PAKISTAN
WATER AND POWER DEVELOPMENT AUTHORITY

DASU HYDROPOWER PROJECT

LOCAL AREA DEVELOPMENT PROGRAM

BIDDING DOCUMENT

NCB NO: PK-DASU-548192-CW-RFB

PROCUREMENT OF SMALL WORKS

REHABILITATION AND IMPROVEMENT OF THOOTI TO KHOWAR ROAD (5.3 KM)

Volume 2(a)

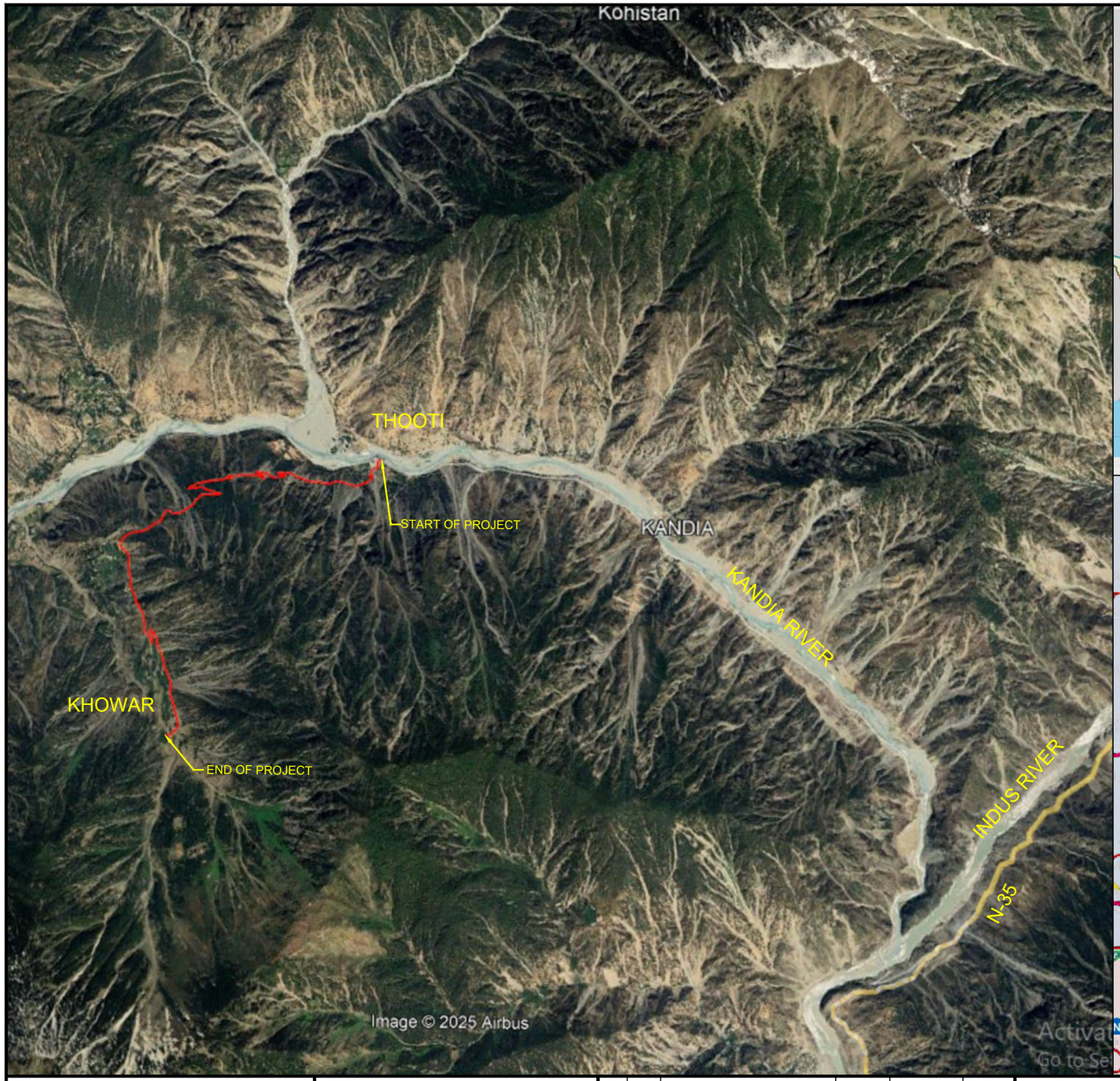
Drawings

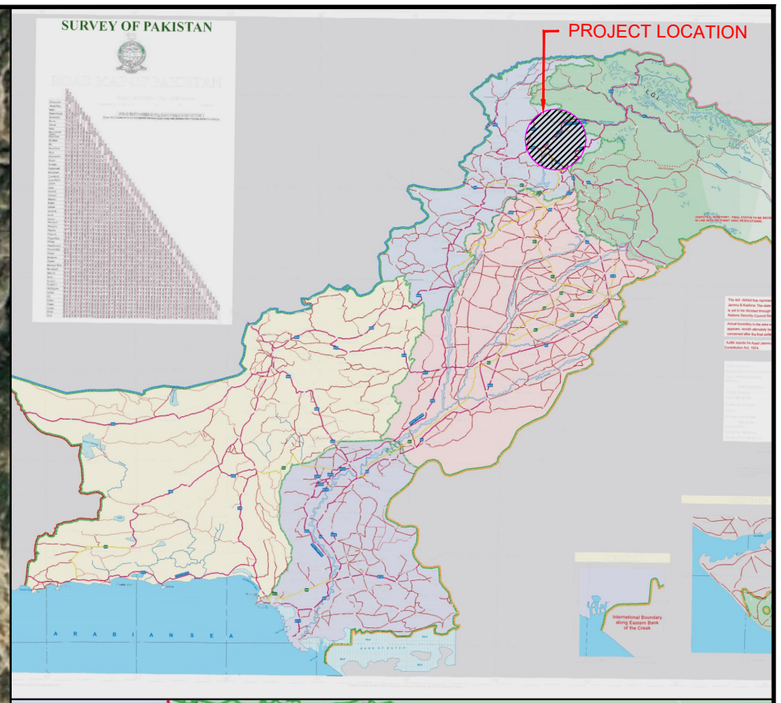
Volume 2(a)

Drawings

GENERAL MANAGER/ PROJECT DIRECTOR
DASU HYDROPOWER PROJECT
DASU, PAKISTAN
JULY 2026

THOOTI TO KHOWAR ROAD DRAWINGS







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

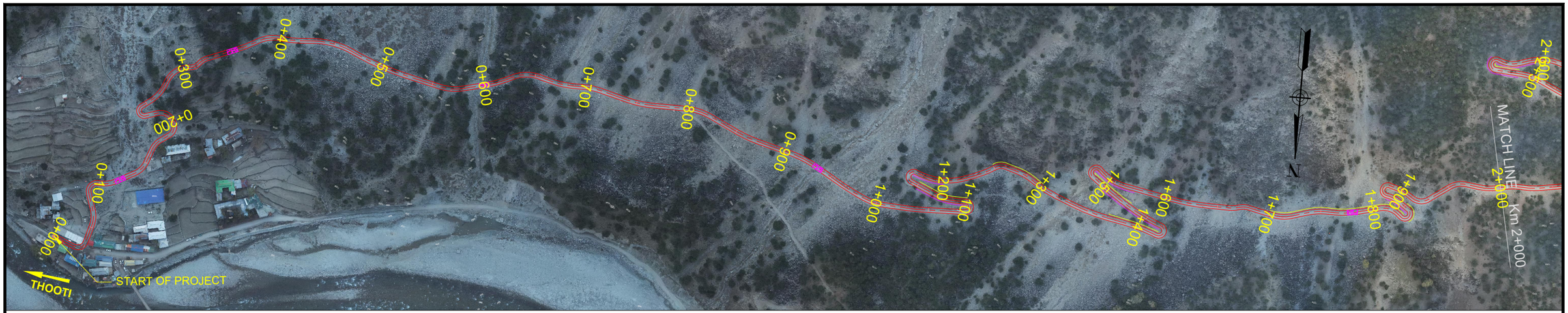
PROJECT

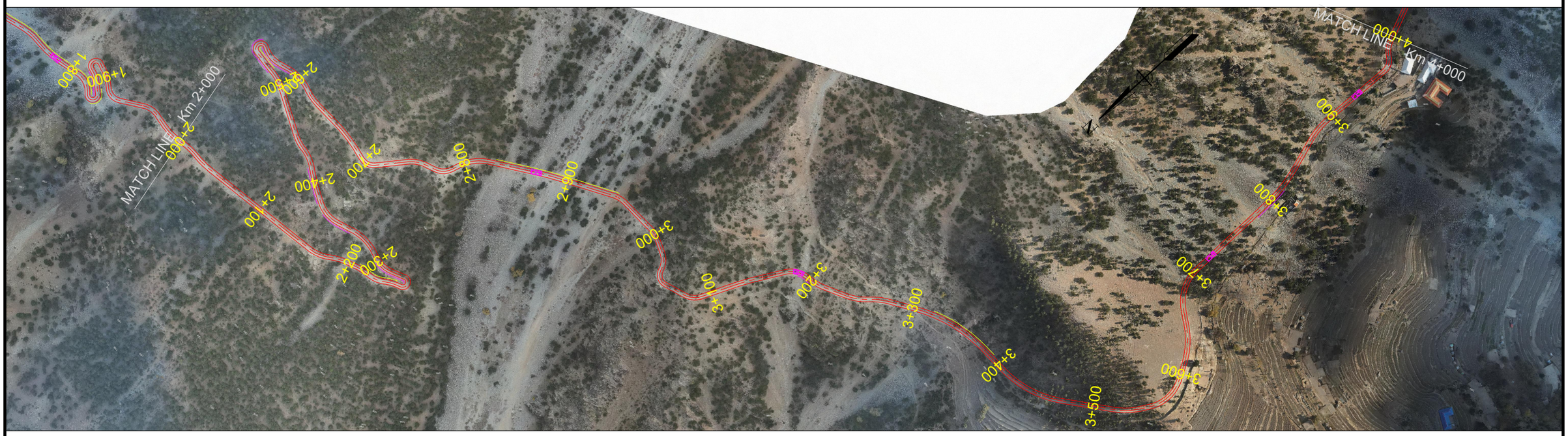
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

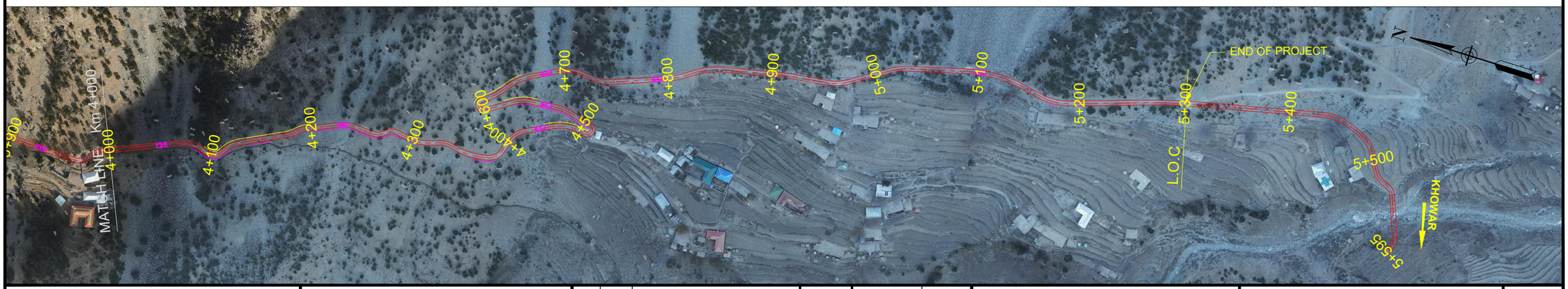
PROJECT LOCATION MAP

DATE	DRAWING No.	SCALE	REV.
MAY, 2025	4520/102/TD/1A001		0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\GENERAL DRAWINGS\1A001.dwg,



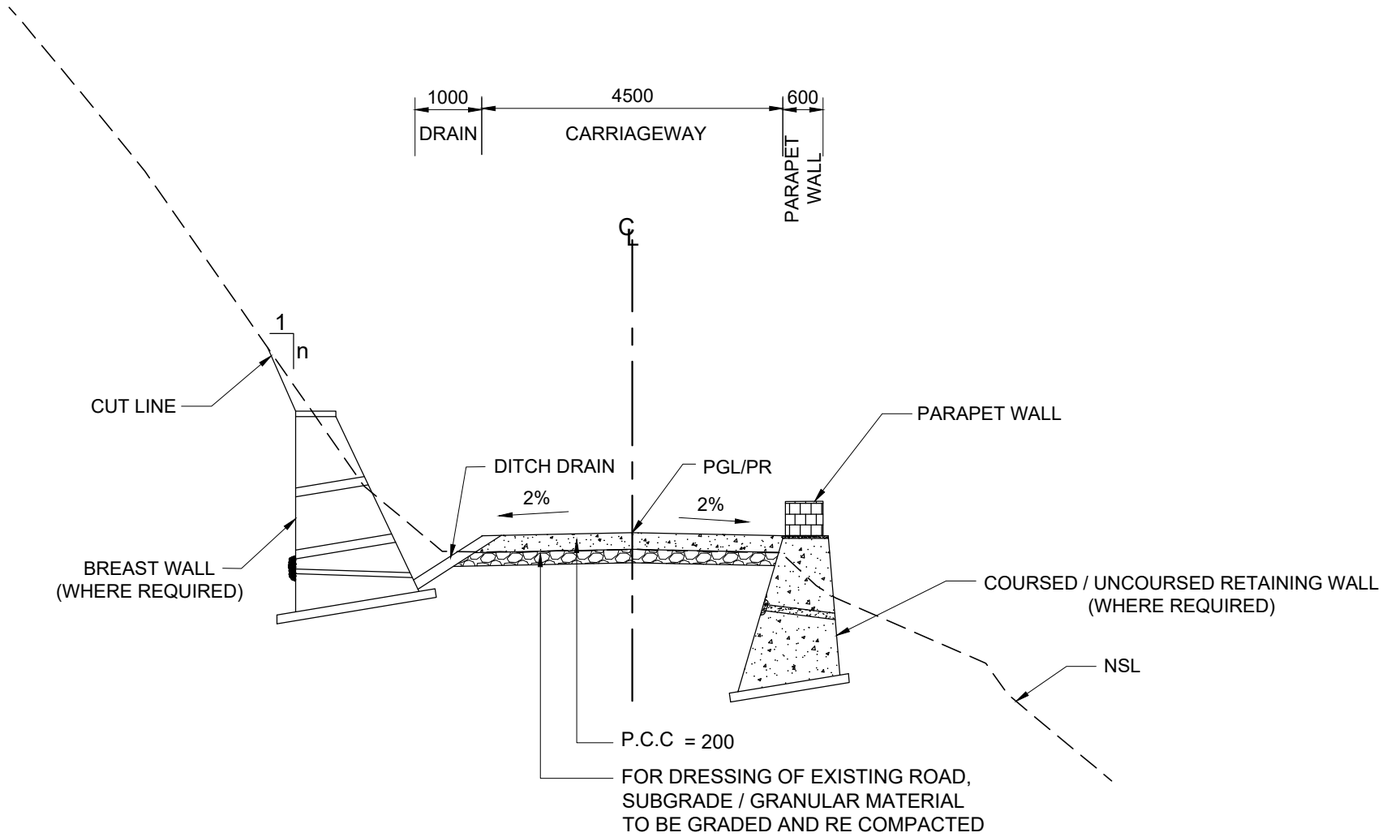




CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01 / REV. / DATE / DESCRIPTION / APPROVED	DRAWN: BILAL AZIZ; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	ALIGNMENT PLAN THOOTI TO KHOWAR ROAD FROM KM. 0+000 TO KM. 5+300; DATE: MAY, 2025; DRAWING No.: 4520/102/TP/1A001; SCALE; REV.: 0

BILAL E:\001-Mr.Naseem -Projects\DASU 8-5-2025\1A002.dwg,

TYPICAL X-SECTIONS



TYPICAL X-SECTION

DETAIL OF n:-

1. FOR COMMON EXCAVATION n = 2
2. FOR MEDIUM ROCK EXCAVATION n = 3~4
3. FOR HARD ROCK EXCAVATION n = 4~6

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. FOR SUBGRADE THE MATERIAL SHOULD HAVE A MINIMUM SOAKED C.B.R OF 20% AT 95% M.D.D AASHTO T-180.
3. IN CASE ANY OF EXISTING GRANULAR LAYER MATERIAL FAILS TO CONFORM THE COMPACTION OR MATERIAL PROPERTIES AS PER THE SPECIFICATION, THE SAME SHALL BE REMOVED AND REPLACED WITH APPROVED MATERIAL OF SPECIFIED THICKNESS AND COMPACTION OR AS DIRECTED BY THE ENGINEER.
4. FOR DRAINAGE DETAILS REFER SPECIALITY DIVISION.
5. LANE WIDTH IS SUBJECT TO AVAILABILITY OF LAND / SPACE.

CLIENT
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

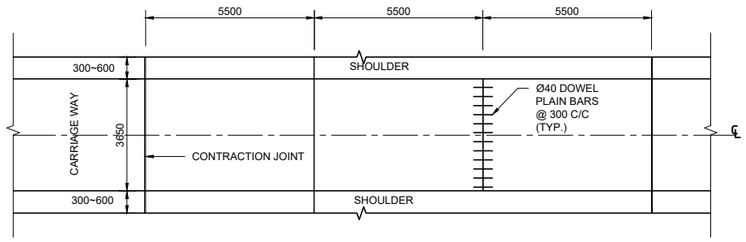
DRAWN: Faisal
SUBMITTED:
RECOMMENDED:
CHD./VER.:
APPROVED:

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

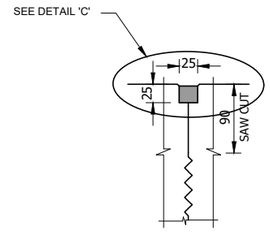
ROAD CROSS SECTION
THOOTI TO KHOWAR ROAD

DATE: MAY, 2025
DRAWING No.: 4520/102/TD/XS001
REV.: 0
SCALE:

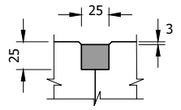
Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\GENERAL DRAWINGS\XS001.dwg,



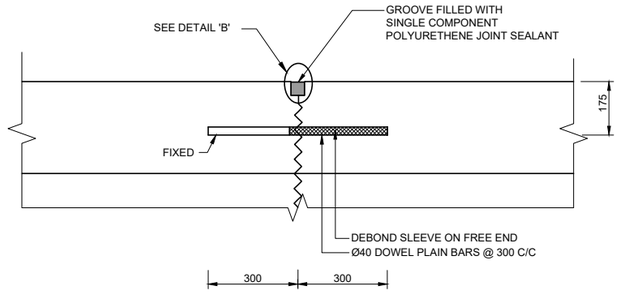
PLAN



DETAIL 'B'



DETAIL 'C'



TYPICAL CONTRACTION JOINT

NOTE:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS SPECIFIED OTHERWISE.
2. SUBGRADE/EMBANKMENT SHALL HAVE A MINIMUM SOAKED CBR OF 50% AT 95% MDD.
3. CONCRETE COMPRESSIVE STRENGTH (CYLINDER) SHALL BE 4000 Psi MINIMUM.
4. FOR DETAILS REFER RELEVANT DRAWINGS.

CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

TYPICAL JOINTED REINFORCED CONCRETE PAVEMENT DETAIL THOOTI TO KHOWAR ROAD

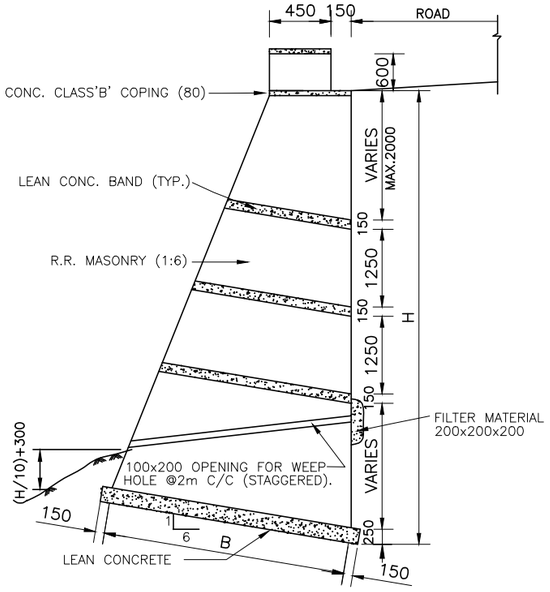
DATE

DRAWING No. 4520/102/TD/XS002

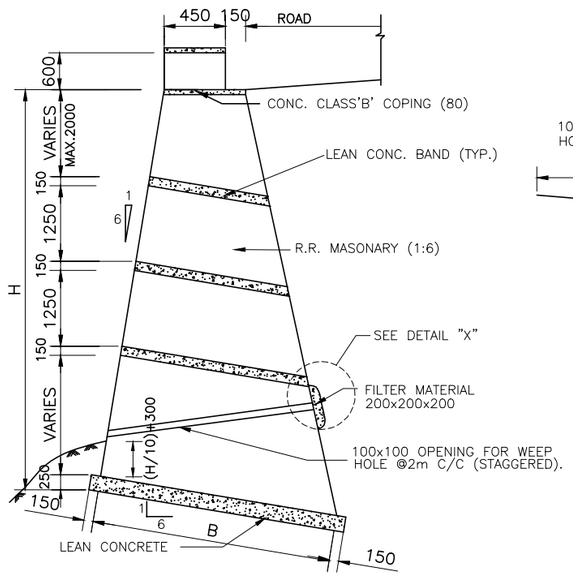
SCALE

REV. 0

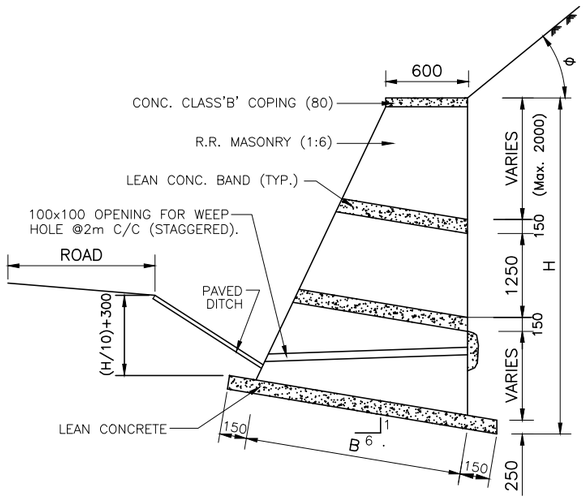
MISCELLANEOUS DRAWINGS



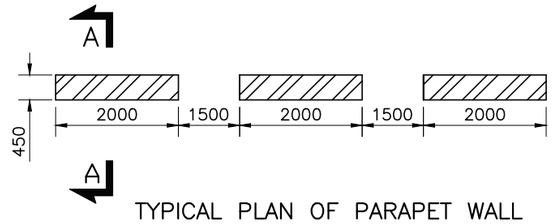
TYPICAL SECTION OF STONE MASONRY
RETAINING WALL TYPE RW1



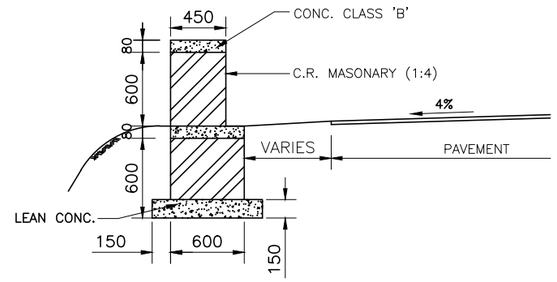
TYPICAL SECTION OF STONE MASONRY
RETAINING WALL TYPE RW2



TYPICAL SECTION OF STONE MASONRY
RETAINING/BREAST WALL TYPE RW3



TYPICAL PLAN OF PARAPET WALL



APPLICABLE WHERE NO RETAINAING WALL EXISTS
SECTION A–A

TABLE RW1

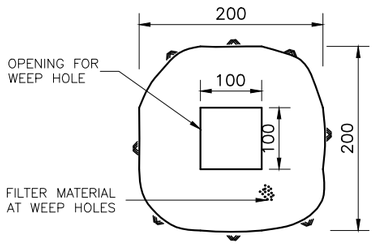
H (m)	B (m)
1.50	0.60
2.00	0.80
2.50	1.00
3.00	1.20
3.50	1.50
4.00	1.80
4.50	2.00
5.00	2.30
5.50	2.60
6.00	2.90
7.00	3.40
8.00	3.90

TABLE RW2

H (m)	B (m)
1.50	0.80
2.00	1.05
2.50	1.40
3.00	1.70
3.50	2.10
4.00	2.40
4.50	2.70
5.00	3.00
5.50	3.30
6.00	4.00
7.00	4.70
8.00	5.50

TABLE RW3
$\theta \leqslant 32°$

H (m)	B (m)
1.50	0.75
2.00	0.90
2.50	1.10
3.00	1.40
3.50	1.60
4.00	1.90
4.50	2.10
5.00	2.40
5.50	2.70
6.00	3.00
6.50	3.20
7.00	3.50
7.50	3.70
8.00	4.00



DETAIL "X"

NOTES

1– ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

2– WEEP HOLES SHALL BE STAGGERED AT AN INTERVAL OF 2m VERTICALLY AND HORIZONTALLY AND/OR AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE.

3– THE SLOPE OF WEEP HOLE SHALL BE 1 IN 8 FROM BACK OF THE MASONRY TO THE OUTER FACE OR AS DIRECTED BY THE ENGINEER'S REPRESENTATIVE.

4– TYPE OF RETAINING WALL TYPE RW1 SHALL BE DECIDED BY THE ENGINEER'S REPRESENTATIVE AS PER SITE CONDITIONS KEEPING FOLLOWING IN VIEW.
- RETAINING WALL TYPE RW1 SHALL BE PROVIDED WHERE THE ROAD IS WELL AWAY FROM THE NALLAH, RIVER/RIVINE.
- RETAINING TYPE RW2 WALL SHALL BE PROVIDED WHERE THE ROAD IS IN CLOSE VICINITY OF THE RIVER/RIVINE OR CLIFF FACE.
- RETAINING WALL TYPE RW3 SHALL BE PROVIDED TO RETAIN THE SCREED MATERIAL.

5– R.R MASONRY AND C.R MASONRY STANDS FOR RANDOM RUBBLE MASONRY AND COURSE RUBBLE MASONRY RESPECTIVELY. R.R MASONRY SHALL BE LAID IN 1:6 CEMENT SAND MORTAR, WHERE AS C.R MASONRY IN 1:4 C/S MORTAR.

6– TYPICAL PARAPET WALL SHALL BE PROVIDED AT TOP OF RETAINING WALL AND AT OTHER HAZARDOUS LOCATIONS AS APPROVED BY THE ENGINEER'S REPRESENTATIVE.

7– THE DESIGN OF RETAINING WALLS IS BASED ON FOLLOWING PARAMETERS.
(i) BEARING CAPACITY 2.2 Kg/Cm2
(ii) ANGLE OF INTERNAL FRICTION
(a) FOR WALL TYPE RW 1 & RW 2 = 32°
(b) FOR WALL TYPE RW 3 = 32°

8– VERTICAL SLOPE TO THE OUTER FACE OF THE RETAINING WALL TYPE RW 2 CAN BE CHANGED UP 1 IN 10.

9– PAYMENT FOR WEEP HOLES AND FILTER MATERIAL IS INCLUDED IN THE COST OF OTHER ITEMS AND SHALL NOT BE PAID SEPARATELY.

CLIENT
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

TYPICAL STONE MASONRY RETAINING WALL DETAILS

SCALE

DATE: MAY, 2025

DRAWING No.: 4520/102/TD/MS001

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\GENERAL DRAWINGS\MS001.dwg,

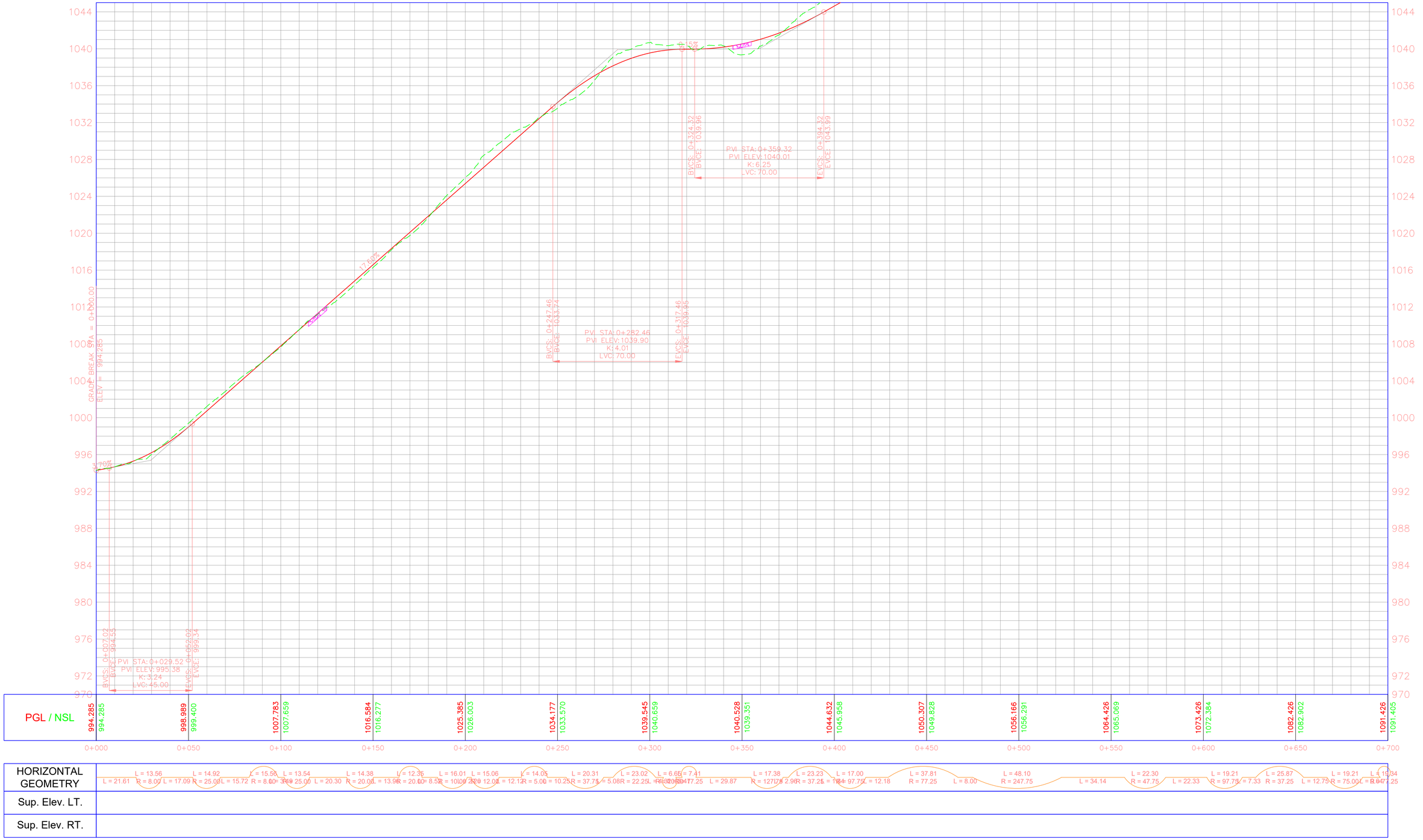
PLAN AND PROFILE



CLIENT	CONSULTANT						PROJECT		SCALE
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	Faisal	**DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**	PLAN THOOTI TO KHOWAR ROAD FROM KM. 0+000 TO KM. 0+700	
		03				SUBMITTED				
		02				RECOMMENDED			DATE: MAY, 2025	DRAWING No.: 4520/102/TD/1C001
		01				CHD./VER.				REV.: 0
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



HORIZONTAL GEOMETRY	L = 13.56 L = 14.92 L = 15.56 L = 13.54 L = 14.38 L = 12.36 L = 16.01 L = 15.06 L = 14.05 L = 20.31 L = 23.02 L = 6.65 L = 7.41 L = 17.38 L = 23.23 L = 17.00 L = 37.81 L = 48.10 L = 22.30 L = 19.21 L = 25.87 L = 19.21 L = 19.34 L = 21.61 R = 8.00 L = 17.09 R = 25.00 L = 15.72 R = 8.00 L = 13.49 R = 25.00 L = 20.30 R = 20.00 L = 13.96 R = 20.00 L = 8.52 R = 10.00 L = 20.20 R = 12.00 L = 12.12 R = 5.00 L = 10.25 R = 37.75 L = 5.08 R = 22.25 L = 18.20 R = 47.25 L = 29.87 R = 127.75 L = 2.96 R = 37.25 L = 1.84 R = 97.75 L = 12.18 R = 77.25 L = 8.00 R = 247.75 L = 34.14 R = 47.75 L = 22.33 R = 97.75 L = 7.33 R = 37.25 L = 12.75 R = 75.00 L = 8.47 R = 247.25
Sup. Elev. LT.	
Sup. Elev. RT.	

CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 0+000 TO KM. 0+700

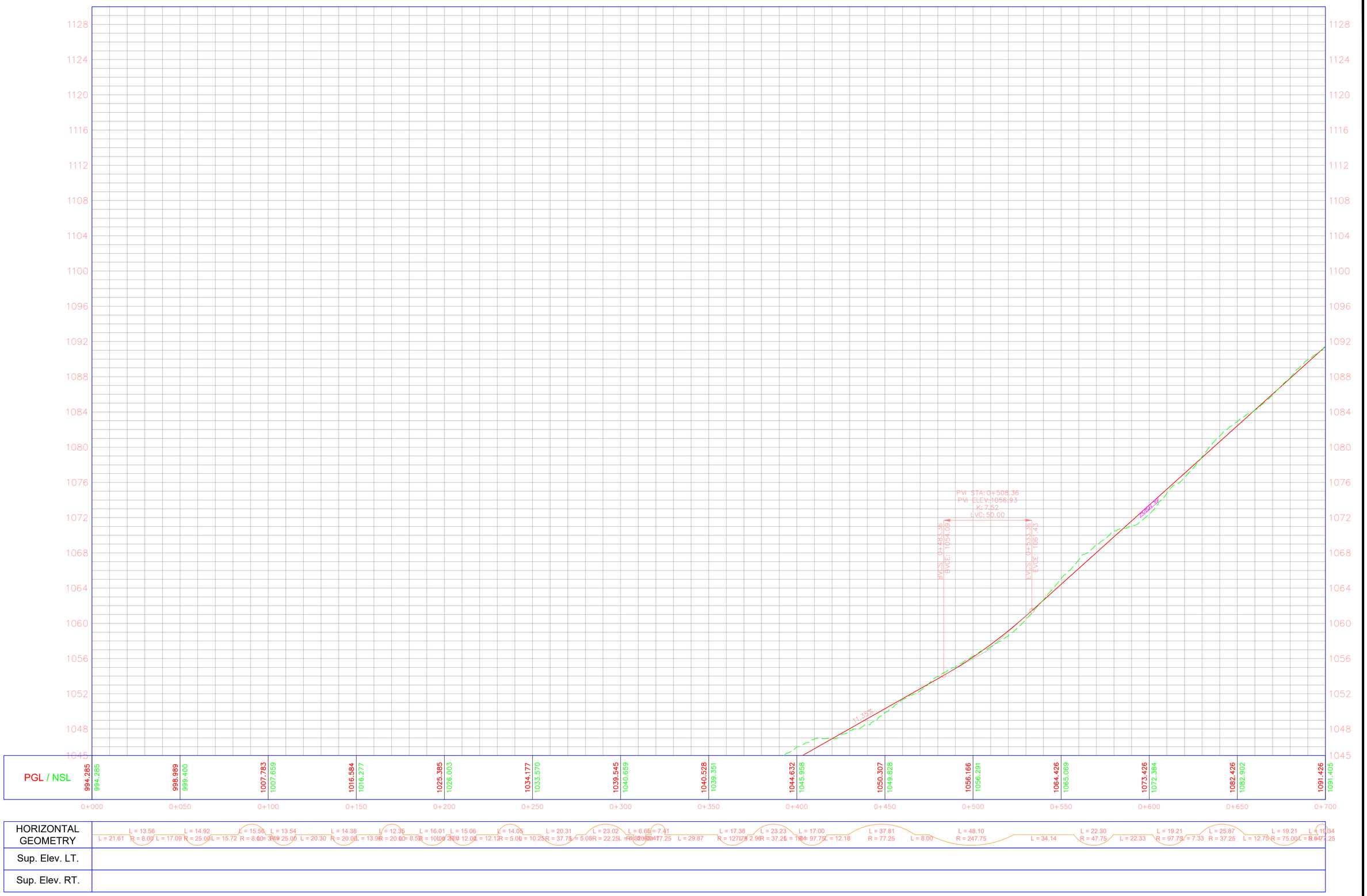
DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C001A

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 0+000 TO KM. 0+700

DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C001B

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

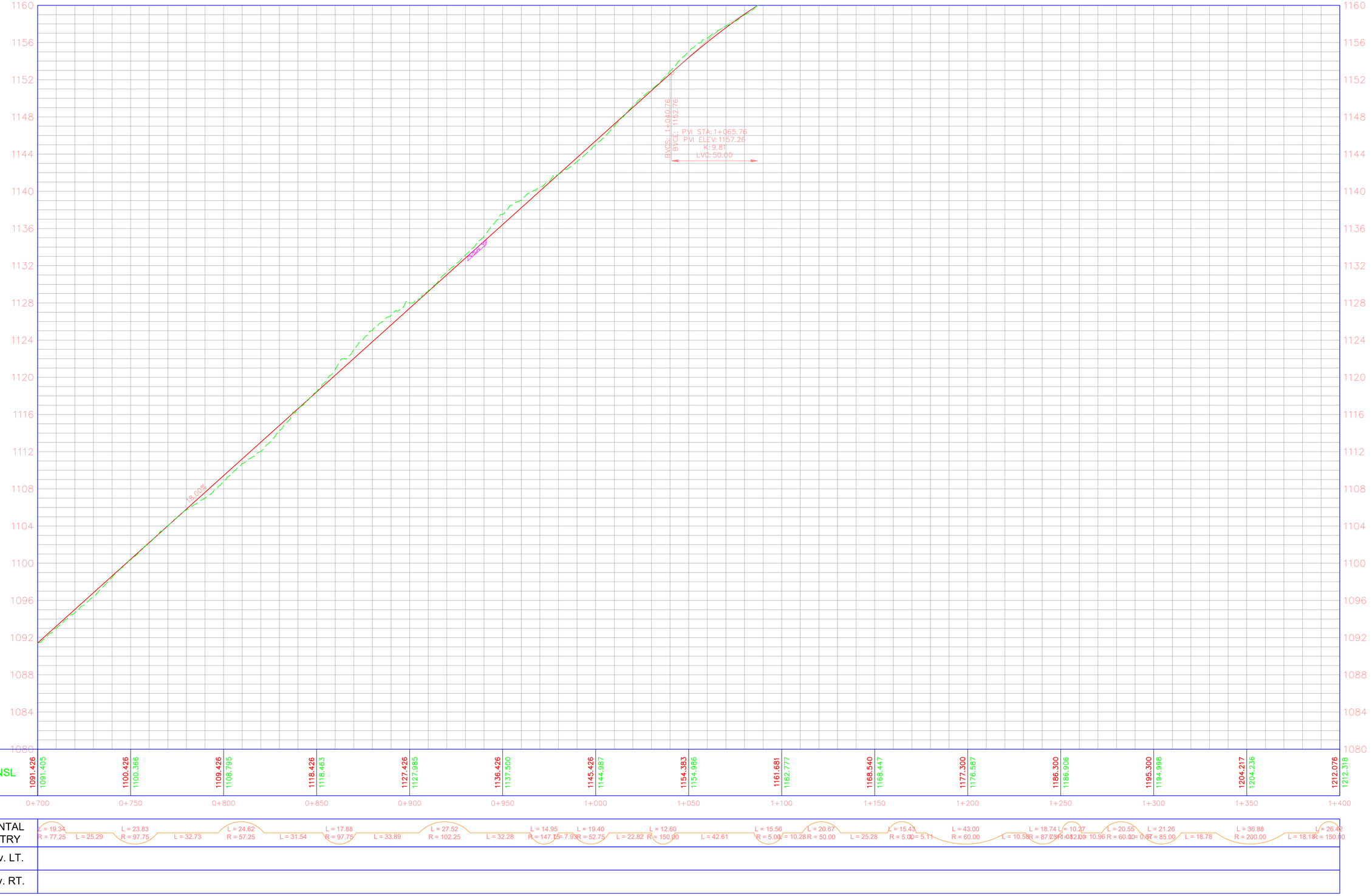
PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 0+700 TO KM. 1+400

DATE	DRAWING No.	REV.
MAY, 2025	4520/102/TD/1C002	0

SCALE

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 0+700 TO KM. 1+400

DATE: MAY, 2025

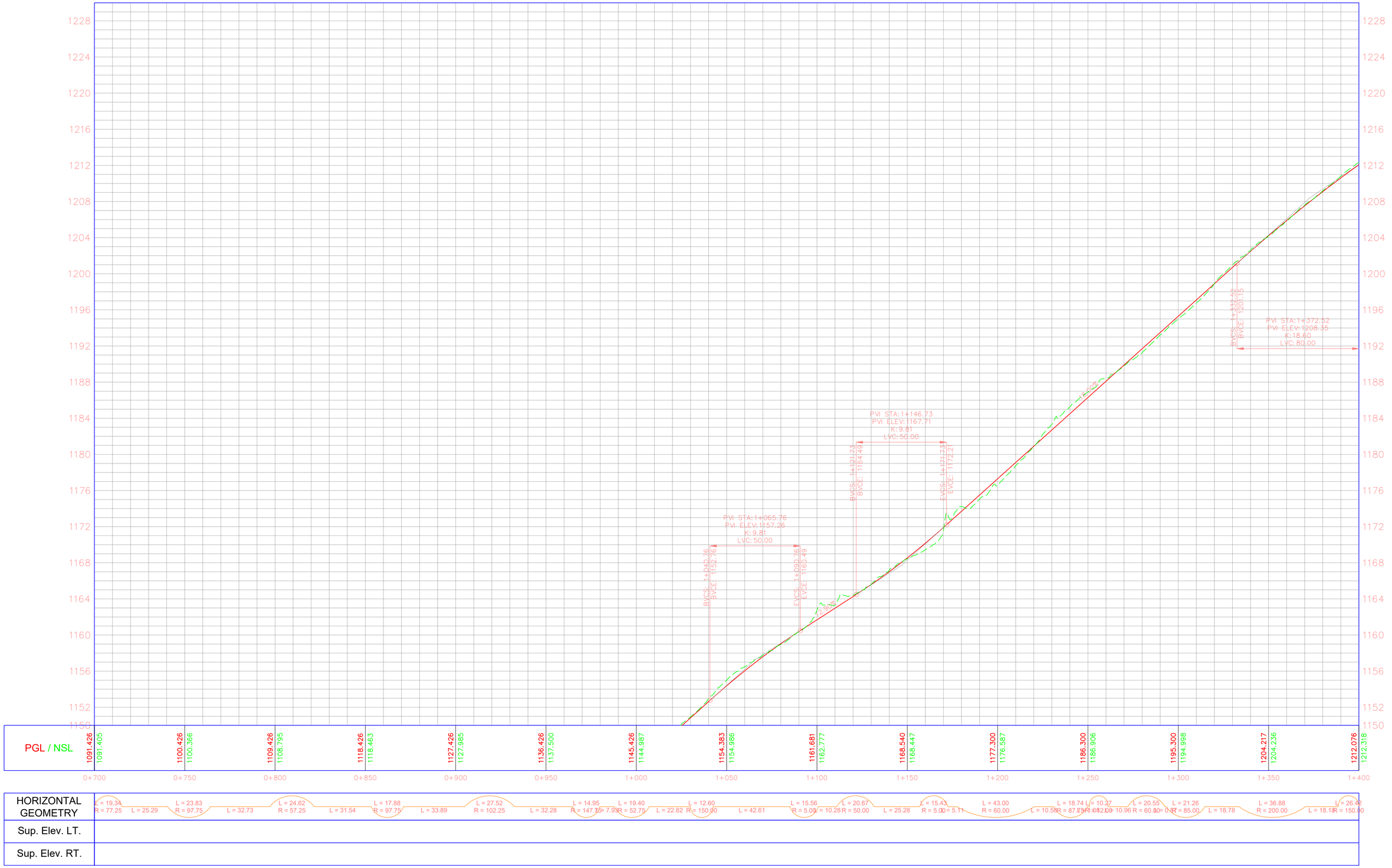
DRAWING No.: 4520/102/TD/1C002A

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN: Faisal
		03			SUBMITTED:
		02			RECOMMENDED:
		01			CHD./VER.:
		REV.	DATE	DESCRIPTION / APPROVED	APPROVED:

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 0+700 TO KM. 1+400

DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C002B

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 1+400 TO KM. 2+100

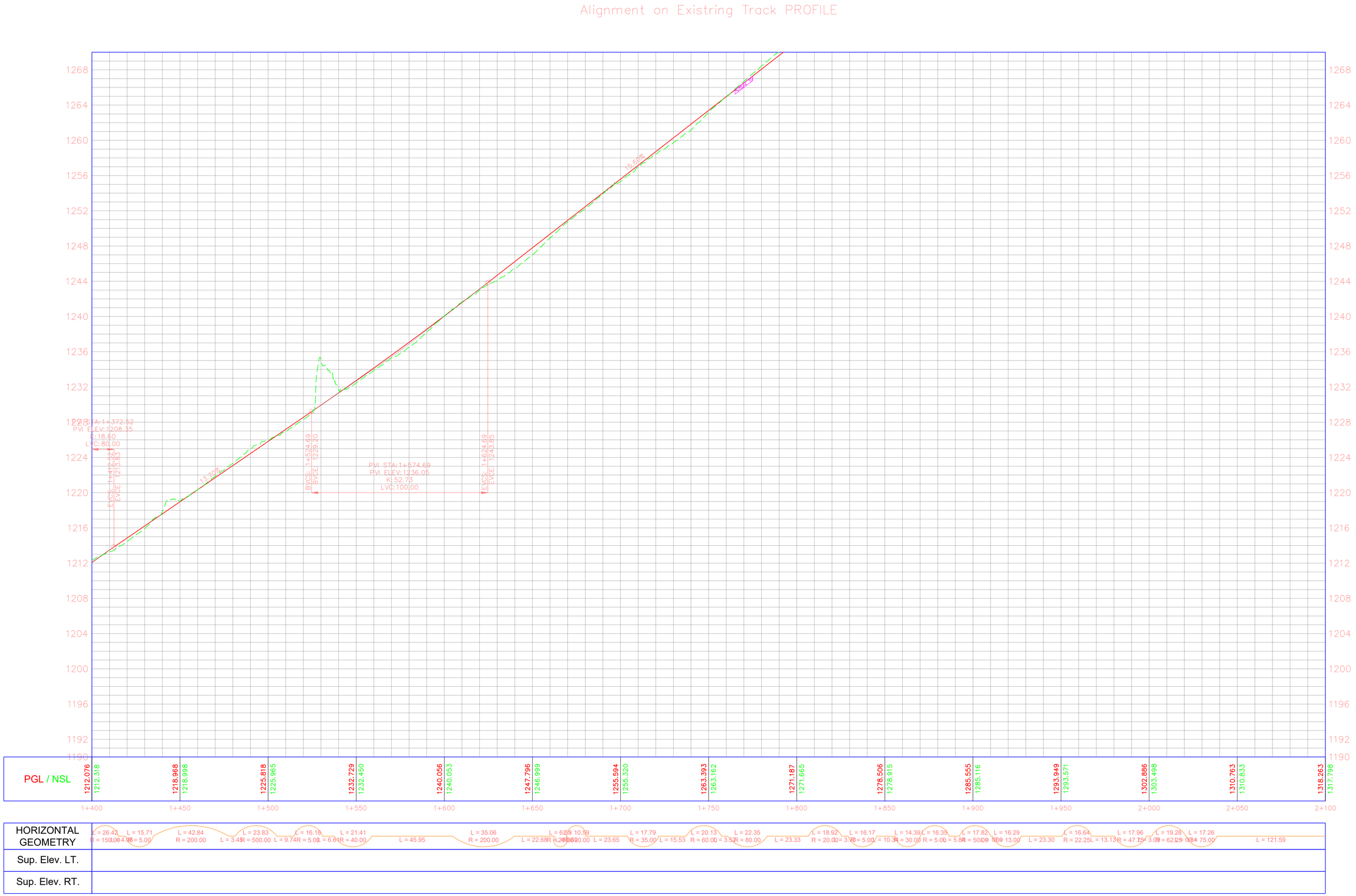
DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C003

SCALE

REV.: 0

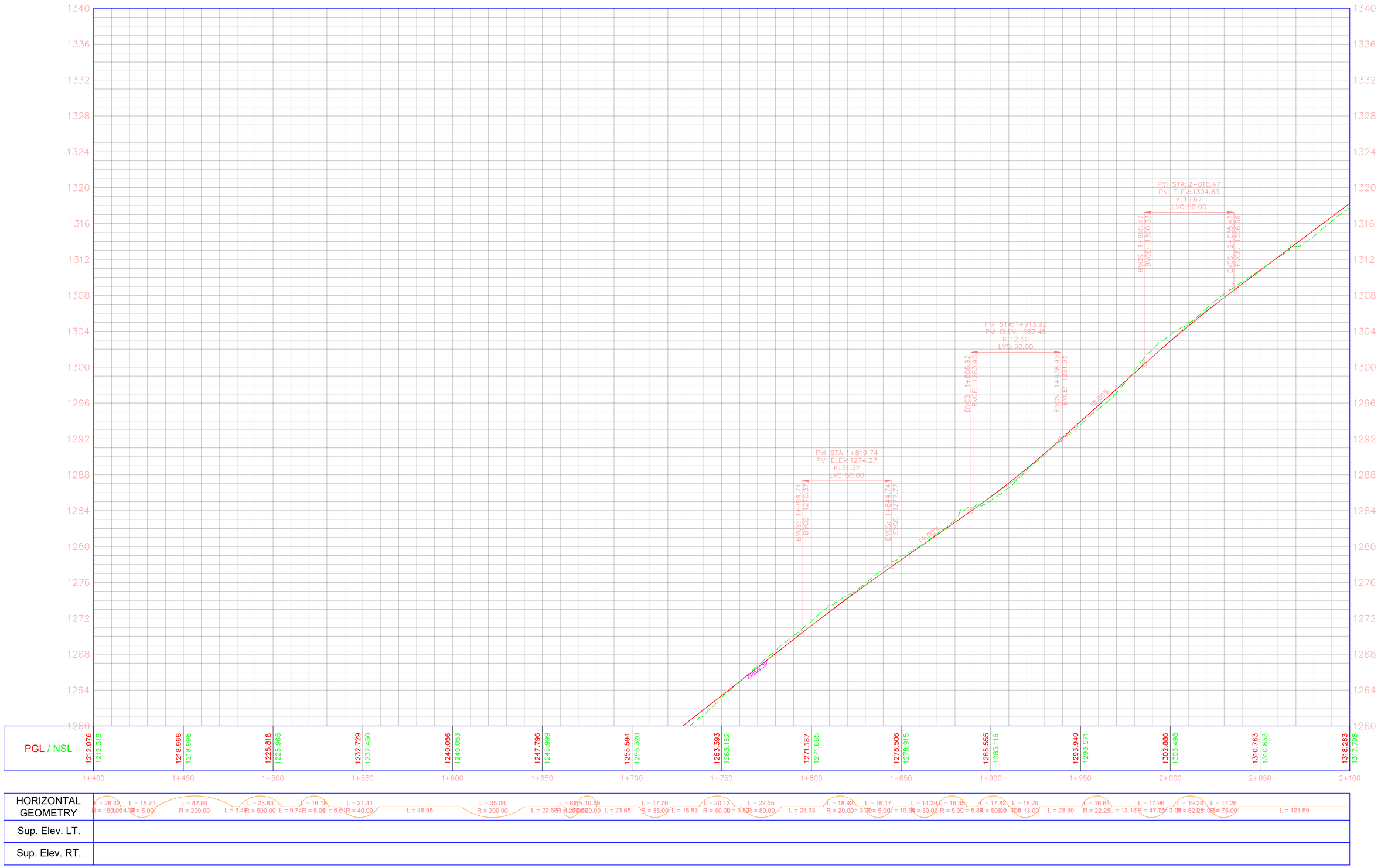
Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	CONSULTANT						PROJECT		SCALE
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	04				DRAWN	Faisal	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	PROFILE THOOTI TO KHOWAR ROAD FROM KM. 1+400 TO KM. 2+100	
		03				SUBMITTED				
		02				RECOMMENDED				
	HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	01				CHD./VER.			DATE MAY, 2025	DRAWING No. 4520/102/TD/1C003A
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				REV. 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



