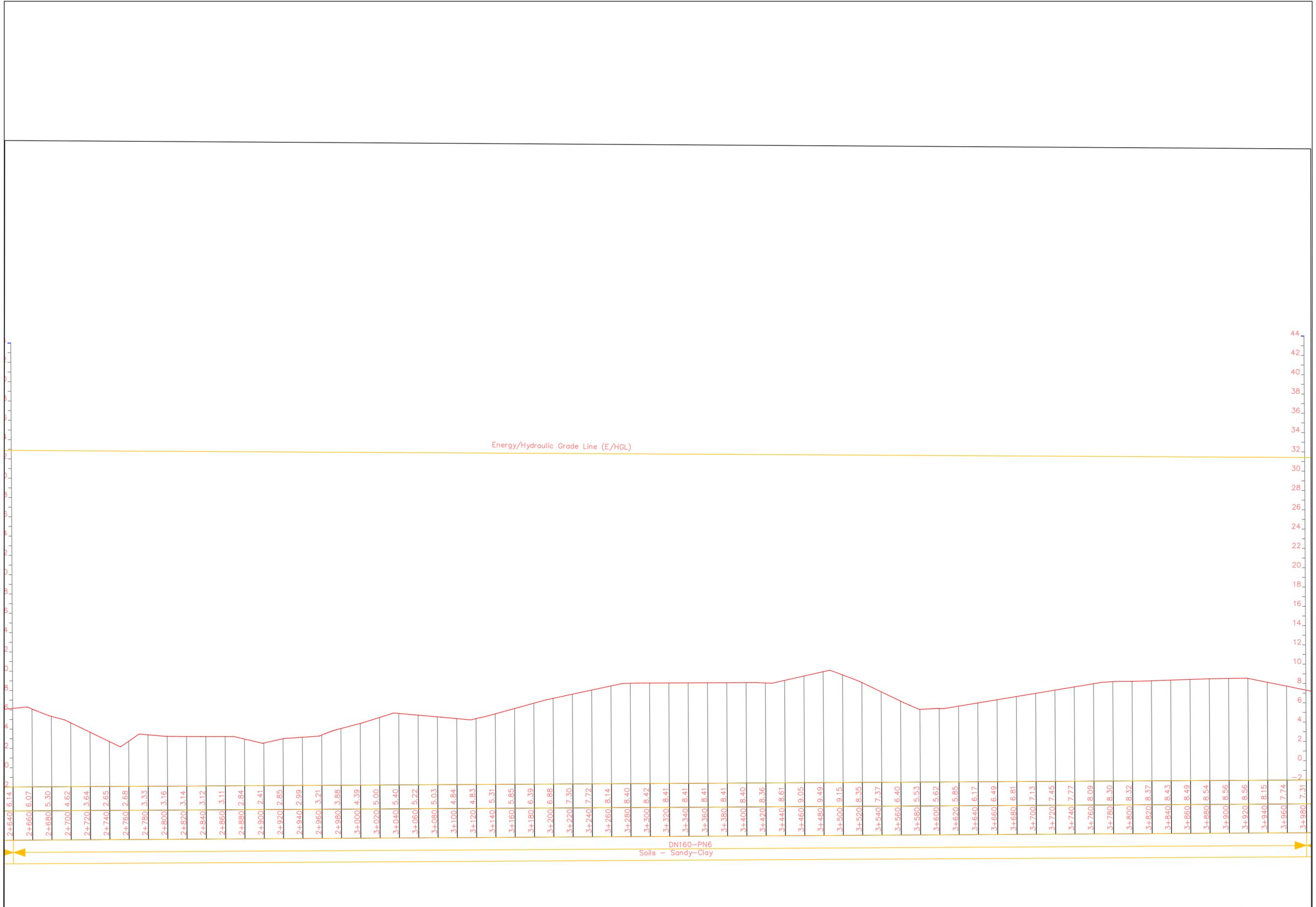

Consultant
NIRAS AFRICA

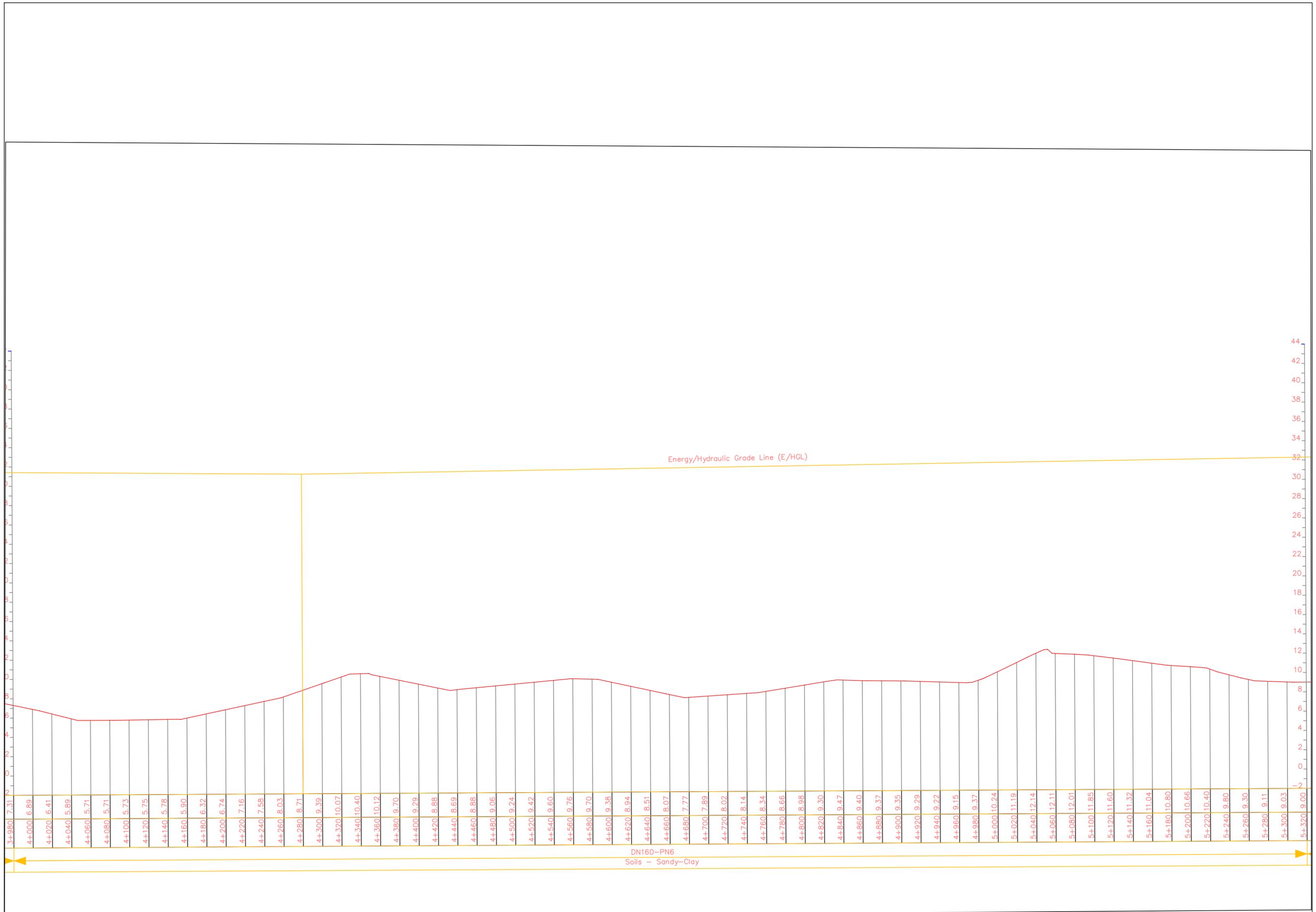
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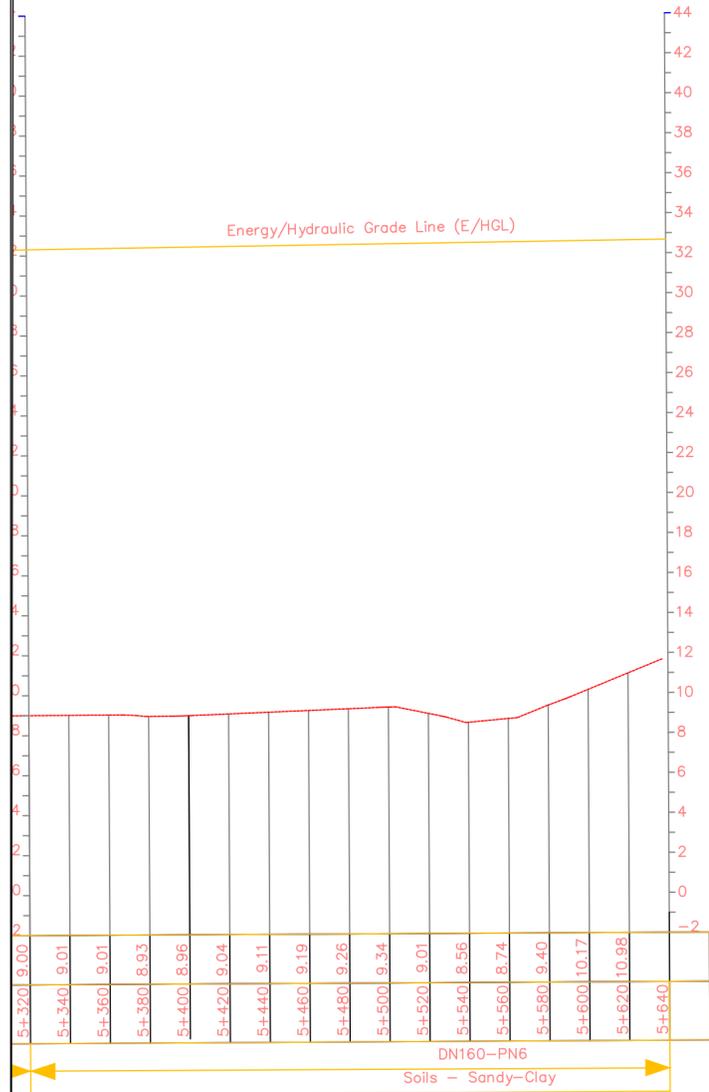