CLIENT	CONSULTANT						PROJECT		SCALE
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	04				DRAWN	Faisal	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	PROFILE THOOTI TO KHOWAR ROAD FROM KM. 1+400 TO KM. 2+100	
		03				SUBMITTED				
		02				RECOMMENDED				
	HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	01				CHD./VER.			DATE MAY, 2025	DRAWING No. 4520/102/TD/1C003B
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				REV. 0

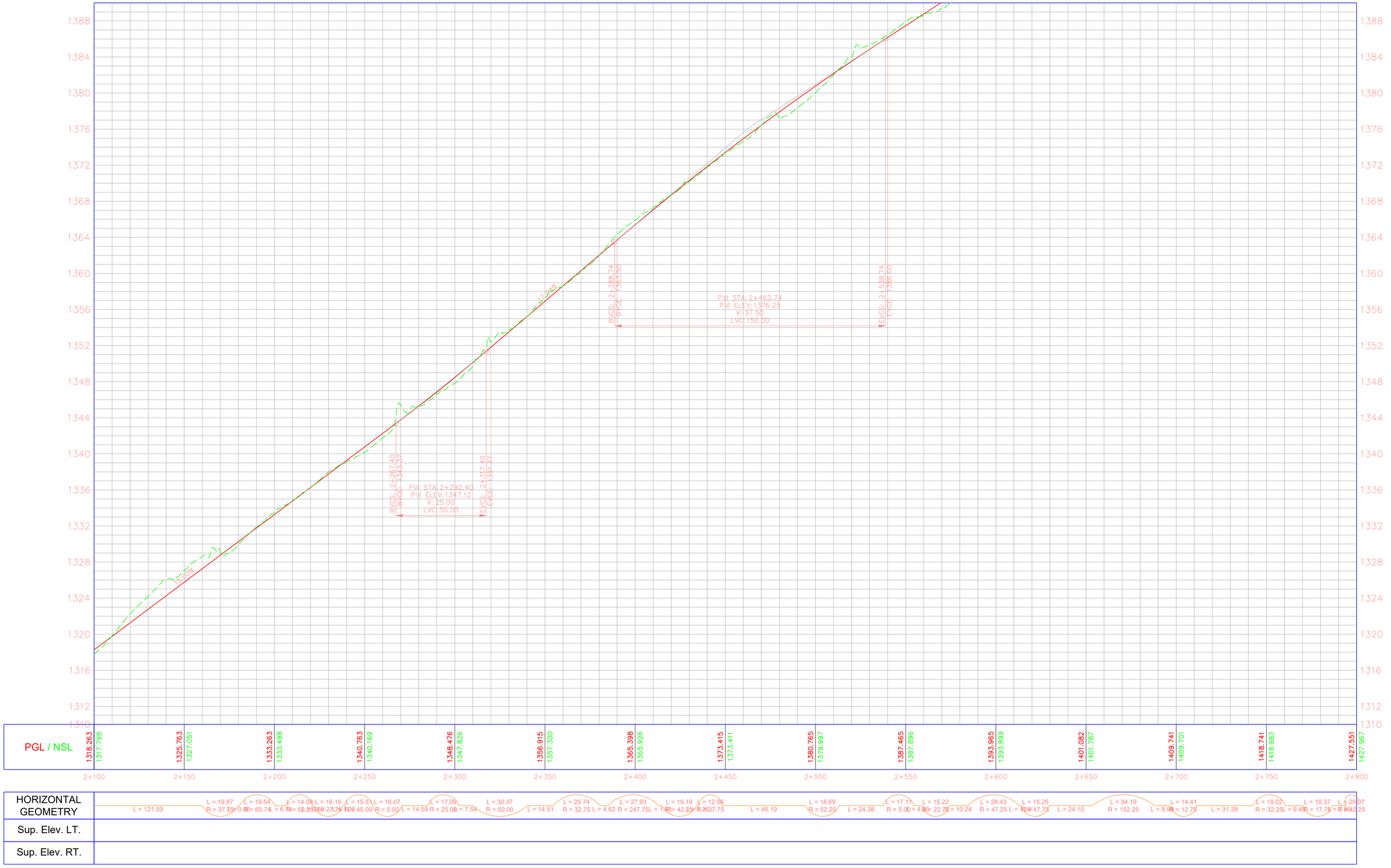
Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	CONSULTANT						PROJECT		SCALE
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	Faisal	**DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**	PLAN THOOTI TO KHOWAR ROAD FROM KM. 2+100 TO KM. 2+800	
		03				SUBMITTED				
		02				RECOMMENDED			DATE: MAY, 2025	DRAWING No.: 4520/102/TD/1C004
		01				CHD./VER.				REV.: 0
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED				

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 2+100 TO KM. 2+800

DATE: MAY, 2025

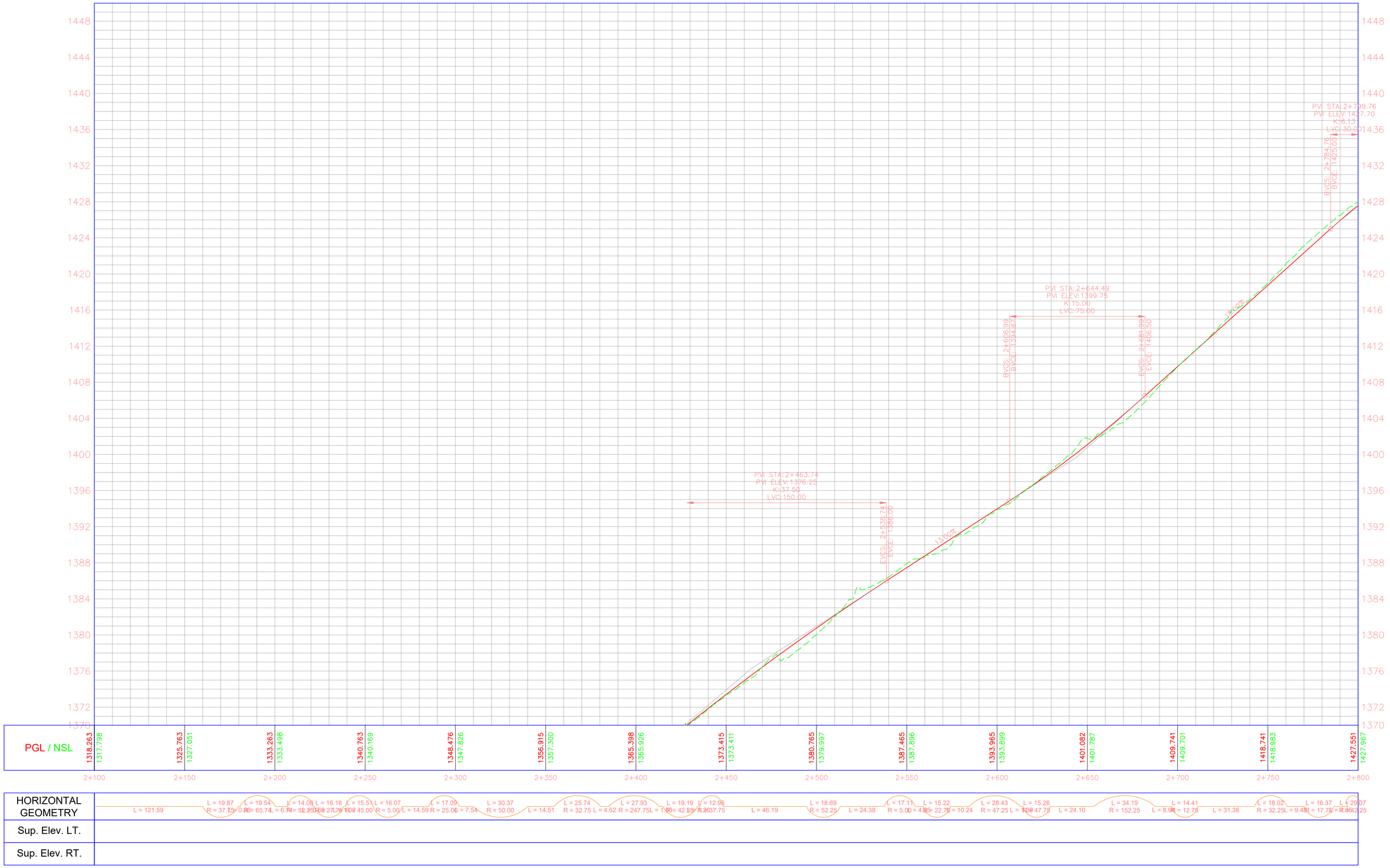
DRAWING No.: 4520/102/TD/1C004A

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 2+100 TO KM. 2+800

DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C004B

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



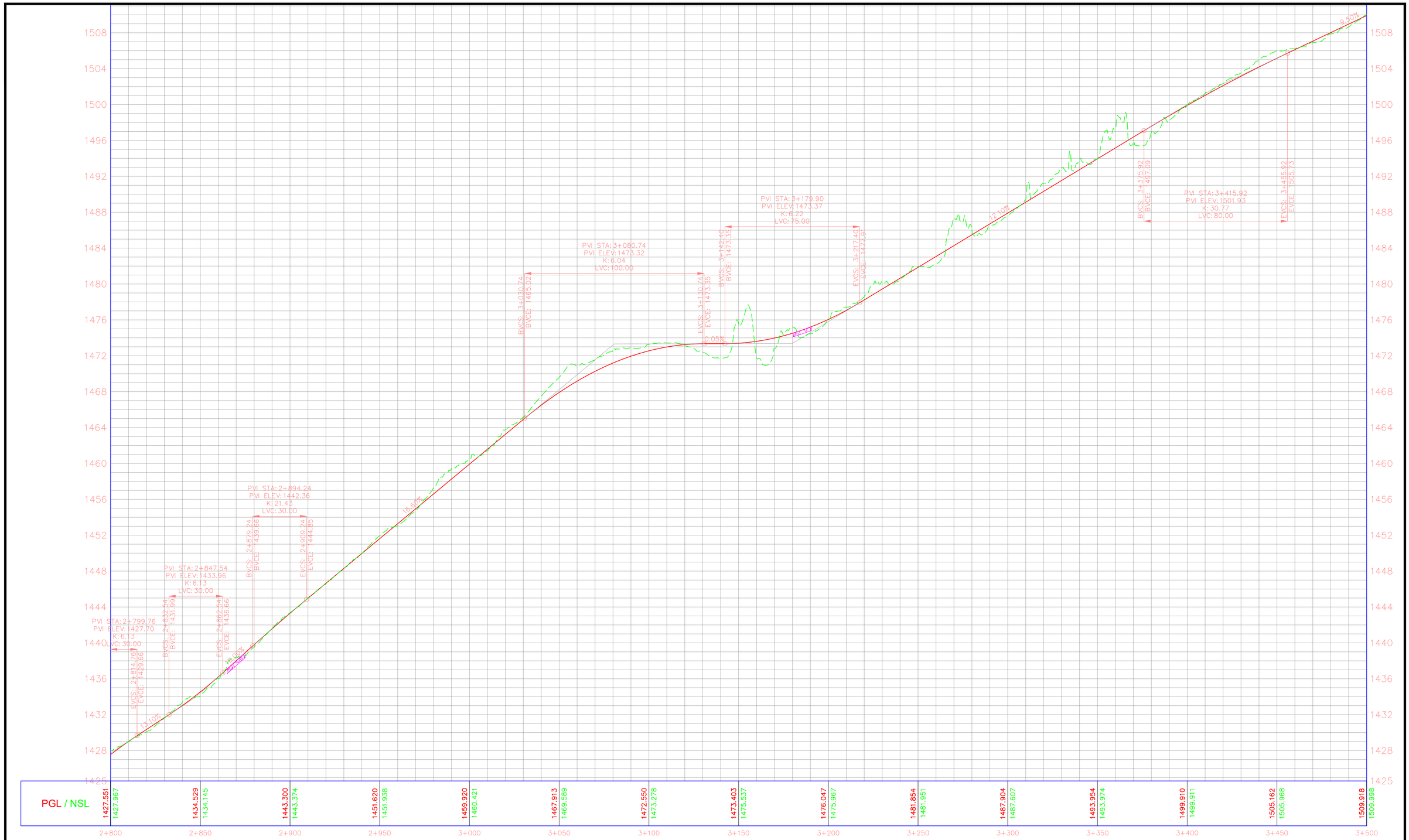
CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 2+800 TO KM. 3+500

DATE	DRAWING No.	SCALE	REV.
MAY, 2025	4520/102/TD/1C005		0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



HORIZONTAL GEOMETRY	L = 29.07, R = 42.25, L = 40.98, L = 33.40, R = 400.00, L = 46.96, L = 14.75, R = 30.00, L = 31.56, L = 17.00, R = 40.00, L = 10.71, L = 15.92, R = 20.00, L = 15.12, R = 10.00, L = 20.91, L = 16.68, R = 20.00, L = 36.12, L = 14.00, R = 150.00, L = 32.33, L = 22.78, R = 25.00, L = 15.63, R = 50.00, L = 22.14, L = 18.19, R = 50.00, L = 16.19, R = 60.00, L = 26.32, L = 75.70, R = 140.00, L = 26.61, L = 64.50, R = 100.00, L = 51.41
Sup. Elev. LT.	
Sup. Elev. RT.	

CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 2+800 TO KM. 3+500

DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C005A

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	CONSULTANT					
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04				DRAWN	Faisal
		03				SUBMITTED	
		02				RECOMMENDED	
		01				CHD./VER.	
		REV.	DATE	DESCRIPTION	APPROVED	APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 3+500 TO KM. 4+200

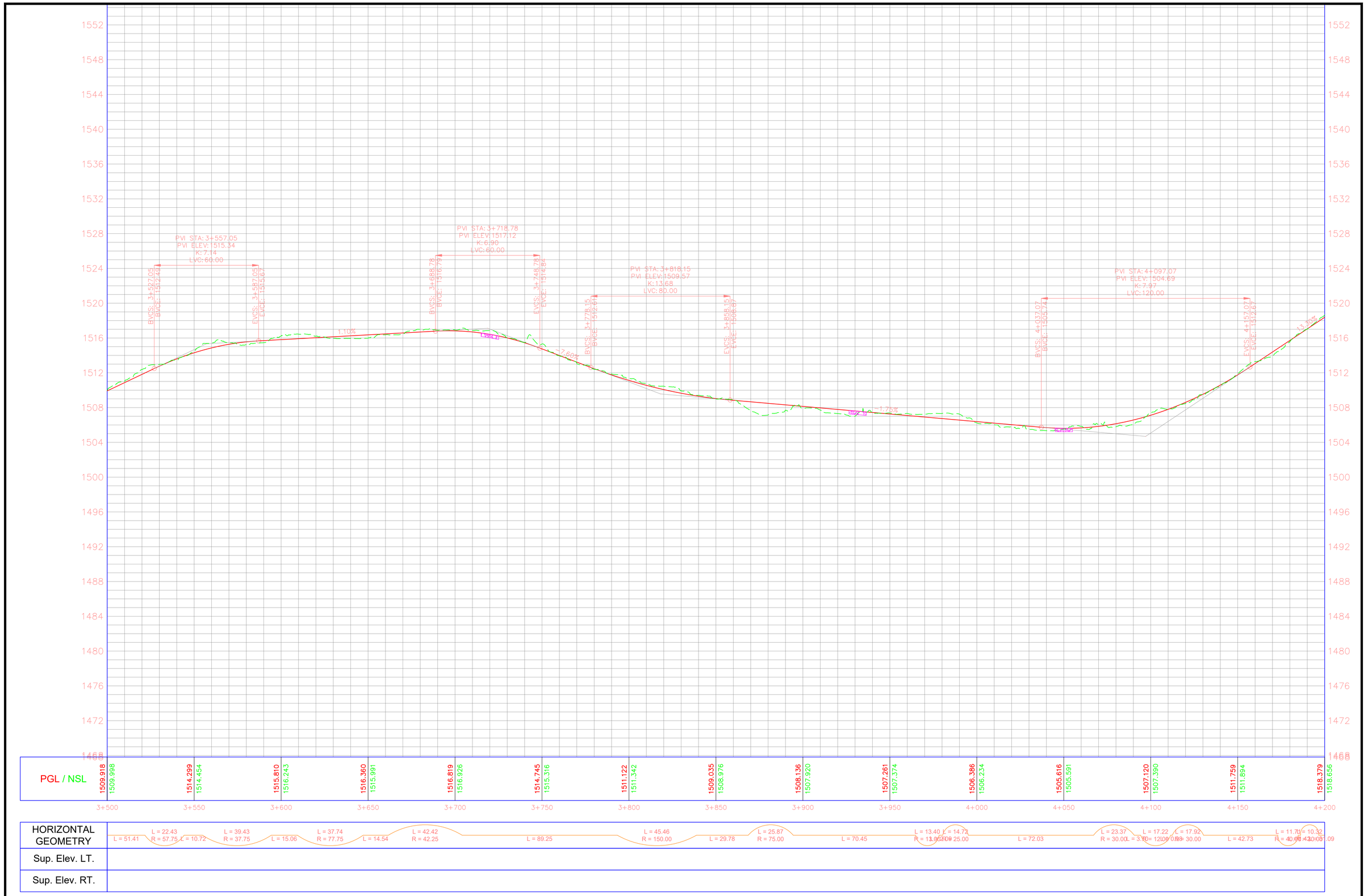
DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C006

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 3+500 TO KM. 4+200

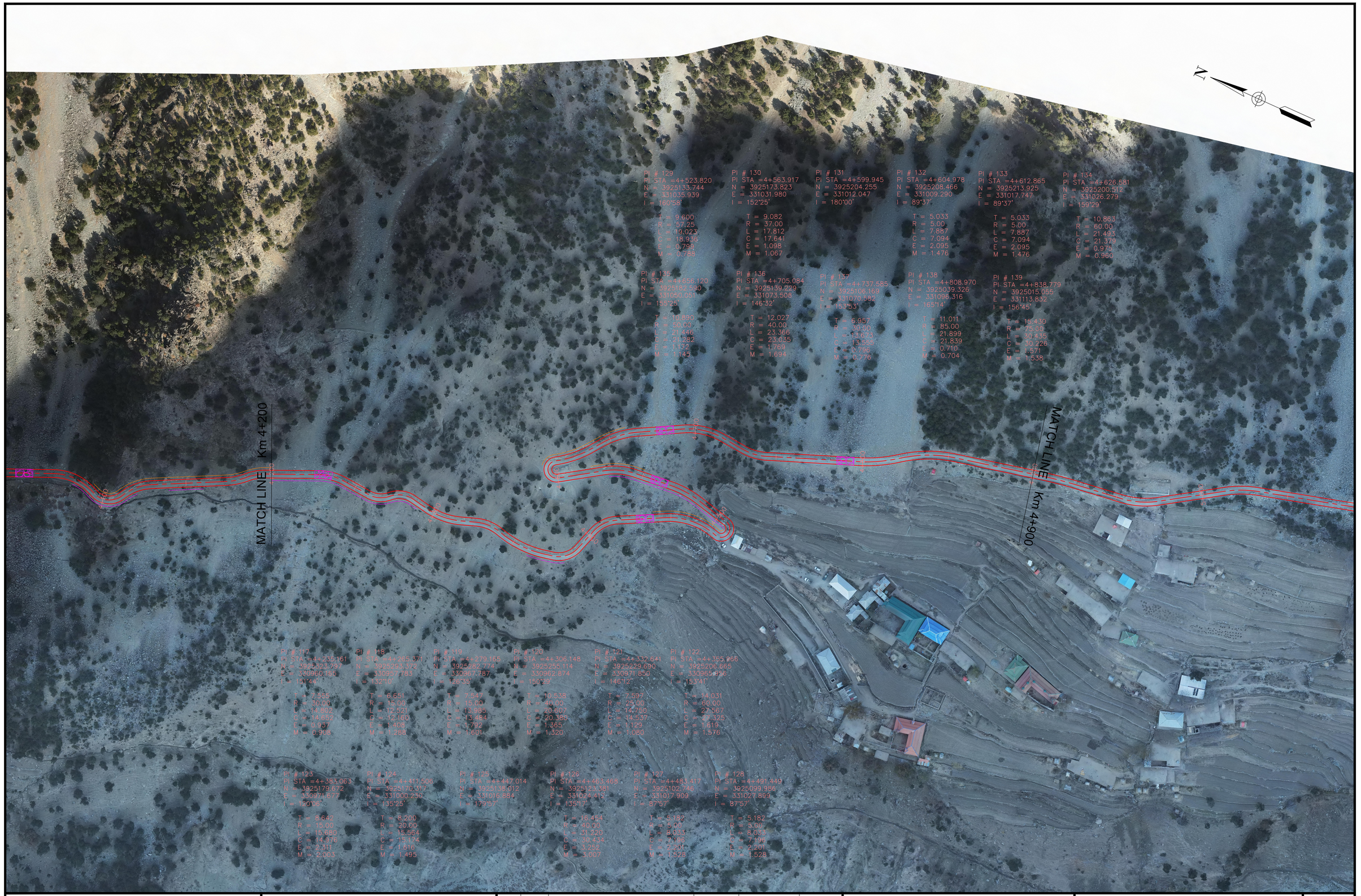
DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C006A

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED	APPROVED
04				DRAWN: Faisal
03				SUBMITTED:
02				RECOMMENDED:
01				CHD./VER.:

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 4+200 TO KM. 4+900

DATE: MAY, 2025

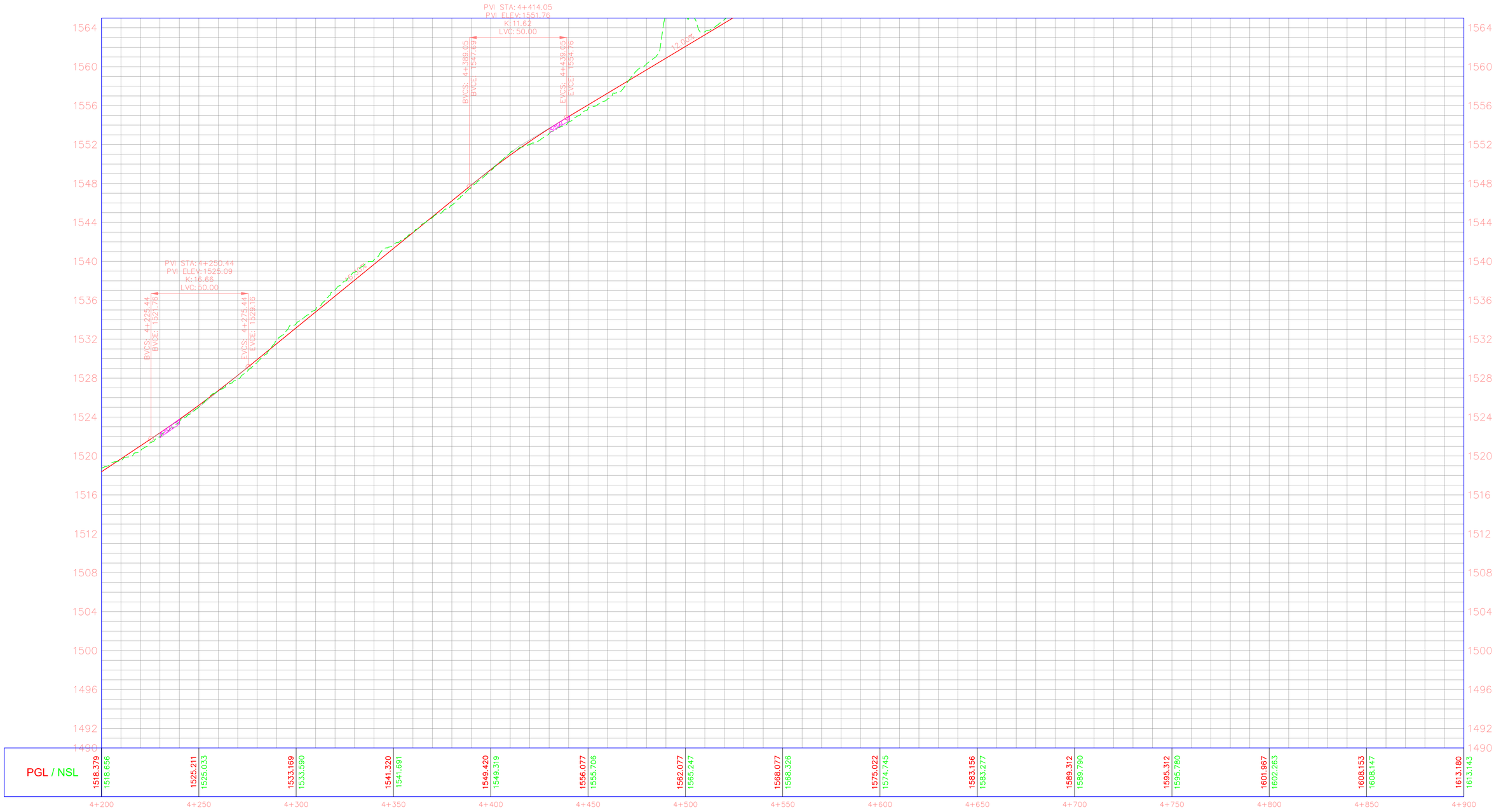
DRAWING No.: 4520/102/TD/1C007

SCALE

REV.: 0

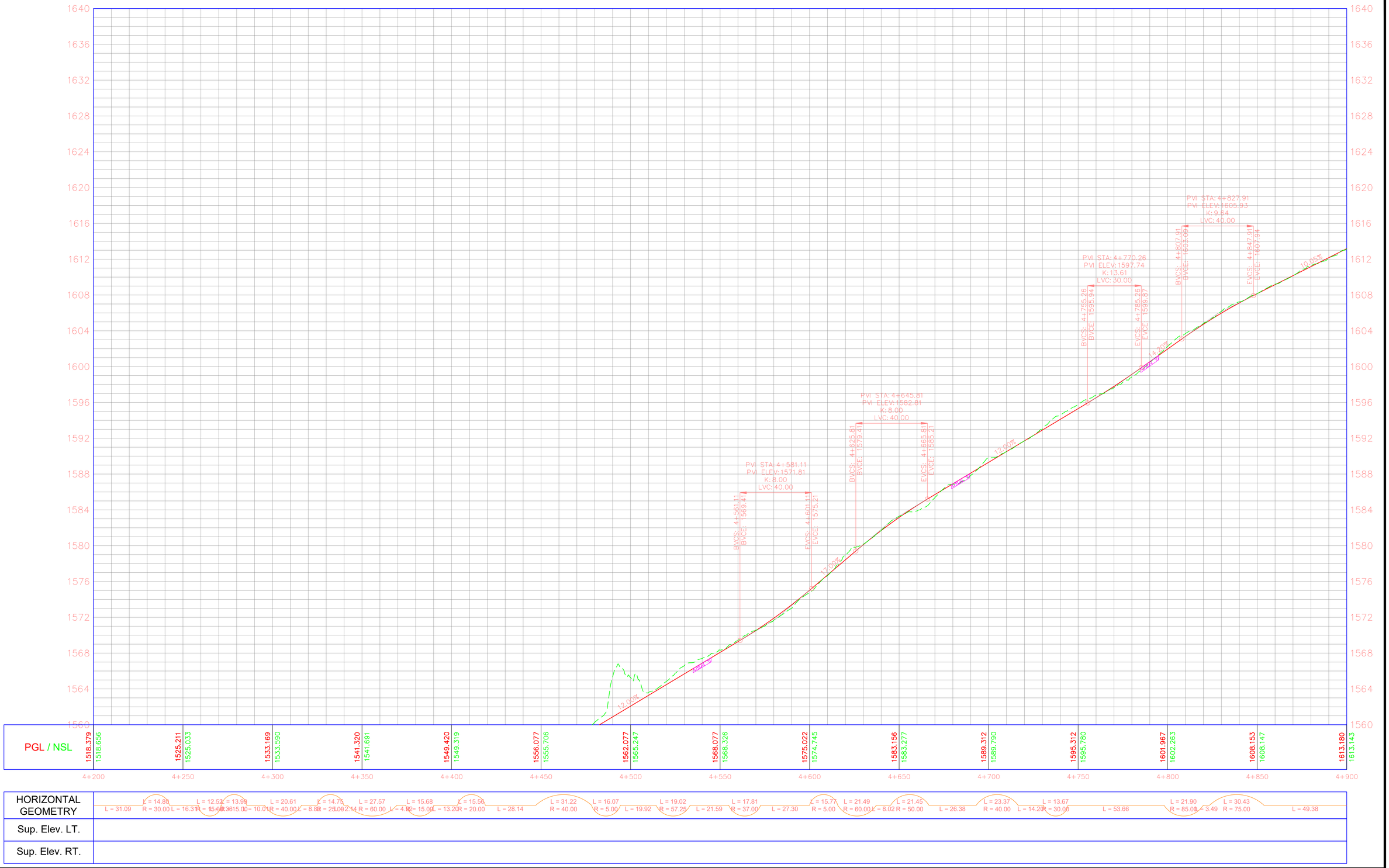
Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

Alignment on Existring Track PROFILE



| PGL / NSL | | |

Alignment on Existring Track PROFILE



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 4+200 TO KM. 4+900

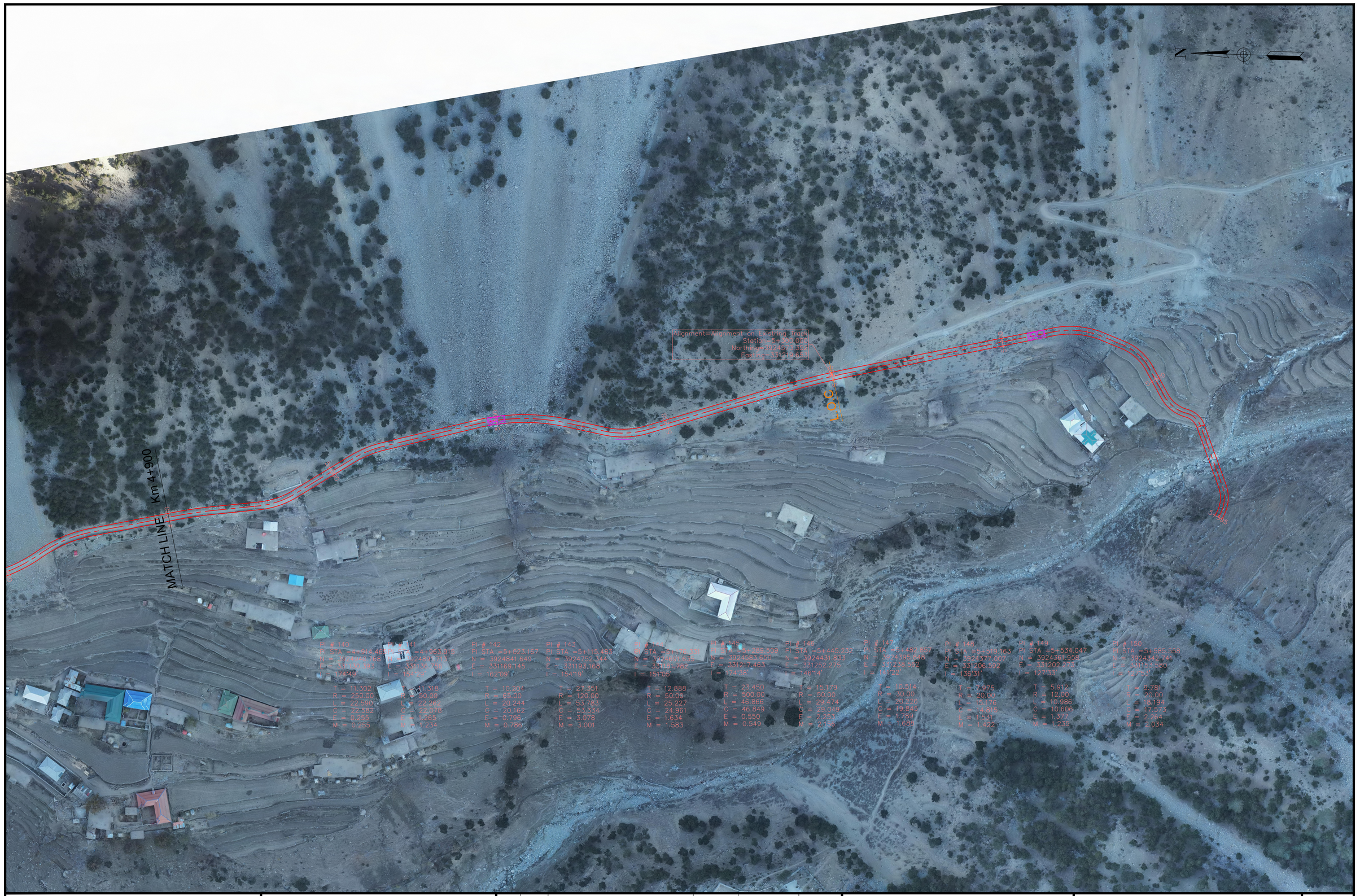
DATE: MAY, 2025

DRAWING No.: 4520/102/TD/1C007B

SCALE

REV.: 0

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.		
			HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	Faisal
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

PROJECT

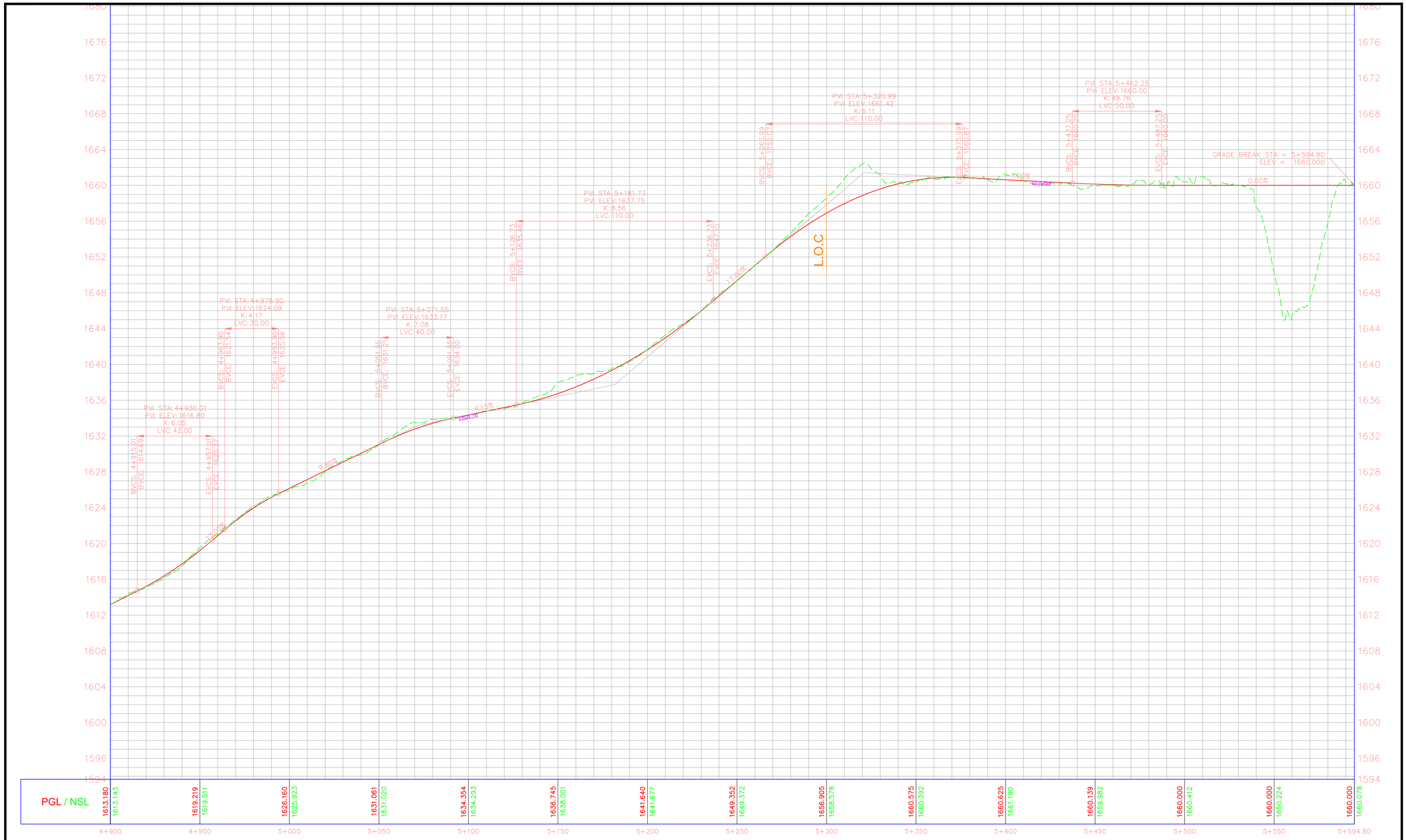
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PLAN
THOOTI TO KHOWAR ROAD
FROM KM. 4+900 TO KM. 5+300

DATE	DRAWING No.	REV.
MAY, 2025	4520/102/TD/1C008	0

SCALE

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	Faisal
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

PROFILE
THOOTI TO KHOWAR ROAD
FROM KM. 4+900 TO KM. 5+300

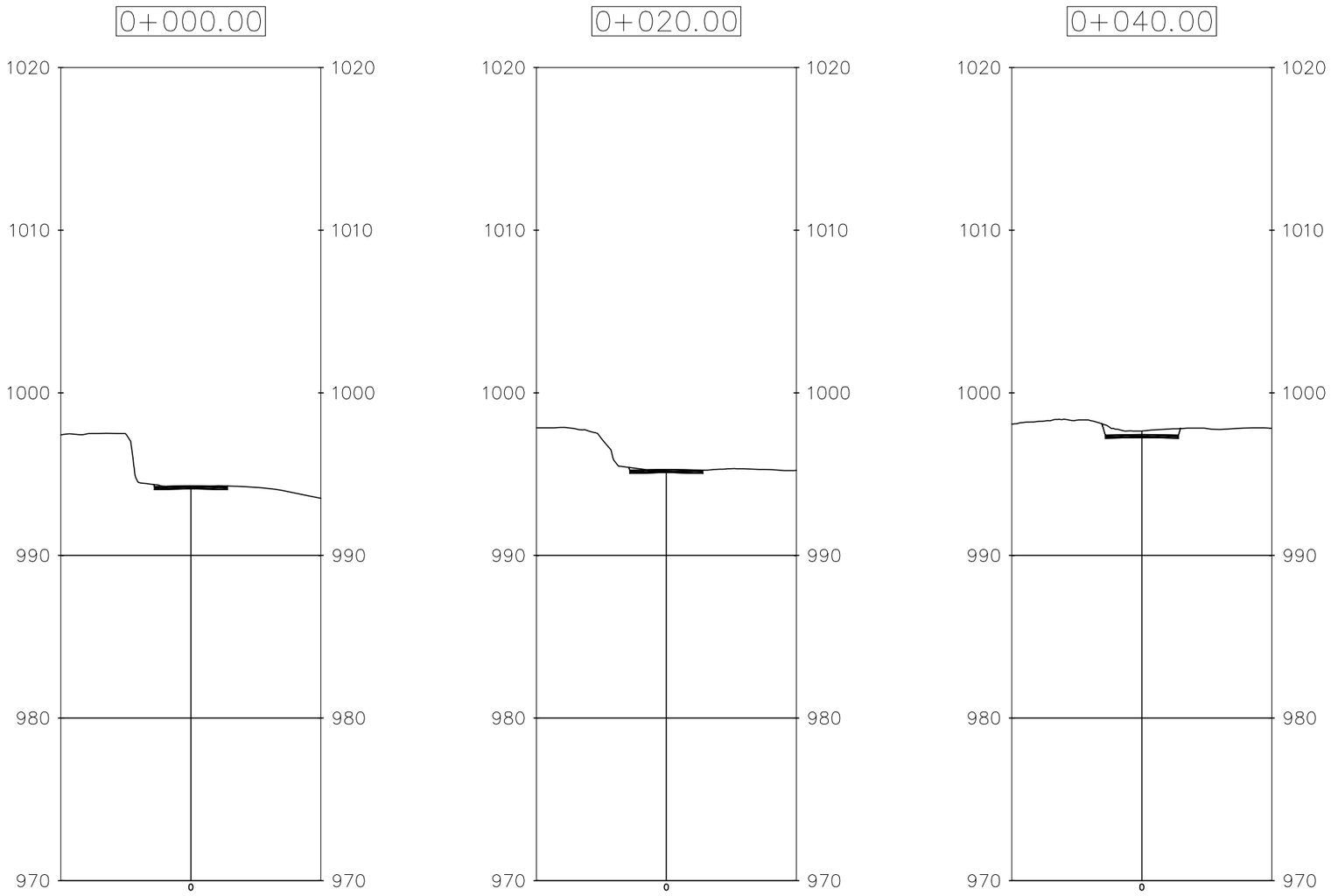
DATE	DRAWING No.	REV.
MAY, 2025	4520/102/TD/1C008A	0

SCALE

Faisal E:\KANDIA ROAD\Thooti to Khowar\TENDER DRAWINGS\PLAN & PROFILE\Design Thooti to Khowar_C3D_26022025.dwg,

CHAINAGE WISE CROSS SECTIONS

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN: GOHAR
		03			SUBMITTED:
		02			RECOMMENDED:
		01			CHD./VER.:
		REV.	DATE	DESCRIPTION / APPROVED	APPROVED:

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

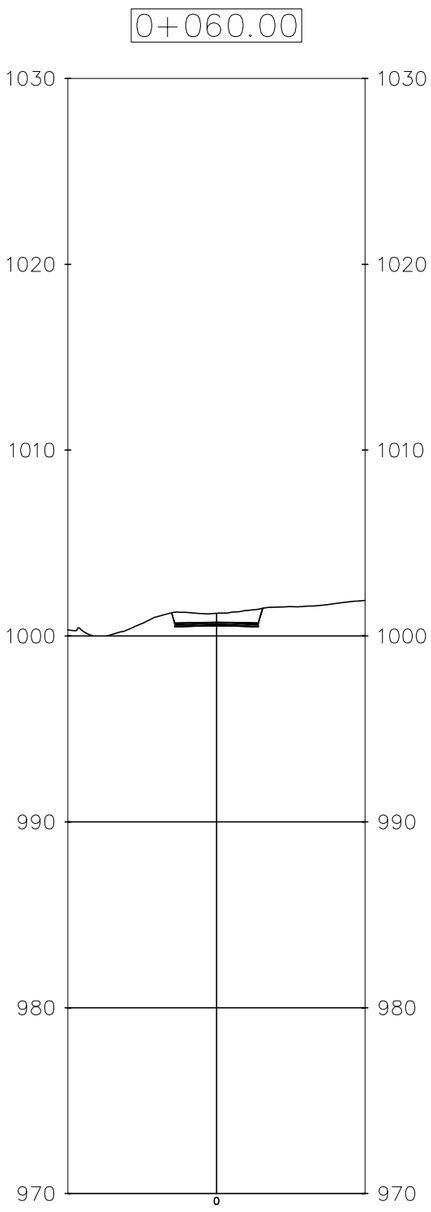
DRAWING No.: 4520/102/TD/XS103

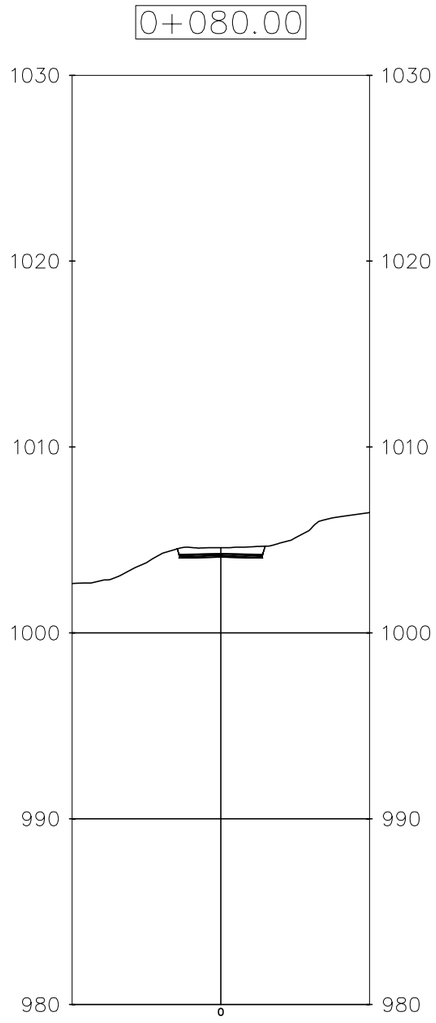
SCALE:

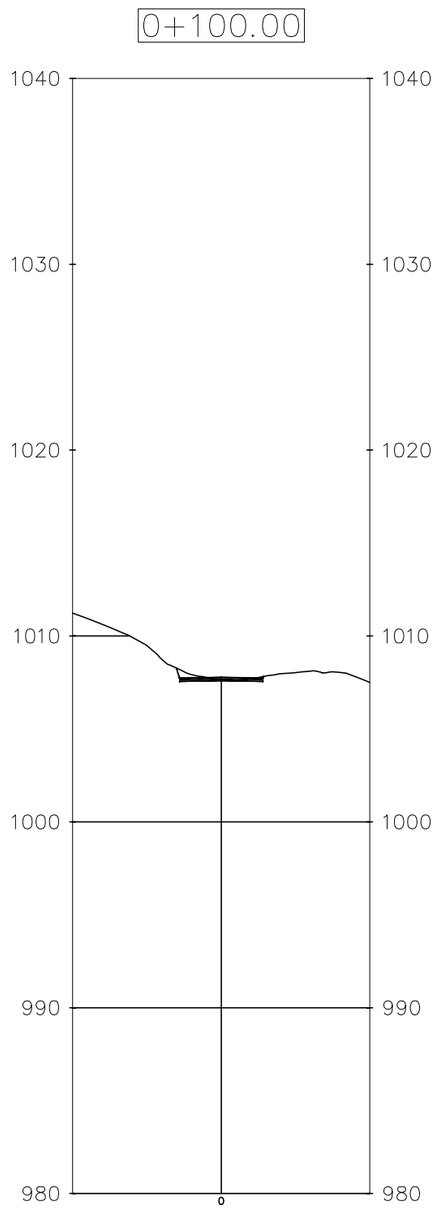
REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

DATE: DECEMBER, 2025

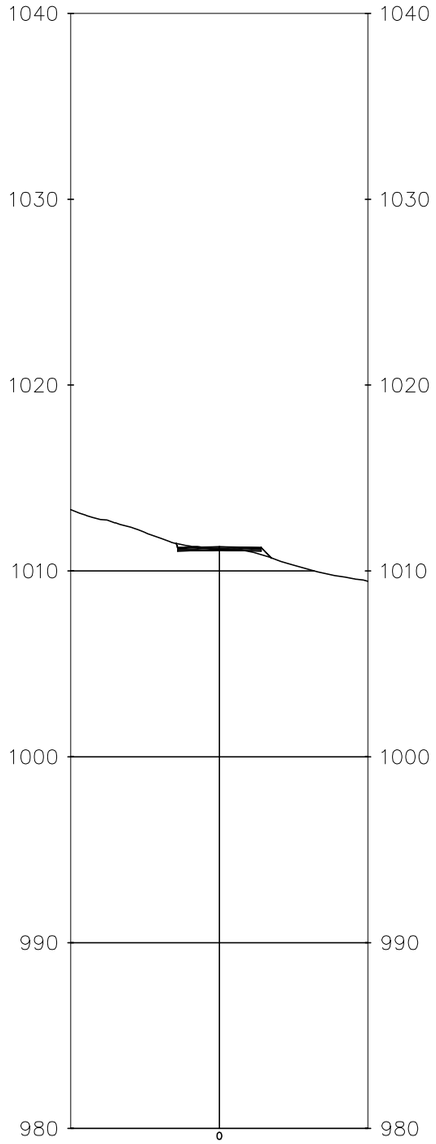
DRAWING No.: 4520/102/TD/XS104

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

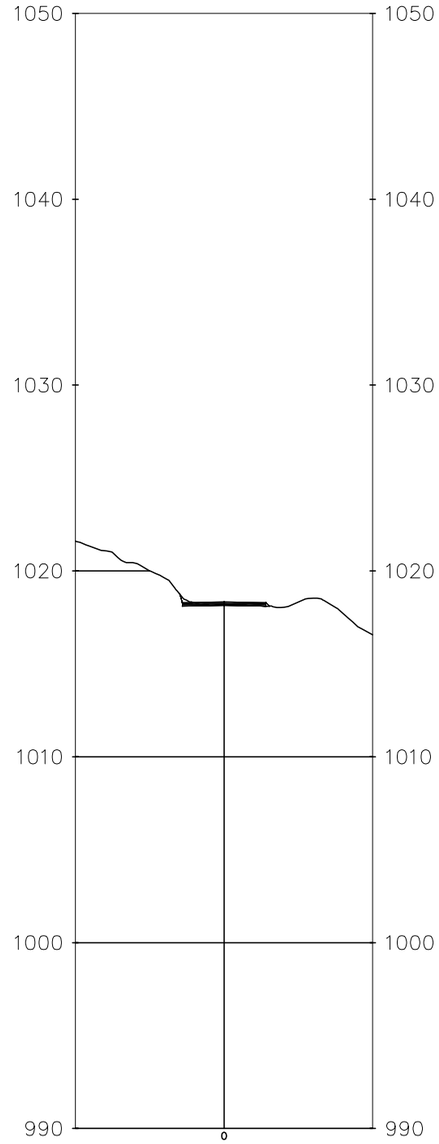
0+120.00



0+140.00



0+160.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

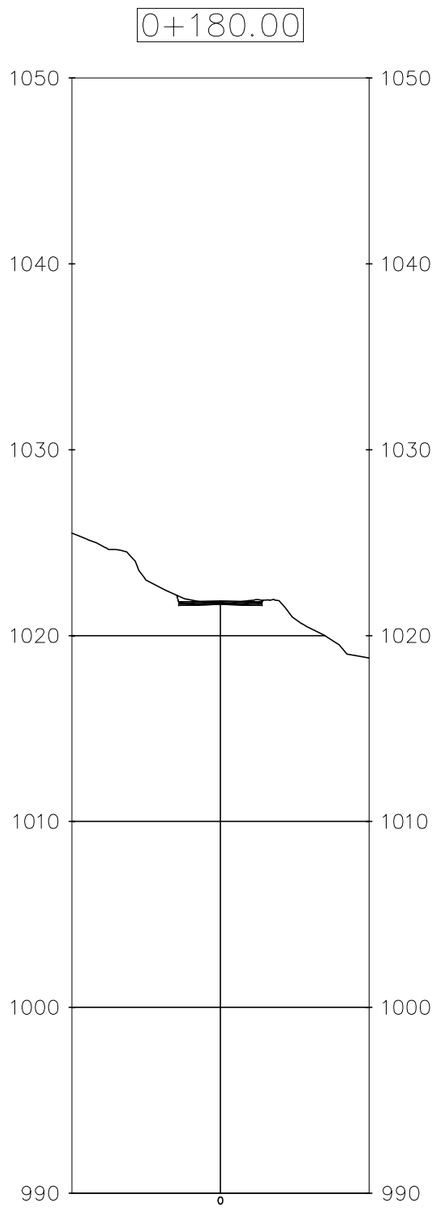
DRAWING No.: 4520/102/TD/XS105

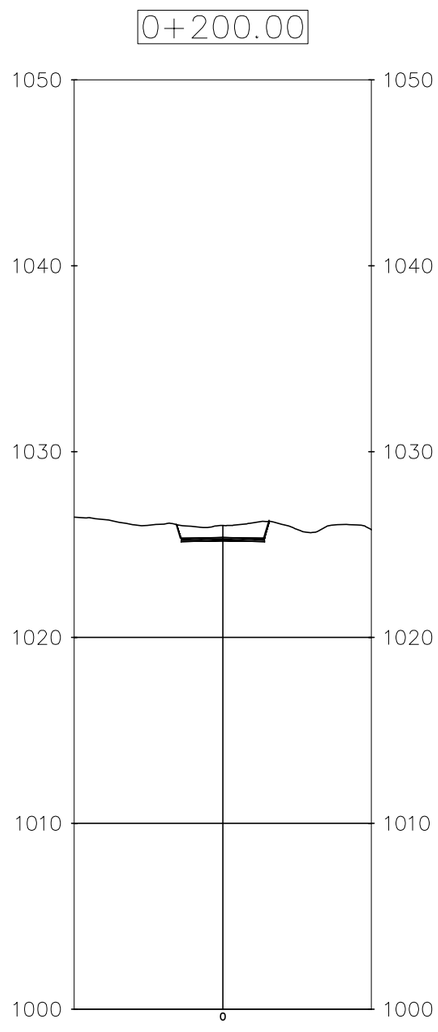
SCALE

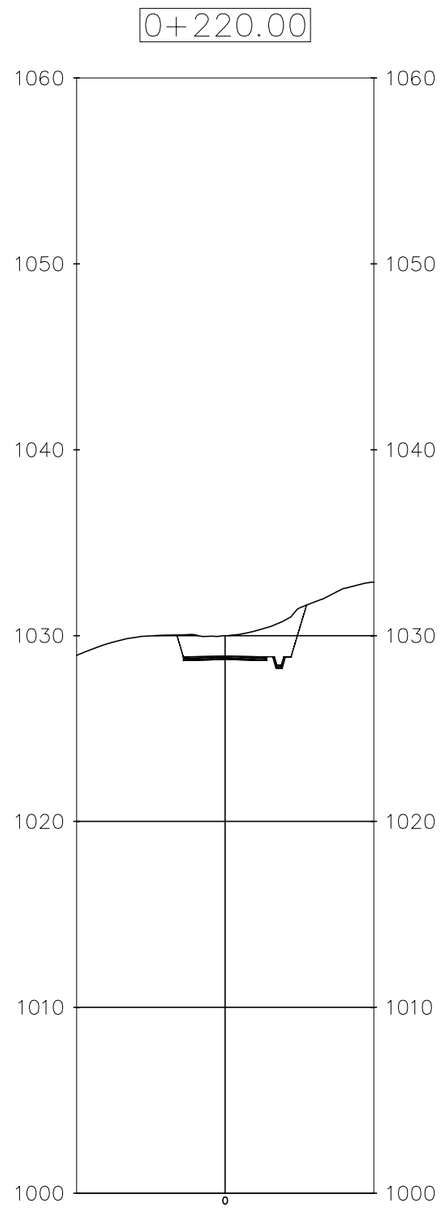
REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