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OPTION A: Gobwayn Gravity line from Qamqam waterpan)
Sheet 2 of 3











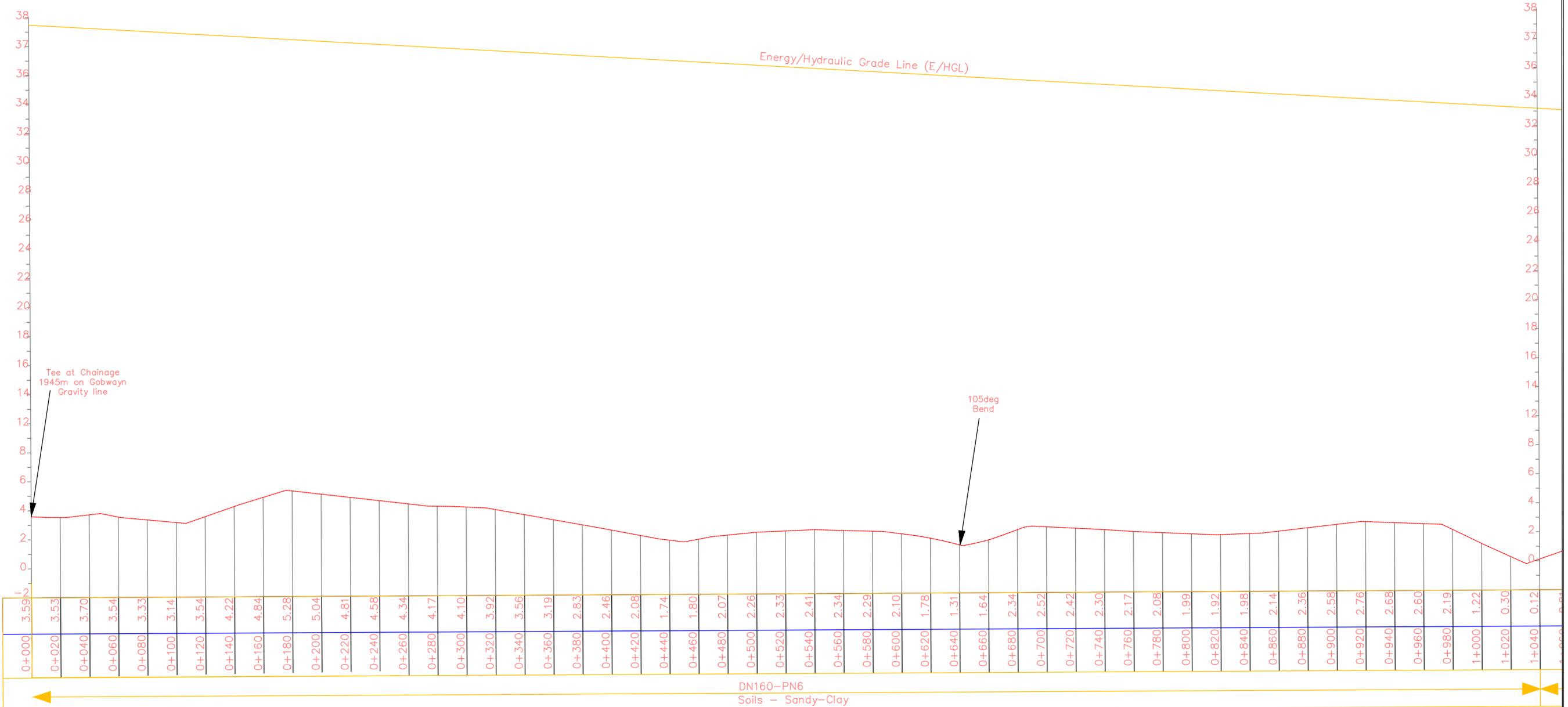
Project Name:
Promoting Climate-resilient Food Security in Southern Somalia Project

Client
giz Promoting Climate-resilient Food Security
in Southern Somalia Project **CFSP**

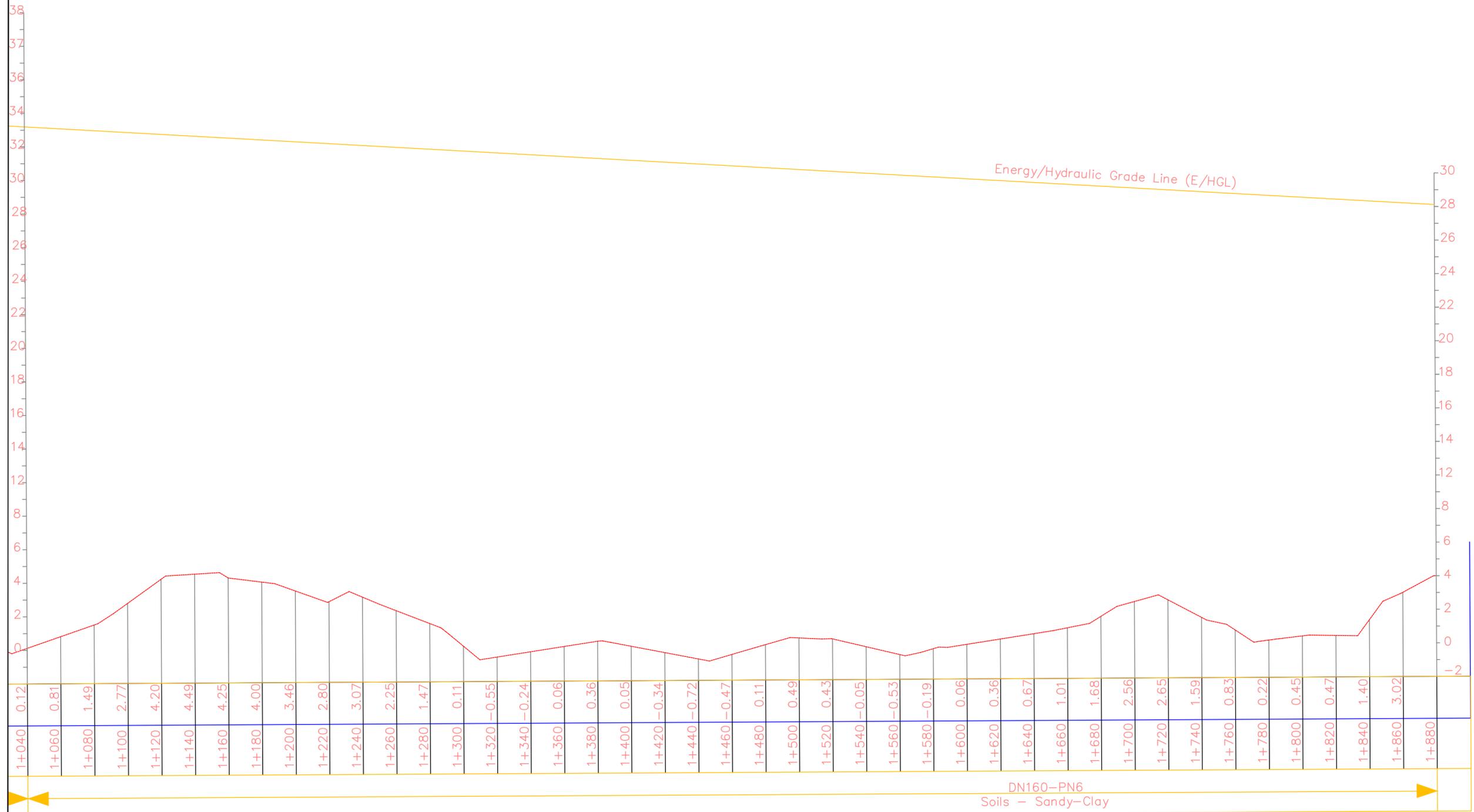
Consultant
NIRAS AFRICA

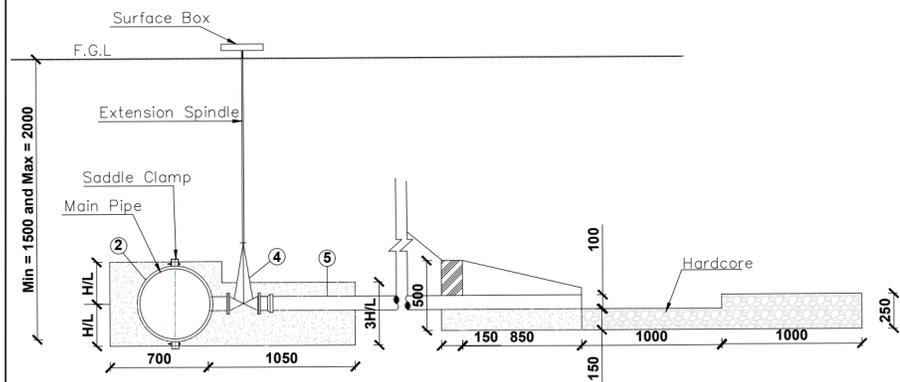
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Approved by:	