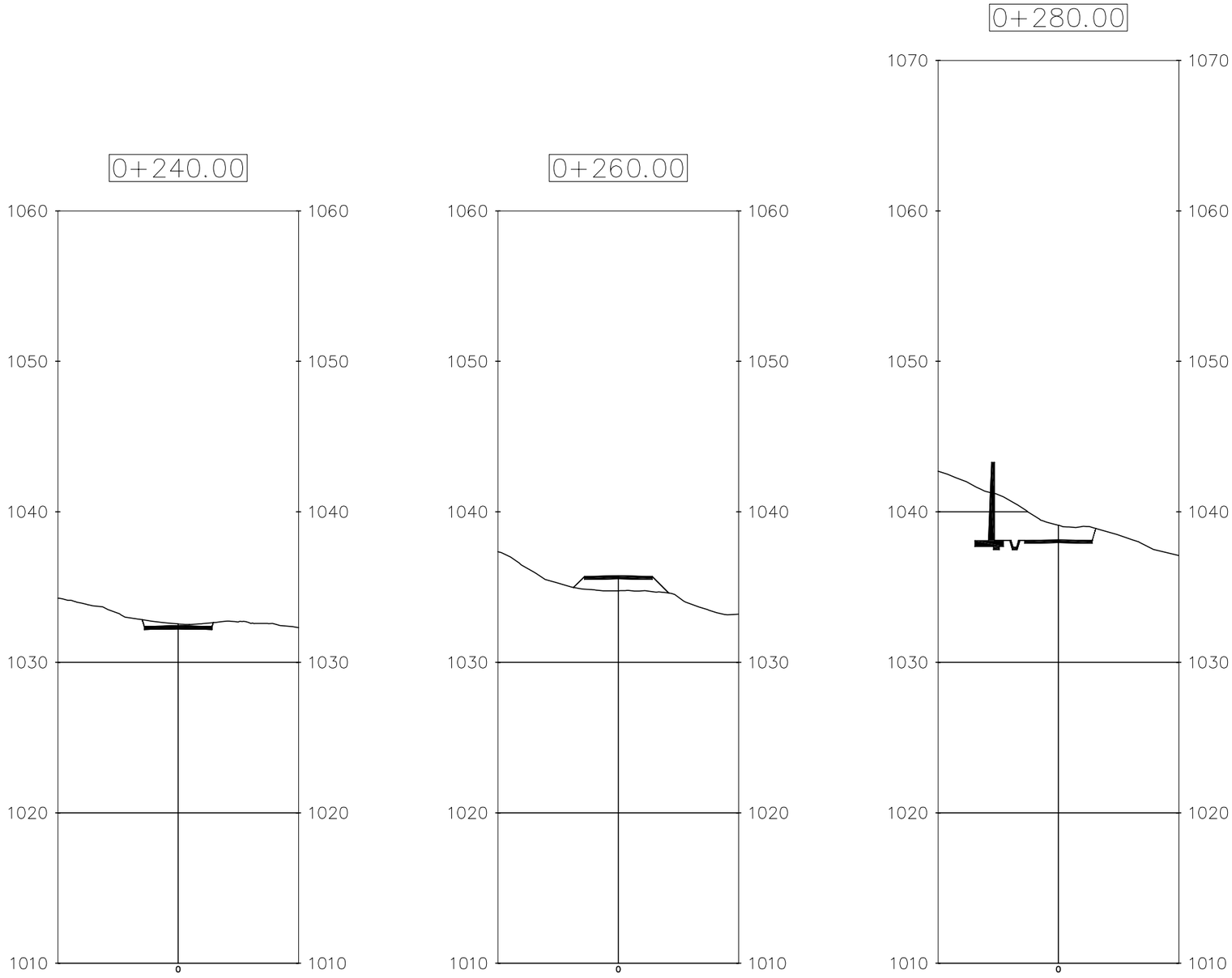
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS106

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		
CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

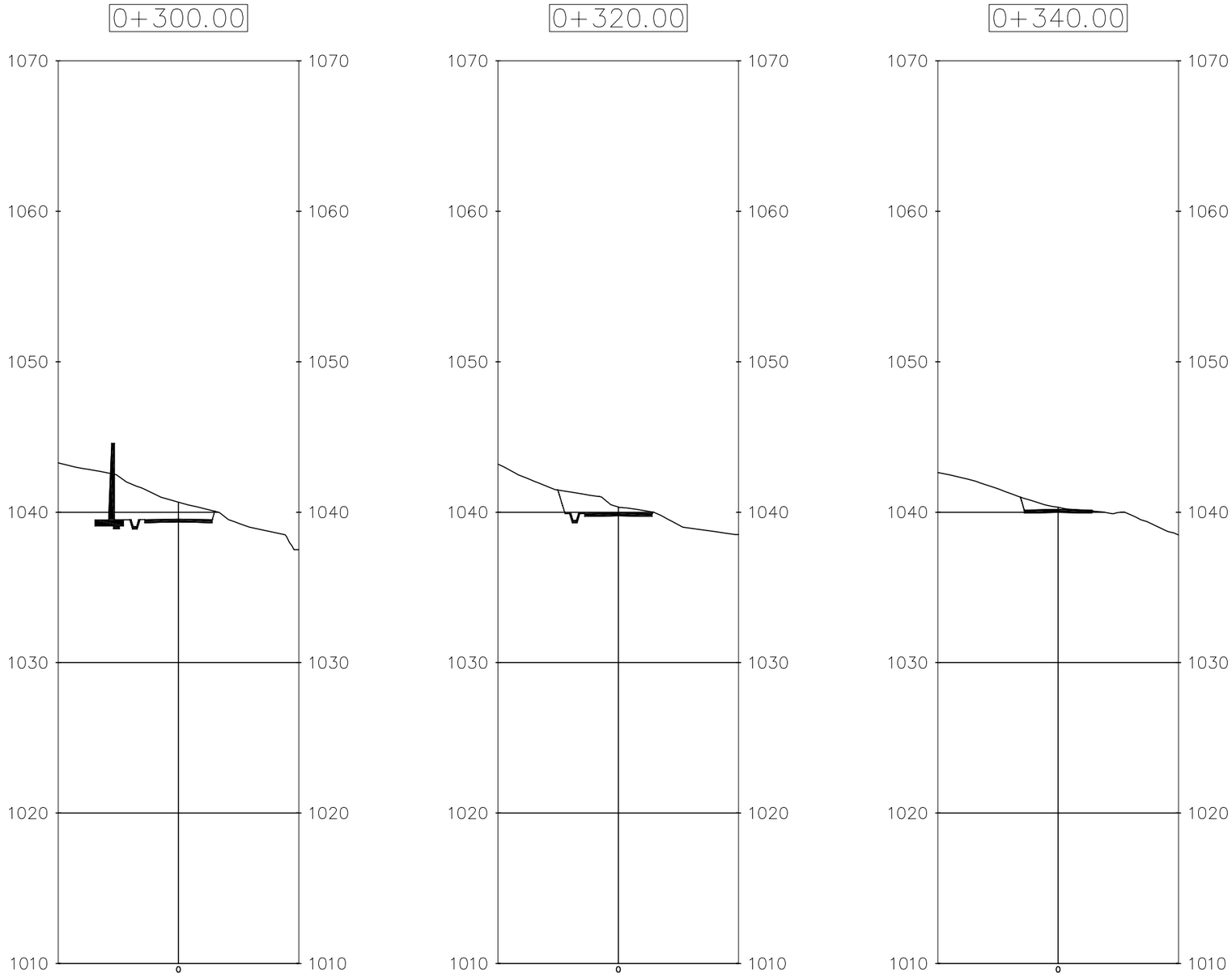
CHAINAGE WISE X-SECTIONS

DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS107	0

SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN: GOHAR
		03			SUBMITTED:
		02			RECOMMENDED:
		01			CHD./VER.:
		REV.	DATE	DESCRIPTION / APPROVED	APPROVED:

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

SCALE:

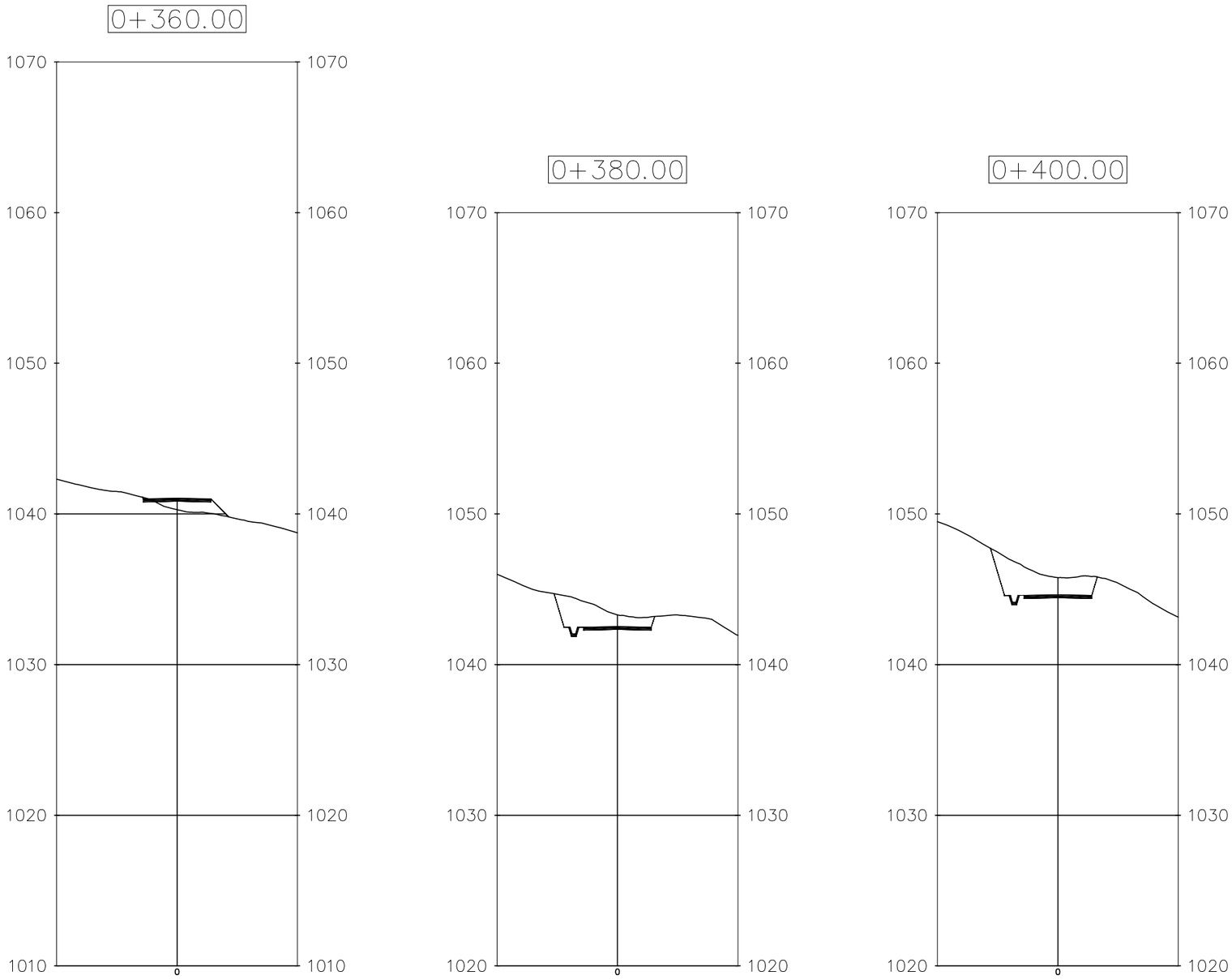
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 108

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		
CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

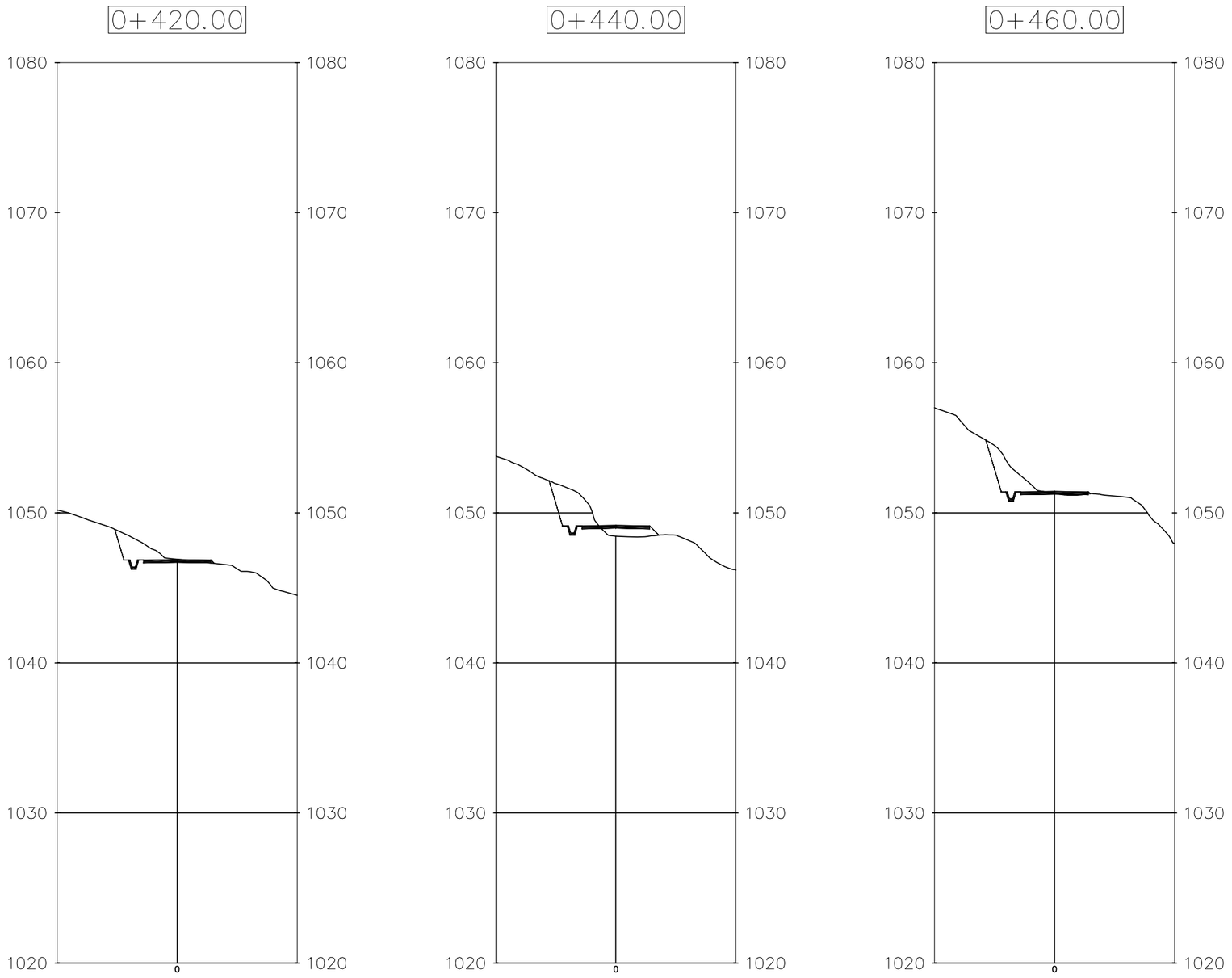
CHAINAGE WISE X-SECTIONS

DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS 109	0

SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT					
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)					
CONSULTANT	04			DRAWN	GOHAR
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	03			SUBMITTED	
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	02			RECOMMENDED	
	01			CHD./VER.	
	REV.	DATE	DESCRIPTION	APPROVED	APPROVED

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

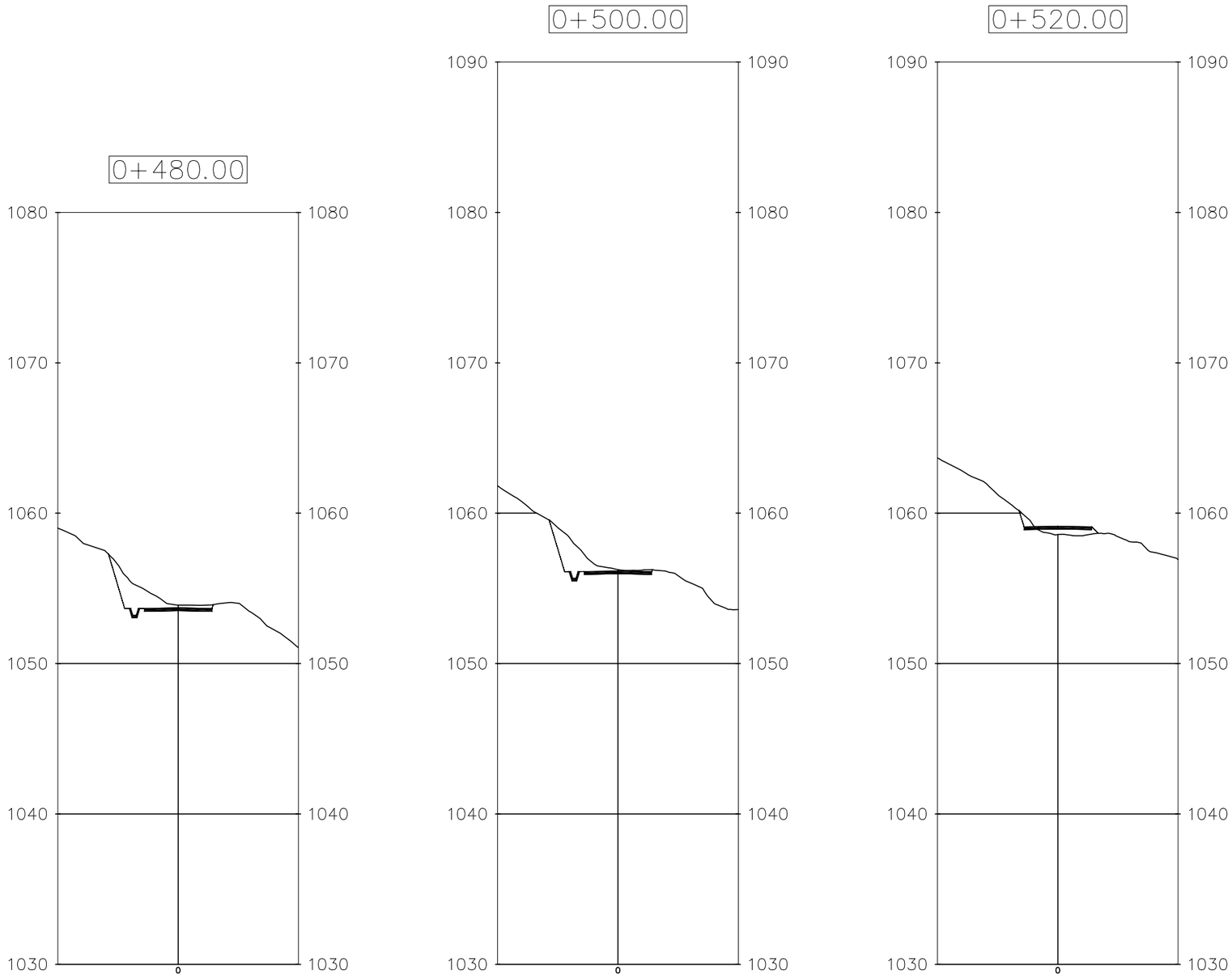
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 110

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN: GOHAR
		03			SUBMITTED:
		02			RECOMMENDED:
		01			CHD./VER.:
		REV.	DATE	DESCRIPTION / APPROVED	APPROVED:

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

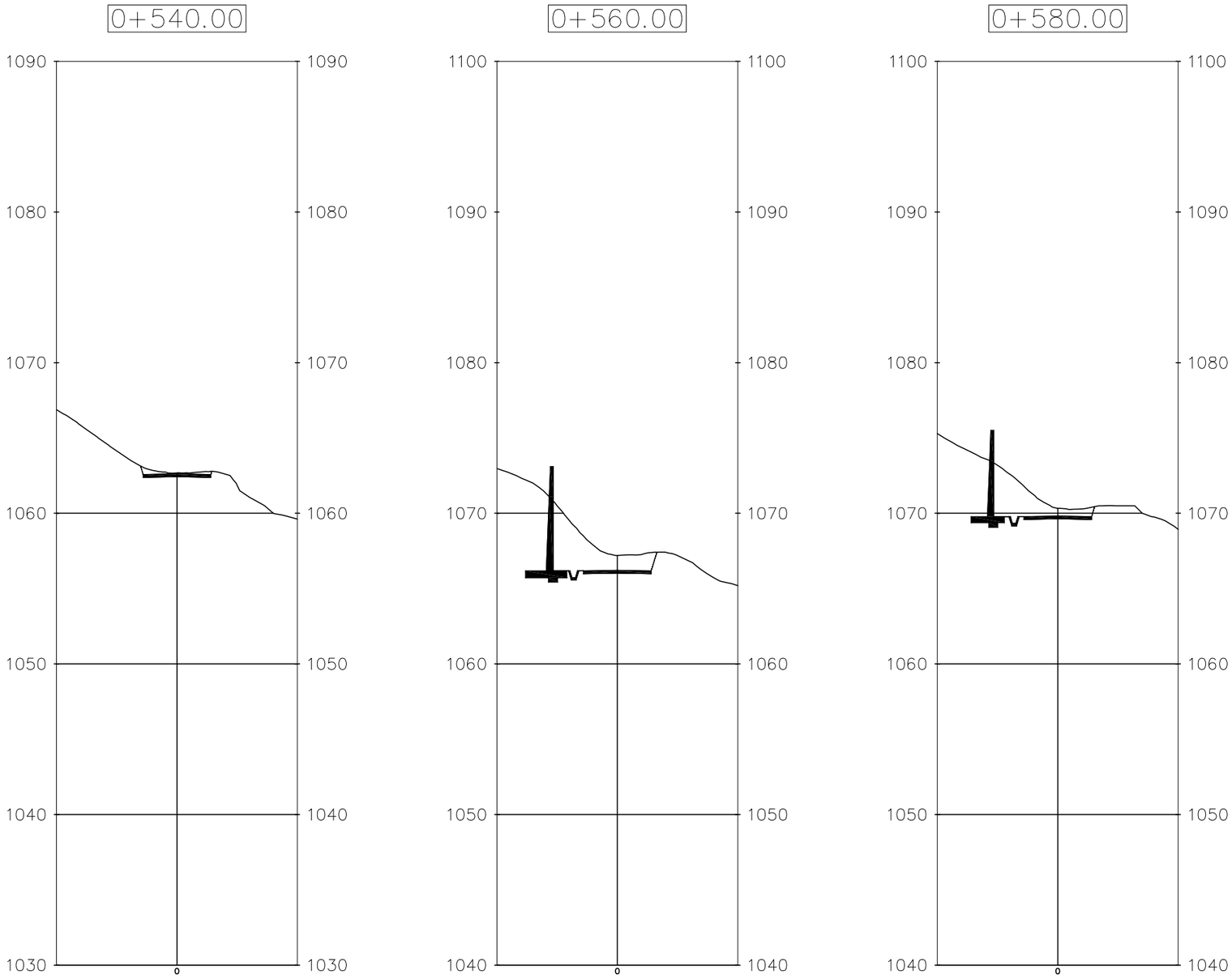
DRAWING No.: 4520/102/TD/XS 111

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

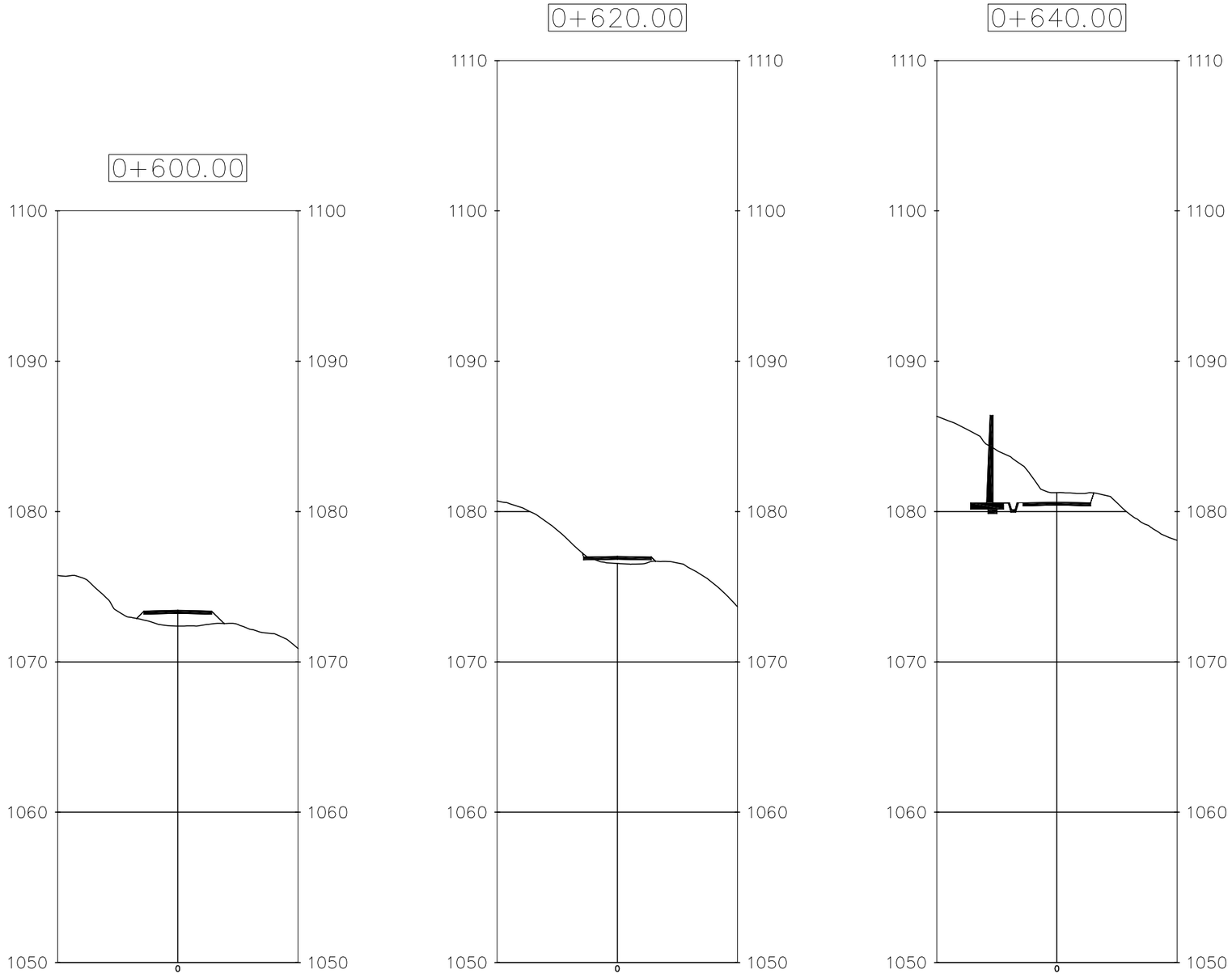
DRAWING No.: 4520/102/TD/XS 112

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04			DRAWN: GOHAR
		03			SUBMITTED:
		02			RECOMMENDED:
		01			CHD./VER.:
		REV.	DATE	DESCRIPTION / APPROVED	APPROVED:

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

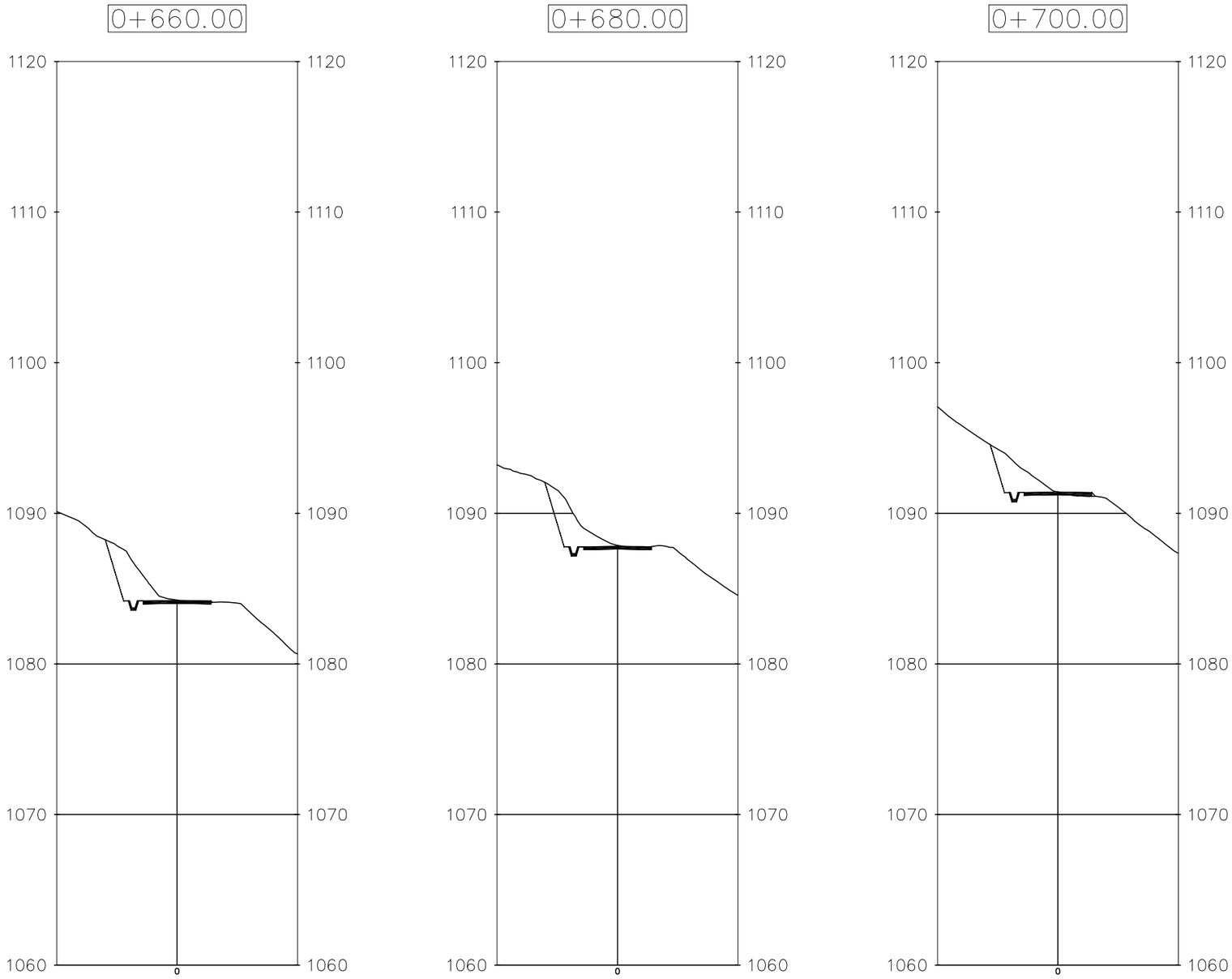
DRAWING No.: 4520/102/TD/XS 113

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01		DRAWN: GOHAR; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

REV.	DATE	DESCRIPTION	APPROVED

CHAINAGE WISE X-SECTIONS

SCALE

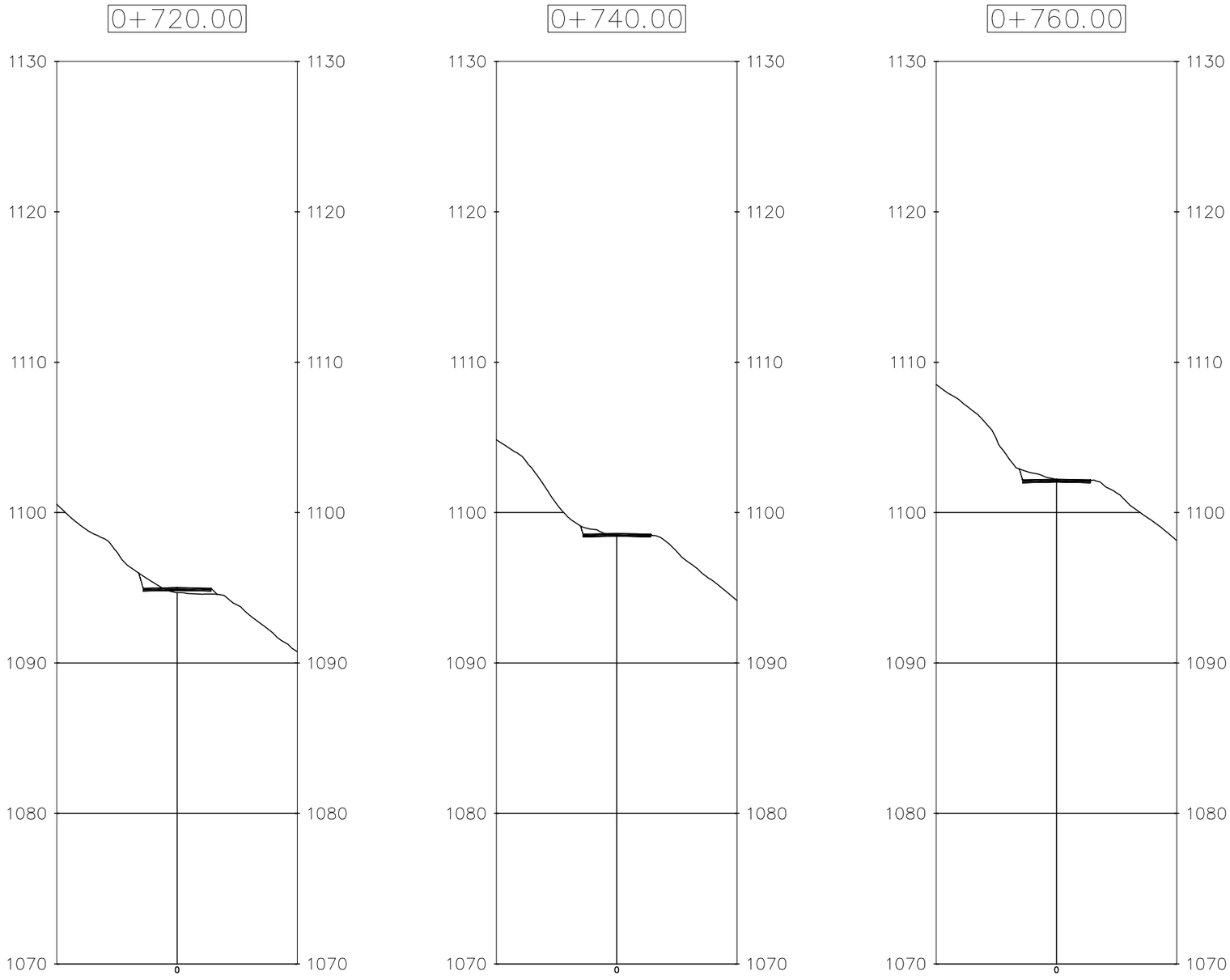
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 114

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

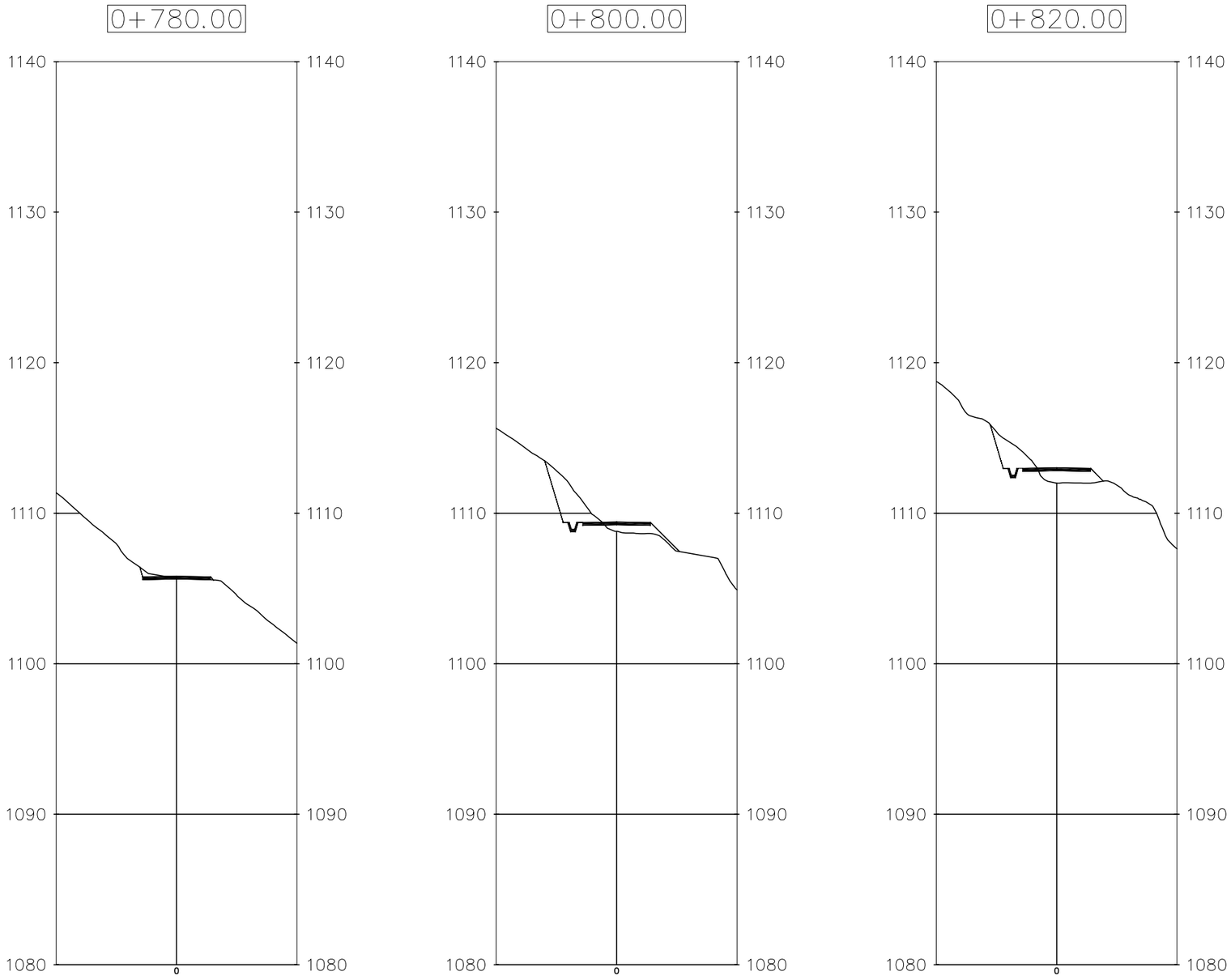


CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01		DRAWN: GOHAR; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS; DATE: DECEMBER, 2025; DRAWING No.: 4520/102/TD/XS 115; SCALE; REV.: 0

REV.	DATE	DESCRIPTION	APPROVED

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

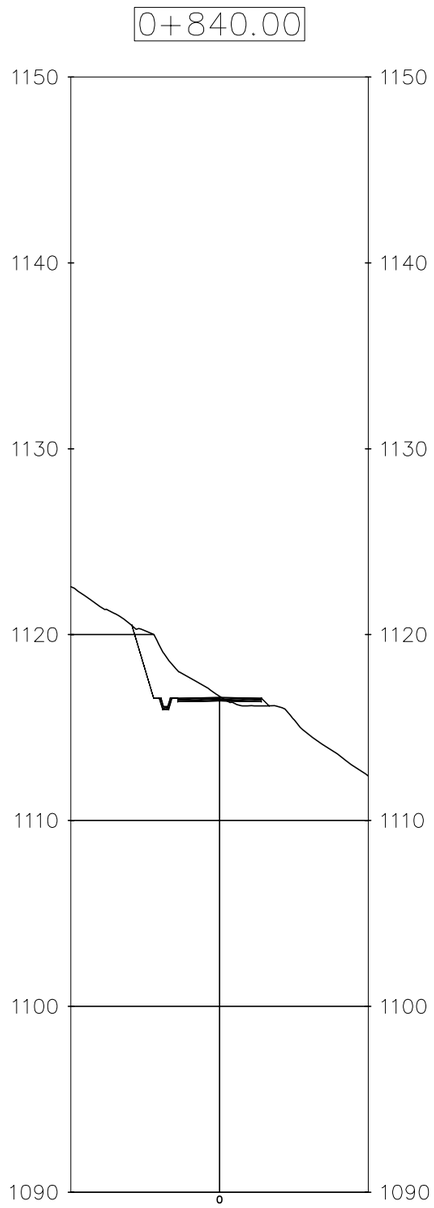
CHAINAGE WISE X-SECTIONS

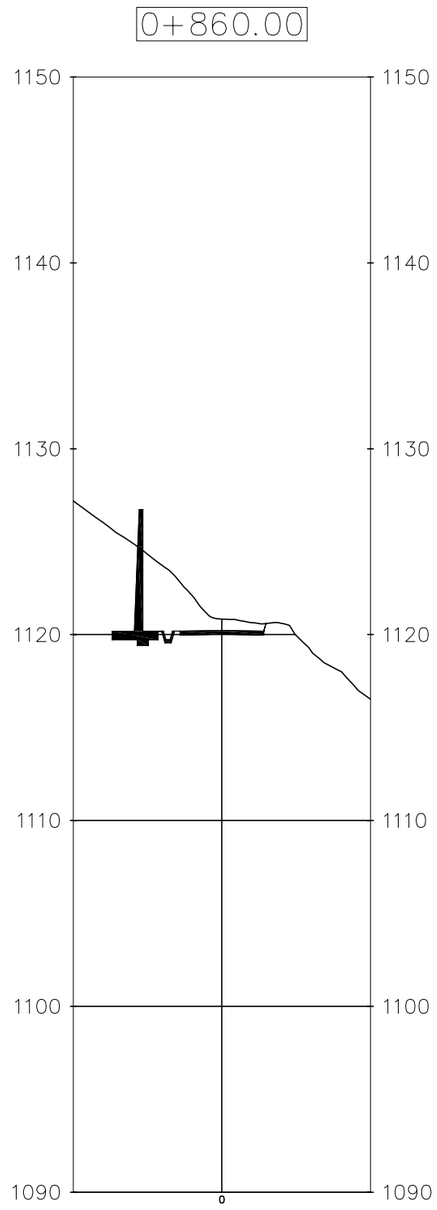
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS 116	0

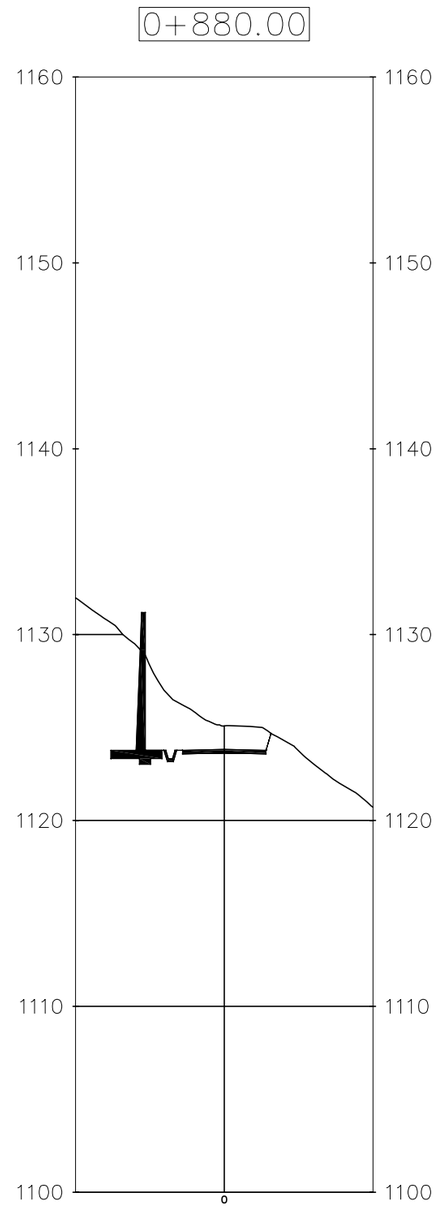
SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

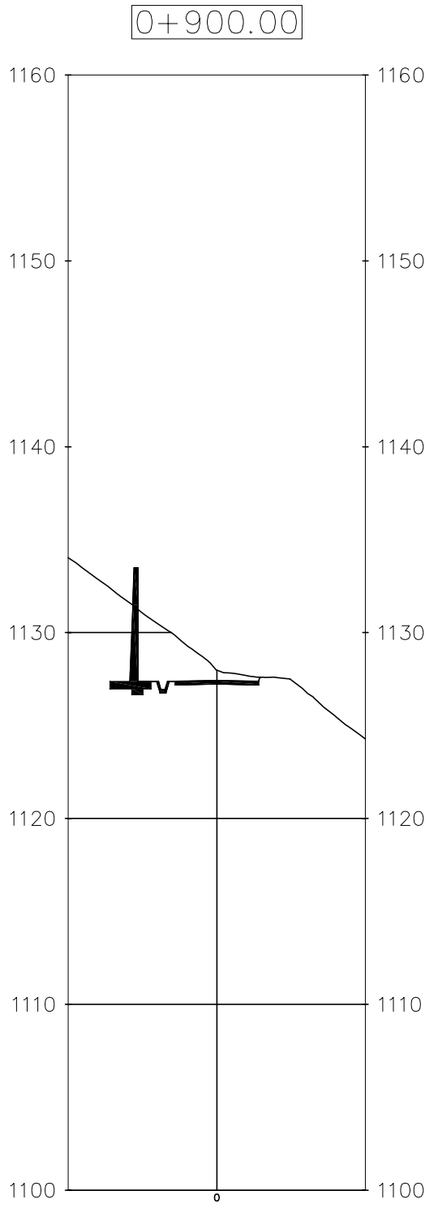
DRAWING No.: 4520/102/TD/XS 117

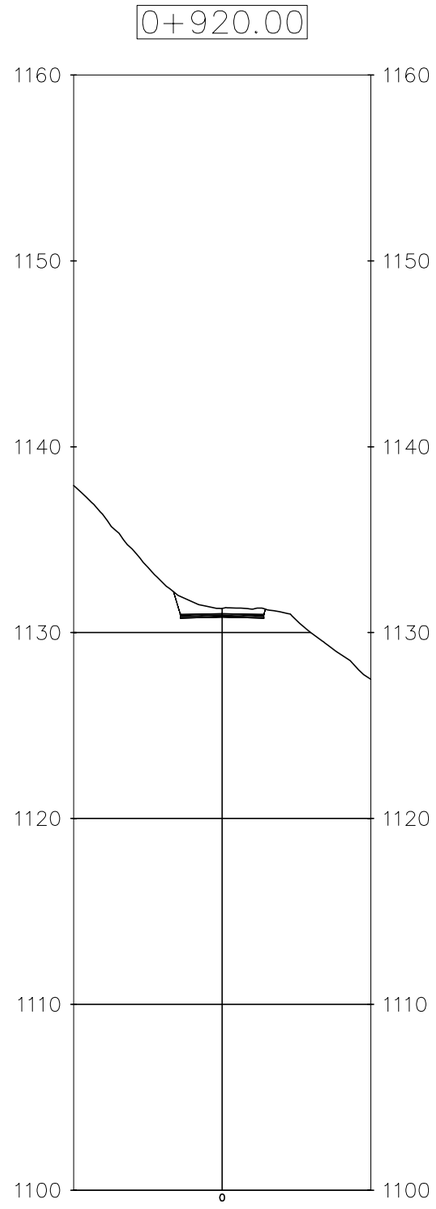
REV.: 0

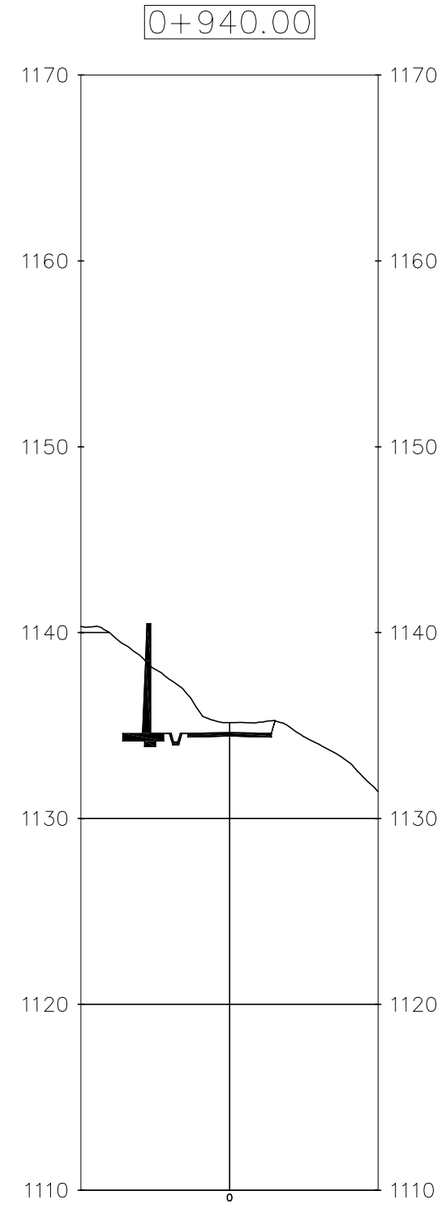
SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

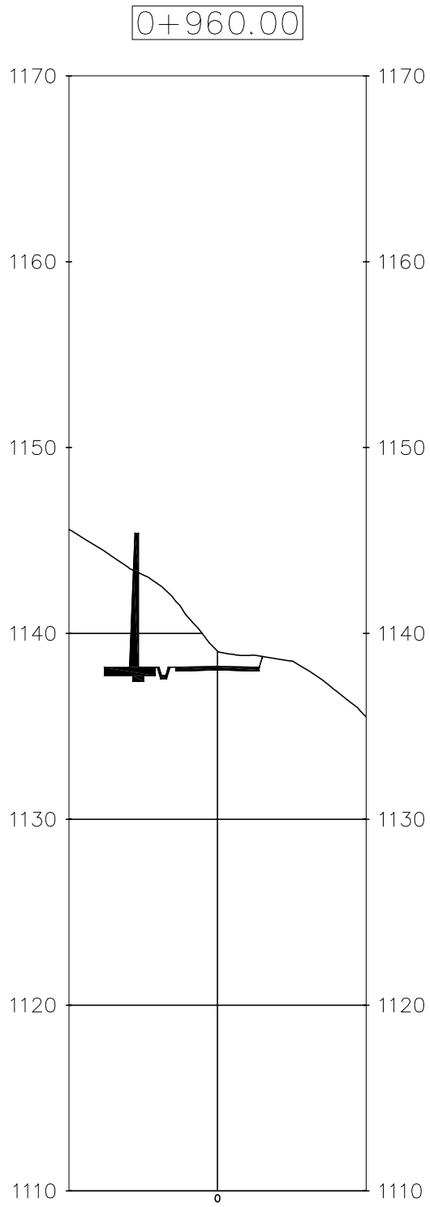
DRAWING No.: 4520/102/TD/XS 118

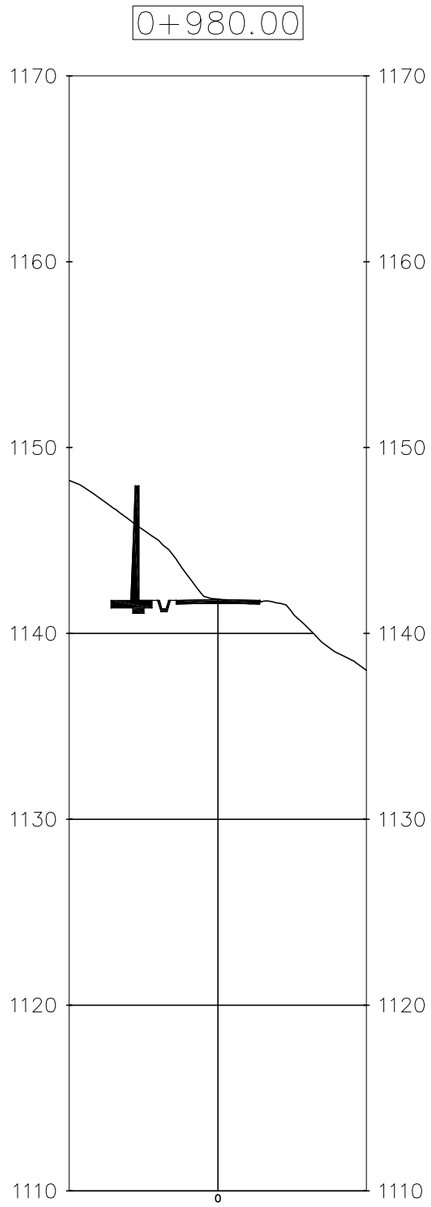
SCALE

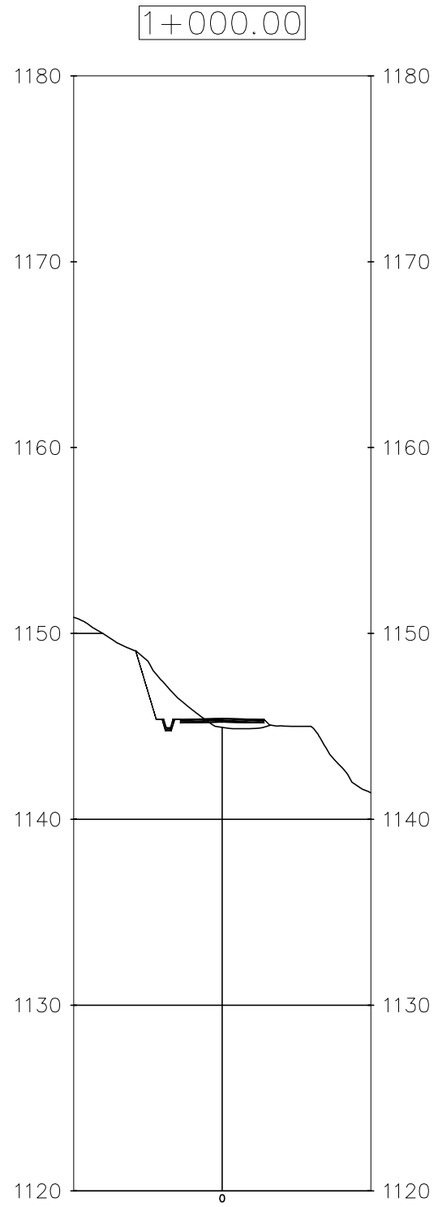
REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

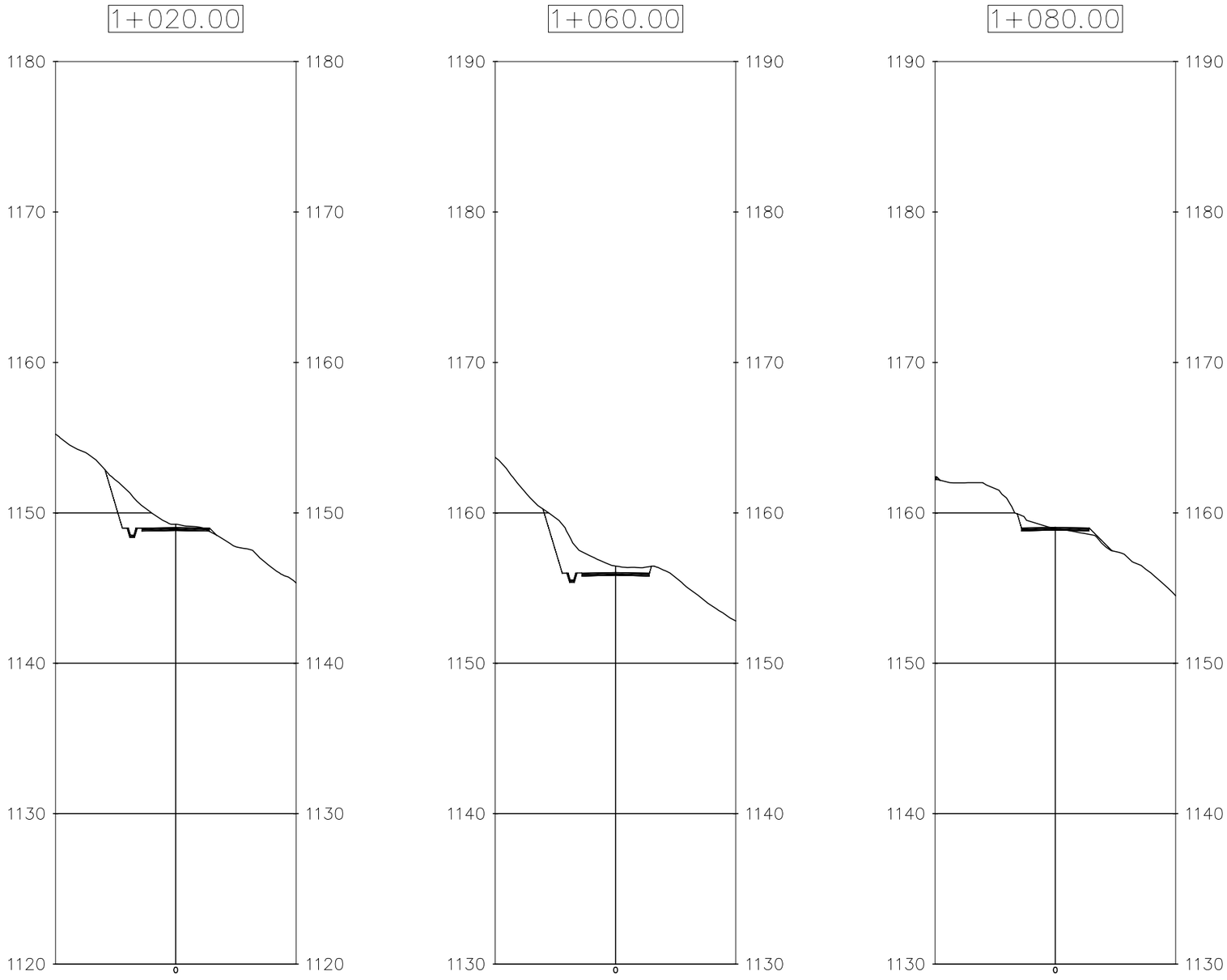
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 119

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

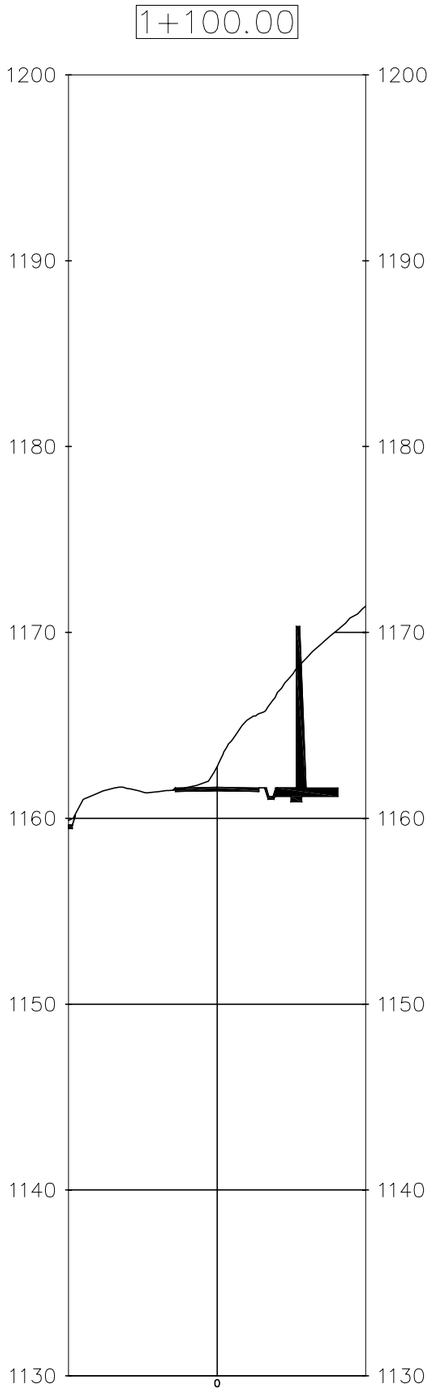


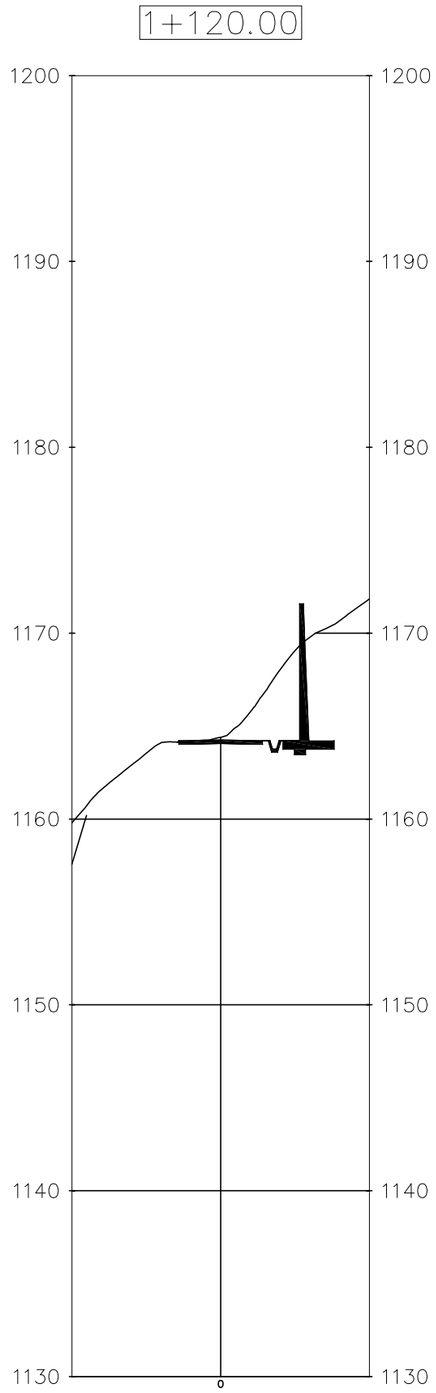
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	SCALE	
			DATE: DECEMBER, 2025	DRAWING No.: 4520/102/TD/XS 120	REV.: 0

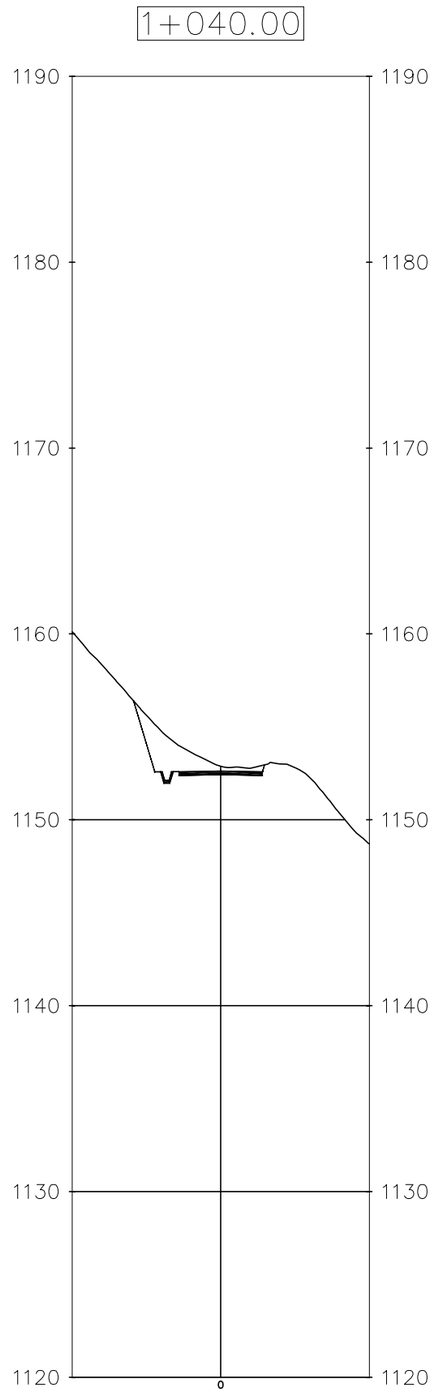
REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	
CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

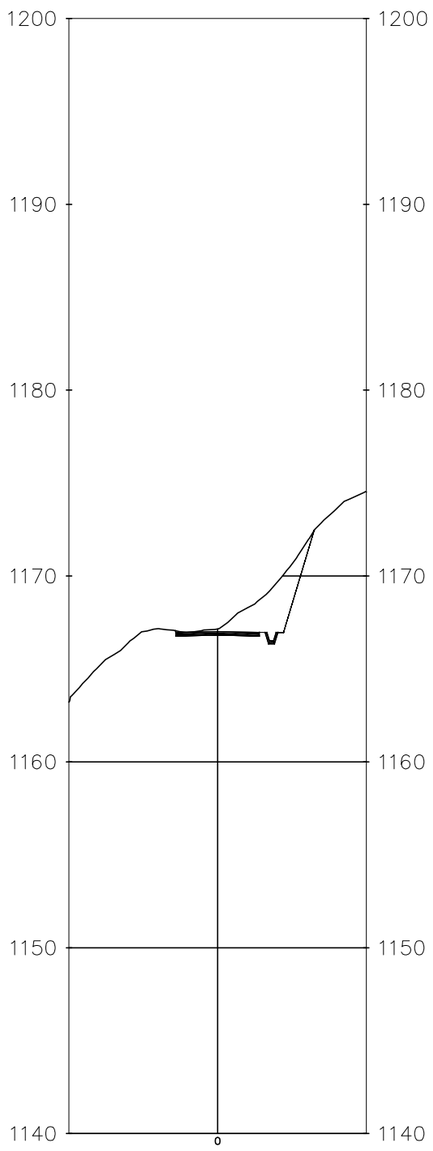
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS 121	0

SCALE

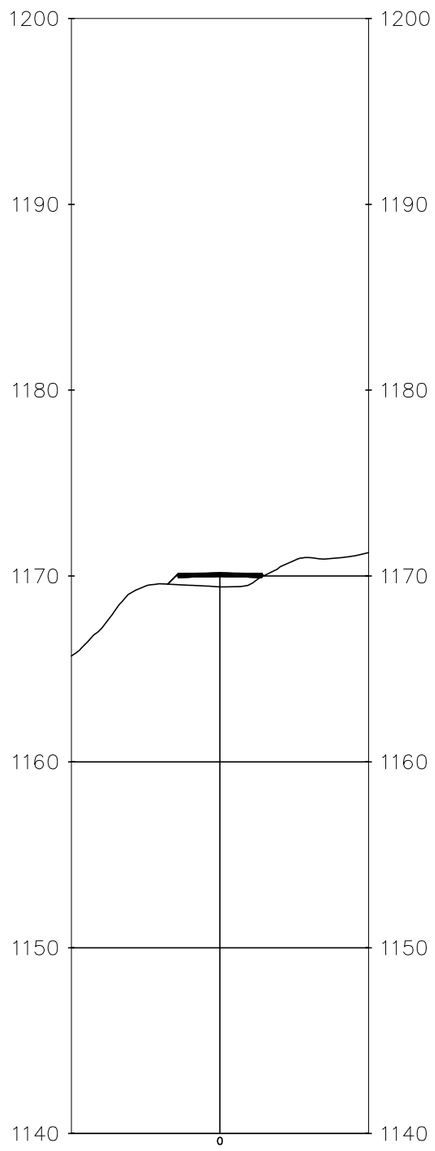
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

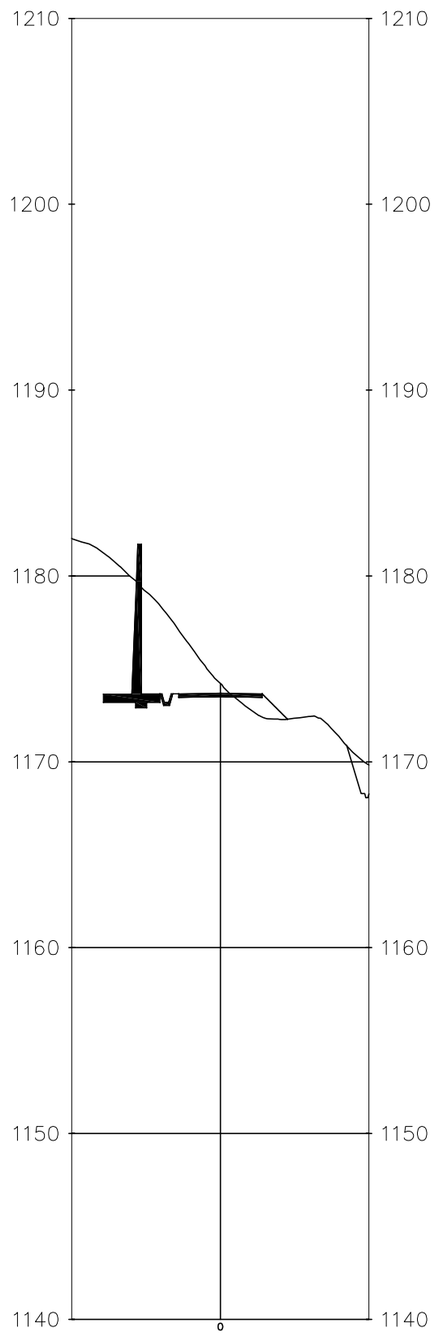
1+140.00



1+160.00



1+180.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 122

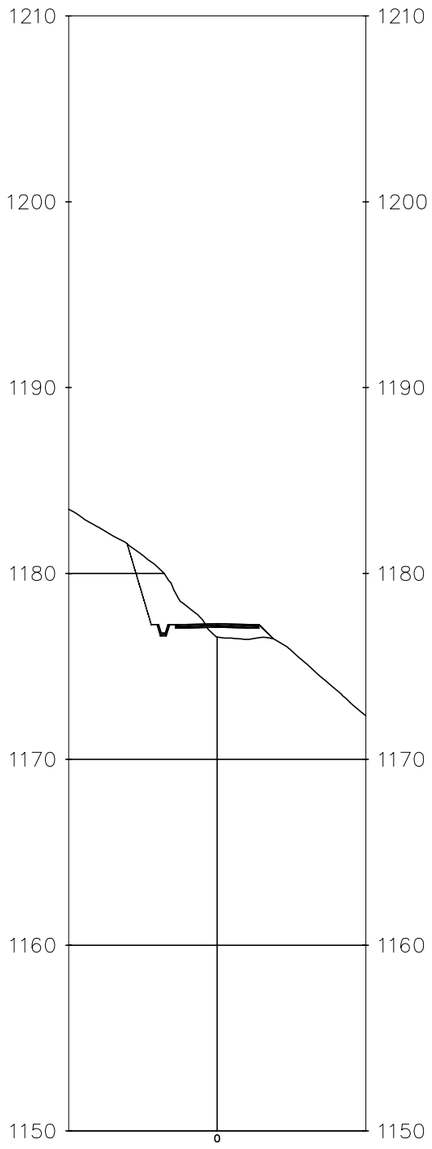
SCALE

REV.: 0

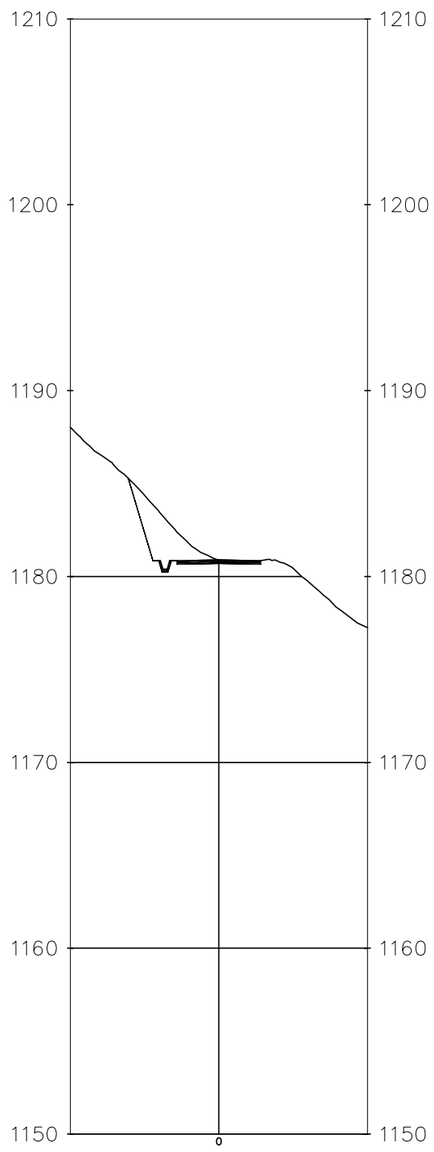
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

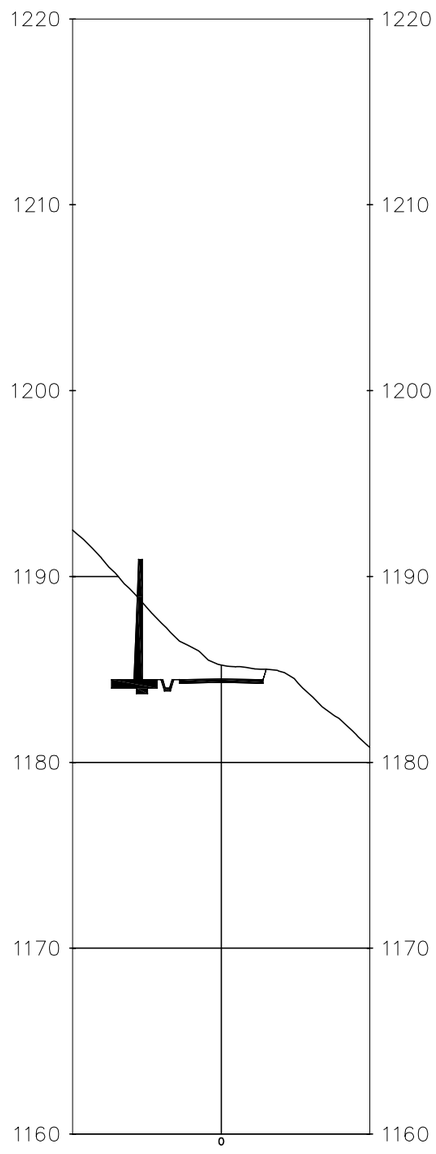
1+200.00



1+220.00



1+240.00



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	GOHAR
		03		SUBMITTED	
		02		RECOMMENDED	
		01		CHD./VER.	
		REV. DATE DESCRIPTION	APPROVED	APPROVED	

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

SCALE:

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 123

REV.: 0

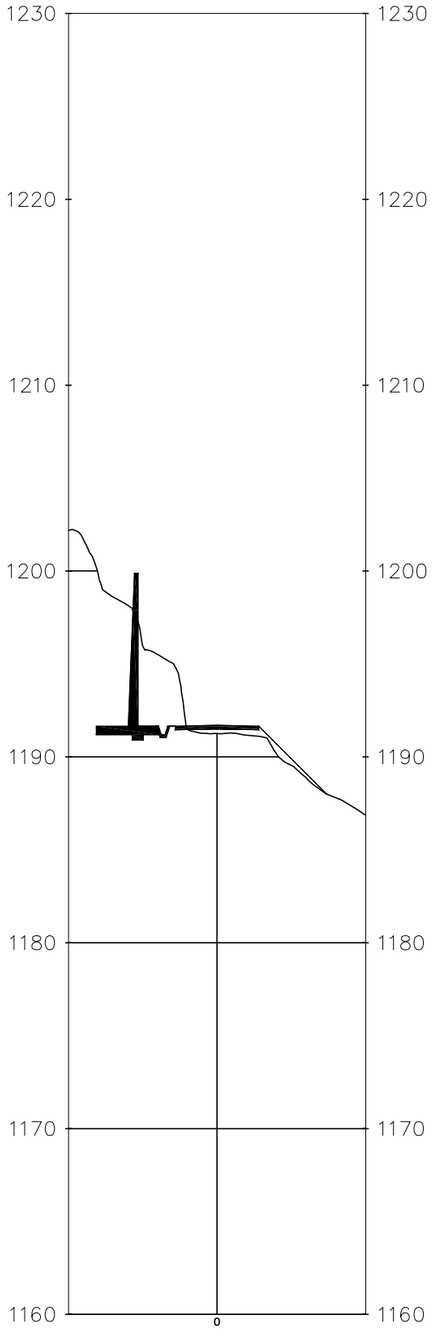
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

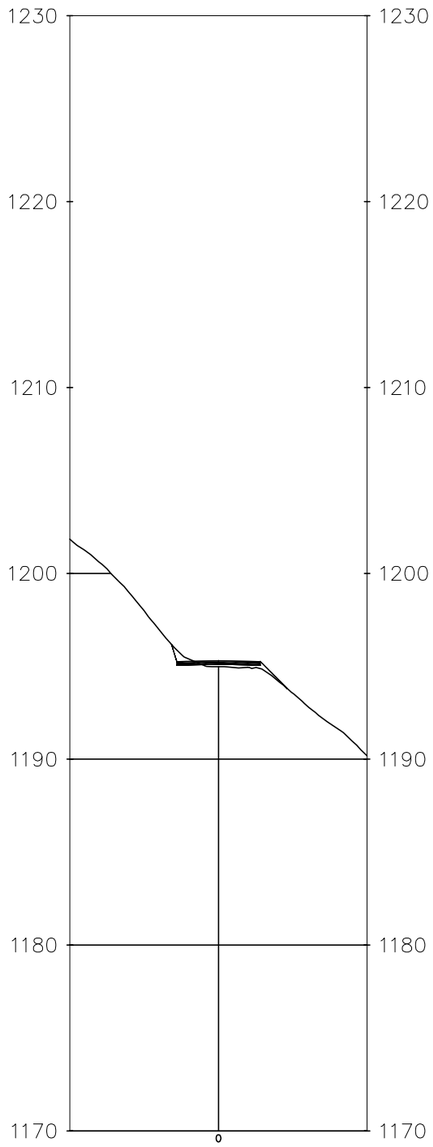
1+260.00



1+280.00



1+300.00



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	GOHAR
		03		SUBMITTED	
		02		RECOMMENDED	
		01		CHD./VER.	
		REV. / DATE / DESCRIPTION	APPROVED	APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 124

REV.: 0

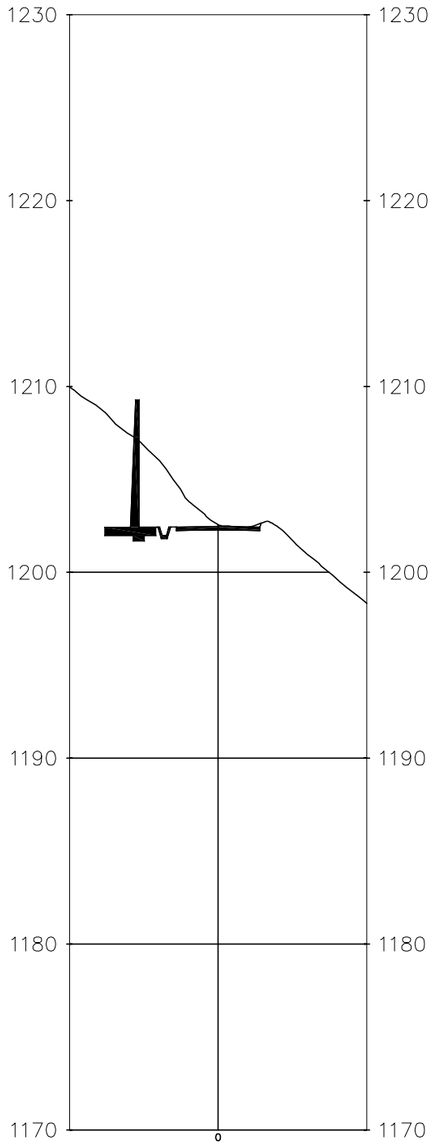
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

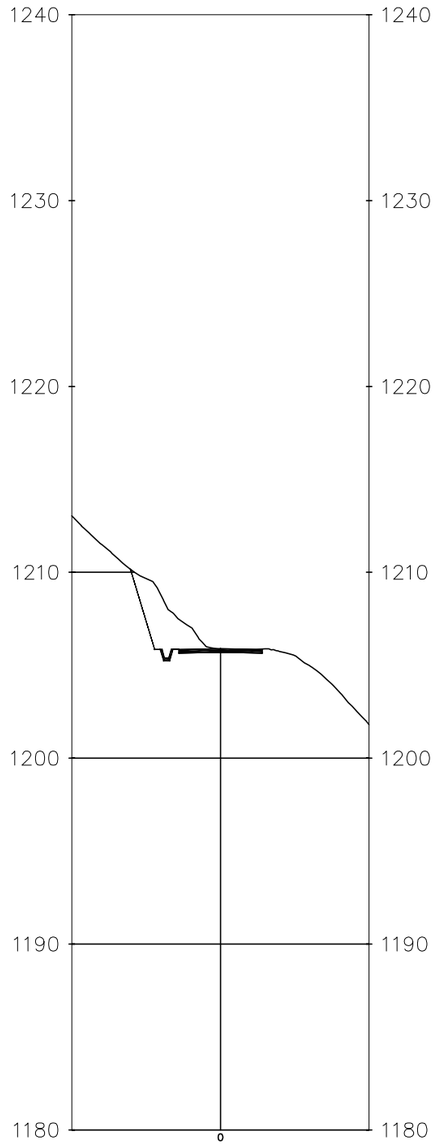
1+320.00



1+340.00



1+360.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS 125

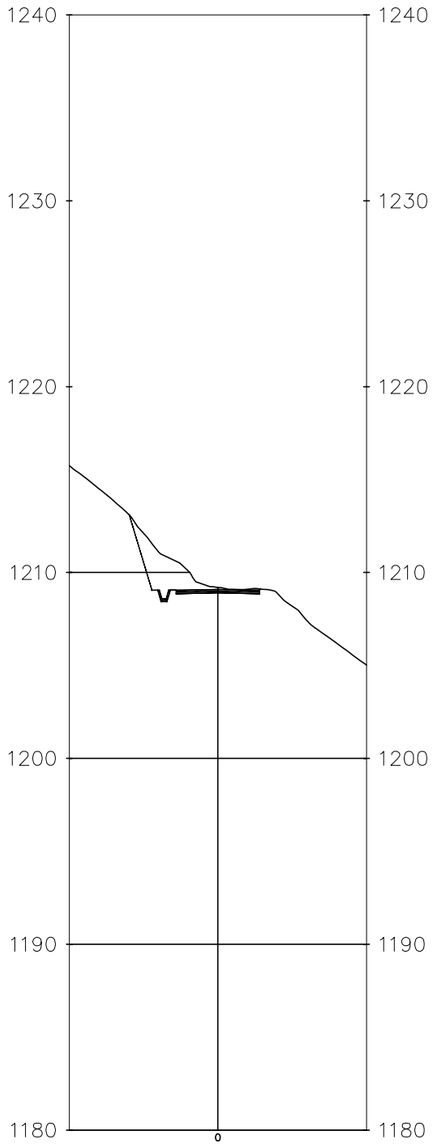
SCALE

REV.: 0

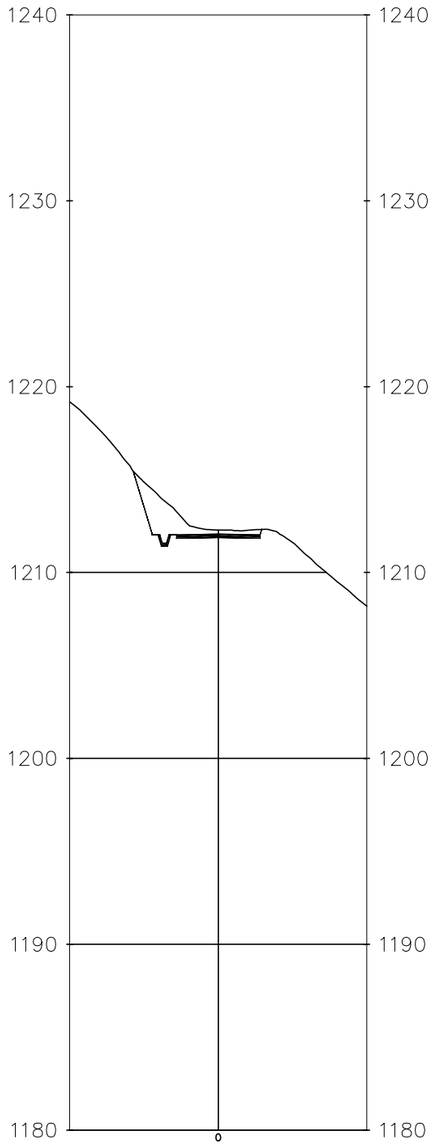
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

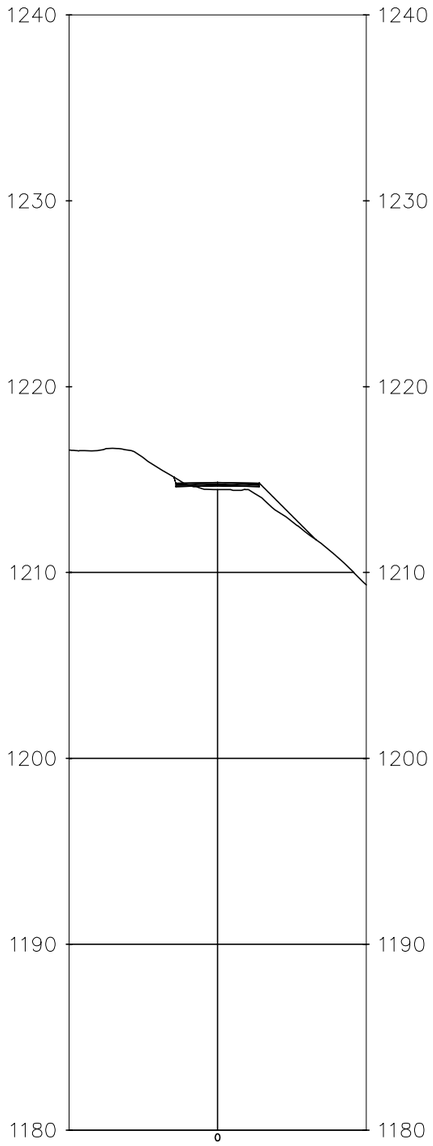
1+380.00



1+400.00



1+420.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

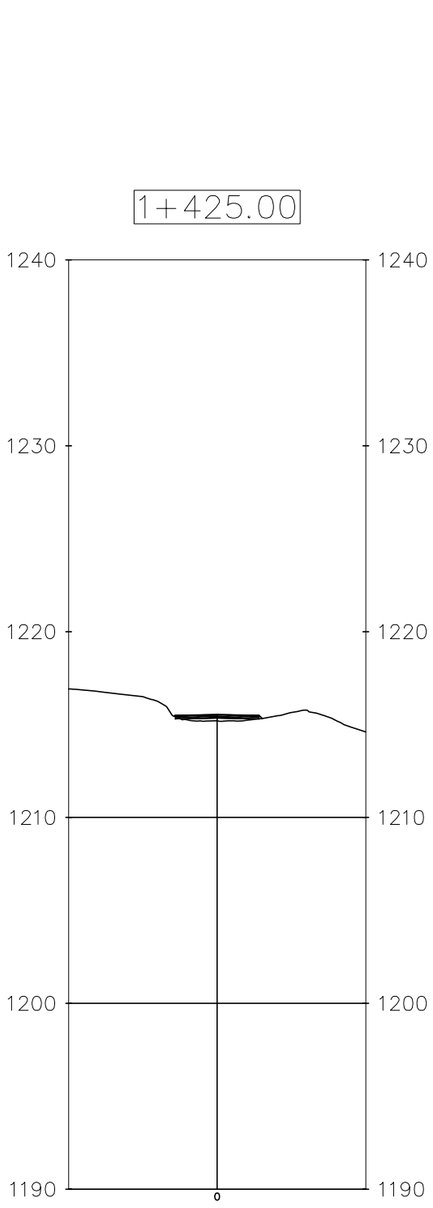
DATE: DECEMBER, 2025

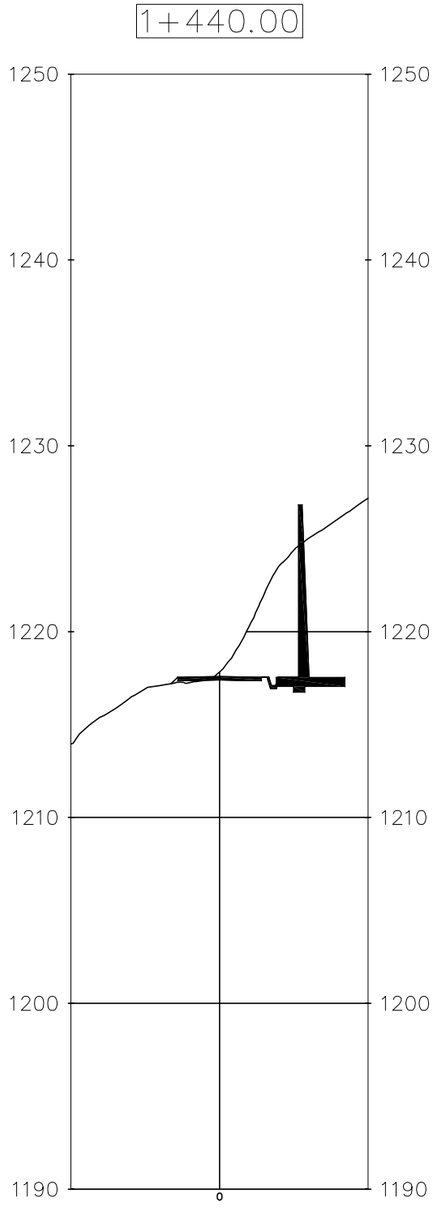
DRAWING No.: 4520/102/TD/XS 126

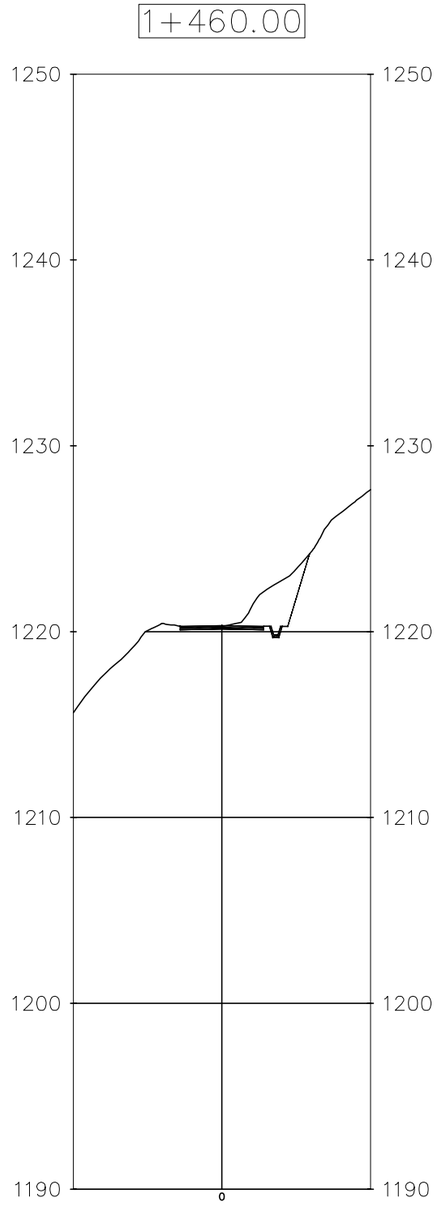
REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

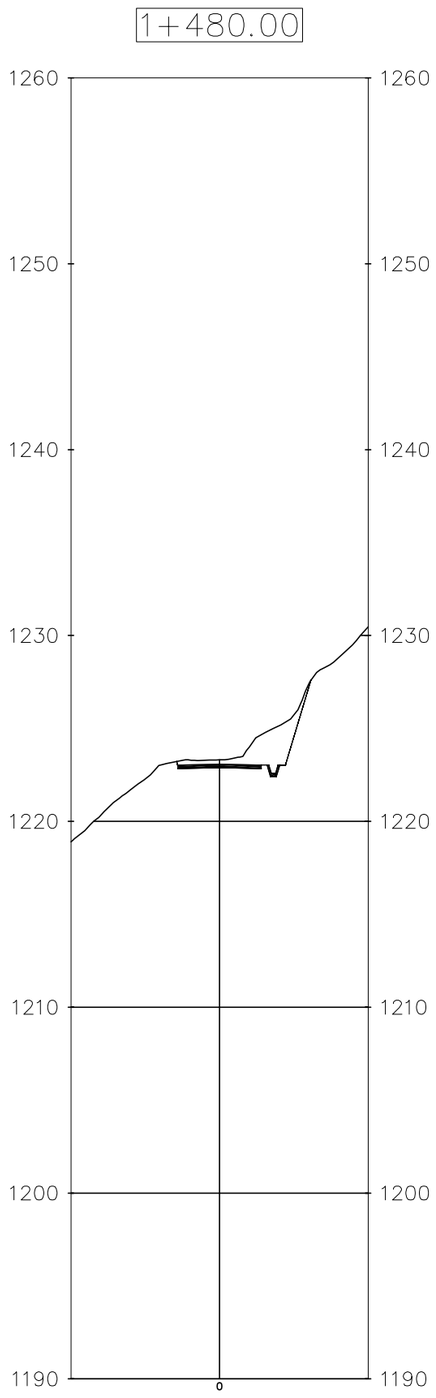
CHAINAGE WISE X-SECTIONS

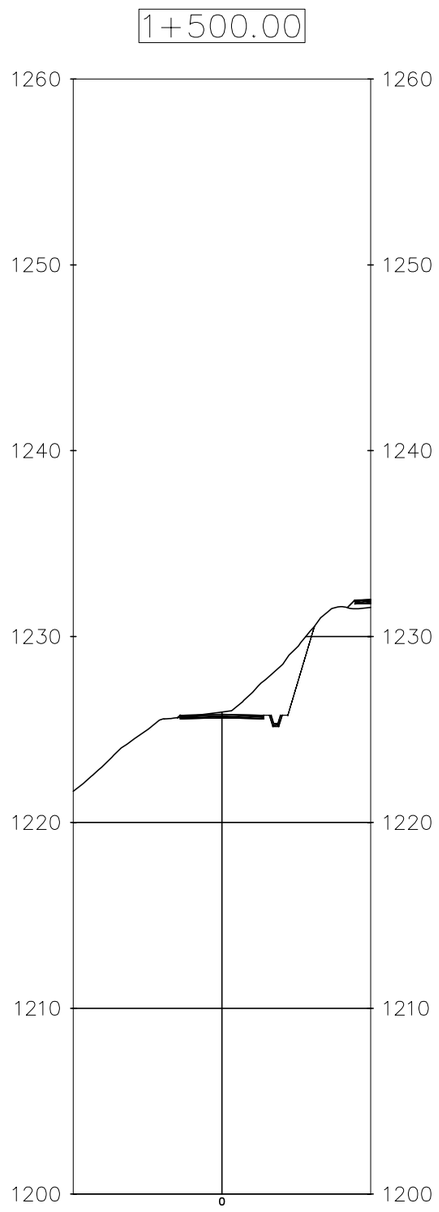
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS127	0

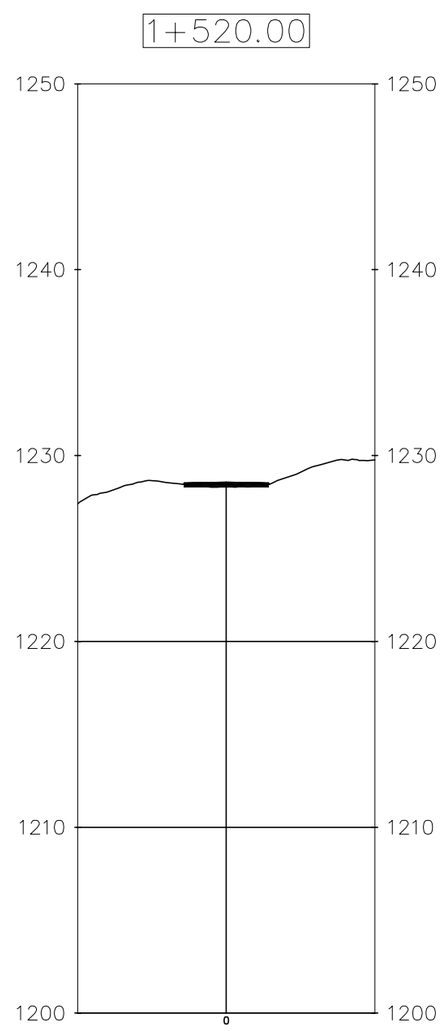
SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

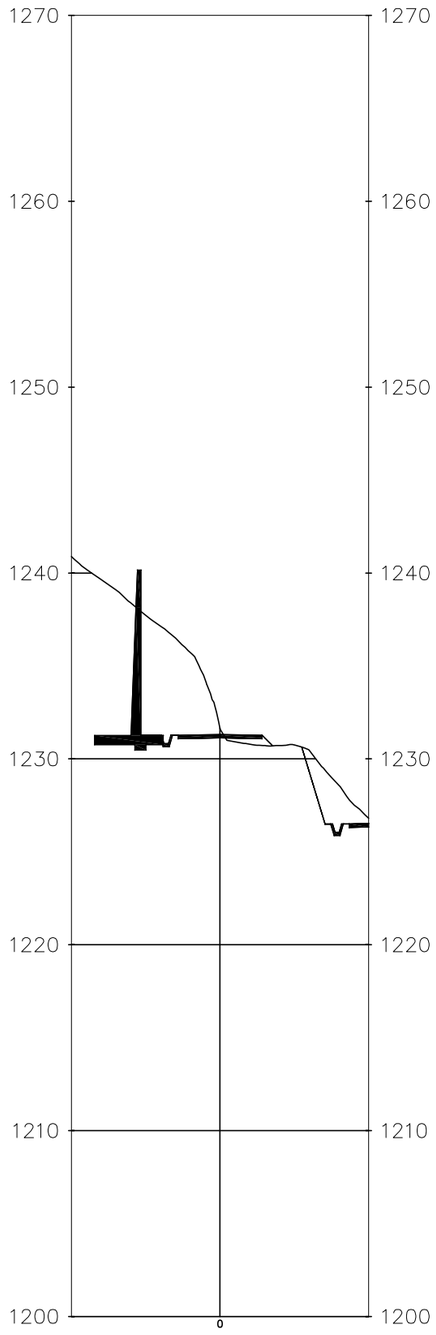
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS128	0

SCALE

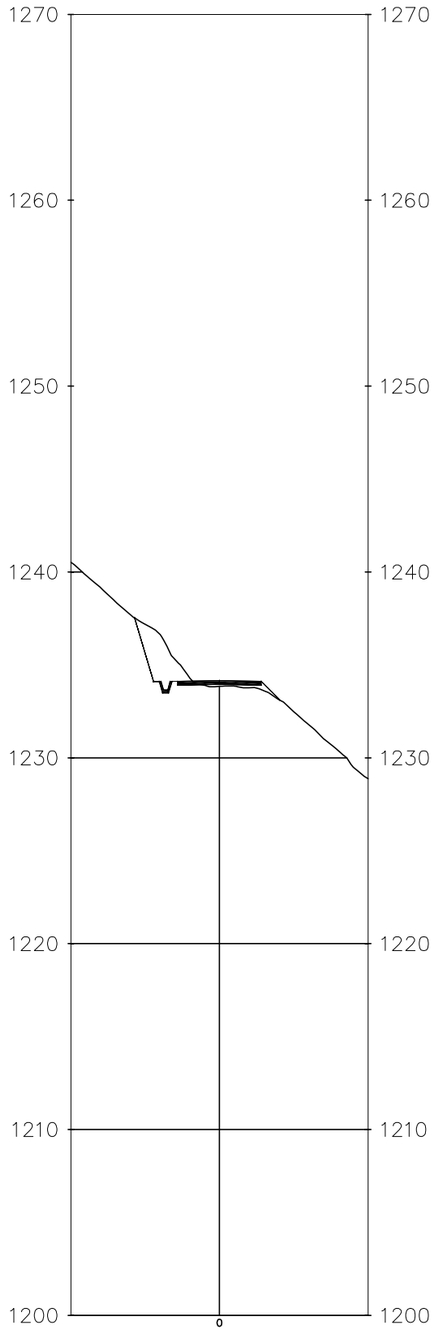
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