Drawing Title:
OPTION A: Gobwayn Gravity line from Qamqam waterpan)
Sheet 2 of 3

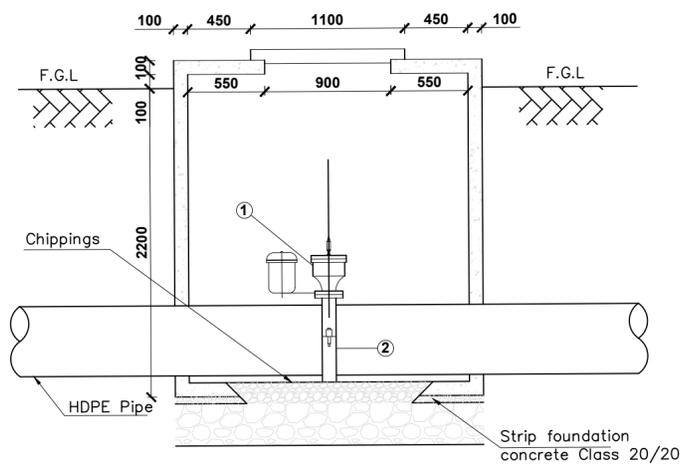


Alignment – Gobwayn–branch_gravity PROFILE

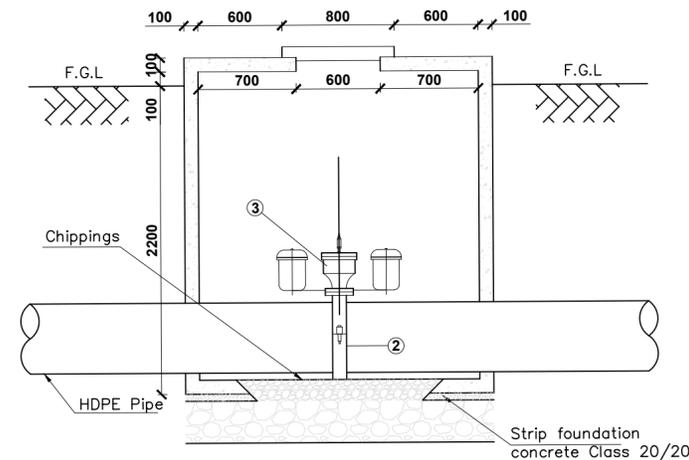




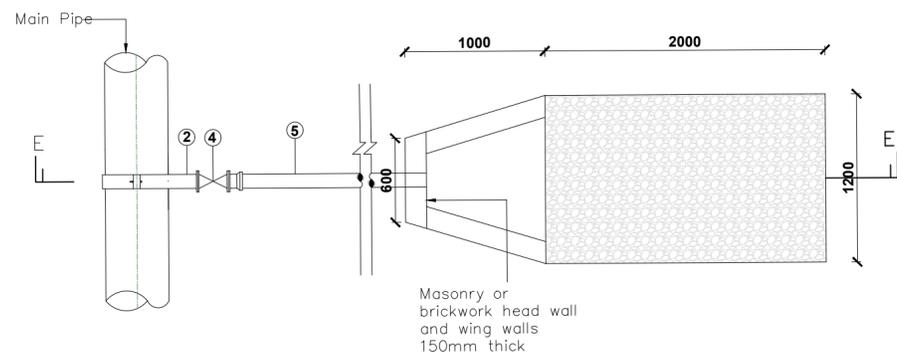
SECTION E-E
Scale 1:25



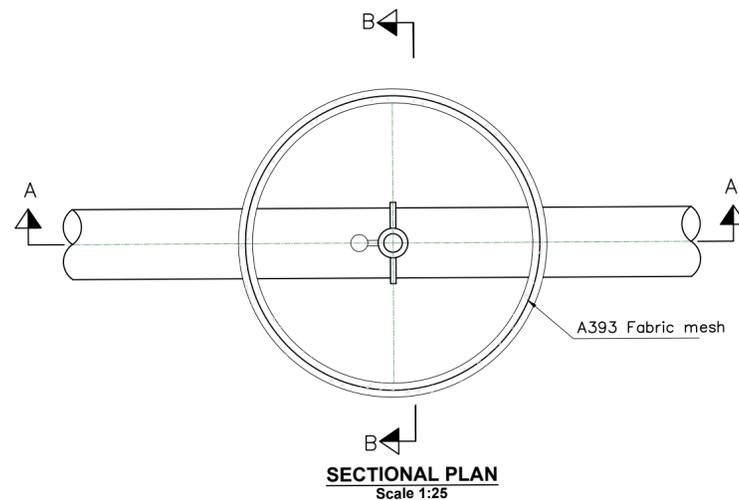
**SECTION A-A
(SINGLE AIR VALVE)**
Scale 1:25



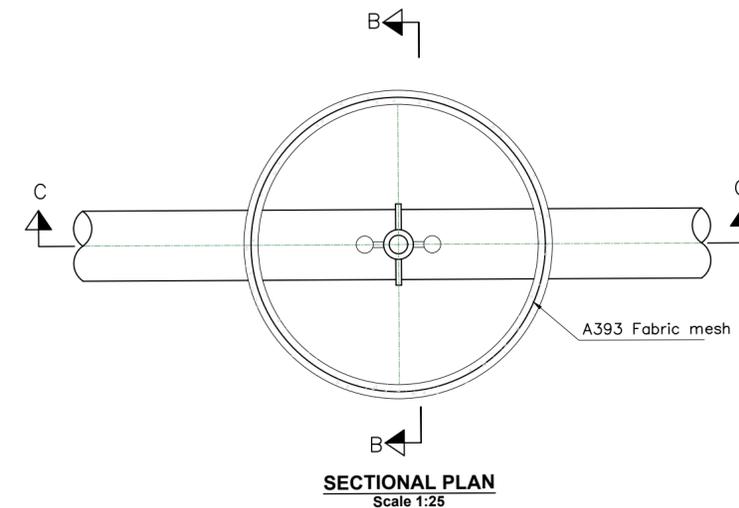
**SECTION C-C
(DOUBLE AIR VALVE)**
Scale 1:25