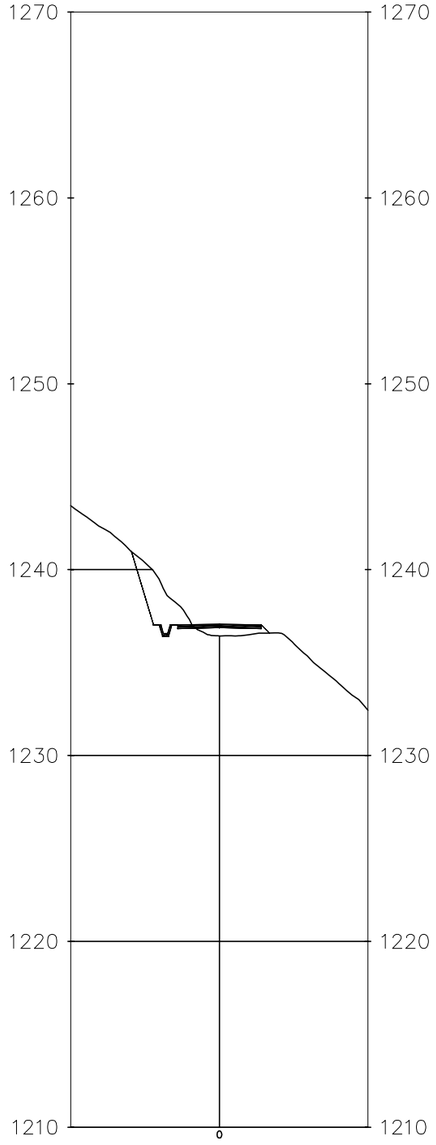
1+540.00



1+560.00



1+580.00



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	DATE: DECEMBER, 2025	DRAWING No.: 4520/102/TD/XS129	SCALE	REV.: 0

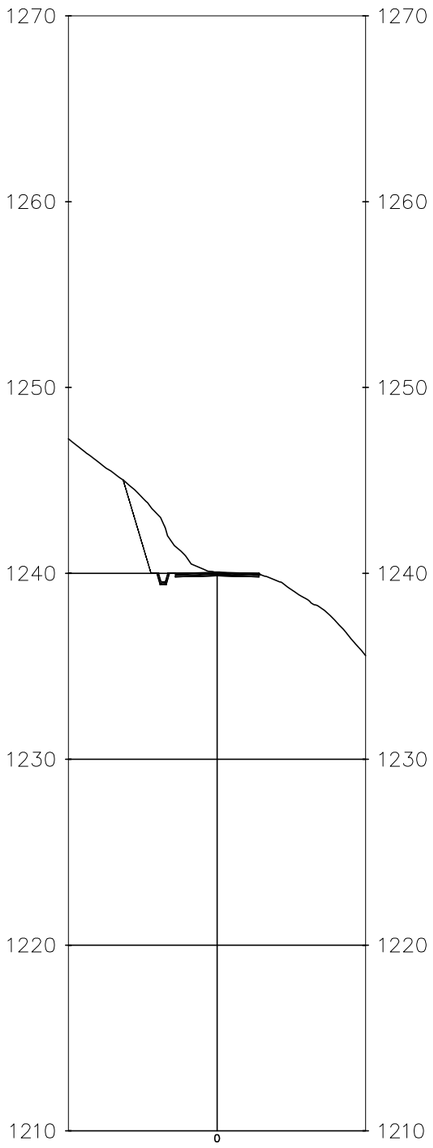
REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

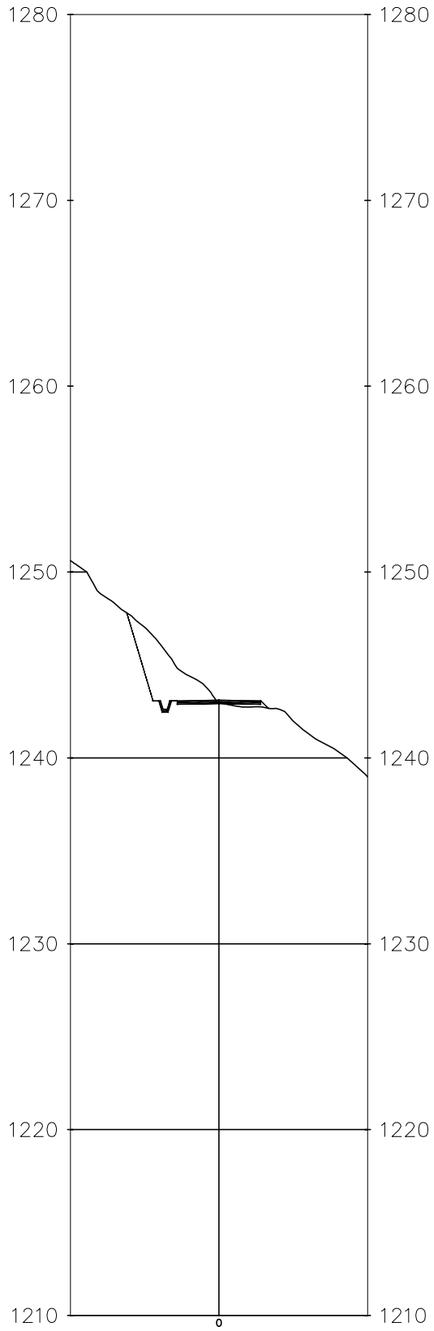
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

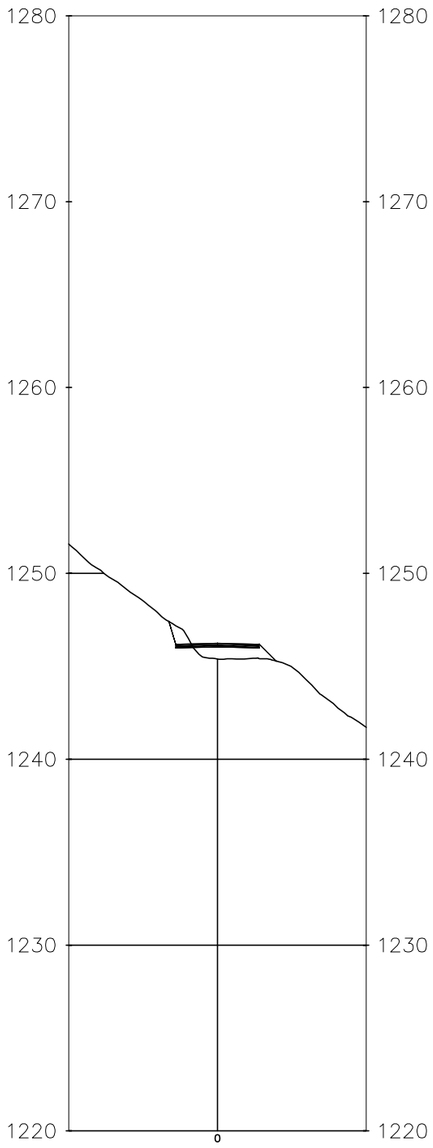
1+600.00



1+620.00



1+640.00



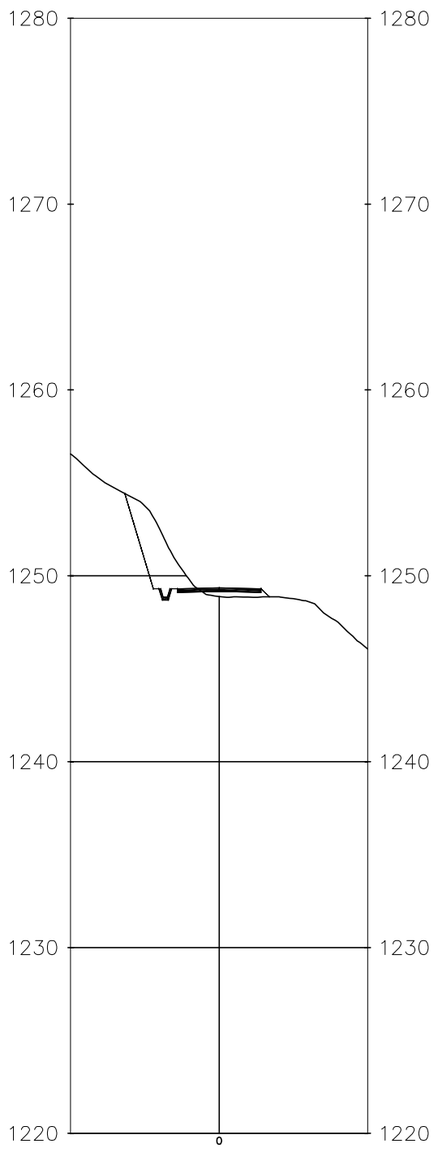
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01	DRAWN: GOHAR; SUBMITTED; RECOMMENDED; CHD./VER.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS; DATE: DECEMBER, 2025; DRAWING No.: 4520/102/TD/XS130; SCALE; REV.: 0

REV.	DATE	DESCRIPTION	APPROVED	APPROVED

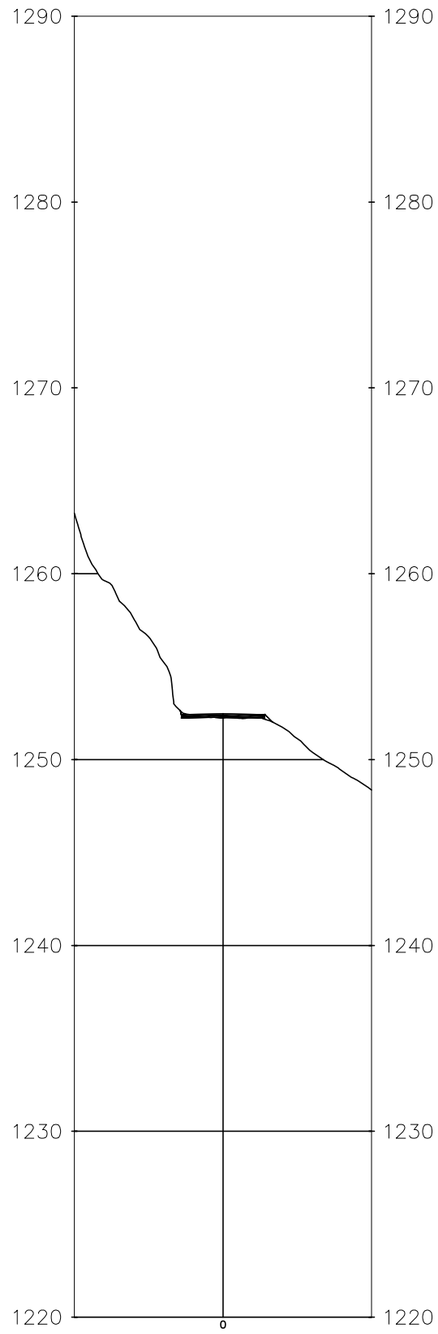
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

1+660.00



1+680.00



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	
CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

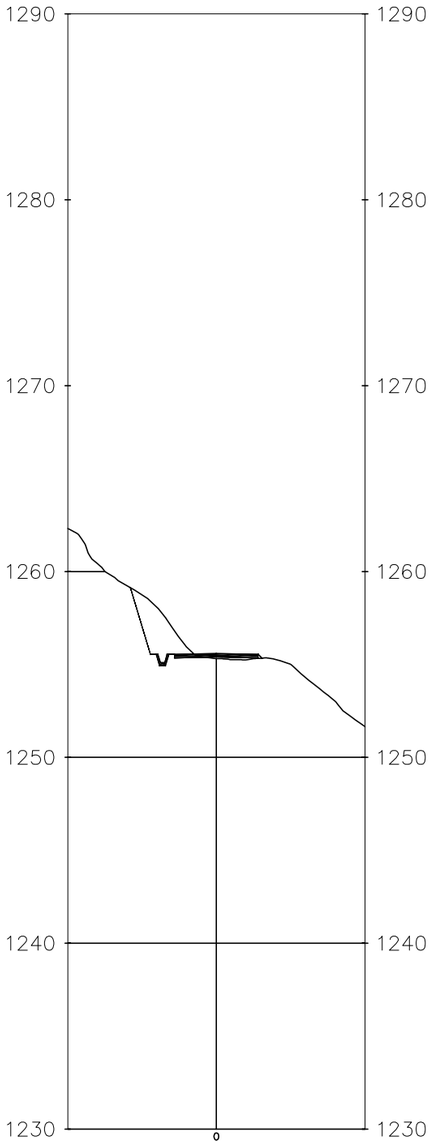
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS131	0

SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

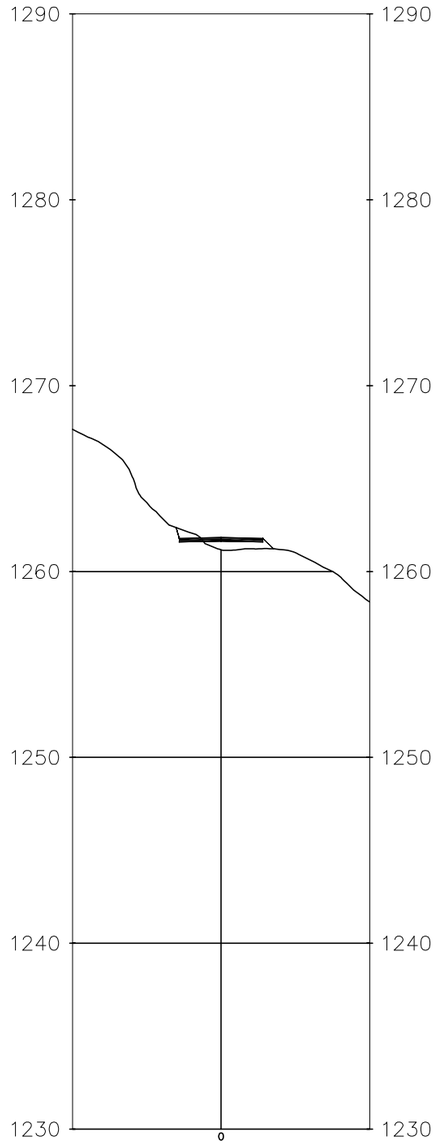
1+700.00



1+720.00



1+740.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

DATE: DECEMBER, 2025

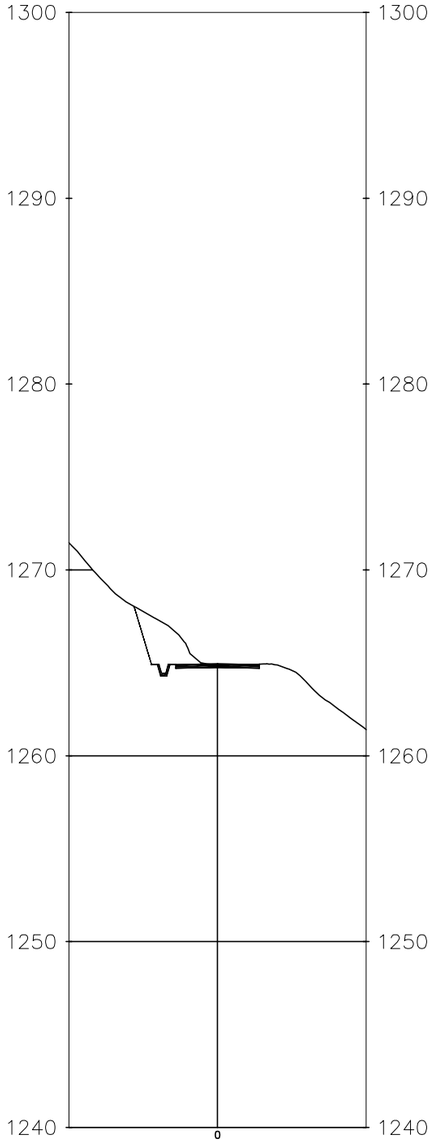
DRAWING No.: 4520/102/TD/XS132

REV.: 0

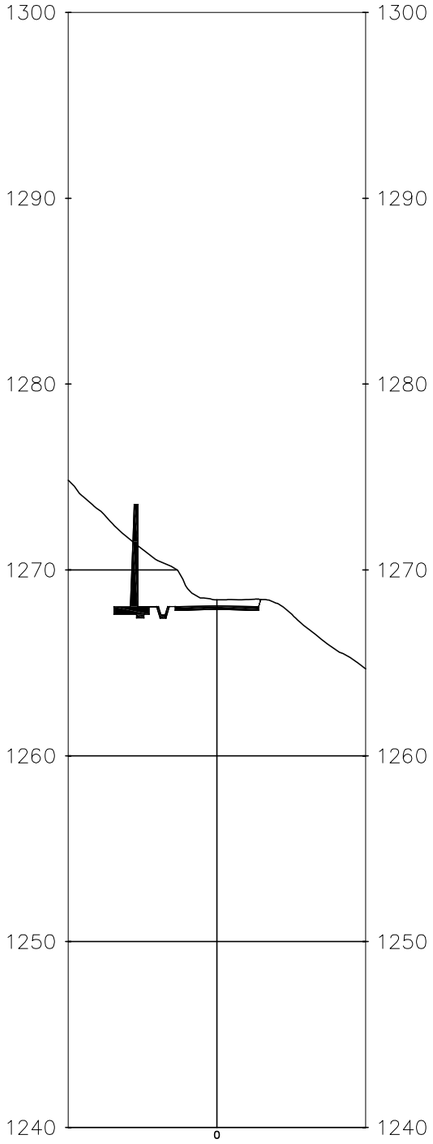
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

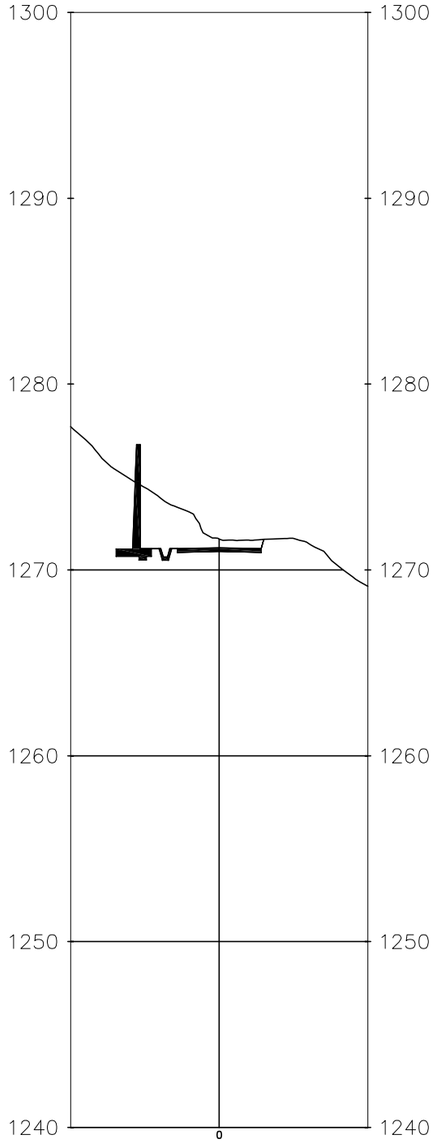
1+760.00



1+780.00



1+800.00



CLIENT	CONSULTANT	PROJECT	SCALE
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

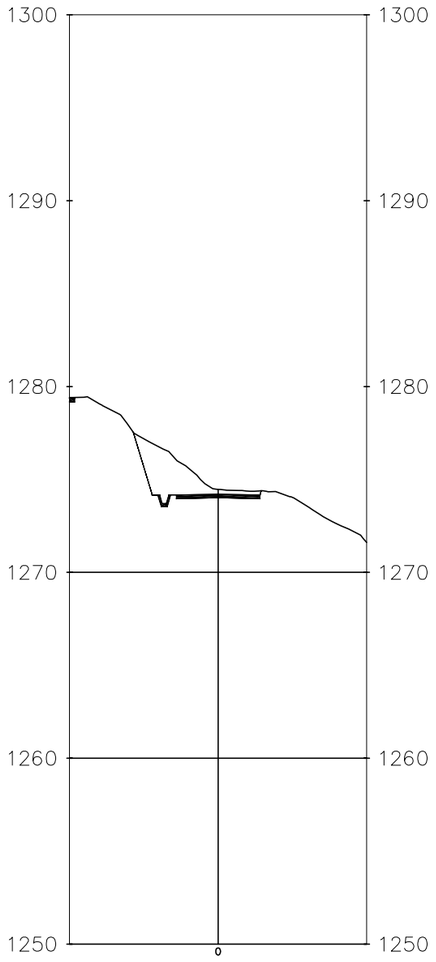
DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS133	0

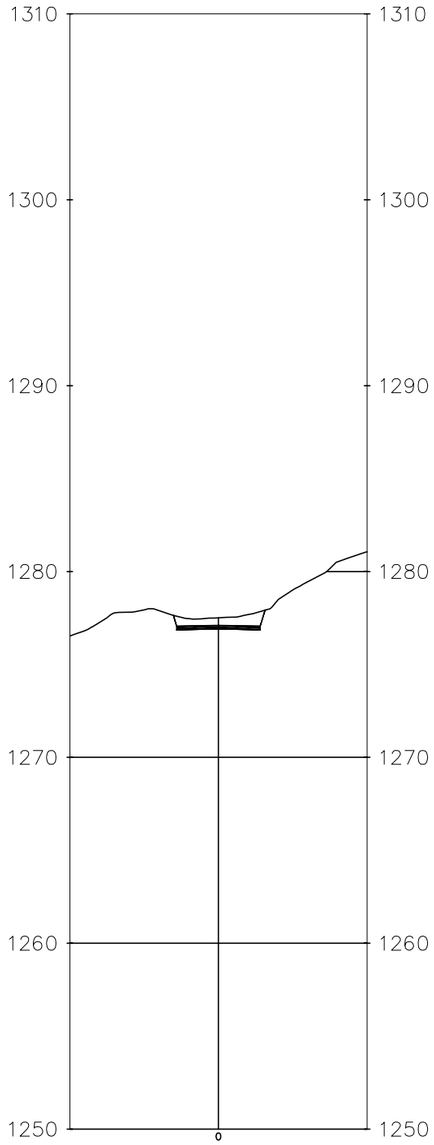
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

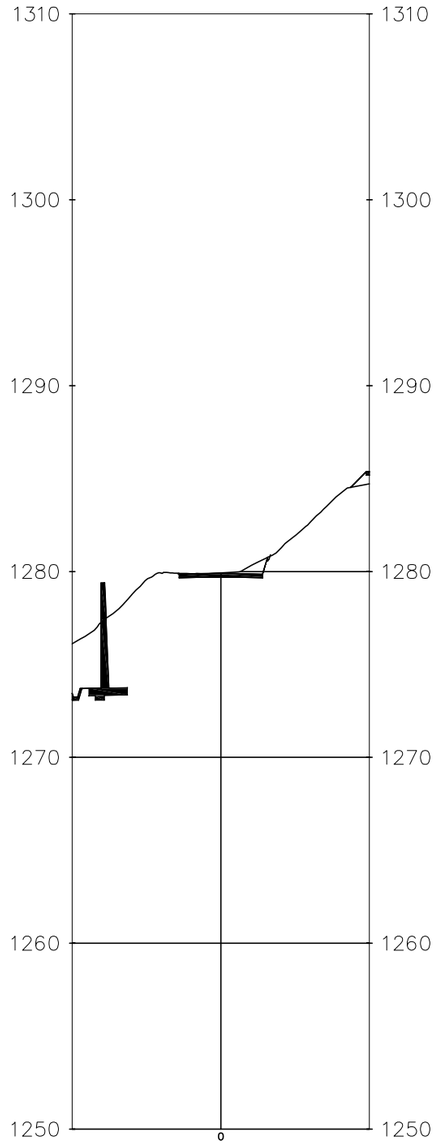
1+820.00



1+840.00



1+860.00



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

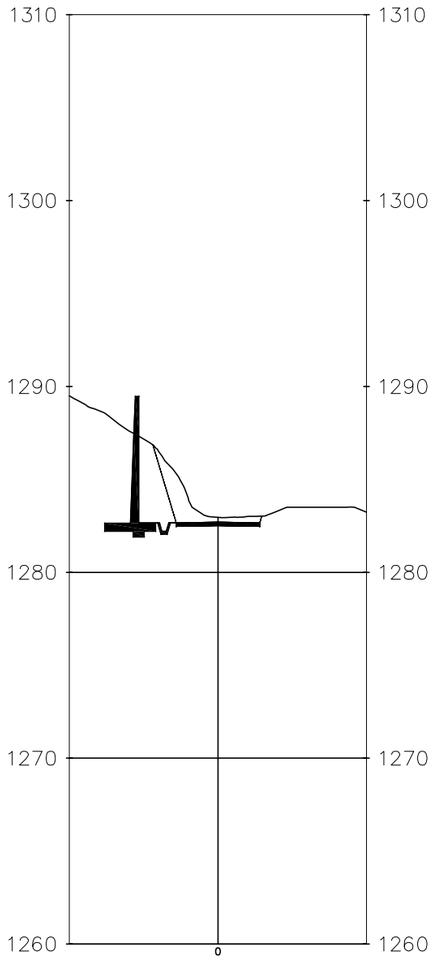
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS134	0

SCALE

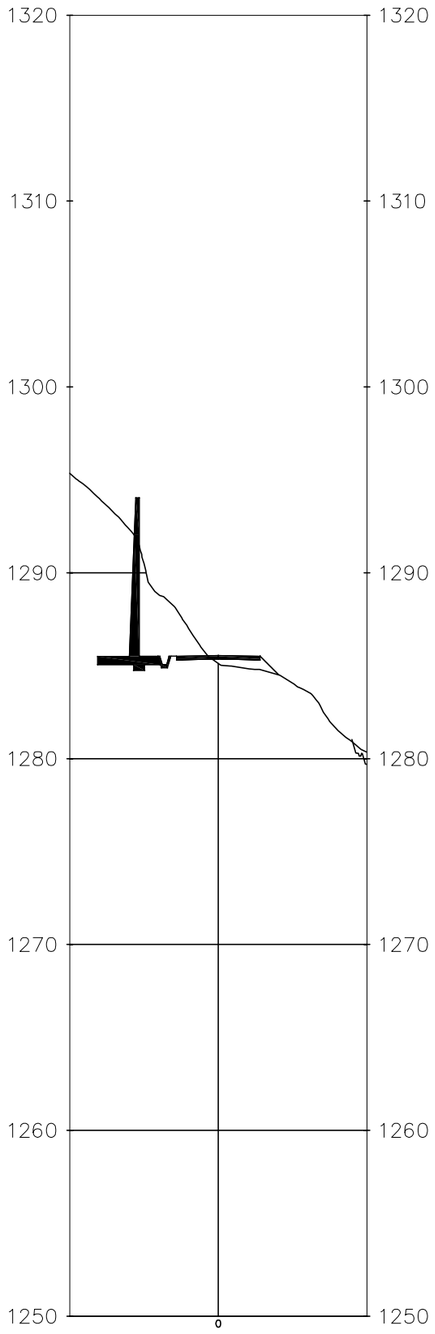
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

1+880.00



1+900.00



1+920.00



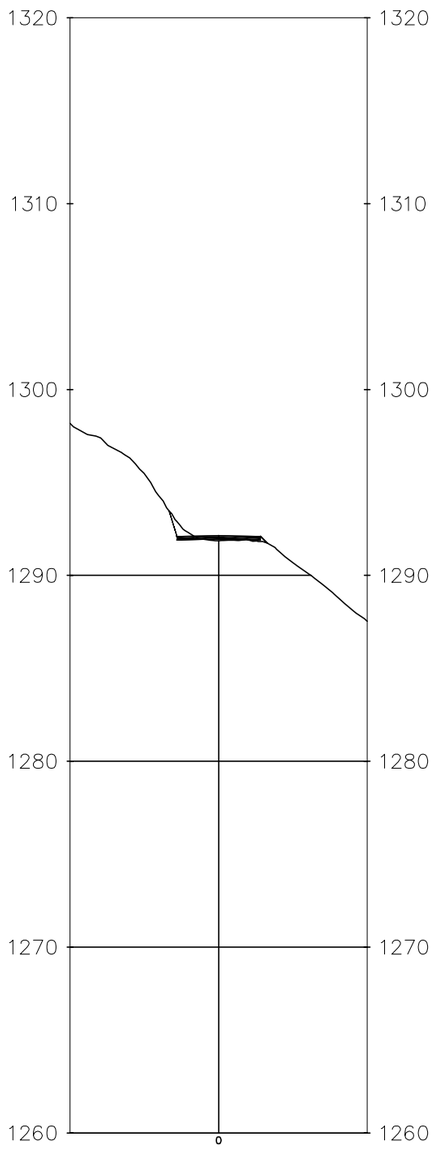
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	DATE: DECEMBER, 2025	SCALE
				DRAWING No.: 4520/102/TD/XS135	REV.: 0

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

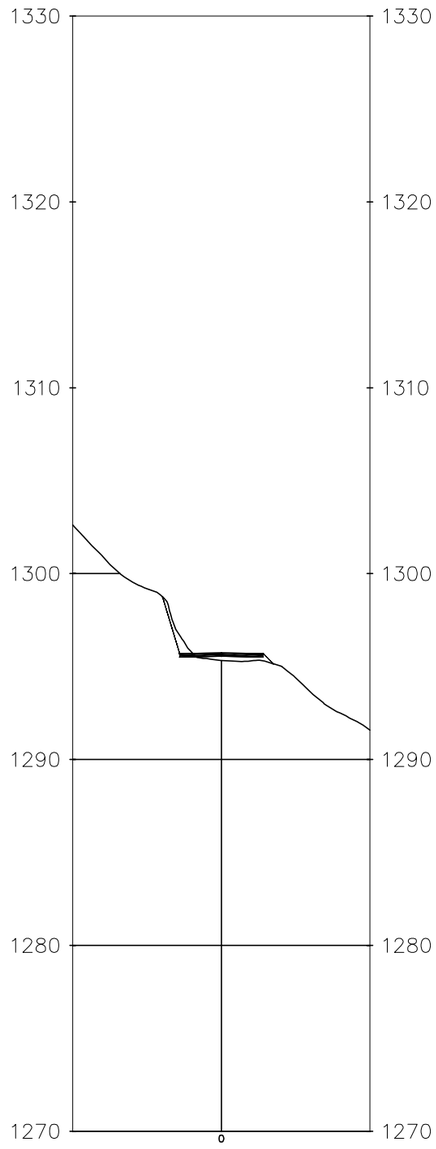
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

1+940.00



1+960.00



1+980.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

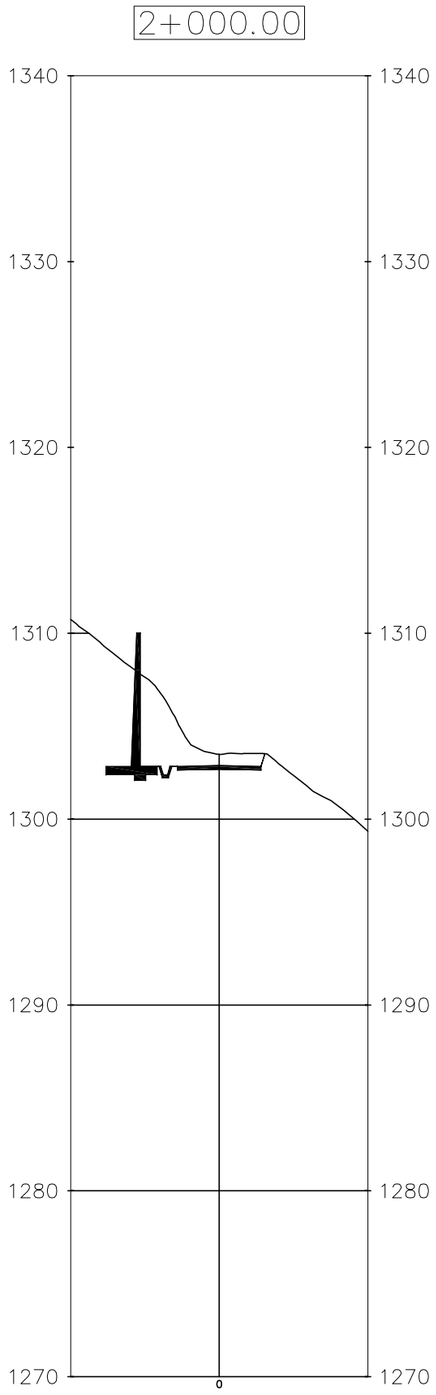
DRAWING No.: 4520/102/TD/XS136

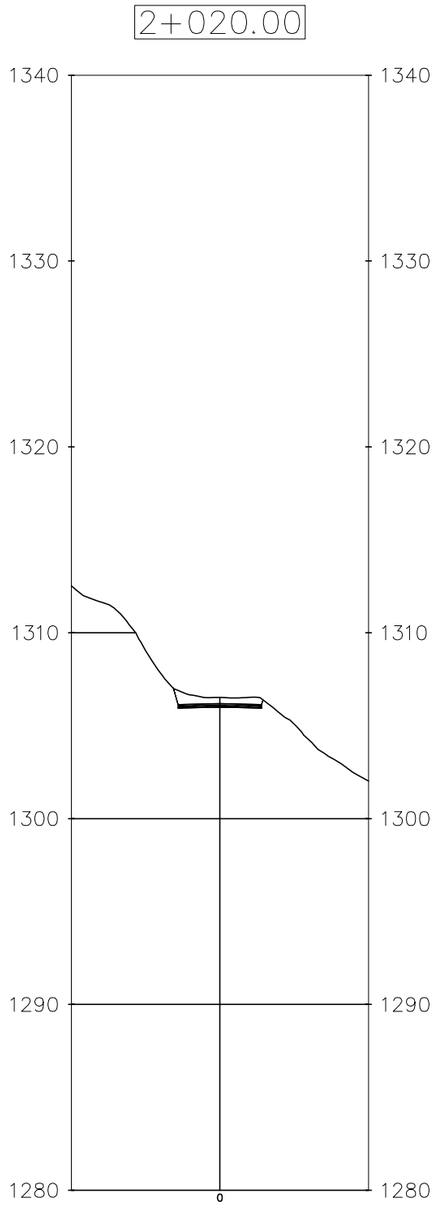
SCALE

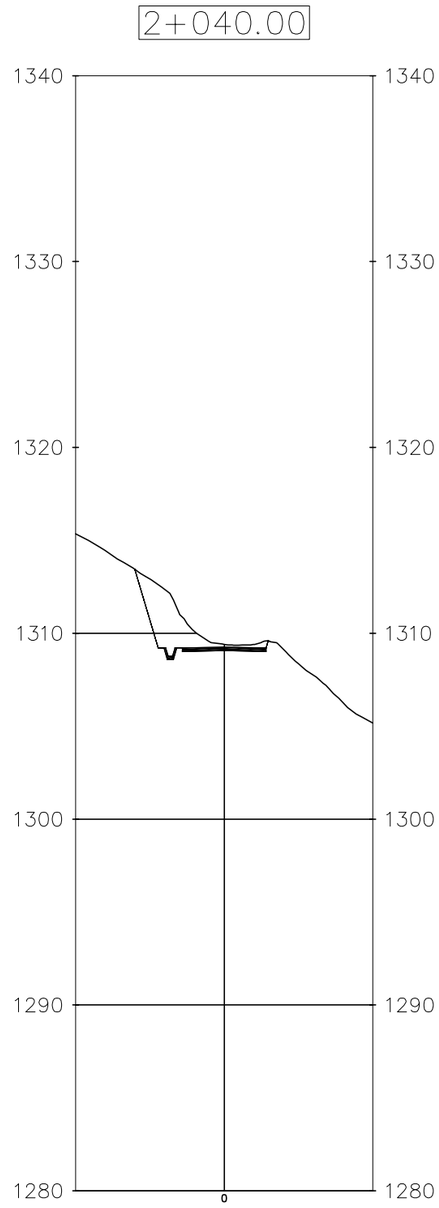
REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

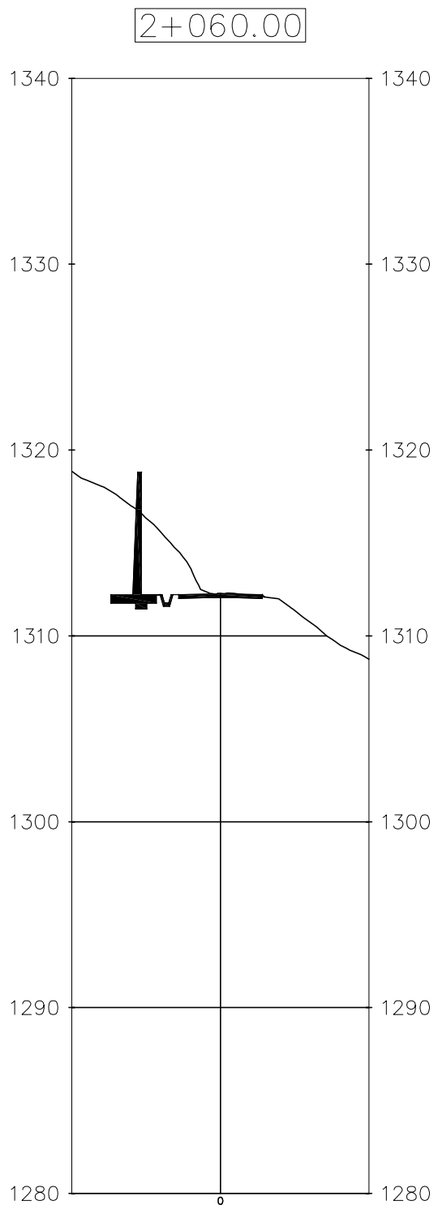
CHAINAGE WISE X-SECTIONS

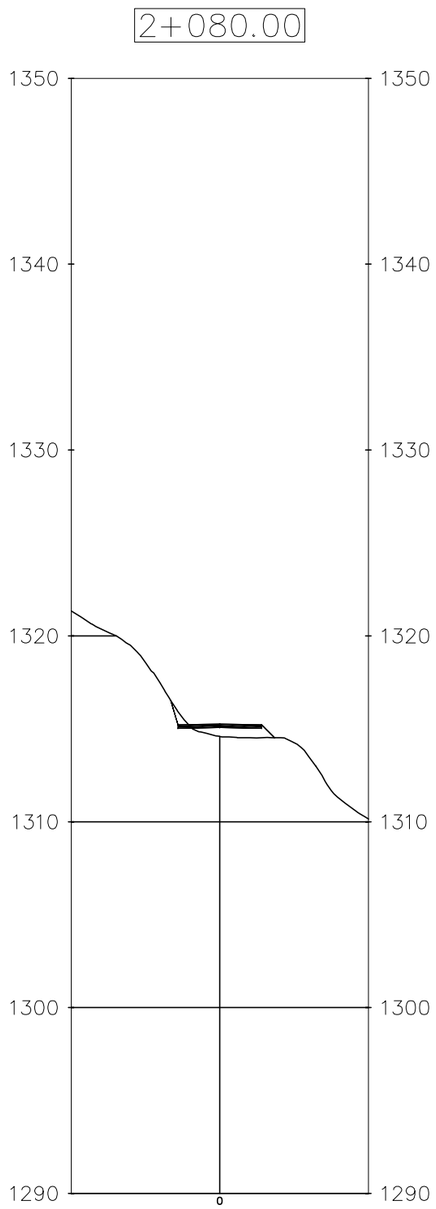
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS137	0

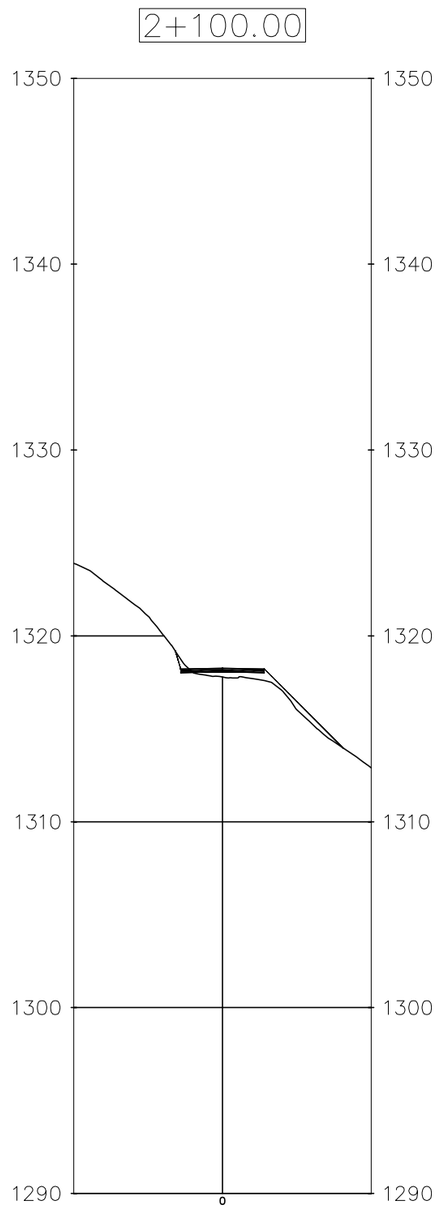
SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS138

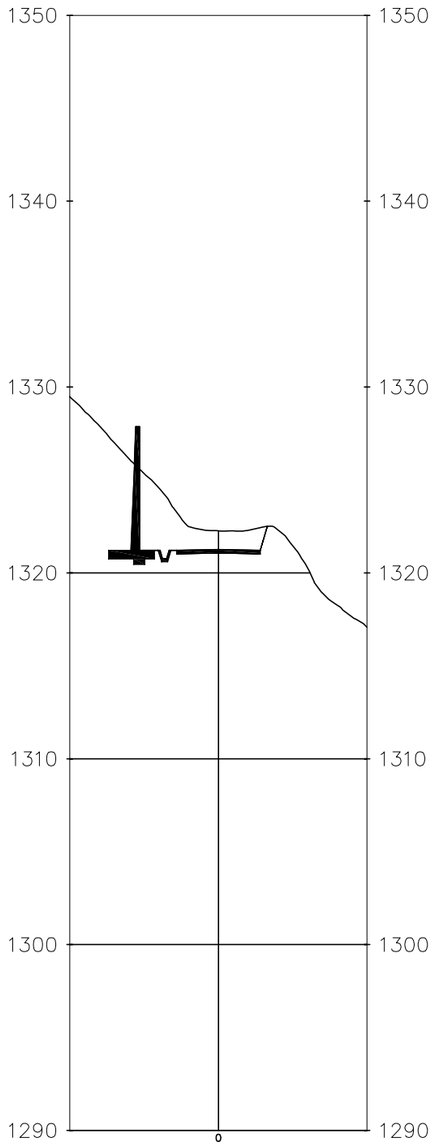
SCALE

REV.: 0

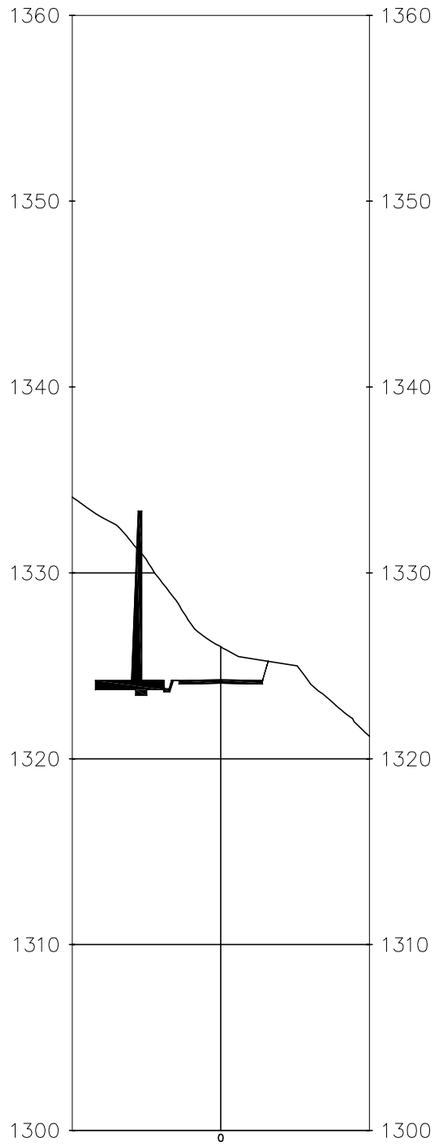
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

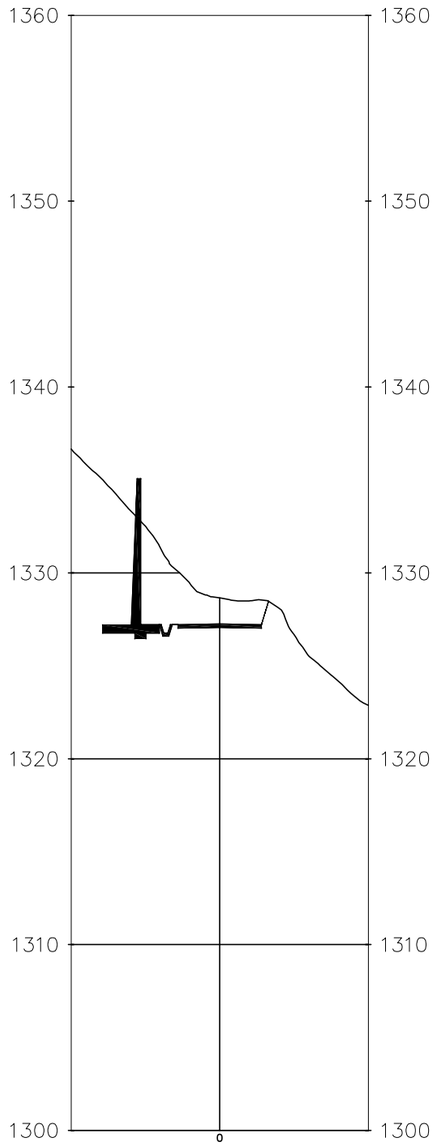
2+120.00



2+140.00



2+160.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS139

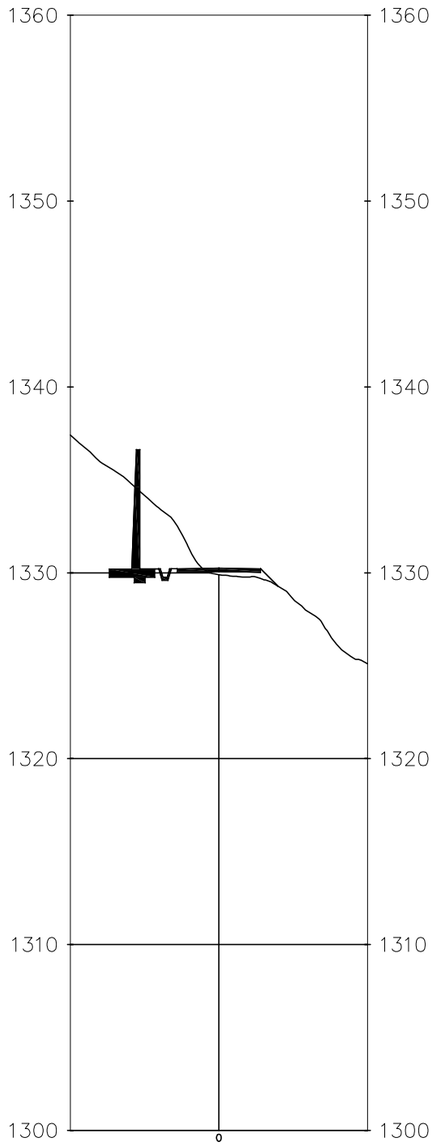
SCALE

REV.: 0

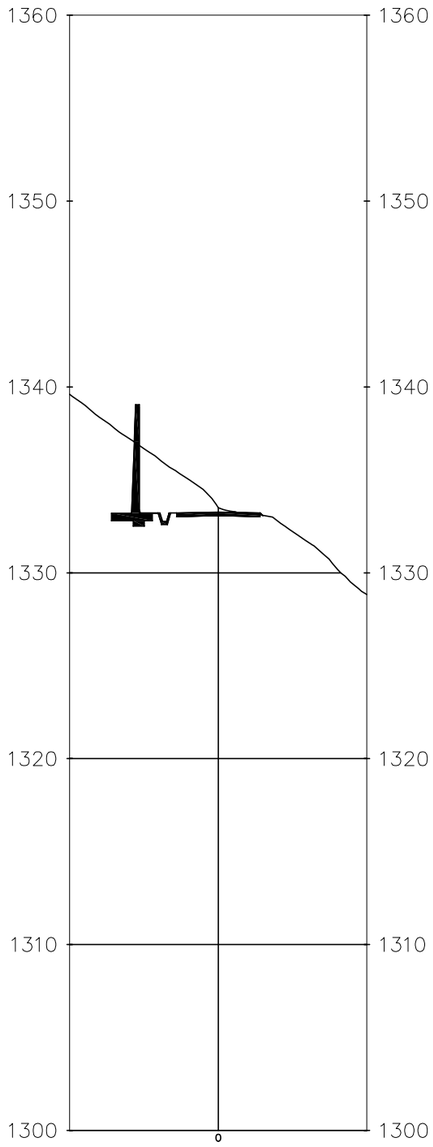
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

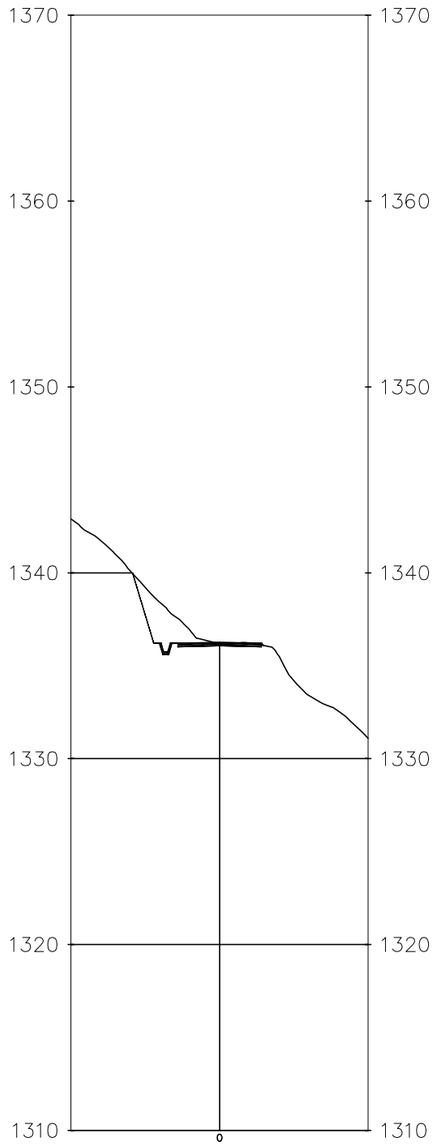
2+180.00



2+200.00



2+220.00

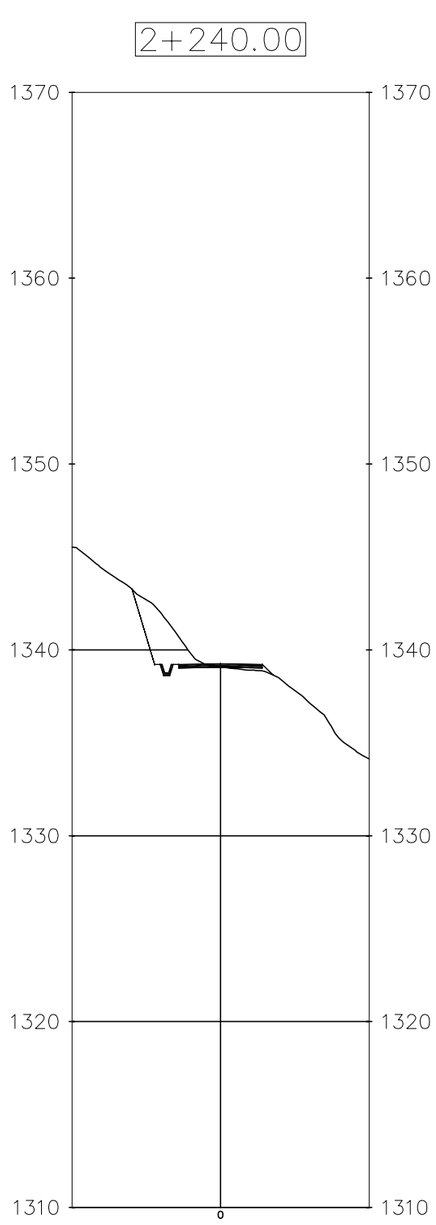


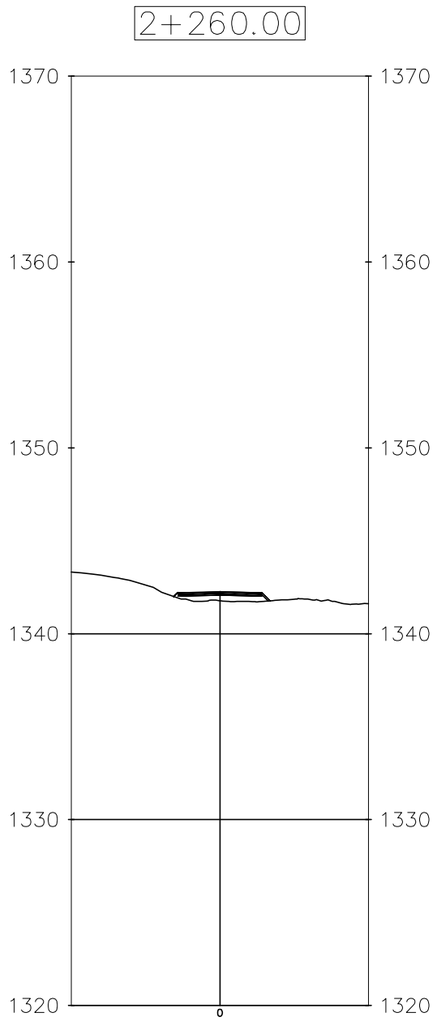
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	DATE: DECEMBER, 2025	SCALE
				DRAWING No.: 4520/102/TD/XS140	REV.: 0