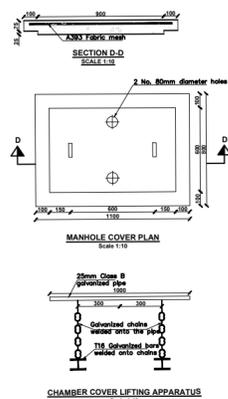
WASHOUT PLAN
Scale 1:25



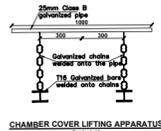
SECTIONAL PLAN
Scale 1:25



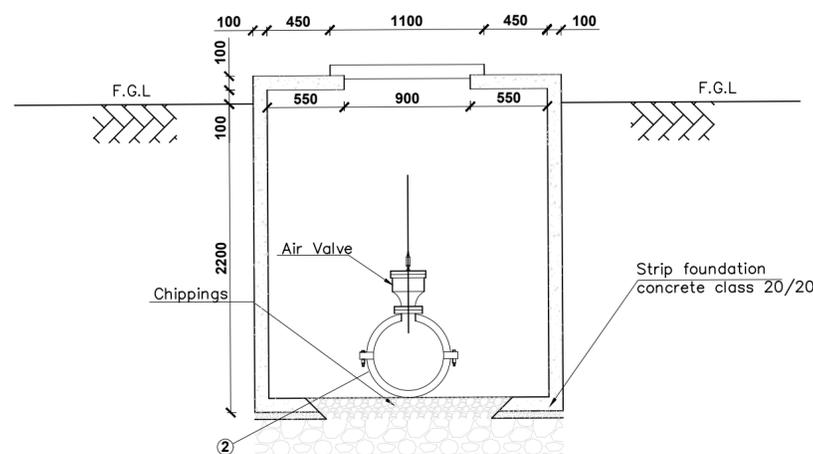
SECTIONAL PLAN
Scale 1:25



MANHOLE COVER PLAN
Scale 1:10



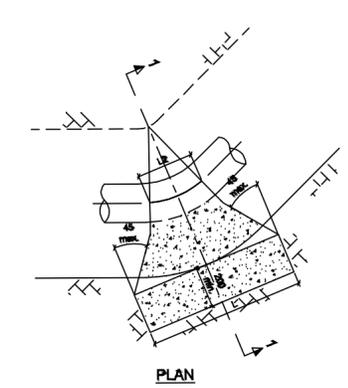
CHAMBER COVER LIFTING APPARATUS
Scale 1:10



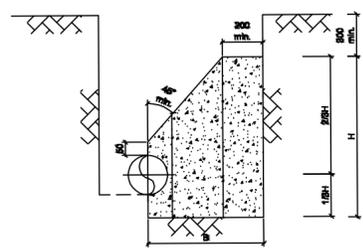
SECTION B-B
Scale 1:25

Schedule of Pipework and Fittings

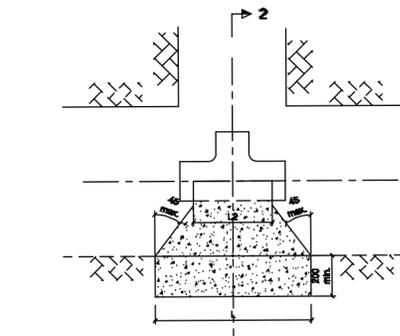
Item No.	Diameter (mm)	Description
1	50	Anti surge single air valve combined with isolating valve
2	Varies	Saddle clamp
3	315	Anti surge double air valve combined with isolating valve
4	200	Sluice valve with a P.E end
5	200	HDPE pipe