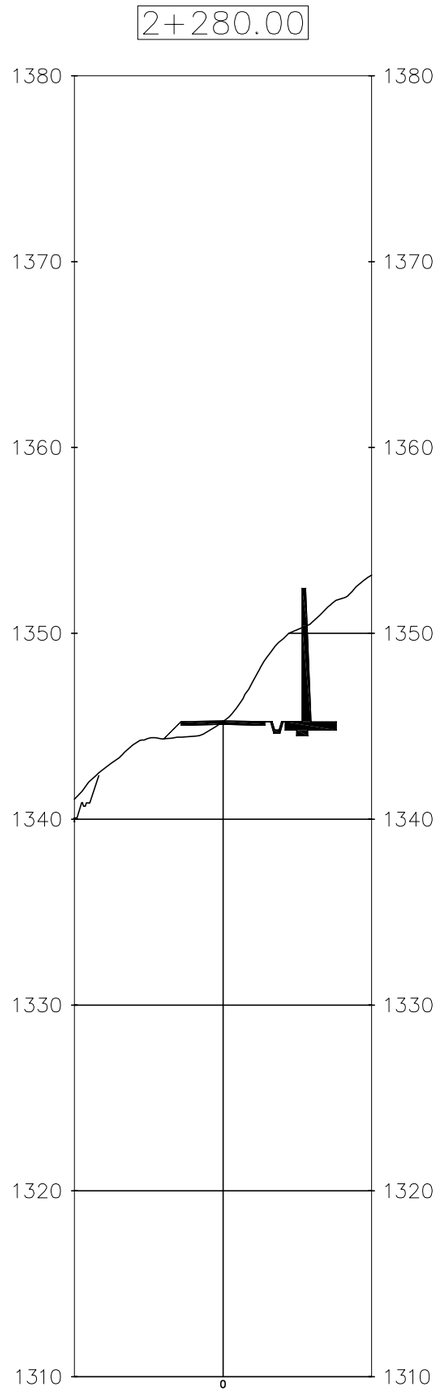
REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION







CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

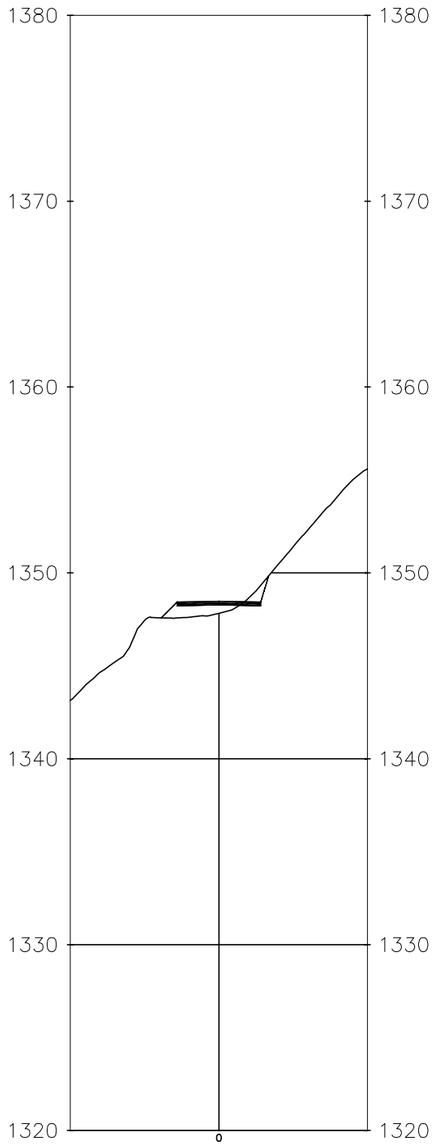
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS141	0

SCALE

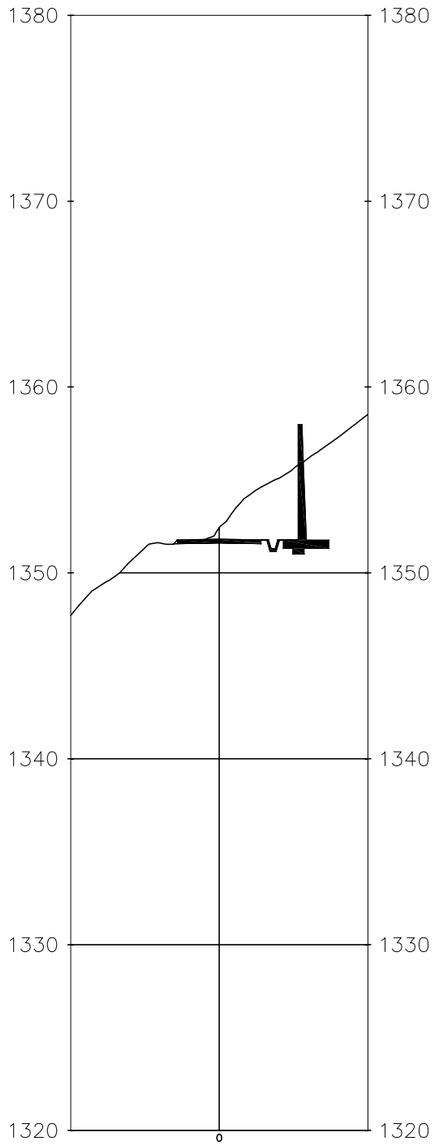
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

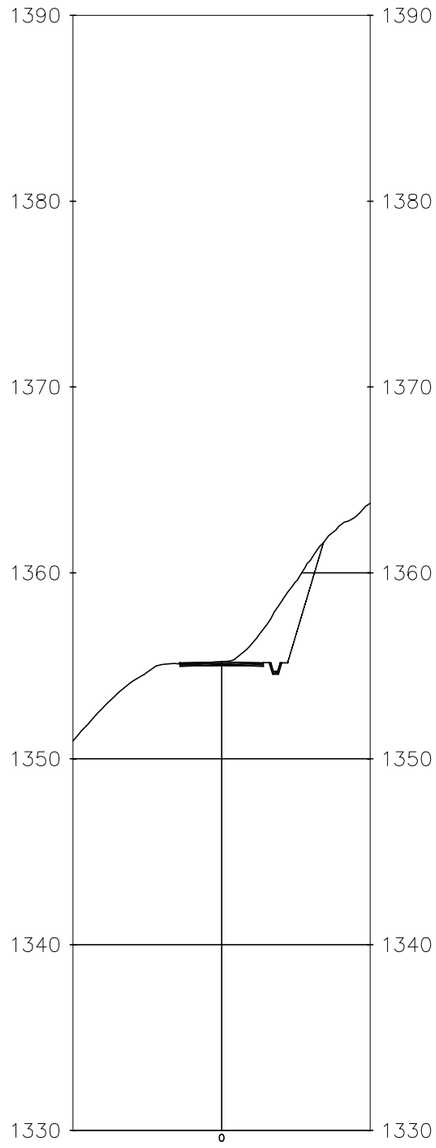
2+300.00



2+320.00



2+340.00



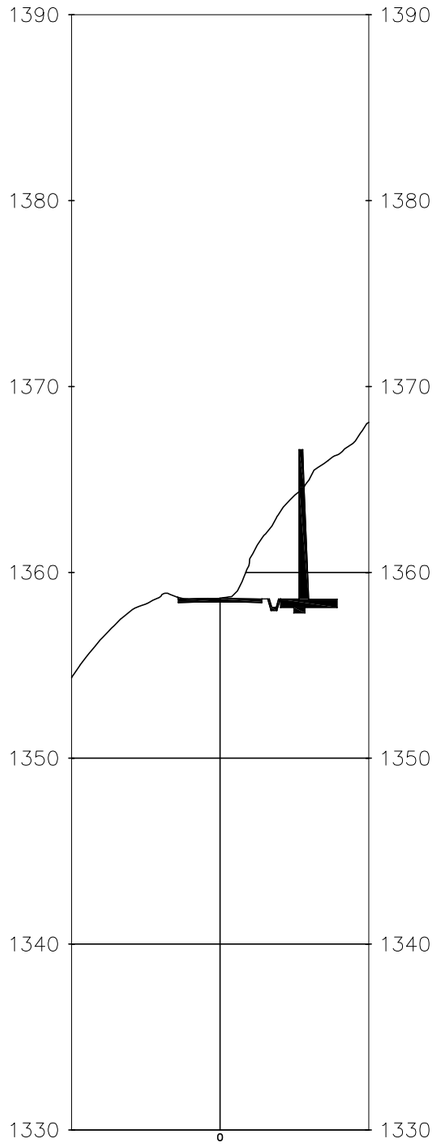
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	DATE: DECEMBER, 2025	SCALE
				DRAWING No.: 4520/102/TD/XS142	REV.: 0

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

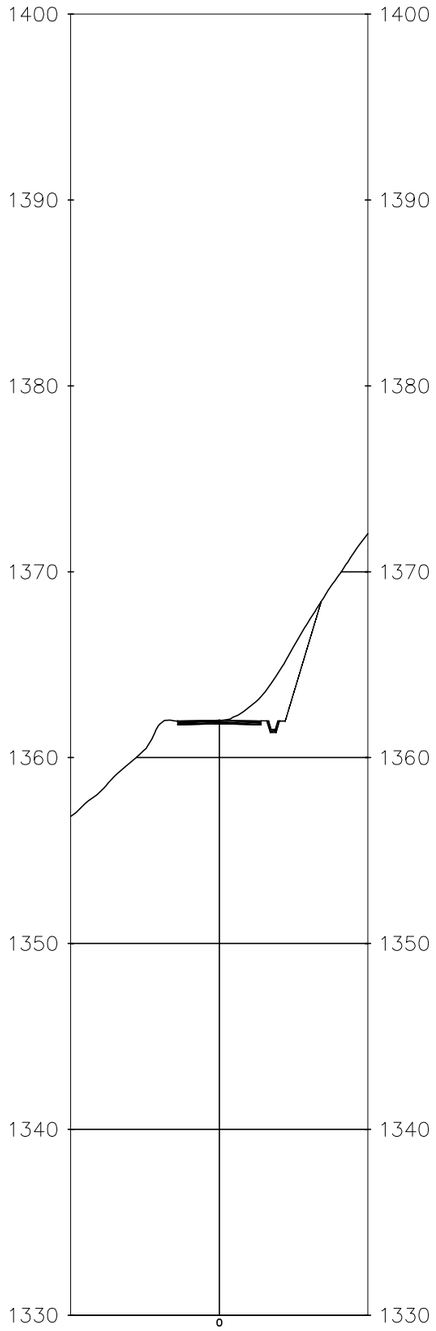
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

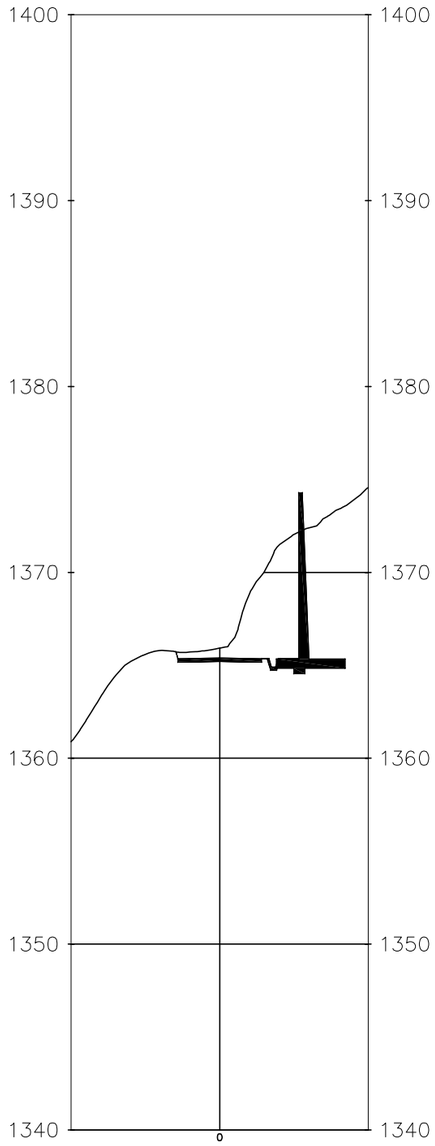
2+360.00



2+380.00



2+400.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS143

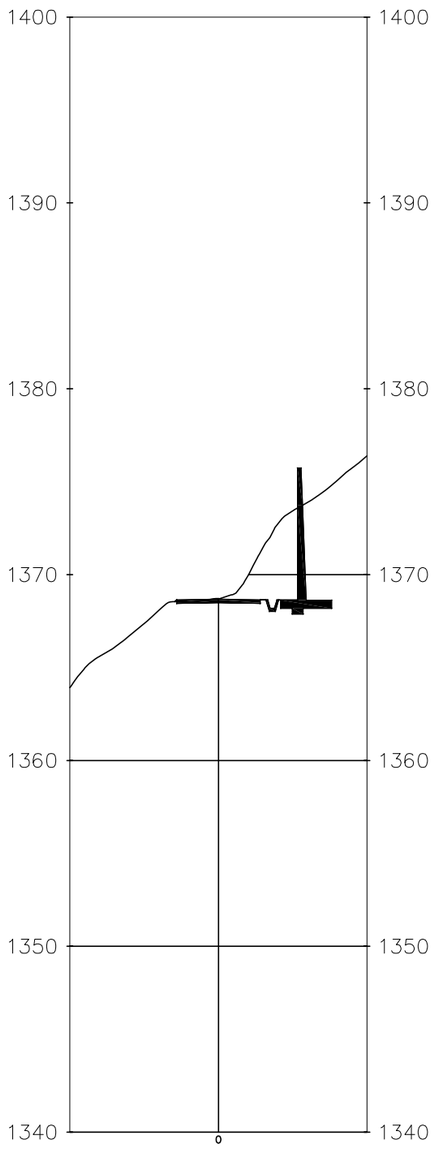
REV.: 0

SCALE

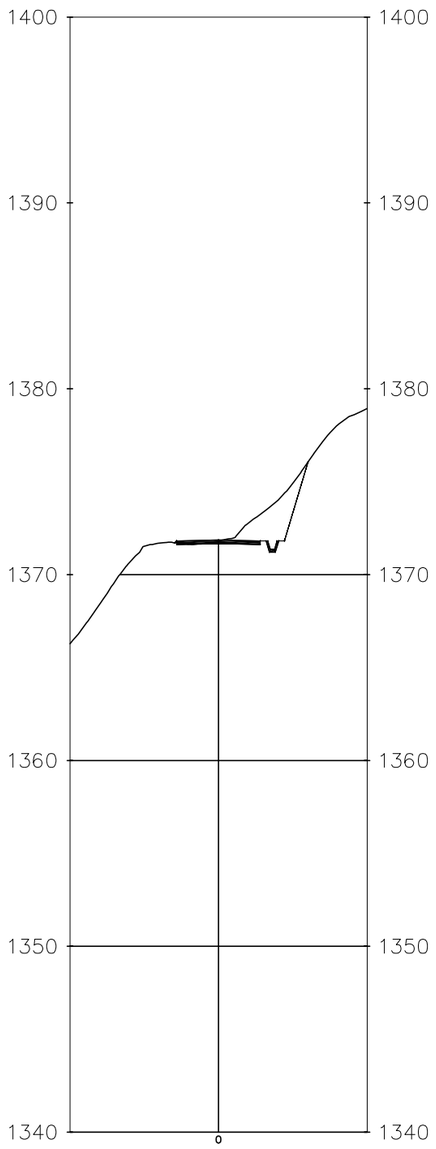
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

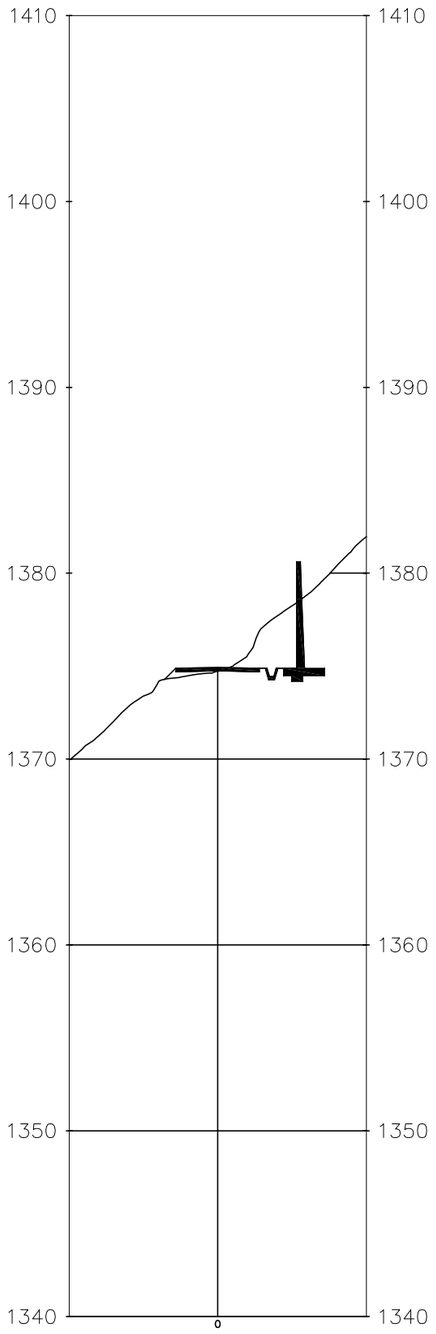
2+420.00



2+440.00



2+460.00



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

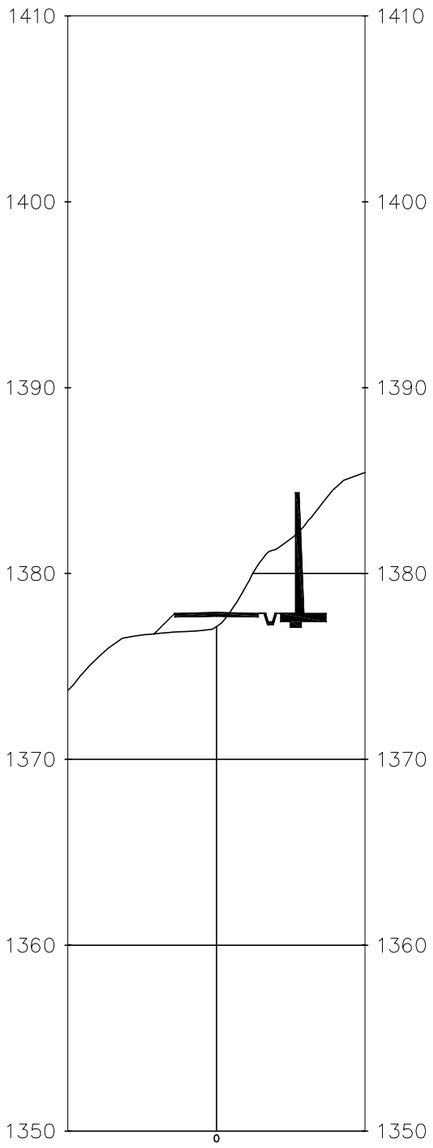
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS144	0

SCALE

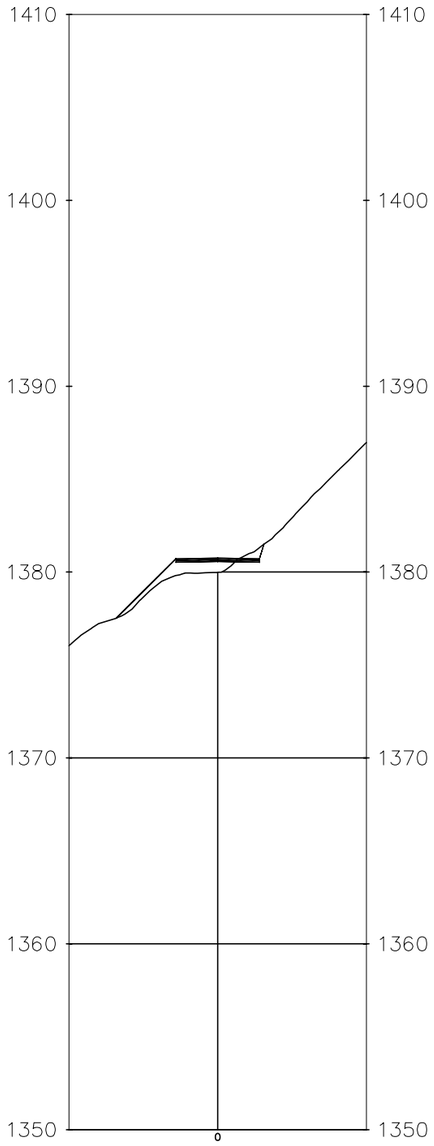
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

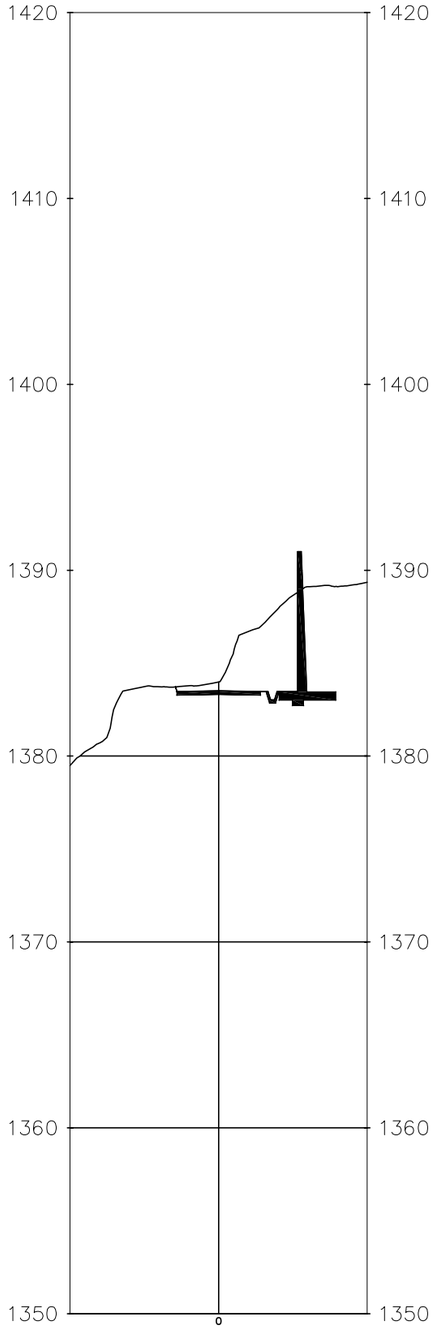
2+480.00



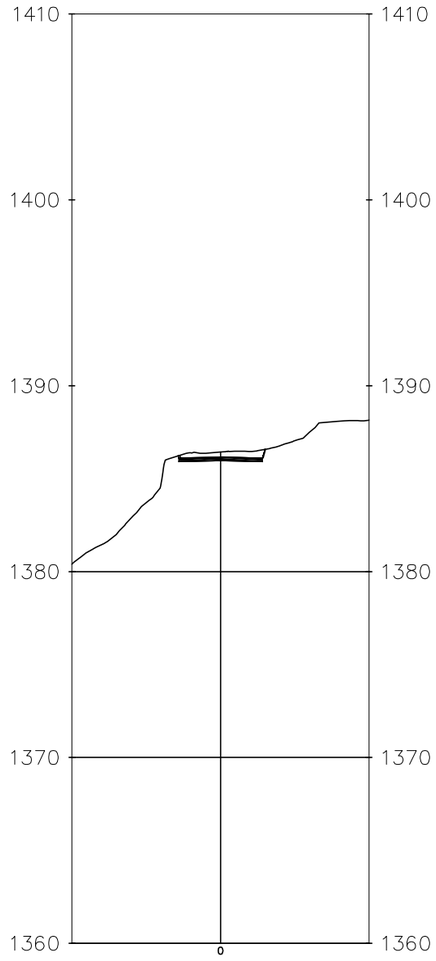
2+500.00



2+520.00



2+540.00



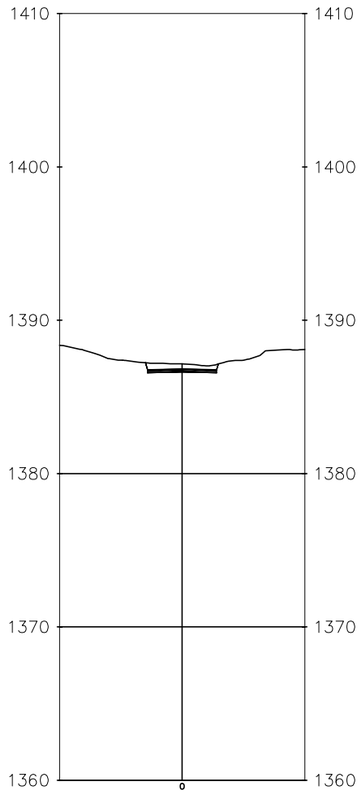
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	CHAINAGE WISE X-SECTIONS	SCALE	
			DATE: DECEMBER, 2025	DRAWING No.: 4520/102/TD/XS145	REV.: 0

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

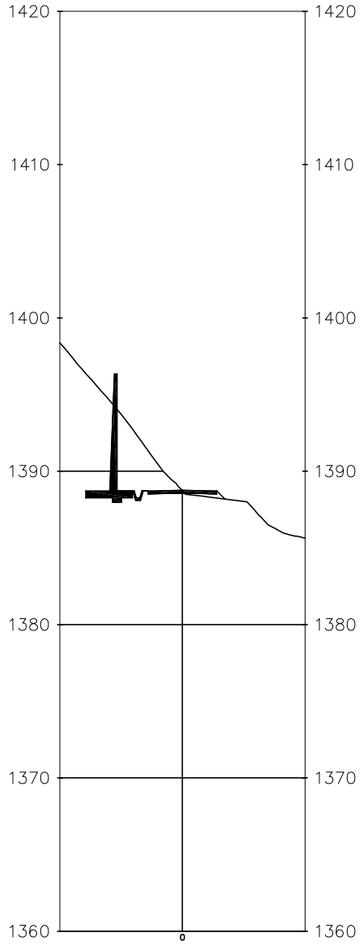
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

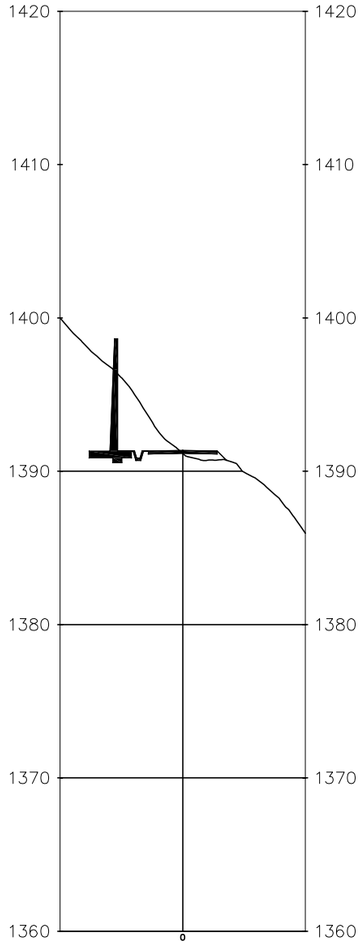
2+545.00



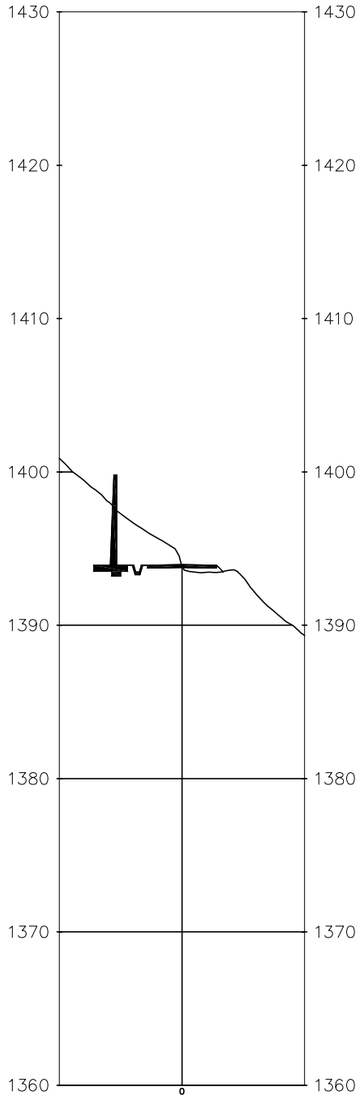
2+560.00



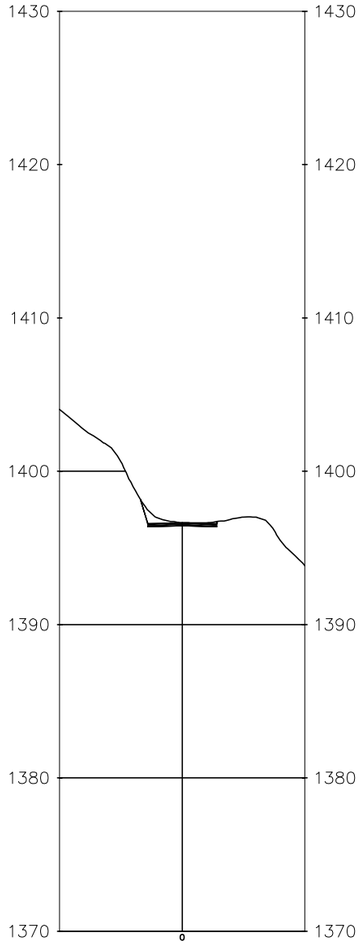
2+580.00



2+600.00



2+620.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS146

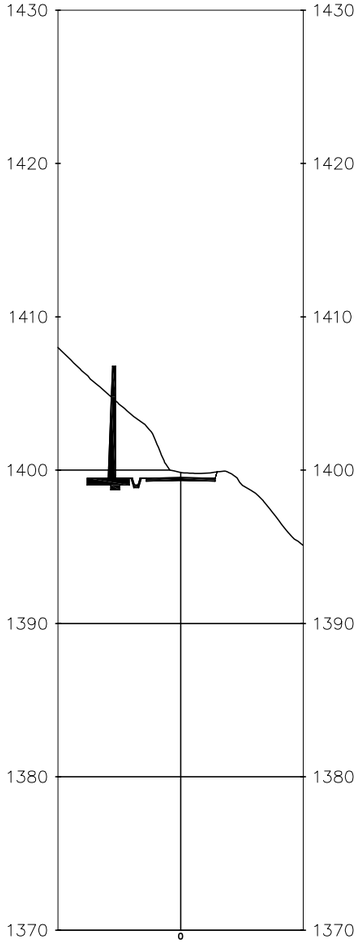
SCALE

REV.: 0

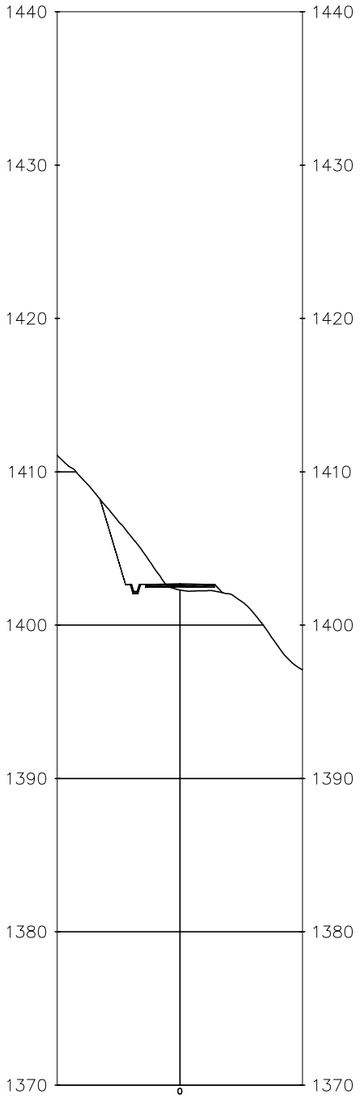
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

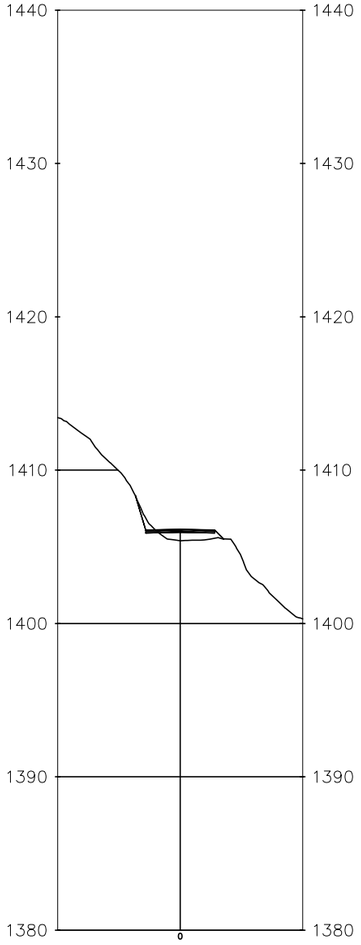
2+640.00



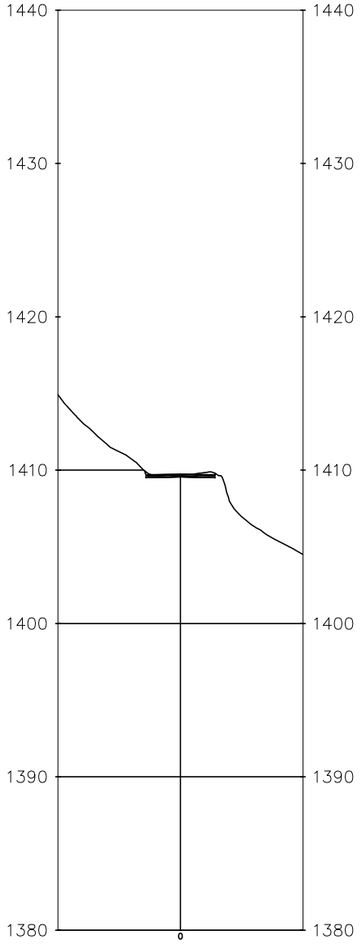
2+660.00



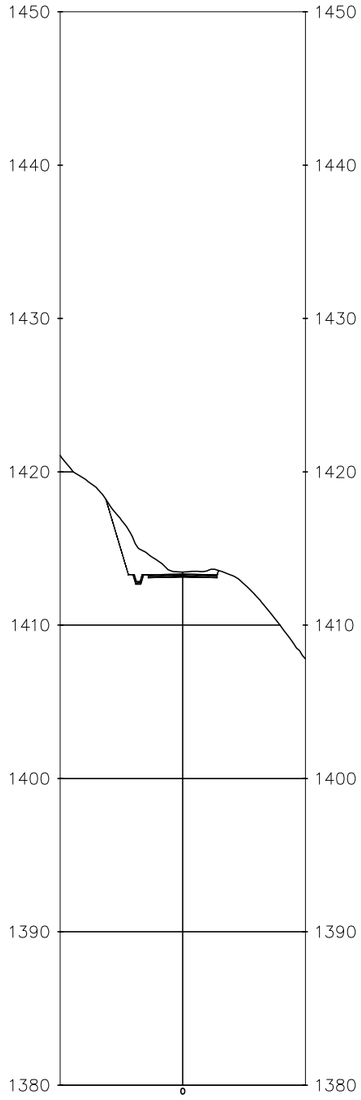
2+680.00



2+700.00



2+720.00



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

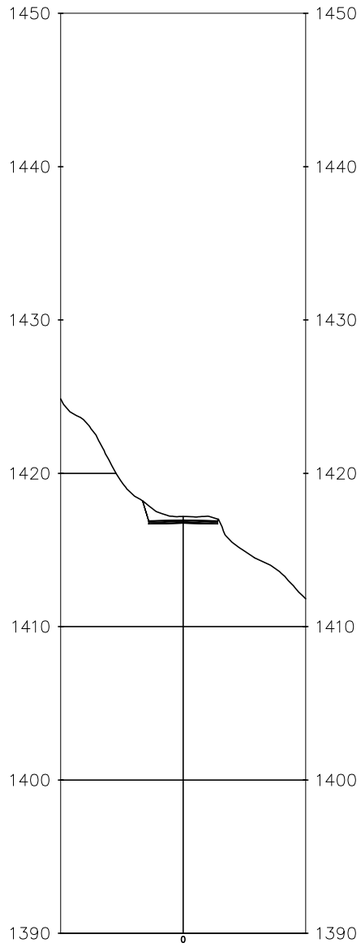
CHAINAGE WISE X-SECTIONS

SCALE		
	DRAWING No.	REV.
DATE: DECEMBER, 2025	4520/102/TD/XS147	0

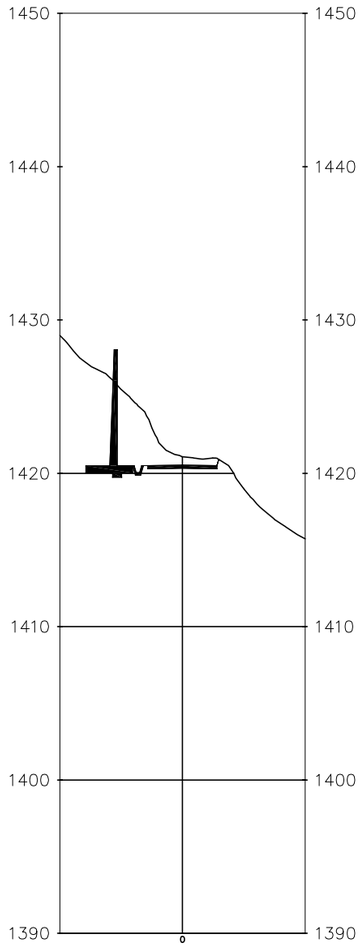
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

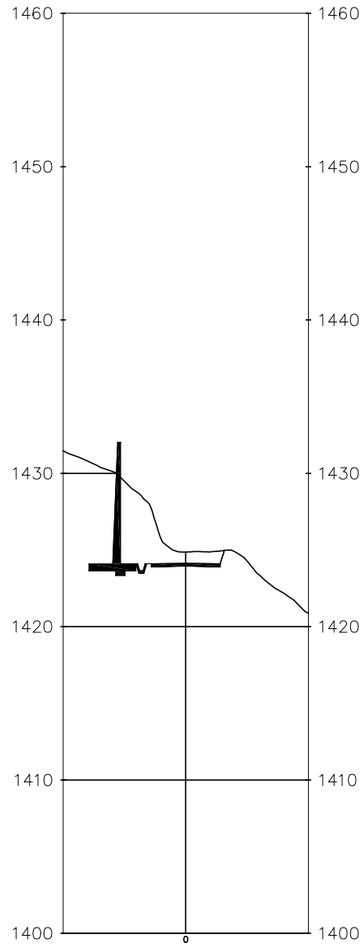
2+740.00



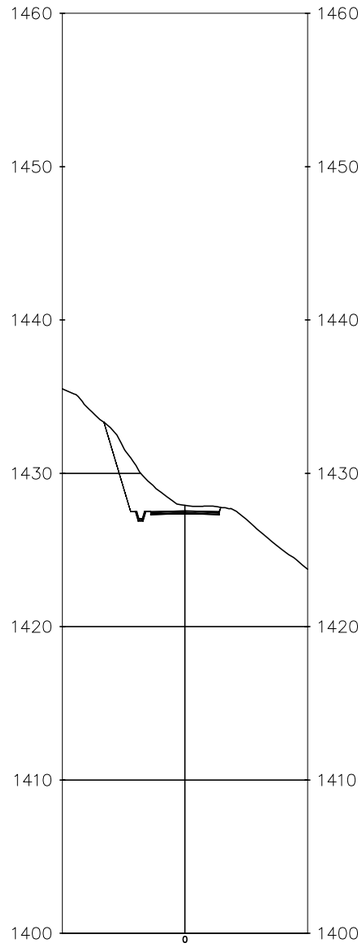
2+760.00



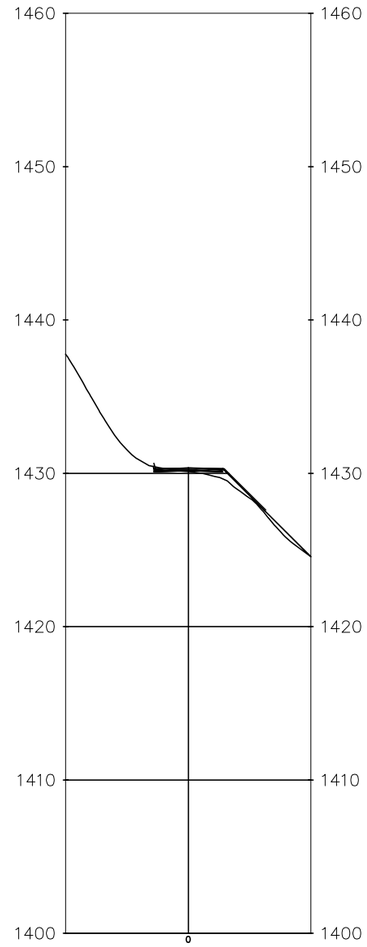
2+780.00



2+800.00



2+820.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS148

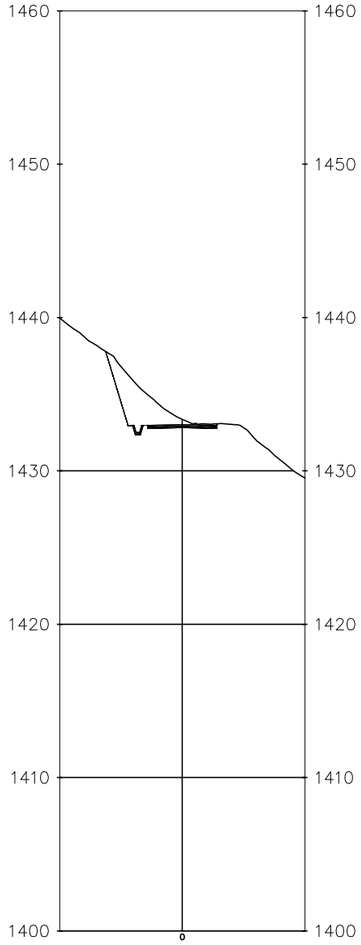
SCALE

REV.: 0

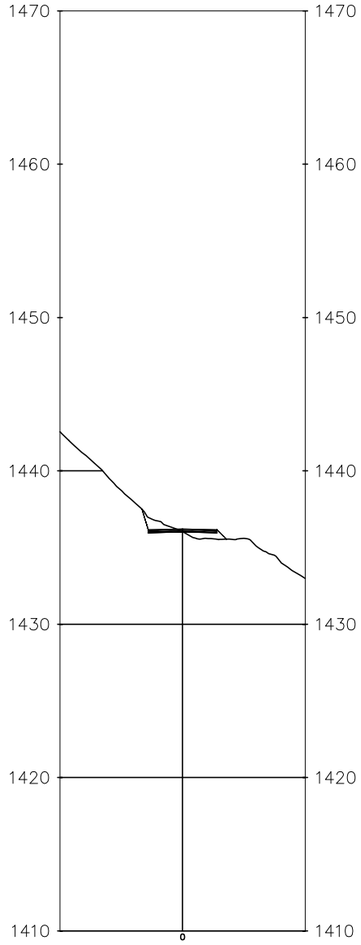
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

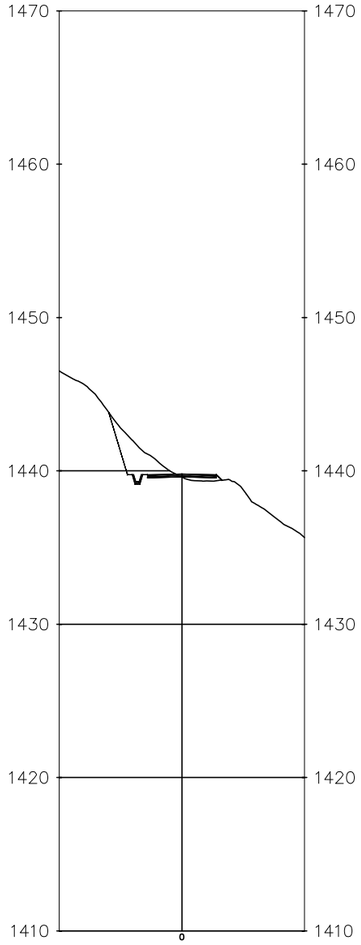
2+840.00



2+860.00



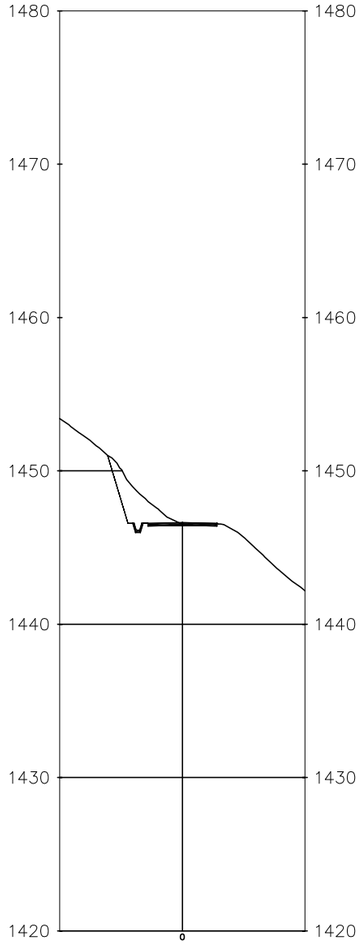
2+880.00



2+900.00



2+920.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

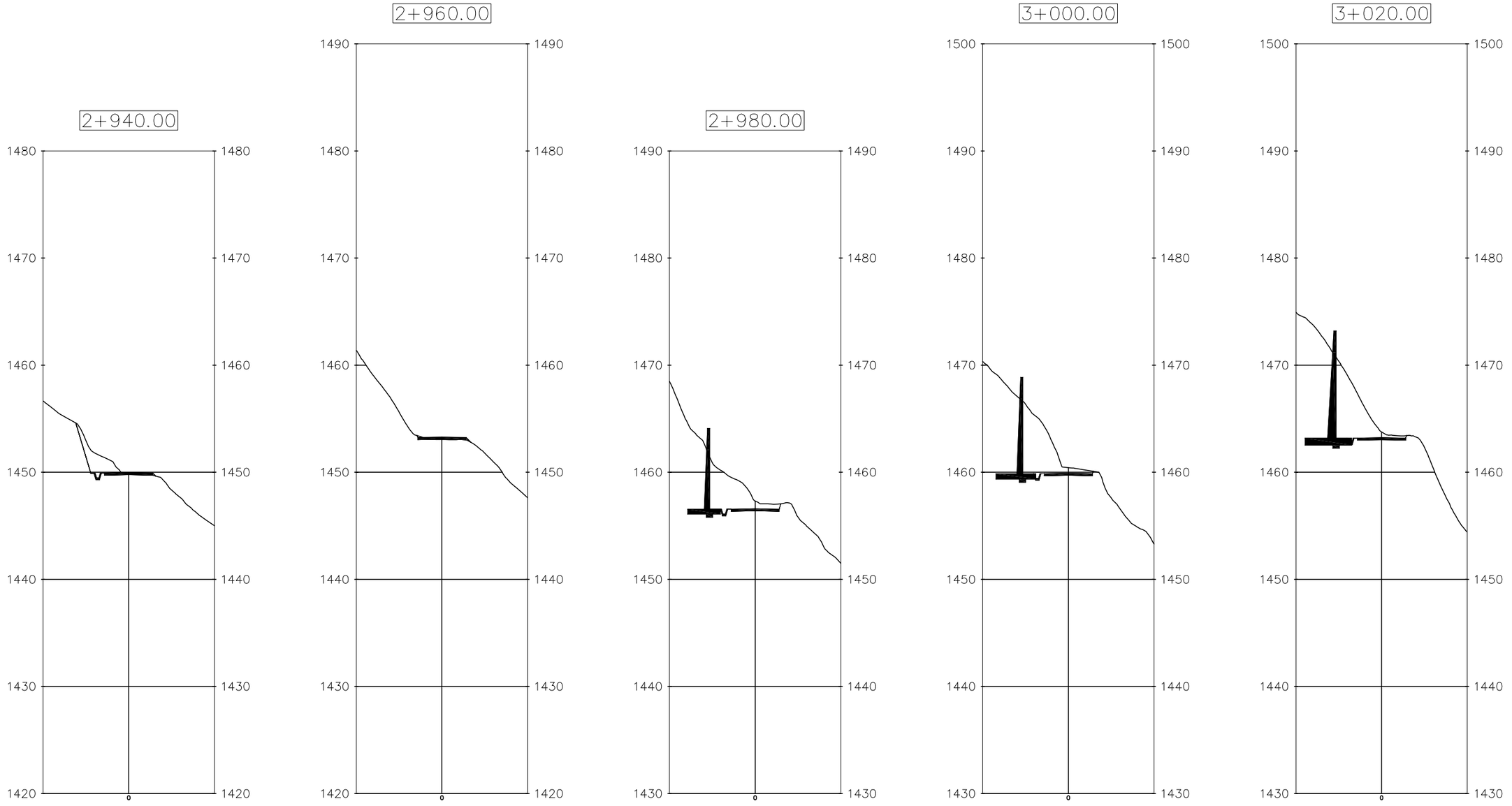
DRAWING No.: 4520/102/TD/XS149

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.				
		04		DRAWN	GOHAR
		03		SUBMITTED	
		02		RECOMMENDED	
		01		CHD./VER.	
		REV. / DATE / DESCRIPTION	APPROVED	APPROVED	