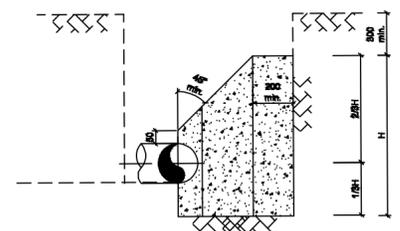
PLAN



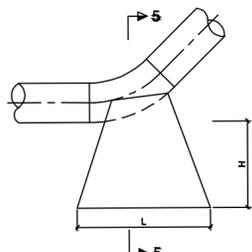
SECTION 1-1
HORIZONTAL BENDS



PLAN

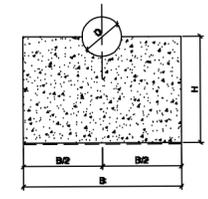


SECTION 2-2
TEES

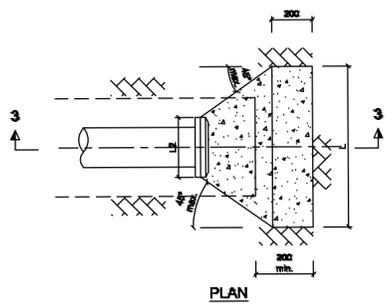


ELEVATION

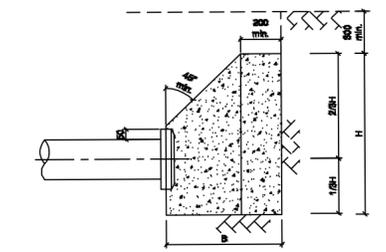
VERTICAL ANCHOR BLOCKS AT DEPRESSIONS



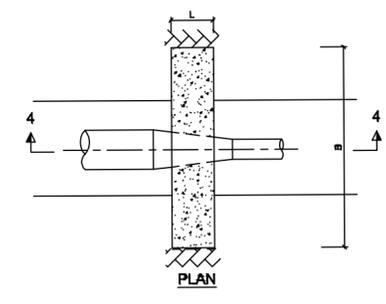
SECTION 5-5



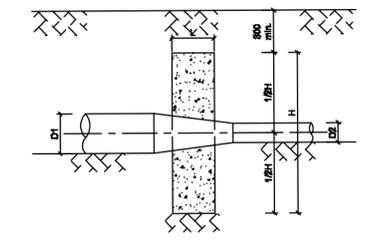
PLAN



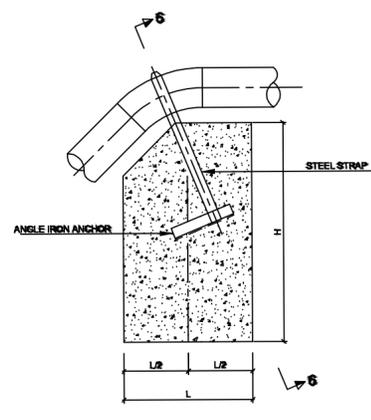
SECTION 3-3
END CAPS



PLAN

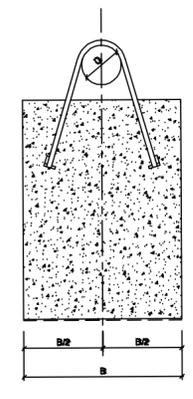


SECTION 4-4
REDUCERS

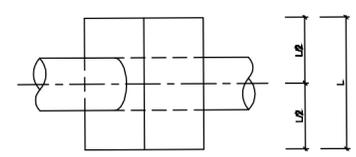


ELEVATION

VERTICAL ANCHOR BLOCKS AT CRESTS

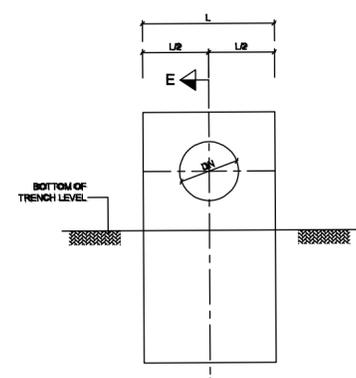


SECTION 6-6

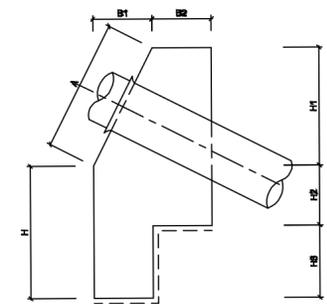


PLAN

NOTE
1. ANCHOR BLOCK TO BE POSITIONED BEHIND COLLAR AS SHOWN



FRONT VIEW



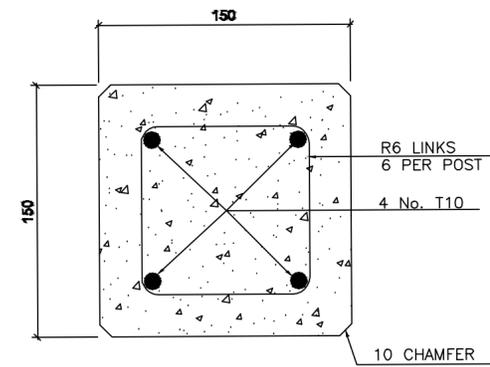
SECTION E - E
ANCHOR BLOCKS ON GRADIENTS

GRADIENT	SPACING OF ANCHOR BLOCKS (m)
1 IN 2	6.5
1 IN 3	11.0
1 IN 4	11.0
1 IN 5	16.5
1 IN 6	22.0
1 IN 7-10	27.5

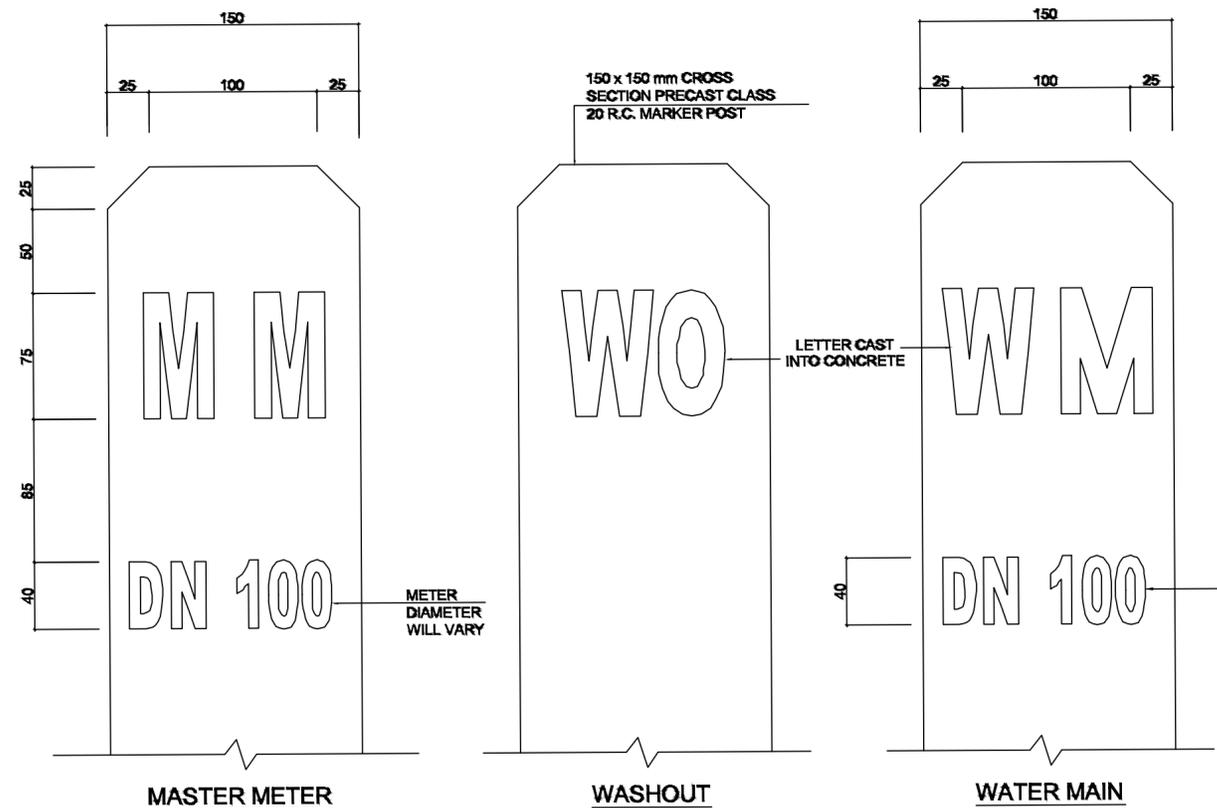
PIPE DIAMETER DN (mm)	DIMENSIONS (m)							
	A	L	H	H1	H2	H3	B1	B2
200	0.8	0.8	0.8	0.7	0.35	0.45	0.35	0.35
300	0.9	1.0	1.0	0.8	0.4	0.5	0.4	0.4

BAR BENDING SCHEDULE

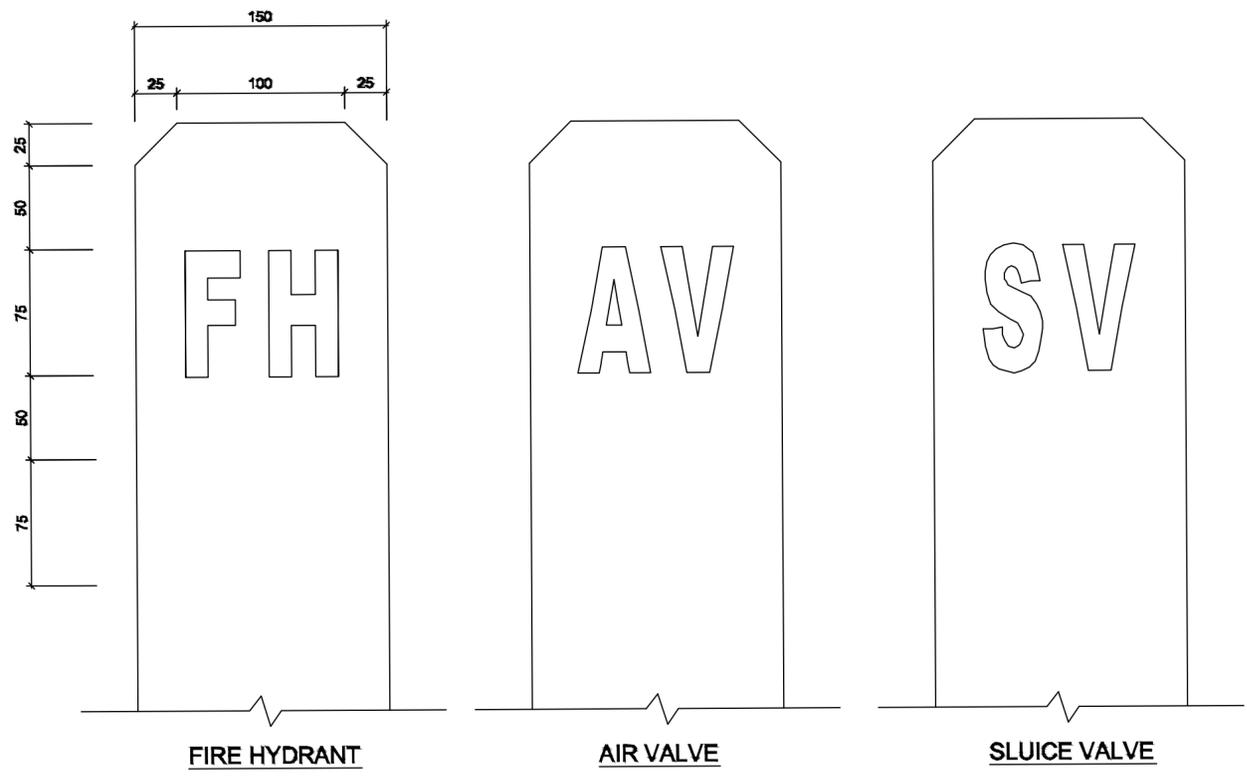
BAR	No. OFF	TYPE	LENGTH
T10	4	STRAIGHT	1000
R6	6		500



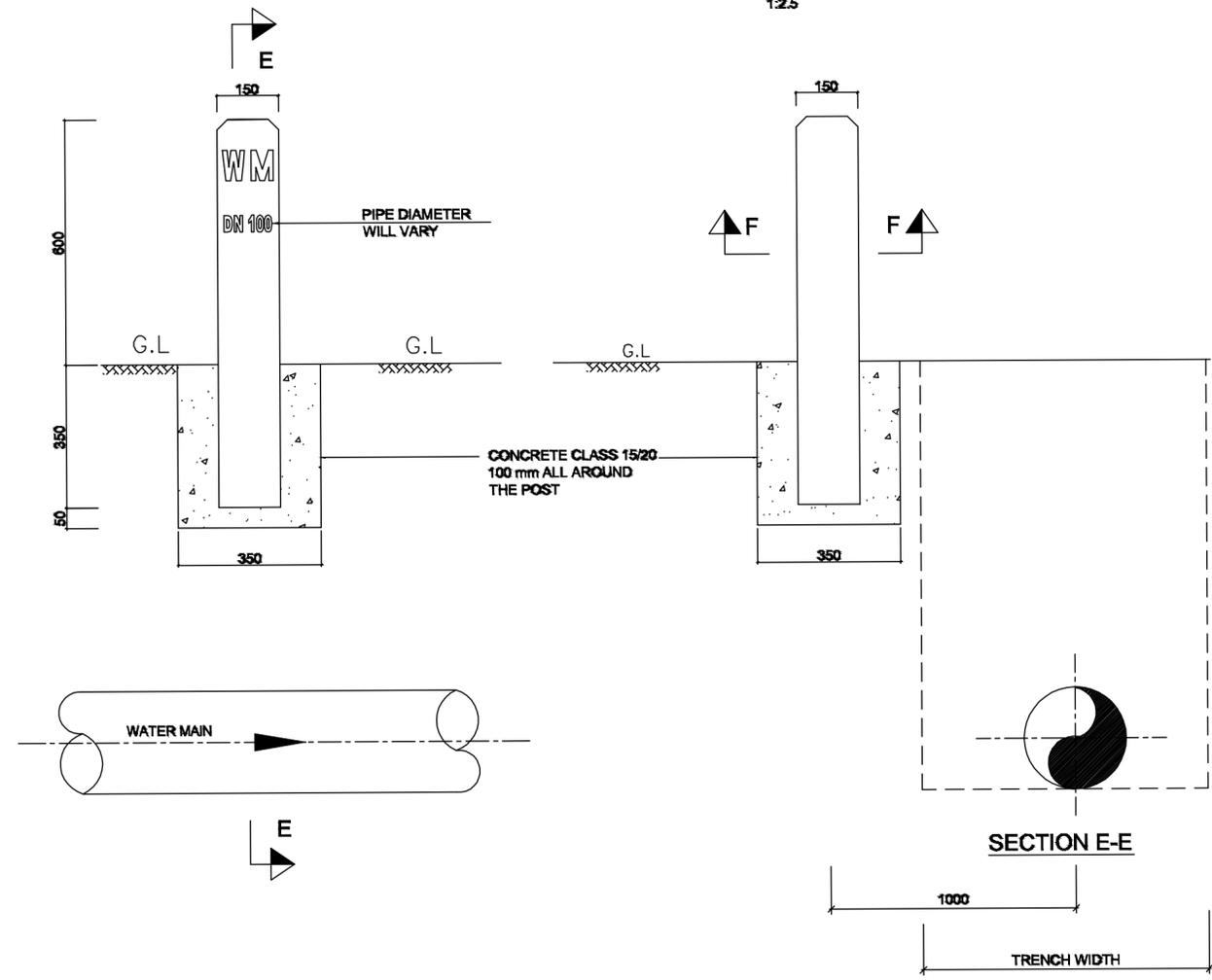
SECTION F-F
1:2.5



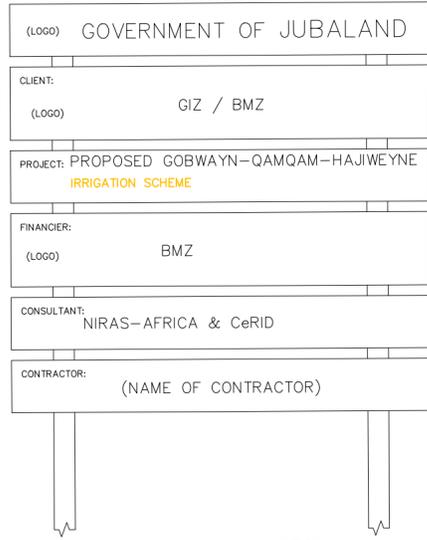
MARKER POST DETAILS
1:2.5



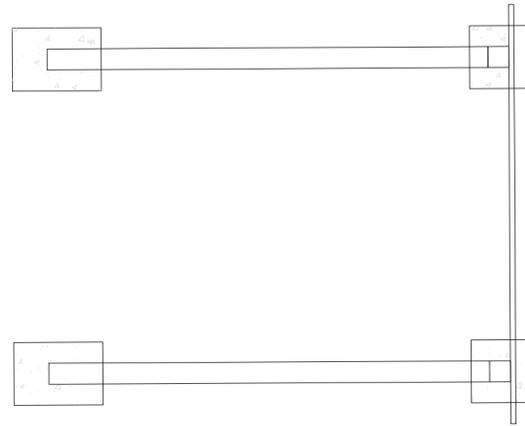
MARKER POST DETAILS
1:2.5



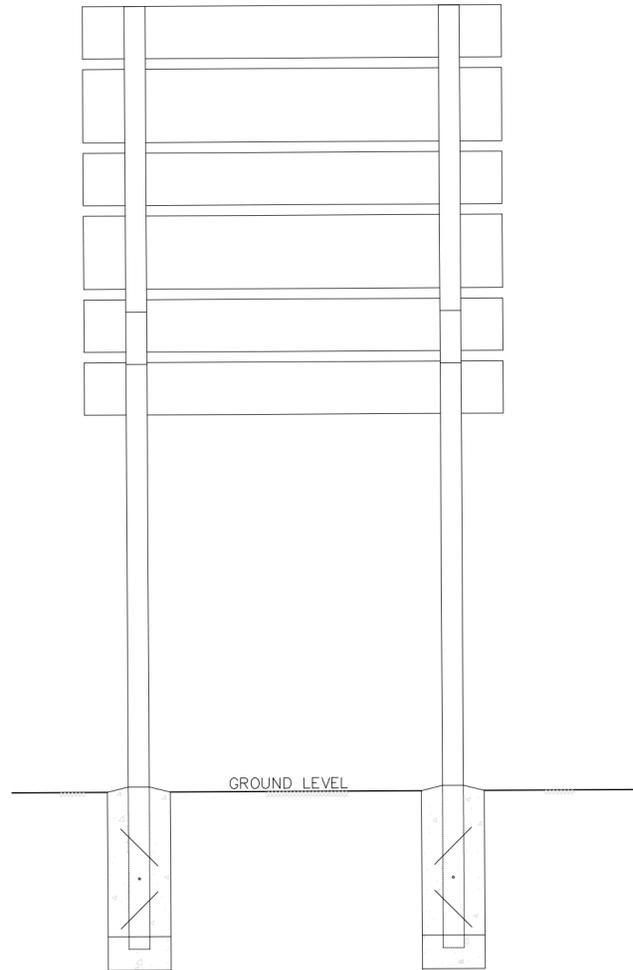
PIPELINE MARKER POST POSITION



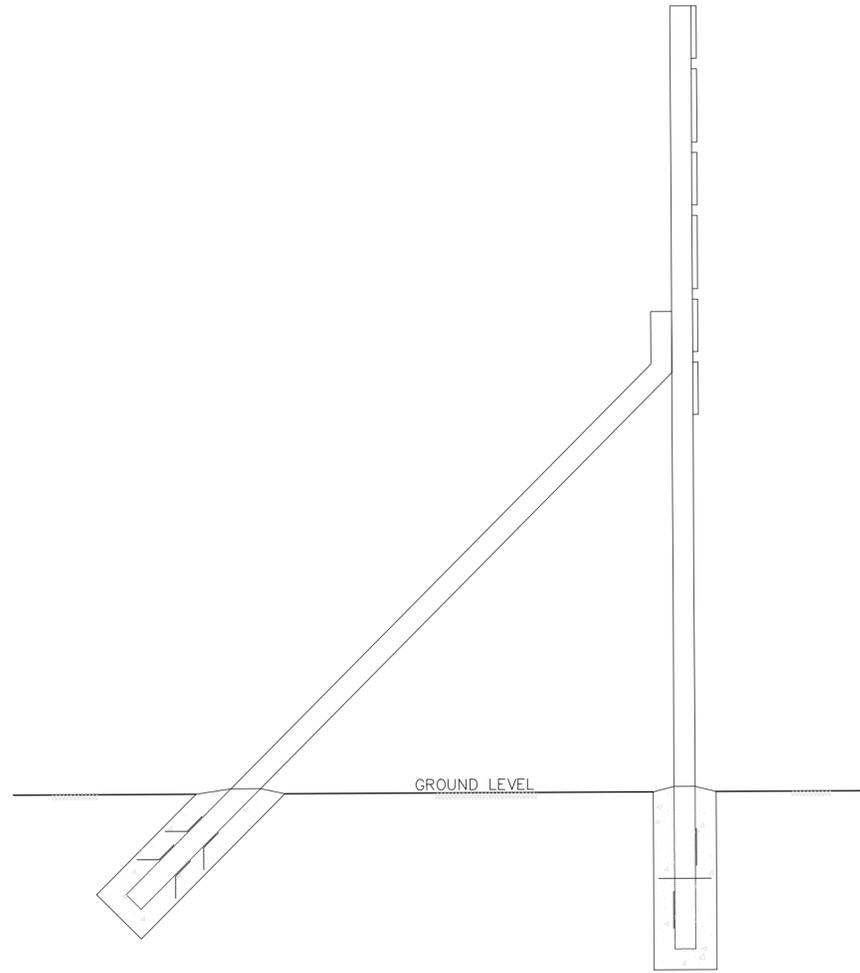
SIGN BOARD - FRONT ELEVATION
SCALE 1:10



PLAN
SCALE 1:20



SIGN BOARD - REAR ELEVATION
SCALE 1:20



SIGN BOARD - SIDE ELEVATION
SCALE 1:20