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

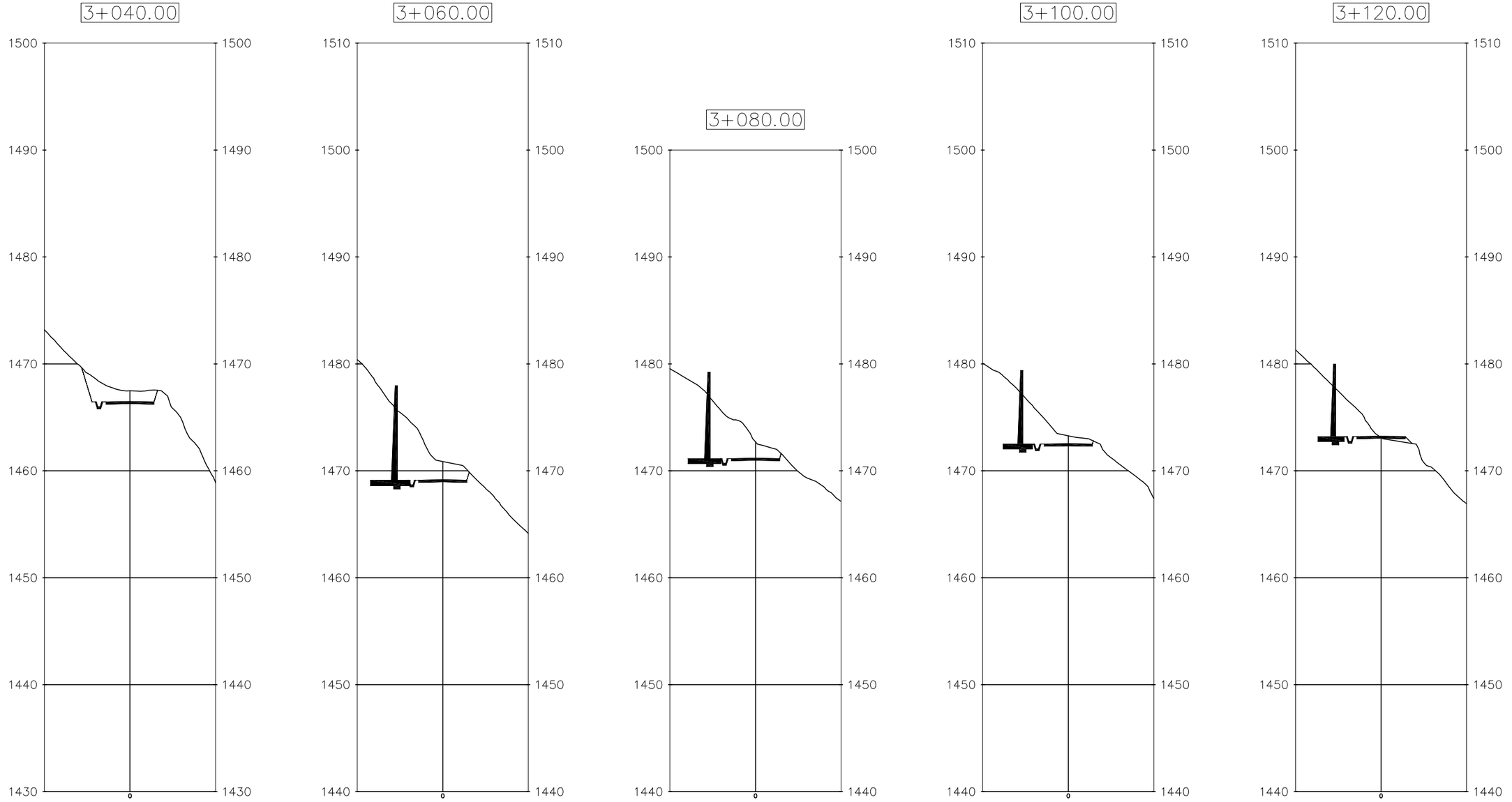
DRAWING No.: 4520/102/TD/XS150

SCALE:

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS151

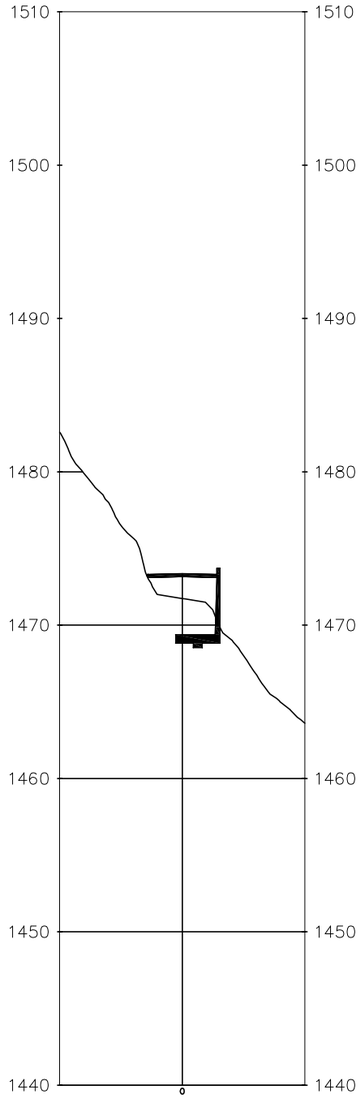
SCALE

REV.: 0

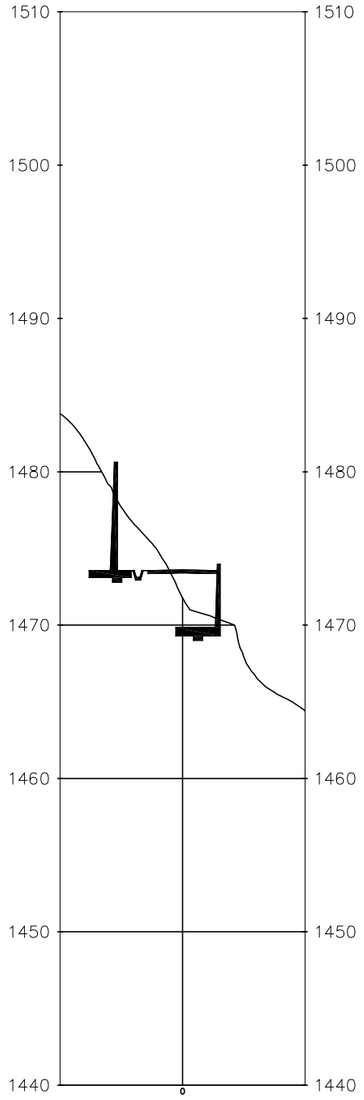
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

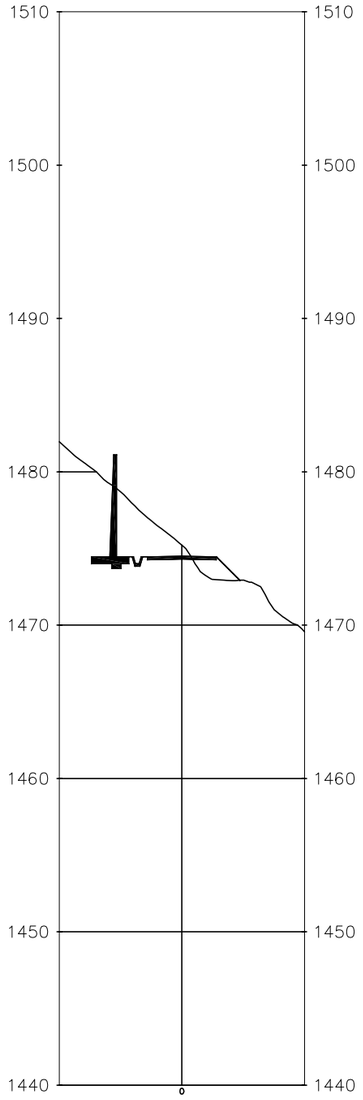
3+140.00



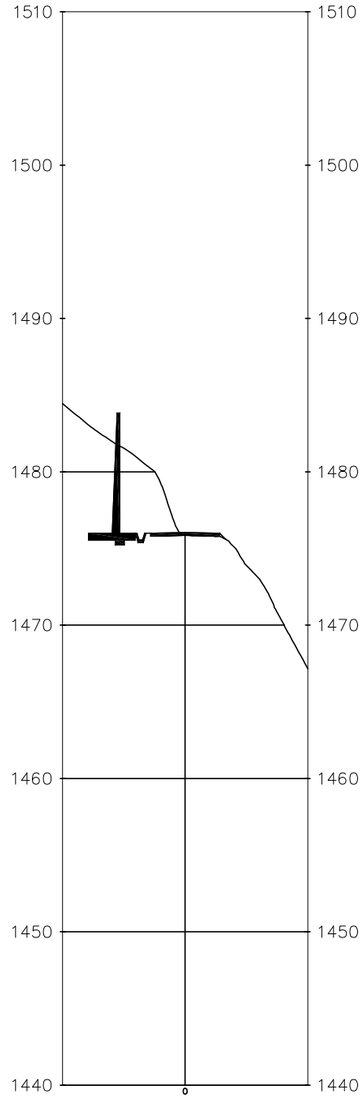
3+160.00



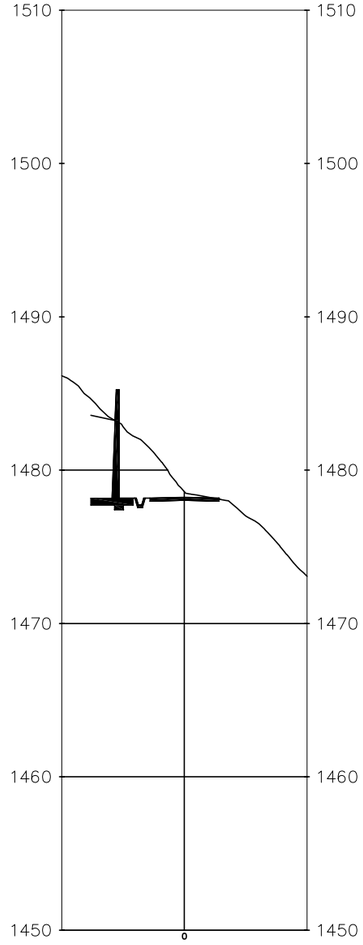
3+180.00



3+200.00



3+220.00



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	GOHAR
		03		SUBMITTED	
		02		RECOMMENDED	
		01		CHD./VER.	
		REV. / DATE / DESCRIPTION	APPROVED	APPROVED	

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS152

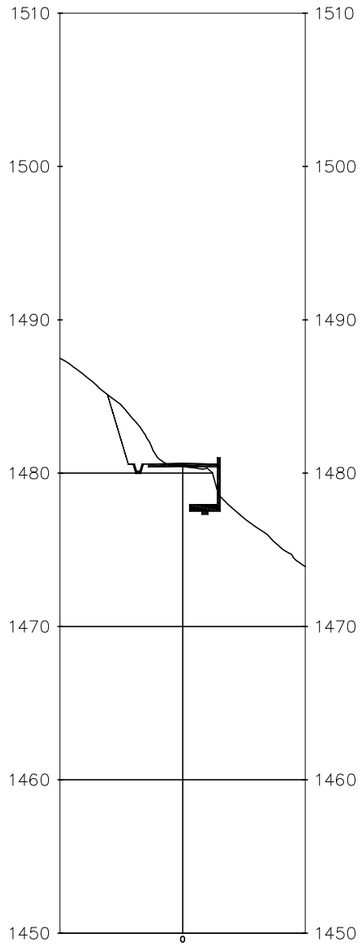
SCALE

REV.: 0

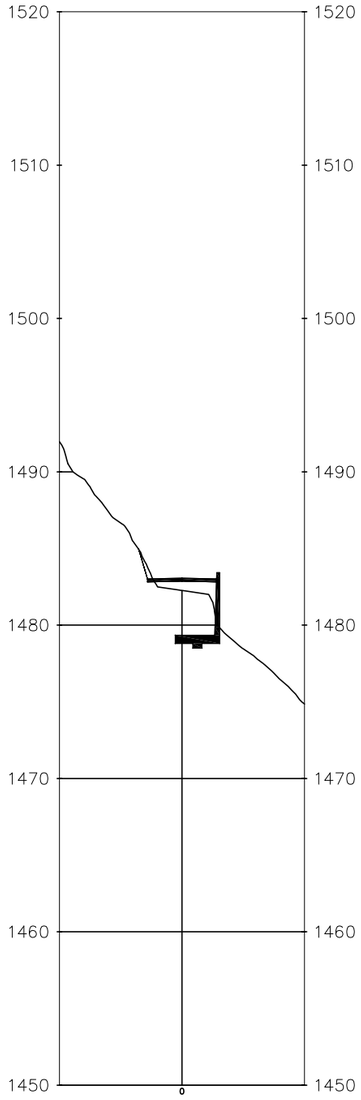
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

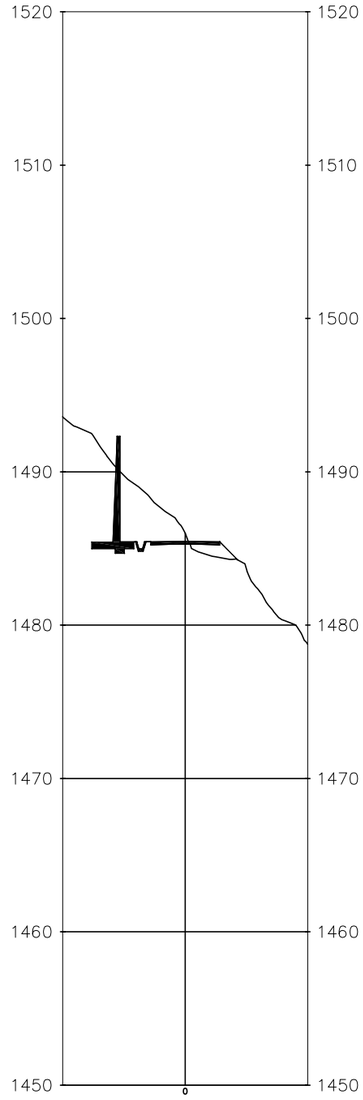
3+240.00



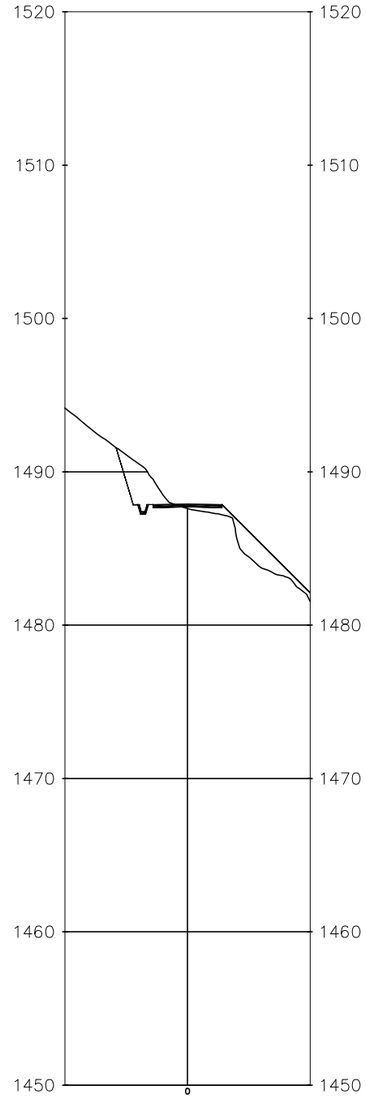
3+260.00



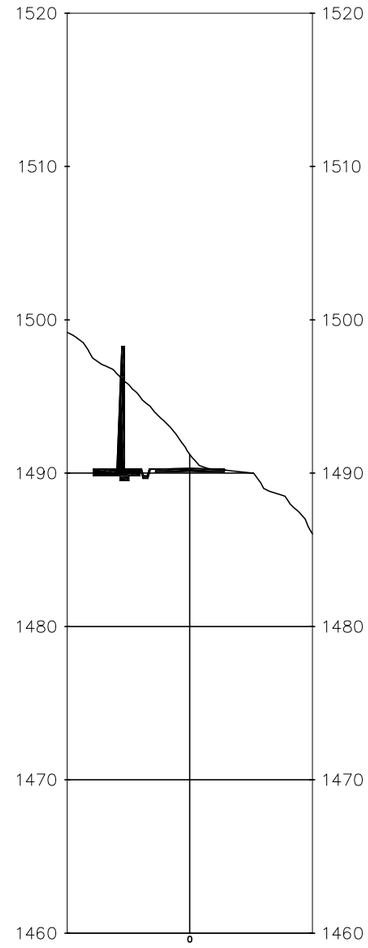
3+280.00



3+300.00



3+320.00



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

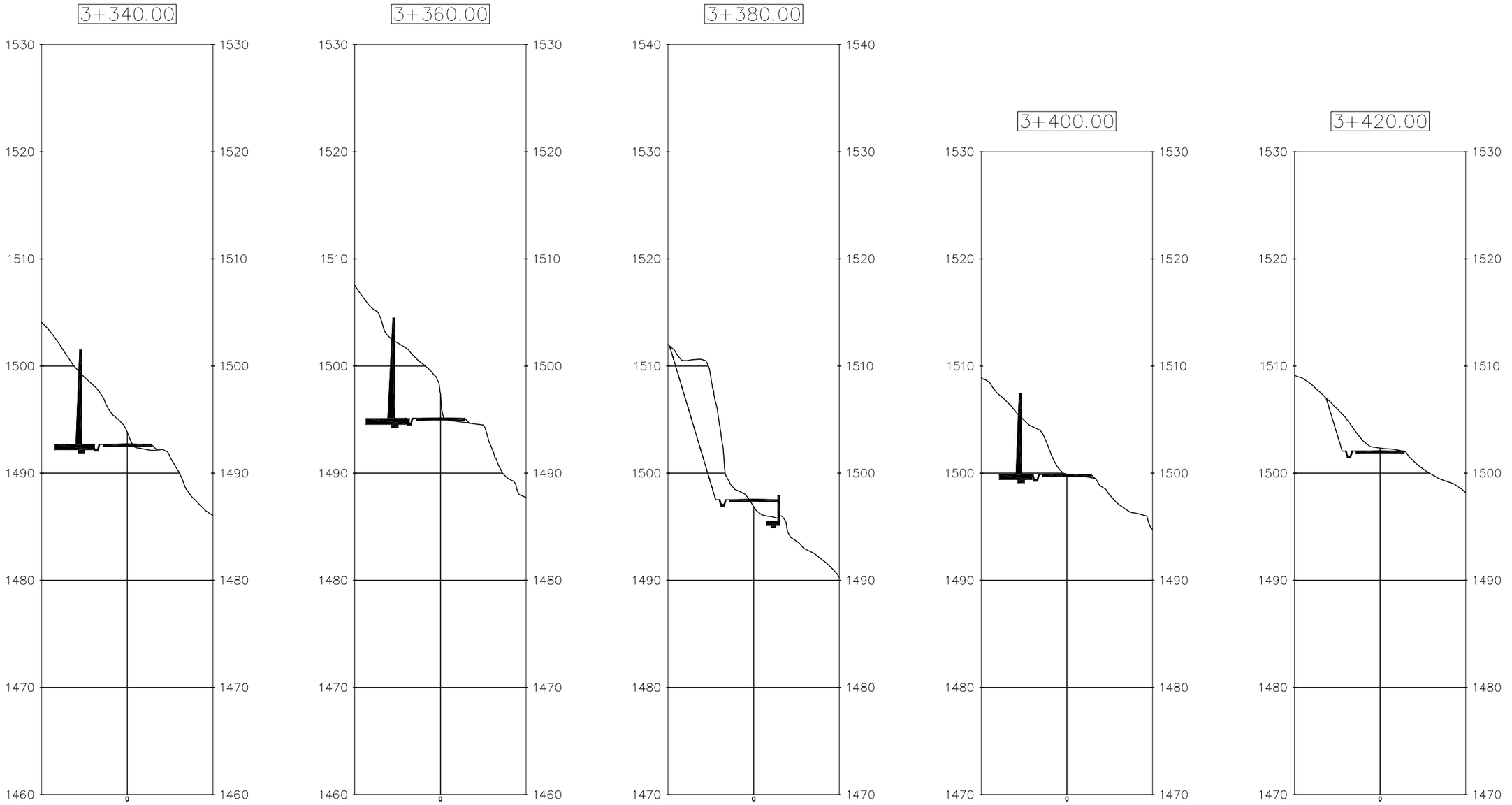
CHAINAGE WISE X-SECTIONS

DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS153	0

SCALE

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

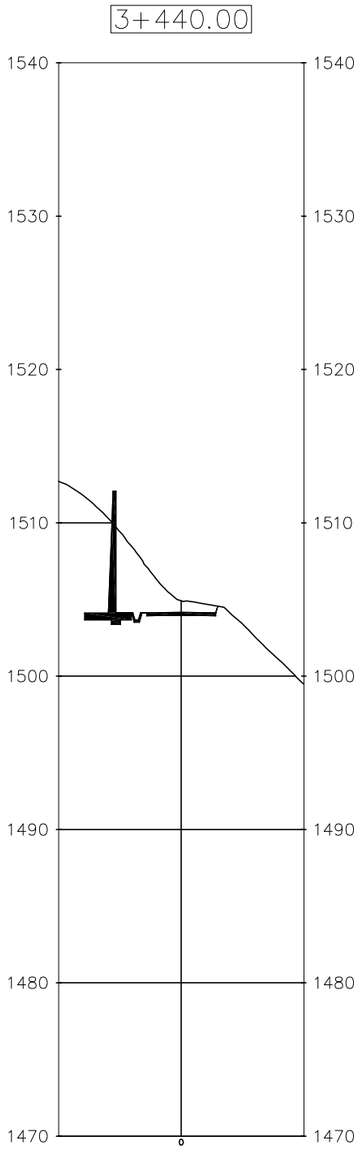


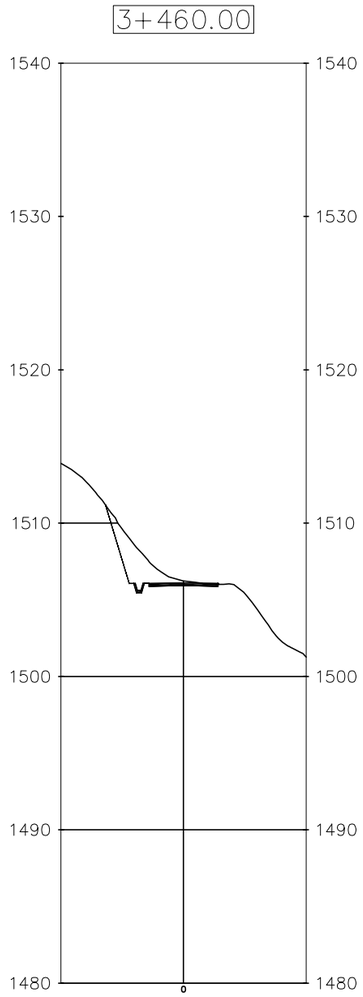
CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01	DRAWN: GOHAR; SUBMITTED; RECOMMENDED; CHD./VER.	PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**	CHAINAGE WISE X-SECTIONS; DATE: DECEMBER, 2025; DRAWING No.: 4520/102/TD/XS154; SCALE; REV.: 0

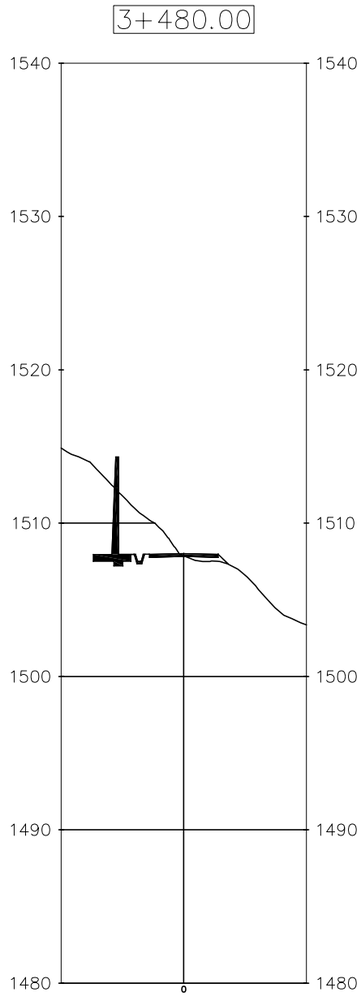
REV.	DATE	DESCRIPTION	APPROVED	APPROVED

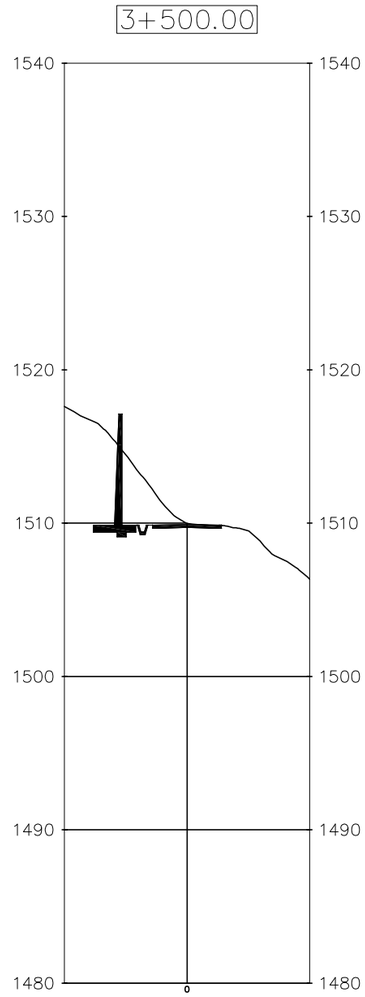
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

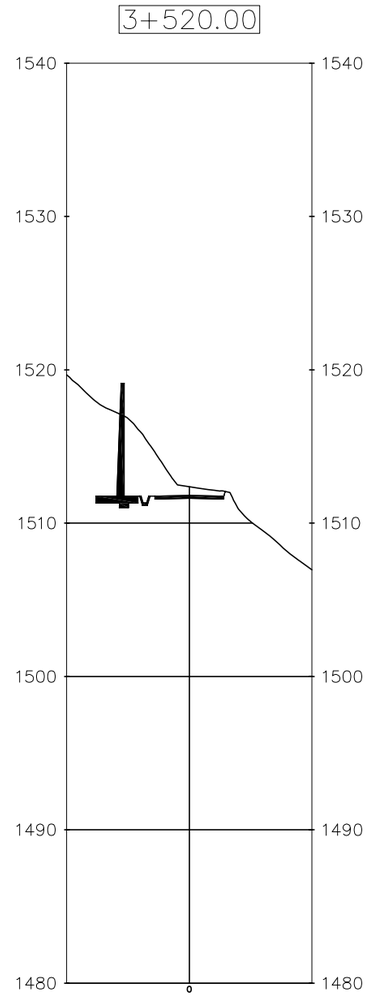
TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION











CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

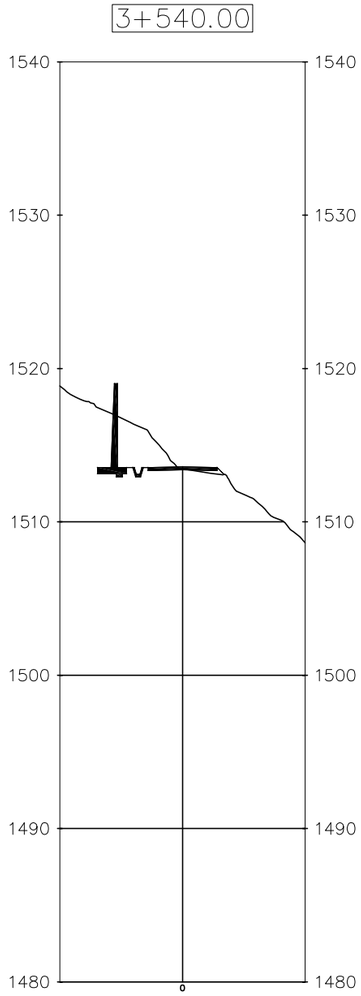
DATE: DECEMBER, 2025

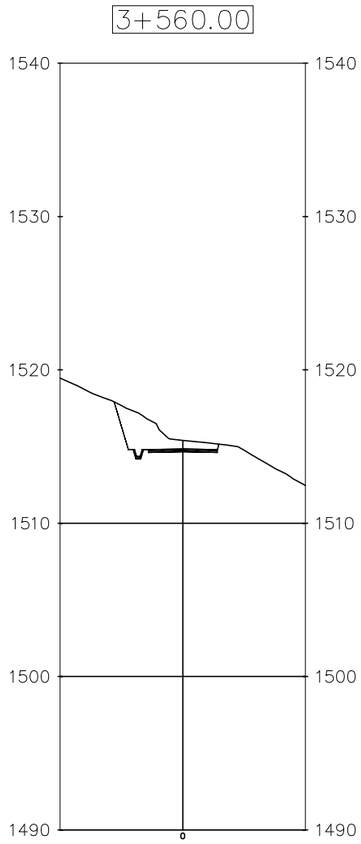
DRAWING No.: 4520/102/TD/XS155

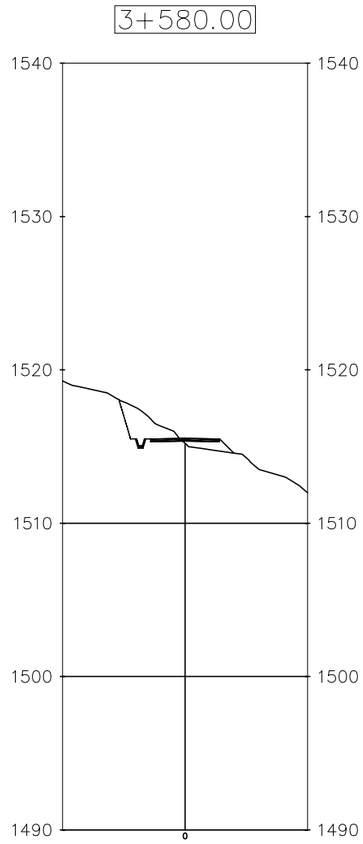
REV.: 0

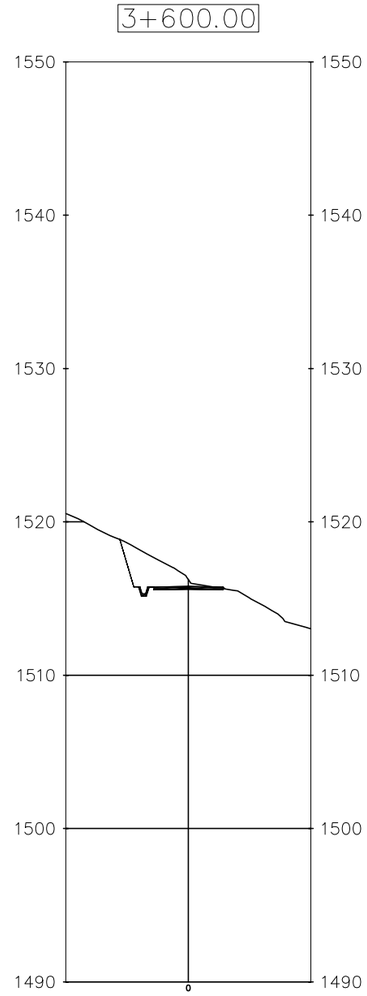
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

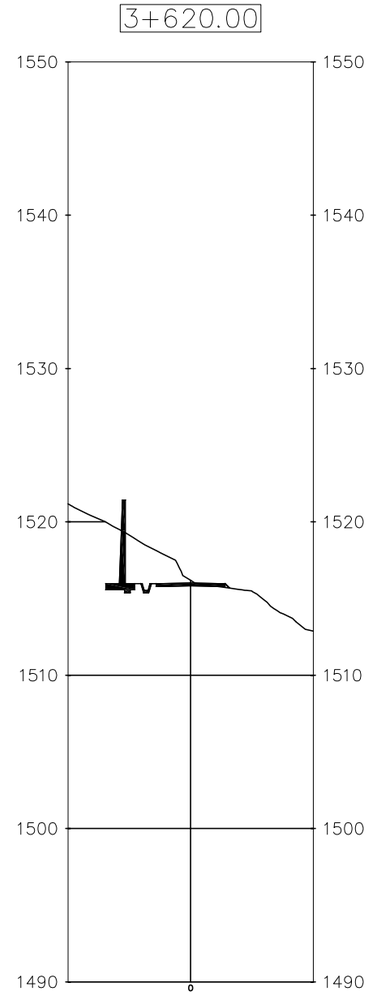
TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION











CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

SCALE

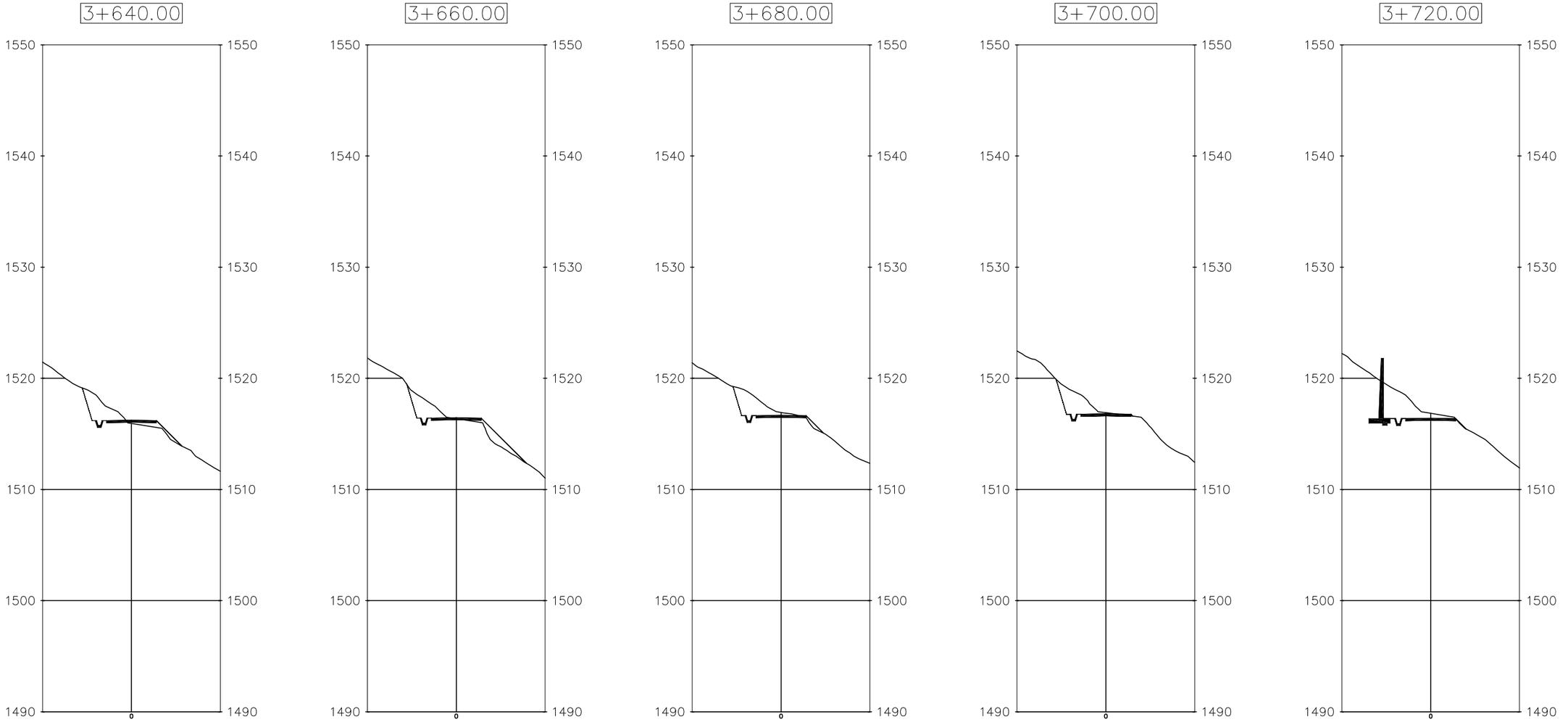
DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS156

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS157

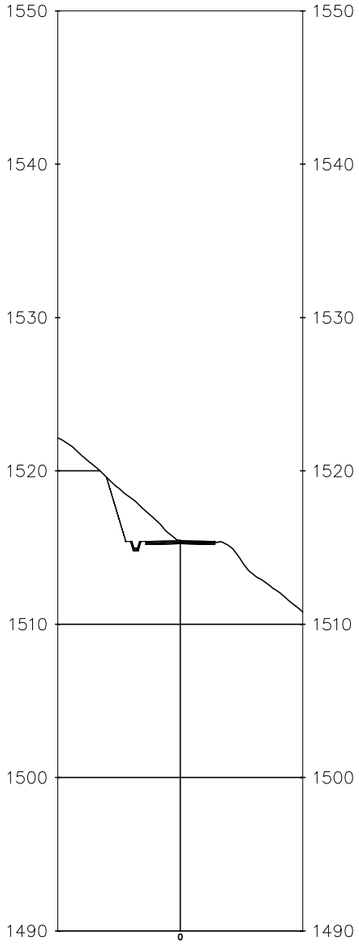
SCALE

REV.: 0

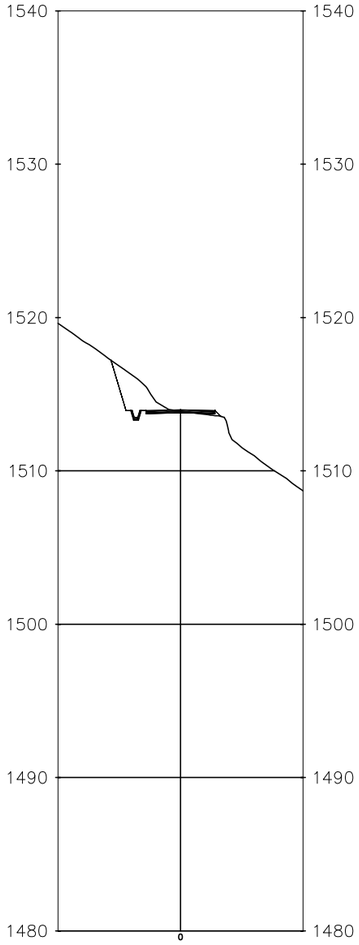
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

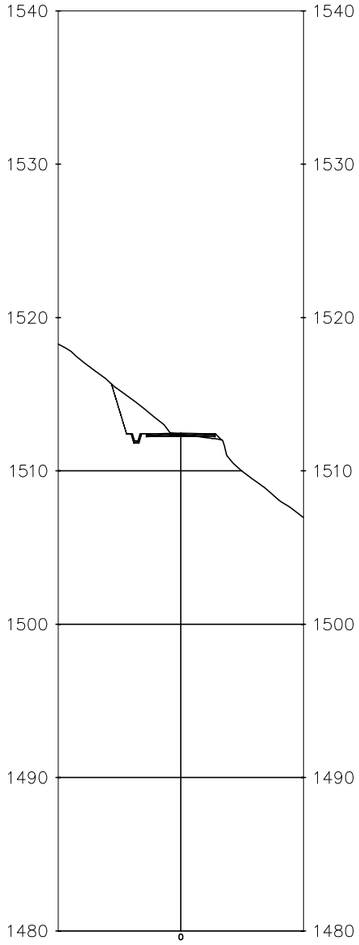
3+740.00



3+760.00



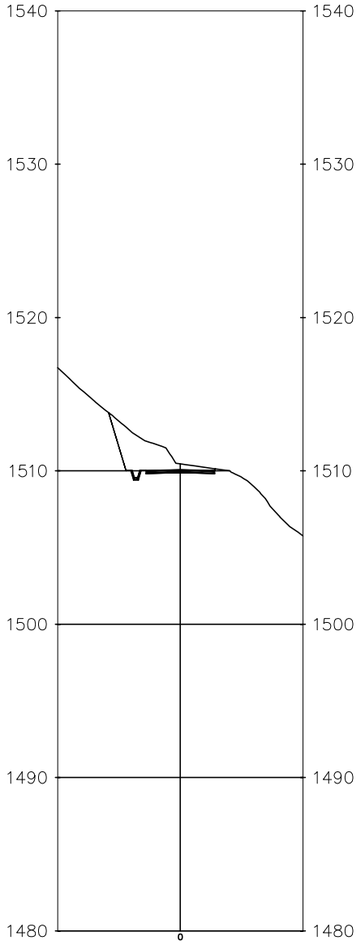
3+780.00



3+800.00



3+820.00



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

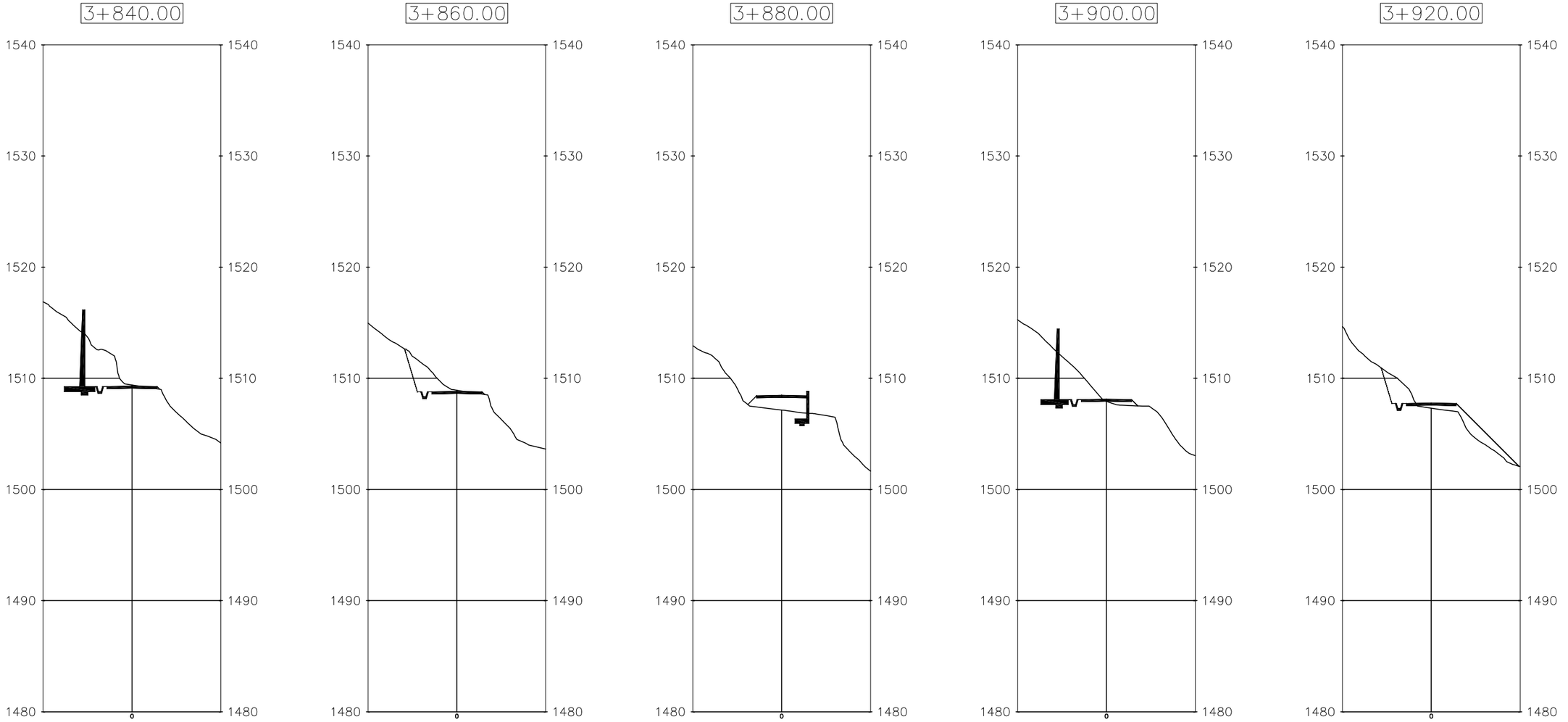
DRAWING No.: 4520/102/TD/XS158

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)		
CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.		

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

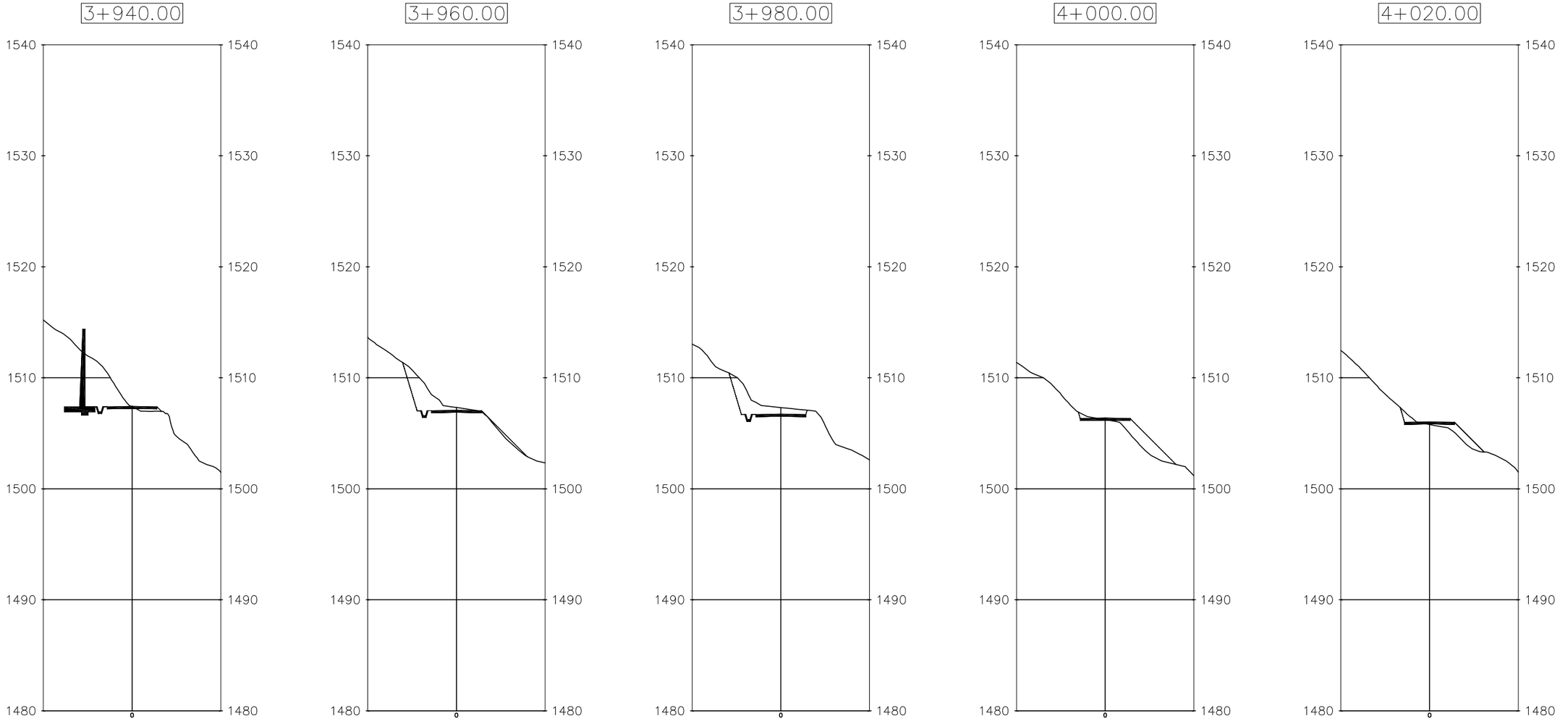
DRAWING No.: 4520/102/TD/XS159

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT

WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.

HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

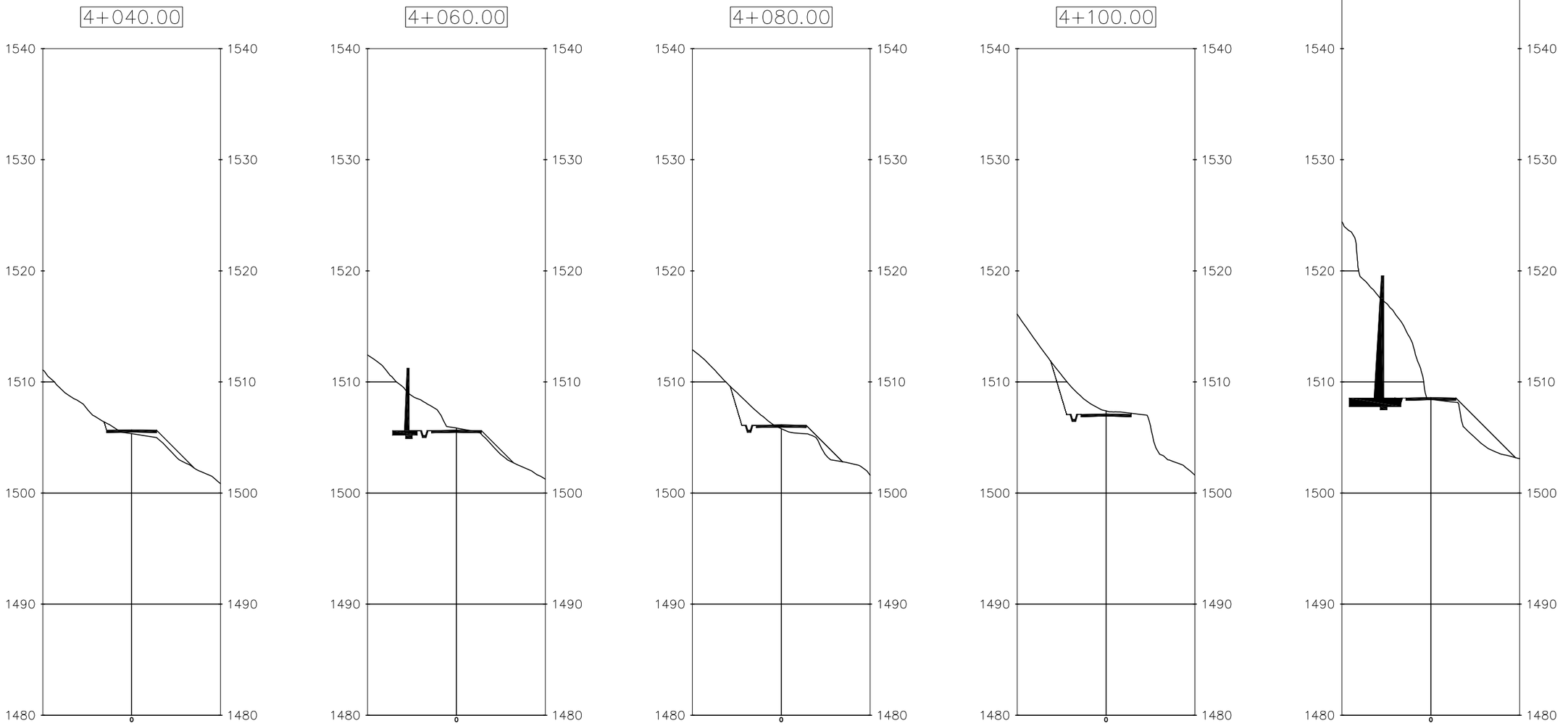
DRAWING No.: 4520/102/TD/XS160

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT

DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

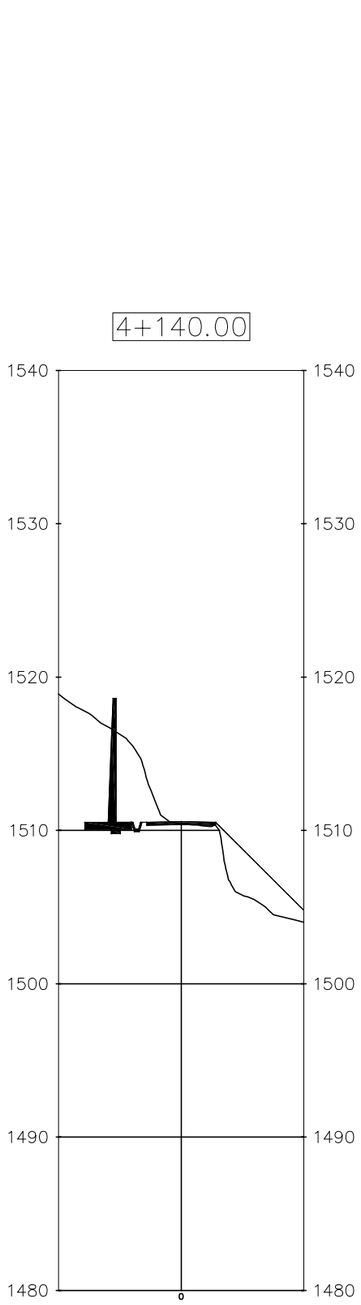
CHAINAGE WISE X-SECTIONS

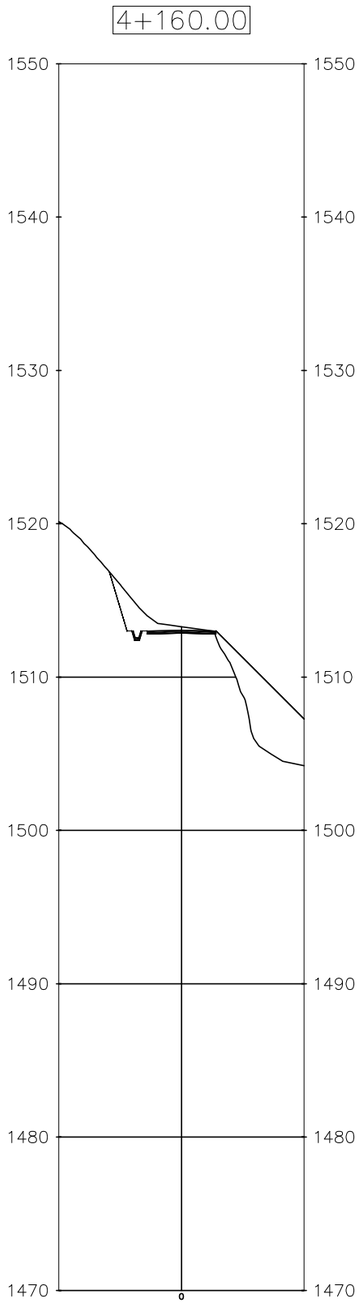
DATE	DRAWING No.	REV.
DECEMBER, 2025	4520/102/TD/XS161	0

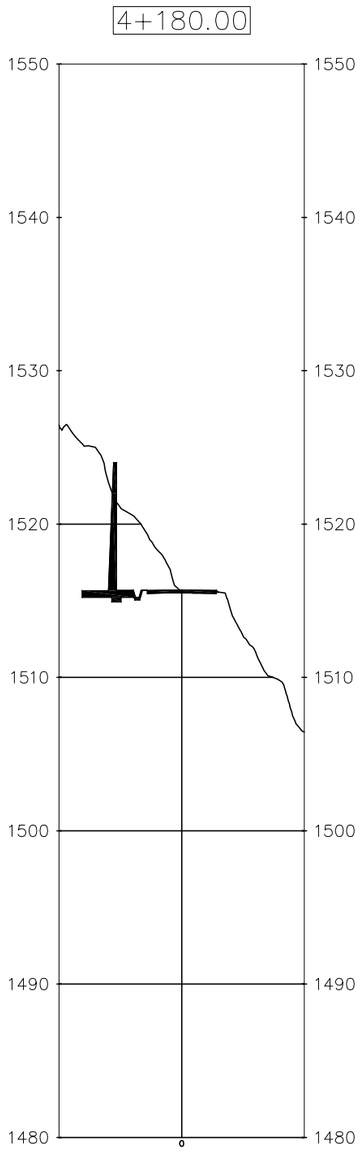
SCALE

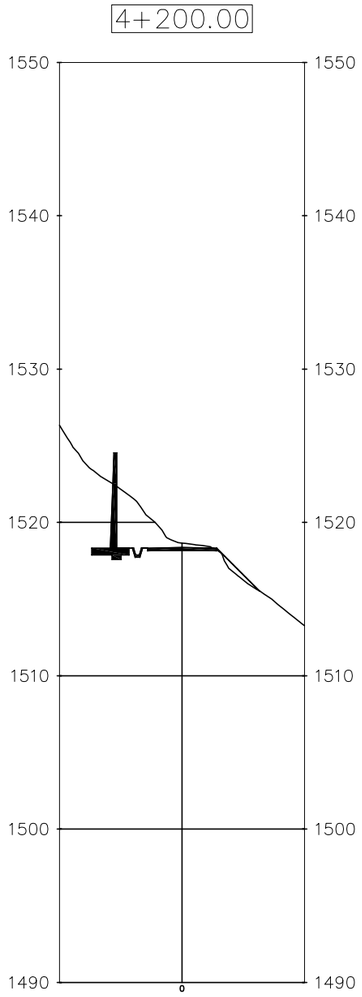
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

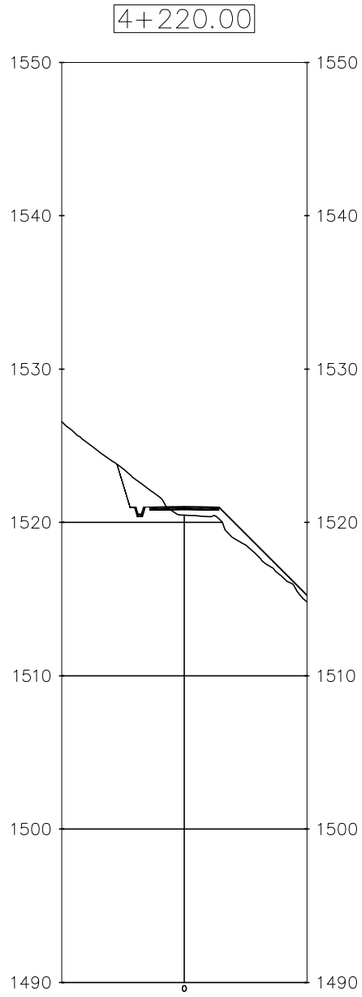
TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION











CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	PROJECT	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)
			HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	CHAINAGE WISE X-SECTIONS	

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

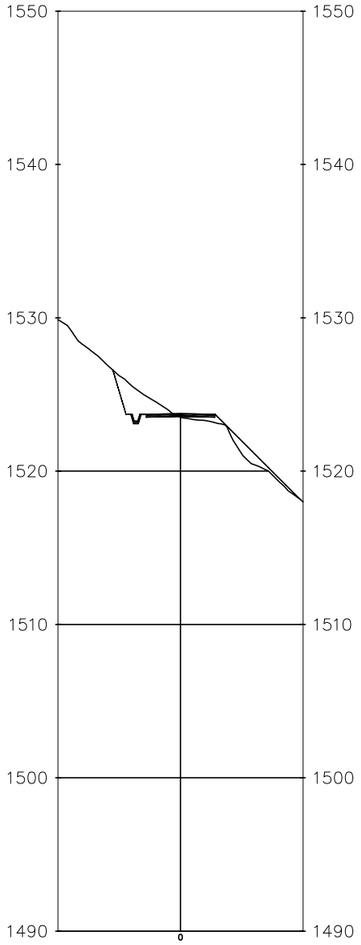
DRAWN	GOHAR
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

DATE	DRAWING No.	REV.	SCALE
DECEMBER, 2025	4520/102/TD/XS162	0	

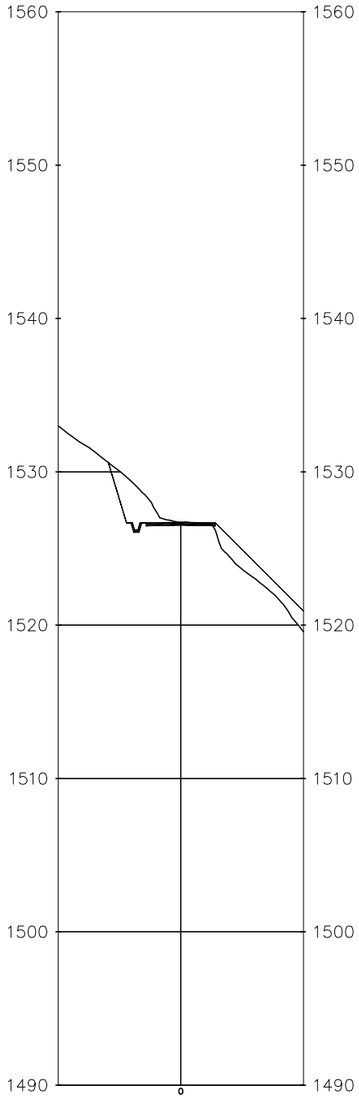
GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION

4+240.00



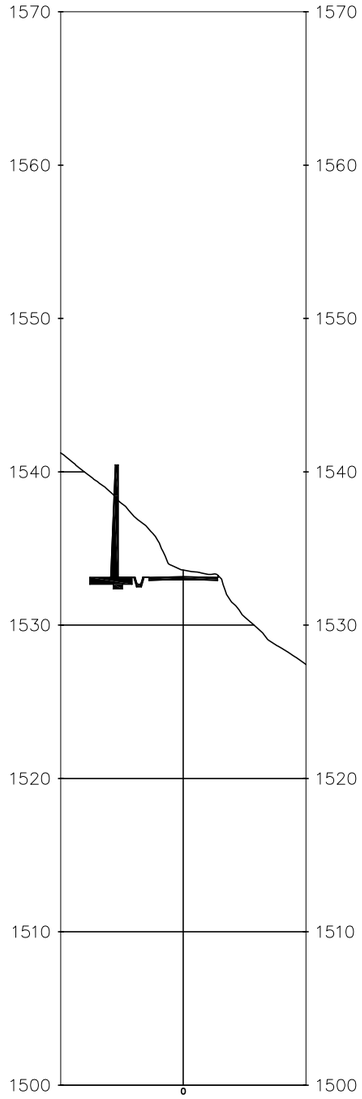
4+260.00



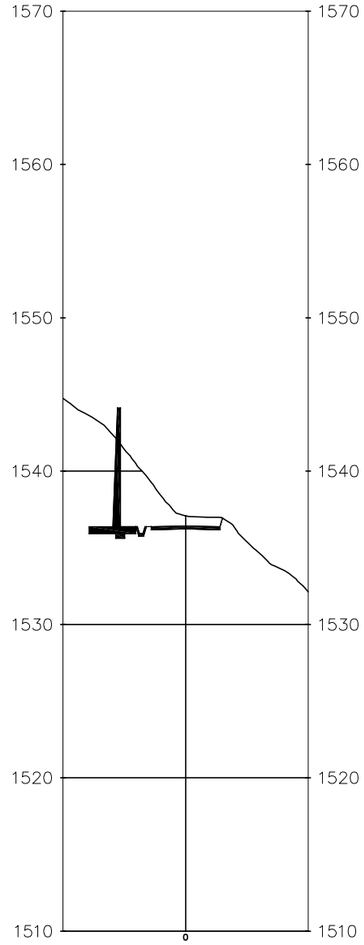
4+280.00



4+300.00



4+320.00

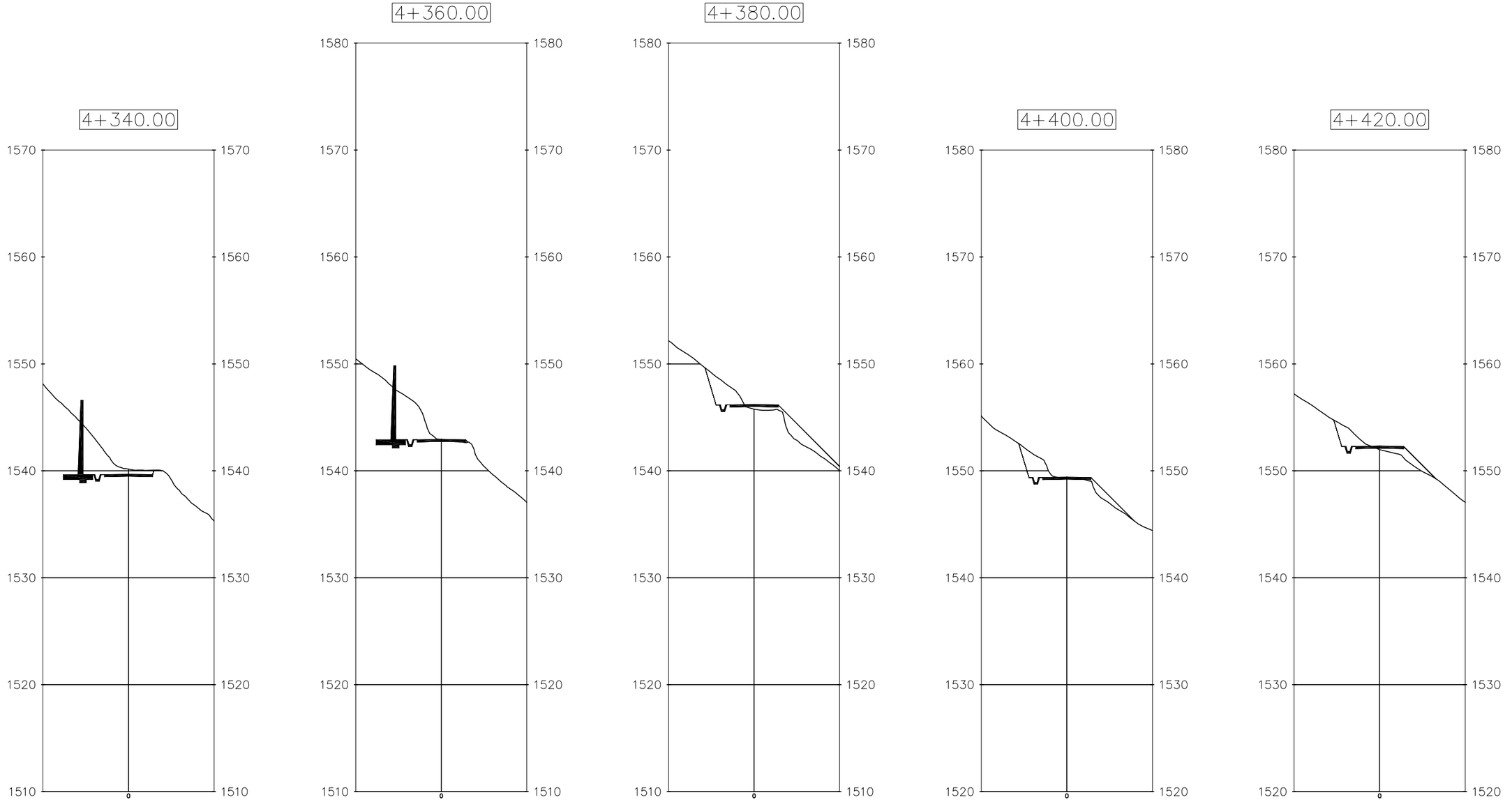


CLIENT	WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT	NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.	PROJECT	DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)
			HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	CHAINAGE WISE X-SECTIONS	SCALE
				DATE: DECEMBER, 2025	DRAWING No.: 4520/102/TD/XS163
					REV.: 0

REV.	DATE	DESCRIPTION	APPROVED		
04				DRAWN	GOHAR
03				SUBMITTED	
02				RECOMMENDED	
01				CHD./VER.	
				APPROVED	

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01	DRAWN: GOHAR; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED	PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**	CHAINAGE WISE X-SECTIONS; DATE: DECEMBER, 2025; DRAWING No.: 4520/102/TD/XS164; SCALE; REV.: 0

REV.	DATE	DESCRIPTION	APPROVED

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

TENDER DRAWING
NOT TO BE USED FOR CONSTRUCTION



CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04		DRAWN	GOHAR
		03		SUBMITTED	
		02		RECOMMENDED	
		01		CHD./VER.	
		REV. / DATE / DESCRIPTION	APPROVED	APPROVED	

PROJECT: **DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)**

CHAINAGE WISE X-SECTIONS

DATE: DECEMBER, 2025

DRAWING No.: 4520/102/TD/XS165

SCALE

REV.: 0

GOHAR F:\Thooti to Khowar\Design Thooti to Khowar_C3D_09122025 - with breast wall assembly.dwg,

Volume Report
THOOTI TO KHOWAR

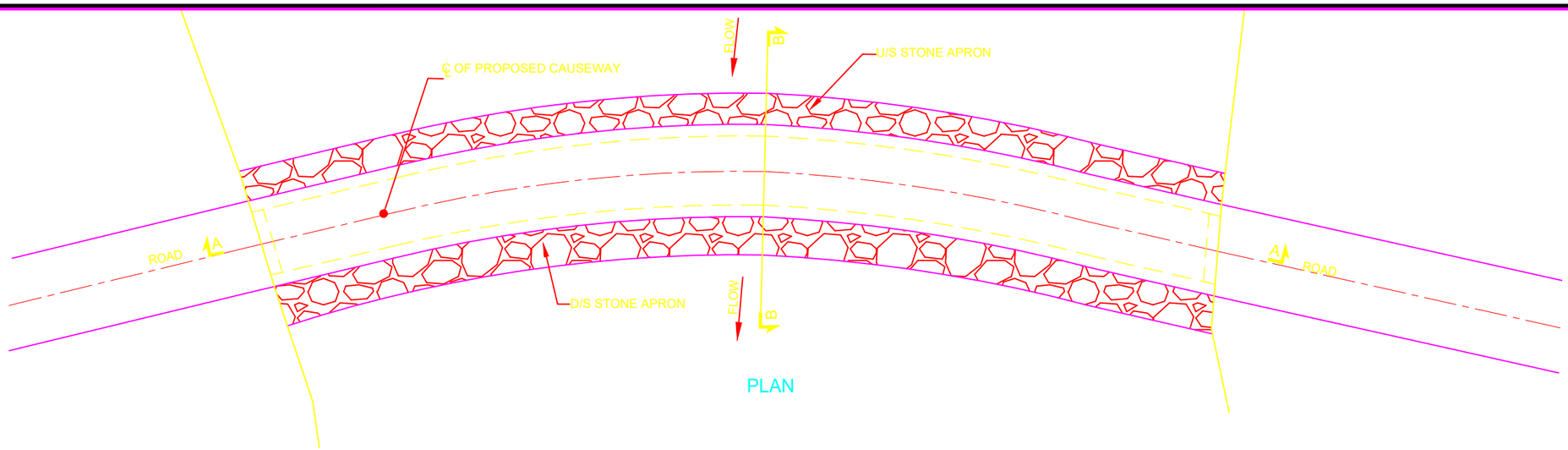
Station	Cut Area (Sq.M.)	Cut Volume (Cu.M.)	Reusable Volume (Cu.M.)	Fill Area (Sq.M.)	Fill Volume (Cu.M.)	Cum. Cut Vol. (Cu.M.)	Cum. Reusable Vol. (Cu.M.)	Cum. Fill Vol. (Cu.M.)	Cum. Net Vol. (Cu.M.)
0+000.00	0.24	0	0	0.09	0	0	0	0	0
0+020.00	0.11	3.36	3.36	0.09	1.8	3.36	1.8	1.8	1.56
0+040.00	1.49	13.31	13.31	0	0.61	16.67	2.41	2.41	14.27
0+060.00	2.64	40.76	40.76	0	0	57.43	2.41	2.41	55.03
0+080.00	1.63	42.32	42.32	0	0	99.75	2.41	2.41	97.36
0+100.00	0.31	17.7	17.7	0.27	1.83	117.45	4.23	4.24	113.23
0+120.00	0.12	4.11	4.11	0.58	8.37	121.56	12.61	12.61	108.96
0+140.00	0.01	1.16	1.16	1.37	18.97	122.72	31.58	31.58	91.15
0+160.00	0.08	0.86	0.86	0.46	17.46	123.58	49.04	49.04	74.55
0+180.00	0.22	2.85	2.85	0.21	6.55	126.43	55.59	55.59	70.85
0+200.00	3.29	28.98	28.98	0	1.42	155.41	57.01	57.01	98.41
0+220.00	10.78	133.45	133.45	0	0	288.86	57.01	57.01	231.87
0+240.00	1.1	102.14	102.14	0	0	391	57.01	57.01	334
0+260.00	0	7.34	7.34	5.16	34.37	398.34	91.38	91.38	306.97
0+280.00	12.04	80.26	80.26	0.49	48.2	478.6	139.58	139.58	339.03
0+300.00	11.74	237.82	237.82	0.49	9.76	716.42	149.34	149.34	567.08
0+320.00	4.96	162.26	162.26	0	3.25	878.68	152.6	152.59	726.09
0+340.00	1.12	56.32	56.32	0.03	0.23	935	152.83	152.82	782.17
0+360.00	0	7.92	7.92	3.36	24.89	942.92	177.72	177.71	765.2
0+380.00	7.73	52.62	52.62	0	22.4	995.54	200.12	200.11	795.42
0+400.00	12.4	199.44	199.44	0	0	1194.98	200.12	200.11	994.86
0+420.00	3.55	150.48	150.48	0.25	1.64	1345.46	201.76	201.75	1,143.69
0+440.00	5.6	90.68	90.68	2.26	21.72	1436.14	223.48	223.47	1,212.64
0+460.00	4.51	100.84	100.84	0.58	26.6	1536.98	250.08	250.07	1,286.89
0+480.00	5.54	100.32	100.32	0	3.86	1637.3	253.94	253.93	1,383.34
0+500.00	4.97	105.12	105.12	0	0	1742.42	253.94	253.93	1,488.46
0+520.00	0.42	45.57	45.57	2.05	13.69	1787.99	267.63	267.62	1,520.35
0+540.00	0.7	11.08	11.08	0	13.69	1799.07	281.32	281.31	1,517.74
0+560.00	18.12	149.2	149.2	0.52	3.45	1948.27	284.77	284.76	1,663.49
0+580.00	11.91	298.14	298.14	0.49	10.11	2246.41	294.88	294.87	1,951.52
0+600.00	0	79.43	79.43	4.67	44.54	2325.84	339.42	339.41	1,986.41
0+620.00	0.03	0.21	0.21	1.8	62.5	2326.05	401.92	401.91	1,924.12
0+640.00	12.64	88.71	88.71	0.53	22.04	2414.76	423.96	423.95	1,990.79
0+660.00	6.8	191.4	191.4	0.2	7.03	2606.16	431	430.98	2,175.16
0+680.00	6.5	133.03	133.03	0.03	2.04	2739.19	433.03	433.02	2,306.15
0+700.00	5.6	120.96	120.96	0.46	4	2860.15	437.03	437.02	2,423.11
0+720.00	0.61	53.77	53.77	1.18	15.86	2913.92	452.89	452.88	2,461.02
0+740.00	0.42	10.2	10.2	0.38	14.94	2924.12	467.84	467.82	2,456.28
0+760.00	0.75	11.46	11.46	0.26	6.41	2935.58	474.24	474.23	2,461.33
0+780.00	0.29	9.95	9.95	0.38	6.39	2945.53	480.63	480.62	2,464.89
0+800.00	5.73	48.66	48.66	2.64	26.85	2994.19	507.48	507.47	2,486.70
0+820.00	3.63	92.84	92.84	3.68	62.91	3087.03	570.39	570.38	2,516.64
0+840.00	6.88	103.35	103.35	0.79	41.18	3190.38	611.57	611.56	2,578.81
0+860.00	14.05	205.04	205.04	0.51	12.89	3395.42	624.46	624.45	2,770.96
0+880.00	20.22	340.8	340.8	0.51	10.19	3736.22	634.65	634.64	3,101.57
0+900.00	12.46	323.68	323.68	0.52	10.31	4059.9	644.96	644.95	3,414.94
0+920.00	2.07	130.76	130.76	0	3.46	4190.66	648.41	648.41	3,542.25
0+940.00	11.14	120.12	120.12	0.51	3.4	4310.78	651.82	651.81	3,658.97
0+960.00	17.85	287.32	287.32	0.51	10.18	4598.1	662	661.99	3,936.11
0+980.00	10.2	276.95	276.95	0.75	12.5	4875.05	674.5	674.49	4,200.55
1+000.00	0	67.99	67.99	1.44	21.57	4943.04	696.07	696.06	4,246.98
1+020.00	6.36	42.39	42.39	0.1	12.83	4985.43	708.89	708.89	4,276.54
1+040.00	6.58	129.34	129.34	0	0.67	5114.77	709.56	709.56	4,405.21
1+060.00	8.14	146.87	146.87	0	0	5261.64	709.56	709.56	4,552.08
1+080.00	0.74	75.5	75.5	0.83	5.5	5337.14	715.06	715.06	4,622.08

1+100.00	20.69	168.89	168.89	0.56	13.81	5506.03	728.87	728.87	4,777.16
1+120.00	12.55	329.04	329.04	0.94	14.93	5835.07	743.8	743.8	5,091.27
1+140.00	7.98	203.54	203.54	0	6.3	6038.61	750.1	750.1	5,288.51
1+160.00	0	53.18	53.18	2.99	19.96	6091.79	770.06	770.06	5,321.73
1+180.00	18.03	120.19	120.19	2.5	54.91	6211.98	824.98	824.97	5,387.01
1+200.00	7.18	243.91	243.91	2.29	47.93	6455.89	872.91	872.9	5,582.98
1+220.00	6.5	136.79	136.79	0.18	20.69	6592.68	893.6	893.59	5,699.08
1+240.00	13.69	197.55	197.55	0.52	6.68	6790.23	900.28	900.27	5,889.95
1+260.00	12.48	261.67	261.67	1.49	19.28	7051.9	919.56	919.55	6,132.33
1+280.00	12.65	251.37	251.37	3.34	47.08	7303.27	966.64	966.63	6,336.62
1+300.00	0.32	99.97	99.97	1.24	44.17	7403.24	1,010.82	1010.8	6,392.42
1+320.00	6.71	56.68	56.68	0.26	13.78	7459.92	1,024.59	1024.58	6,435.32
1+340.00	11.85	183.12	183.12	0.51	7.53	7643.04	1,032.12	1032.11	6,610.91
1+360.00	7.11	187.53	187.53	0.12	5.81	7830.57	1,037.93	1037.92	6,792.63
1+380.00	5.66	127.37	127.37	0.01	1.11	7957.94	1,039.04	1039.03	6,918.90
1+400.00	5.45	111.09	111.09	0	0.08	8069.03	1,039.11	1039.11	7,029.91
1+420.00	0.06	40.66	40.66	2.64	17.62	8109.69	1,056.73	1056.73	7,052.95
1+440.00	19.31	136.46	136.46	1.49	40.8	8246.15	1,097.53	1097.53	7,148.61
1+460.00	6	240.47	240.47	0.14	13.9	8486.62	1,111.43	1111.43	7,375.18
1+480.00	6.05	120.48	120.48	0	0.92	8607.1	1,112.35	1112.35	7,494.74
1+500.00	7.43	134.52	134.52	0.06	0.4	8741.62	1,112.75	1112.75	7,628.86
1+520.00	0	49.5	49.5	0.85	7.56	8791.12	1,120.32	1120.31	7,670.80
1+540.00	23.99	159.95	159.95	1.54	23.54	8951.07	1,143.86	1143.85	7,807.21
1+560.00	4.6	260.65	260.65	1.24	27.75	9211.72	1,171.61	1171.6	8,040.11
1+580.00	4.85	94.52	94.52	2.02	32.32	9306.24	1,203.93	1203.92	8,102.31
1+600.00	7.37	121.37	121.37	0.1	17.21	9427.61	1,221.13	1221.13	8,206.48
1+620.00	8.32	156.81	156.81	0.74	7.43	9584.42	1,228.56	1228.56	8,355.86
1+640.00	0.71	76.34	76.34	2.97	34.54	9660.76	1,263.10	1263.1	8,397.66
1+660.00	7.39	69.24	69.24	1.51	43.96	9730	1,307.07	1307.06	8,422.93
1+680.00	0.03	52.52	52.52	0.88	23.57	9782.52	1,330.64	1330.63	8,451.88
1+700.00	5.08	36.57	36.57	0.88	17.51	9819.09	1,348.15	1348.14	8,470.93
1+720.00	6.68	117.27	117.27	0.91	17.83	9936.36	1,365.98	1365.97	8,570.37
1+740.00	0.39	57.84	57.84	2.06	28.86	9994.2	1,394.85	1394.83	8,599.34
1+760.00	5.43	48.45	48.45	0.07	16.82	10042.65	1,411.67	1411.65	8,630.97
1+780.00	9.76	149.85	149.85	0.51	5.22	10192.5	1,416.89	1416.87	8,775.60
1+800.00	11.31	210.54	210.54	0.5	10.17	10403.04	1,427.05	1427.04	8,975.97
1+820.00	7.49	186.76	186.76	0	3.36	10589.8	1,430.42	1430.4	9,159.36
1+840.00	2.32	93.26	93.26	0	0	10683.06	1,430.42	1430.4	9,252.62
1+860.00	0.83	30.27	30.27	0	0	10713.33	1,430.42	1430.4	9,282.90
1+880.00	12.67	111.59	111.59	0.56	3.71	10824.92	1,434.13	1434.11	9,390.77
1+900.00	14.73	273.68	273.68	2.39	27.32	11098.6	1,461.45	1461.43	9,637.13
1+920.00	7.09	213.57	213.57	0.54	27.12	11312.17	1,488.57	1488.55	9,823.59
1+940.00	0.47	62.5	62.5	0.81	13.42	11374.67	1,501.99	1501.97	9,872.66
1+960.00	0.8	12.53	12.53	1.49	22.68	11387.2	1,524.67	1524.65	9,862.52
1+980.00	8.48	79.31	79.31	0	9.96	11466.51	1,534.63	1534.61	9,931.87
2+000.00	14.56	227.7	227.7	0.51	3.39	11694.21	1,538.02	1538	10,156.18
2+020.00	1.84	143.76	143.76	0	3.39	11837.97	1,541.41	1541.39	10,296.55
2+040.00	7.82	89.66	89.66	0	0	11927.63	1,541.41	1541.39	10,386.21
2+060.00	10.58	183.28	183.28	0.78	5.2	12110.91	1,546.61	1546.59	10,564.29
2+080.00	0.33	85.18	85.18	2.58	31.87	12196.09	1,578.48	1578.46	10,617.60
2+100.00	0.18	5.08	5.08	3.19	57.65	12201.17	1,636.13	1636.11	10,565.03
2+120.00	15.96	119.05	119.05	0.52	33.38	12320.22	1,669.51	1669.49	10,650.70
2+140.00	24.45	401.09	401.09	0.84	13.51	12721.31	1,683.02	1683	11,038.28
2+160.00	20.05	444.27	444.27	0.52	13.48	13165.58	1,696.50	1696.48	11,469.07
2+180.00	10.01	294.82	294.82	2.17	25.06	13460.4	1,721.56	1721.54	11,738.83
2+200.00	10.86	208.67	208.67	0.6	26.18	13669.07	1,747.74	1747.72	11,921.32
2+220.00	5.02	155.13	155.13	0.12	6.62	13824.2	1,754.35	1754.34	12,069.84
2+240.00	5.92	109.28	109.28	0.8	8.17	13933.48	1,762.53	1762.51	12,170.94
2+260.00	0	39.47	39.47	2.22	29	13972.95	1,791.53	1791.51	12,181.42
2+280.00	14.78	98.57	98.57	2.21	44.26	14071.52	1,835.79	1835.77	12,235.72
2+300.00	0.55	121.32	121.32	2.71	49.09	14192.84	1,884.88	1884.86	12,307.95
2+320.00	13.01	108.3	108.3	0.73	32.34	14301.14	1,917.21	1917.2	12,383.91

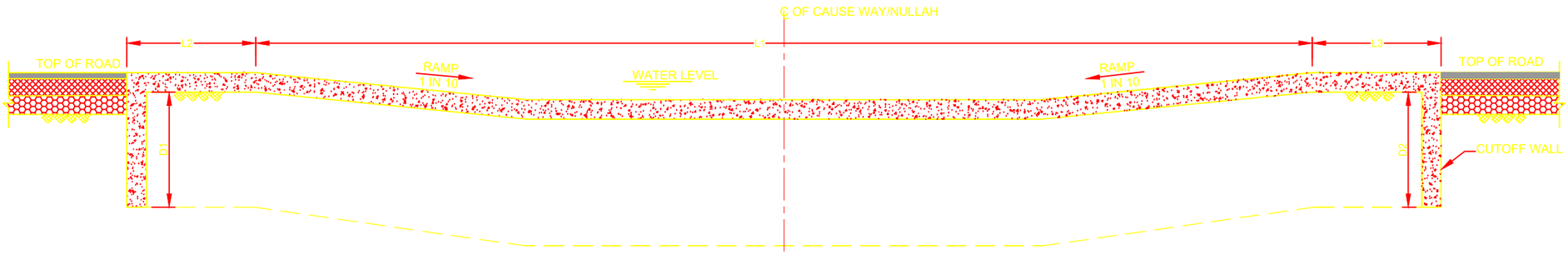
2+340.00	8.91	217.87	217.87	0.09	7.16	14519.01	1,924.37	1924.36	12,594.62
2+360.00	16.33	248.65	248.65	0.57	5.89	14767.66	1,930.27	1930.25	12,837.38
2+380.00	7.24	229.58	229.58	0.09	5.9	14997.24	1,936.17	1936.15	13,061.06
2+400.00	22.98	287.39	287.39	0.49	5.26	15284.63	1,941.43	1941.41	13,343.19
2+420.00	12.74	352.18	352.18	0.69	11.79	15636.81	1,953.22	1953.2	13,683.57
2+440.00	5.49	177.23	177.23	0.37	10.53	15814.04	1,963.75	1963.73	13,850.27
2+460.00	8.85	142.02	142.02	1.57	18.09	15956.06	1,981.85	1981.82	13,974.19
2+480.00	10.98	197.87	197.87	3.46	49.07	16153.93	2,030.91	2030.89	14,123.00
2+500.00	0.36	88.73	88.73	3.59	70.44	16242.66	2,101.36	2101.33	14,141.28
2+520.00	17.73	137.36	137.36	0.48	35.91	16380.02	2,137.27	2137.24	14,242.73
2+540.00	1.37	160.19	160.19	0	3.22	16540.21	2,140.49	2140.46	14,399.71
2+560.00	14.09	93.93	93.93	1.43	9.55	16634.14	23.74	2150.01	70.2
2+580.00	13.02	271.04	271.04	1.8	32.23	16905.18	55.97	2182.24	309.01
2+600.00	10.67	236.52	236.52	1.55	33.44	17141.7	89.42	2215.68	512.09
2+620.00	0.94	98.42	98.42	0	10.33	17240.12	99.75	2226.01	600.17
2+640.00	16.2	140.19	140.19	0.51	3.43	17380.31	103.18	2229.44	736.93
2+660.00	7.98	237.01	237.01	1.42	18.57	17617.32	121.75	2248.01	955.37
2+680.00	0.44	68.69	68.69	2.49	38.55	17686.01	160.3	2286.56	985.51
2+700.00	0.24	6.7	6.7	0.08	20.01	17692.71	180.32	2306.57	972.2
2+720.00	6.53	53.43	53.43	0	0.51	17746.14	180.83	2307.08	1,025.11
2+740.00	1.68	76.86	76.86	0	0	17823	180.83	2307.08	1,101.98
2+760.00	15.88	151.54	151.54	0.52	3.47	17974.54	184.3	2310.55	1,250.05
2+780.00	18.28	341.25	341.25	0.49	10.14	18315.79	194.44	2320.69	1,581.16
2+800.00	9.79	276.23	276.23	0	3.29	18592.02	197.73	2323.98	1,854.10
2+820.00	0.05	70.21	70.21	2.87	19.12	18662.23	216.84	2343.1	1,905.20
2+840.00	8.73	62.94	62.94	0	19.12	18725.17	235.96	2362.22	1,949.02
2+860.00	0.92	83.26	83.26	1.42	9.45	18808.43	245.41	2371.67	2,022.84
2+880.00	5.37	56.72	56.72	0.99	23.94	18865.15	269.35	2395.61	2,055.62
2+900.00	4.79	101.51	101.51	0	6.8	18966.66	276.15	2402.41	2,150.33
2+920.00	6.12	108.84	108.84	0.23	1.61	19075.5	277.76	2404.02	2,257.56
2+940.00	5.54	116.58	116.58	0.2	4.28	19192.08	282.04	2408.3	2,369.86
2+960.00	0.05	40.69	40.69	0.84	9.68	19232.77	291.72	2417.98	2,400.87
2+980.00	18.61	130.64	130.64	0.55	13.8	19363.41	305.52	2431.78	2,517.71
3+000.00	23.02	415.46	415.46	0.54	10.89	19778.87	316.41	2442.67	2,922.28
3+020.00	26.11	491	491	0.6	11.37	20269.87	327.78	2454.04	3,401.92
3+040.00	10.16	350.37	350.37	0	4	20620.24	331.77	2458.04	3,748.29
3+060.00	29.16	376.8	376.8	0.54	3.63	20997.04	335.4	2461.67	4,121.46
3+080.00	23.23	522.73	522.73	0.51	10.58	21519.77	345.98	2472.25	4,633.60
3+100.00	14.55	374.45	374.45	0.52	10.35	21894.22	356.33	2482.6	4,997.71
3+120.00	13.08	276.2	276.2	1.53	19.66	22170.42	375.99	2502.26	5,254.25
3+140.00	0	87.2	87.2	7.95	86.5	22257.62	462.5	2588.76	5,254.94
3+160.00	13.58	90.55	90.55	8.21	161.61	22348.17	624.11	2750.37	5,183.88
3+180.00	13.02	265.98	265.98	3.32	111.68	22614.15	735.78	2862.05	5,338.18
3+200.00	17.83	307.19	307.19	0.93	40.08	22921.34	775.86	2902.13	5,605.30
3+220.00	15.65	334.57	334.57	0.52	14.33	23255.91	790.2	2916.46	5,925.54
3+240.00	6.44	214.19	214.19	1.57	19.96	23470.1	810.16	2936.42	6,119.77
3+260.00	0.37	55.62	55.62	4.32	56.6	23525.72	866.75	2993.02	6,118.80
3+280.00	15.26	119.96	119.96	2.62	68.71	23645.68	935.46	3061.73	6,170.05
3+300.00	5.79	203.01	203.01	7.58	97.74	23848.69	1,033.19	3159.47	6,275.33
3+320.00	19.33	238.05	238.05	0.62	69.07	24086.74	1,102.26	3228.54	6,444.31
3+340.00	23.87	431.22	431.22	1.41	19.77	24517.96	1,122.04	3248.31	6,855.75
3+360.00	31.41	551.07	551.07	1.16	25.73	25069.03	1,147.77	3274.04	7,381.09
3+380.00	32.32	637.33	637.33	3.76	46.76	25706.36	1,194.53	3320.8	7,971.66
3+400.00	14.77	459.67	459.67	2.29	59.87	26166.03	1,254.40	3380.67	8,371.46
3+420.00	8.05	224.91	224.91	0.01	16.59	26390.94	1,270.99	3397.26	8,579.78
3+440.00	19.79	269.8	269.8	0.52	4.15	26660.74	1,275.15	3401.41	8,845.43
3+460.00	6.62	252.38	252.38	0.09	5.48	26913.12	1,280.62	3406.89	9,092.33
3+480.00	11.59	179.84	179.84	1.62	13.88	27092.96	1,294.50	3420.77	9,258.30
3+500.00	13.24	248.13	248.13	0.57	21.02	27341.09	1,315.52	3441.79	9,485.41
3+520.00	15.72	289.21	289.21	0.5	10.69	27630.3	1,326.21	3452.48	9,763.93
3+540.00	9.76	252.47	252.47	1.17	16.16	27882.77	1,342.38	3468.64	10,000.24
3+560.00	7.84	175.72	175.72	0	7.77	28058.49	1,350.15	3476.41	10,168.19

3+580.00	4.65	123.54	123.54	1.92	12.79	28182.03	1,362.93	3489.2	10,278.95
3+600.00	7.37	119.13	119.13	0.05	15.14	28301.16	1,378.07	3504.34	10,382.94
3+620.00	10.37	176.52	176.52	0.81	7.03	28477.68	1,385.10	3511.37	10,552.43
3+640.00	5.13	151.95	151.95	1.81	25.56	28629.63	1,410.66	3536.93	10,678.82
3+660.00	4.25	93.69	93.69	3.05	48.08	28723.32	1,458.74	3585.01	10,724.42
3+680.00	5.78	99.93	99.93	0.5	31.81	28823.25	1,490.56	3616.82	10,792.54
3+700.00	5.62	114	114	0.1	5.45	28937.25	1,496.00	3622.27	10,901.09
3+720.00	10.48	158.47	158.47	0.56	6	29095.72	1,502.00	3628.27	11,053.57
3+740.00	7.51	179.02	179.02	0	3.76	29274.74	1,505.76	3632.03	11,228.83
3+760.00	5.09	125.18	125.18	0.47	3.13	29399.92	1,508.88	3635.16	11,350.88
3+780.00	5.33	104.14	104.14	0.53	10	29504.06	1,518.88	3645.16	11,445.02
3+800.00	5.57	108.93	108.93	7.72	68.53	29612.99	1,587.42	3713.69	11,485.42
3+820.00	8.33	138.06	138.06	0	51.47	29751.05	1,638.89	3765.16	11,572.00
3+840.00	13.91	220.03	220.03	0.69	4.63	29971.08	1,643.52	3769.79	11,787.41
3+860.00	6.54	199.92	199.92	0.2	8.43	30171	1,651.95	3778.22	11,978.89
3+880.00	0	43.61	43.61	6.77	54.21	30214.61	1,706.16	3832.43	11,968.30
3+900.00	11.79	78.6	78.6	1.8	80.44	30293.21	1,786.60	3912.87	11,966.46
3+920.00	4.82	161	161	6.98	82.18	30454.21	1,868.77	3995.05	12,045.29
3+940.00	15.06	189.34	189.34	1.41	76.91	30643.55	1,945.68	4071.96	12,157.72
3+960.00	7.12	216.87	216.87	0.71	20.81	30860.42	1,966.49	4092.77	12,353.79
3+980.00	7.12	142.37	142.37	0	4.71	31002.79	1,971.20	4097.48	12,491.45
4+000.00	0.31	59.4	59.4	5.86	39.1	31062.19	2,010.30	4136.58	12,511.75
4+020.00	0.71	9.89	9.89	3.1	88.19	31072.08	2,098.49	4224.77	12,433.45
4+040.00	0.41	11.03	11.03	3.03	61.33	31083.11	2,159.83	4286.1	12,383.14
4+060.00	9.48	79.06	79.06	1.52	44.63	31162.17	2,204.46	4330.73	12,417.56
4+080.00	4.94	141.74	141.74	3.35	47.5	31303.91	2,251.96	4378.23	12,511.80
4+100.00	7.43	122.84	122.84	0	22.36	31426.75	2,274.32	4400.59	12,612.29
4+120.00	41.52	443.43	443.43	7.95	52.99	31870.18	2,327.31	4453.58	13,002.72
4+140.00	16.35	559.46	559.46	14.04	216.97	32429.64	2,544.28	4670.55	13,345.21
4+160.00	5.08	203.61	203.61	22.88	365.61	32633.25	2,909.89	5036.16	13,183.21
4+180.00	26.74	289.83	289.83	1.12	193.84	32923.08	3,103.73	5230	13,279.20
4+200.00	10.85	364.18	364.18	1.33	24.48	33287.26	3,128.21	5254.48	13,618.90
4+220.00	3.89	141.58	141.58	5.69	65.13	33428.84	3,193.34	5319.61	13,695.35
4+240.00	4.32	82.06	82.06	3.18	87.49	33510.9	3,280.82	5407.1	13,689.93
4+260.00	6.14	104.1	104.1	9.21	118.62	33615	3,399.44	5525.72	13,675.41
4+280.00	3.62	96.48	96.48	0.82	85.24	33711.48	3,484.68	5610.96	13,686.66
4+300.00	14.79	171.52	171.52	0.52	13.28	33883	3,497.95	5624.24	13,844.91
4+320.00	15.84	306.27	306.27	0.52	10.38	34189.27	3,508.33	5634.62	14,140.79
4+340.00	12.49	282.63	282.63	0.53	10.51	34471.9	3,518.84	5645.13	14,412.91
4+360.00	13	254.9	254.9	0.8	13.2	34726.8	3,532.04	5658.33	14,654.61
4+380.00	5.73	182.46	182.46	7.44	71.23	34909.26	3,603.27	5729.56	14,765.84
4+400.00	4.82	105.39	105.39	2.64	96.82	35014.65	3,700.09	5826.38	14,774.41
4+420.00	3.68	84.74	84.74	3.34	59.75	35099.39	3,759.83	5886.13	14,799.41
4+440.00	0.4	35.35	35.35	3.06	64.01	35134.74	3,823.84	5950.14	14,770.75
4+460.00	3.68	35.32	35.32	3.05	61.12	35170.06	3,884.96	6011.26	14,744.95
4+480.00	5.7	93.08	93.08	0	20.35	35263.14	3,905.31	6031.61	14,817.67
4+500.00	34.41	360.82	360.82	0.57	3.78	35623.96	3,909.09	6035.39	15,174.71
4+520.00	7.03	379.93	379.93	0	3.78	36003.89	3,912.87	6039.17	15,550.86
4+540.00	7.92	149.38	149.38	0	0	36153.27	3,912.87	6039.17	15,700.25
4+560.00	5.92	137.95	137.95	0	0	36291.22	3,912.87	6039.17	15,838.19
4+580.00	0.64	56.68	56.68	0.88	5.89	36347.9	3,918.76	6045.06	15,888.99
4+600.00	0.5	11.38	11.38	1.27	21.37	36359.28	3,940.13	6066.43	15,878.99
4+620.00	27.51	211.6	211.6	0.57	17.89	36570.88	3,958.02	6084.32	16,072.71
4+640.00	15.3	422.15	422.15	0.51	10.77	36993.03	3,968.79	6095.09	16,484.09
4+660.00	0	101.97	101.97	3.48	35.45	37095	4,004.24	6130.54	16,550.61
4+680.00	0.98	6.55	6.55	0.9	40.95	37101.55	4,045.18	6171.49	16,516.22
4+700.00	5.35	57.49	57.49	0.98	18.77	37159.04	4,063.95	6190.26	16,554.95
4+720.00	0.26	45.21	45.21	0.17	10.35	37204.25	4,074.30	6200.61	16,589.81
4+740.00	2.67	25.06	25.06	0	1.12	37229.31	4,075.42	6201.73	16,613.75
4+760.00	1.55	41.67	41.67	0	0	37270.98	4,075.42	6201.73	16,655.42
4+780.00	0.49	19.4	19.4	1.07	7.15	37290.38	4,082.58	6208.88	16,667.67
4+800.00	1.28	17.1	17.1	0.12	10.32	37307.48	4,092.90	6219.2	16,674.45

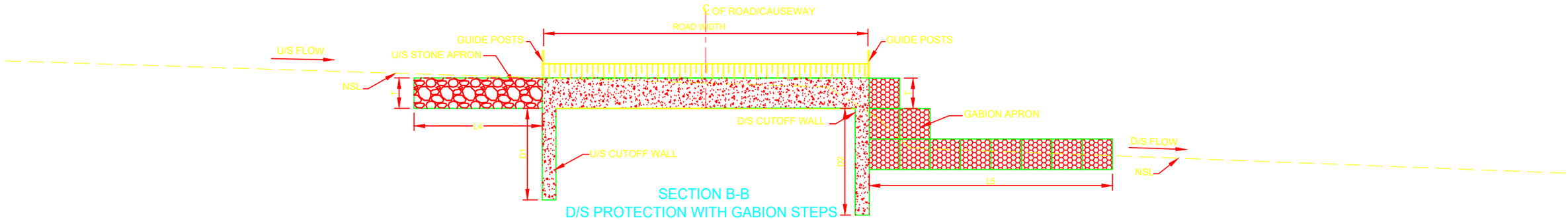
4+820.00	0.92	21.9	21.9	0	0.79	37329.38	4,093.69	6219.99	16,695.56
4+840.00	0.7	16.15	16.15	0.02	0.16	37345.53	4,093.85	6220.15	16,711.55
4+860.00	0.51	12.07	12.07	0.12	1.33	37357.6	4,095.18	6221.48	16,722.29
4+880.00	4.45	43.18	43.18	0	0.8	37400.78	4,095.98	6222.28	16,764.66
4+900.00	7.65	119.61	119.61	0.2	1.35	37520.39	4,097.33	6223.63	16,882.93
4+920.00	0.42	65.77	65.77	0.68	8.32	37586.16	4,105.65	6231.95	16,940.38
4+940.00	6.53	57.41	57.41	2.21	27.43	37643.57	4,133.08	6259.38	16,970.36
4+960.00	13.72	198.11	198.11	0.54	25.71	37841.68	4,158.80	6285.09	17,142.76
4+980.00	1.47	131.19	131.19	6.43	58.94	37972.87	4,217.74	6344.03	17,215.00
5+000.00	0.14	13.69	13.69	1.03	66.91	37986.56	4,284.65	6410.94	17,161.78
5+020.00	0.26	3.9	3.9	0.21	11.39	37990.46	4,296.04	6422.33	17,154.30
5+040.00	0.01	2.22	2.22	0.79	9.39	37992.68	4,305.43	6431.72	17,147.13
5+060.00	1.68	12.28	12.28	0	5.29	38004.96	4,310.71	6437.01	17,154.12
5+080.00	2.19	38.56	38.56	0	0	38043.52	4,310.71	6437.01	17,192.68
5+100.00	0.2	20.29	20.29	0.4	2.7	38063.81	4,313.41	6439.71	17,210.27
5+120.00	0.13	3.2	3.2	0.5	9.04	38067.01	4,322.45	6448.75	17,204.43
5+140.00	1.81	16.1	16.1	0	3.34	38083.11	4,325.79	6452.09	17,217.19
5+160.00	12.52	127.32	127.32	0.12	0.8	38210.43	4,326.59	6452.89	17,343.72
5+180.00	1.36	120	120	1.76	15.61	38330.43	4,342.19	6468.5	17,448.11
5+200.00	15.47	142.73	142.73	0.61	22.68	38473.16	4,364.88	6491.18	17,568.15
5+220.00	1.29	141.53	141.53	0	4.05	38614.69	4,368.93	6495.23	17,705.64
5+240.00	6.61	72.1	72.1	0	0	38686.79	4,368.93	6495.23	17,777.74
5+260.00	0.33	56.13	56.13	0.04	0.25	38742.92	4,369.17	6495.48	17,833.62
5+280.00	2.4	24.14	24.14	0	0.25	38767.06	4,369.42	6495.73	17,857.51
5+300.00	19.18	189.06	189.06	0.53	3.52	38956.12	4,372.94	6499.25	18,043.05



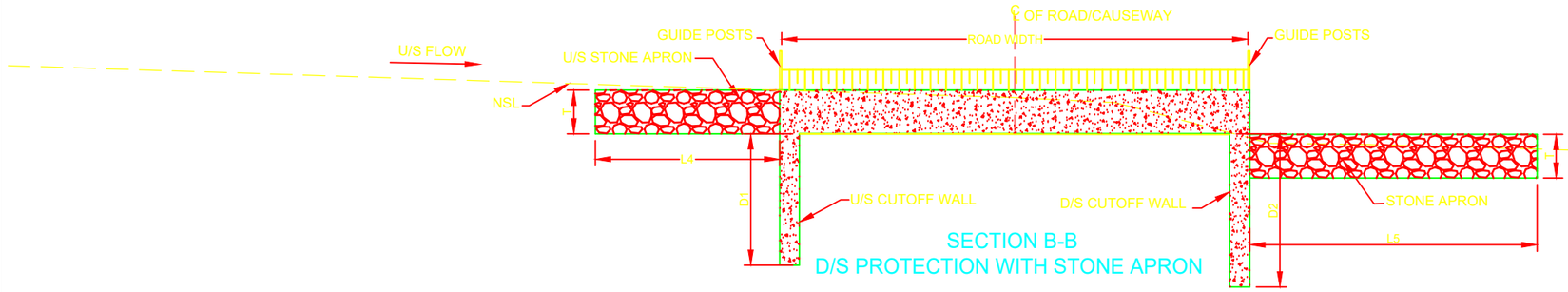
PLAN



SECTION A-A



SECTION B-B
D/S PROTECTION WITH GABION STEPS



SECTION B-B
D/S PROTECTION WITH STONE APRON

NOTES

ALL DIMENSIONS AND LEVELS ARE IN METERS
UNLESS OTHERWISE NOTED.

D/S FLOW

NSL

CLIENT: WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)	CONSULTANT: NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD. HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.	04 / 03 / 02 / 01 / REV. / DATE / DESCRIPTION / APPROVED	DRAWN F.A; SUBMITTED; RECOMMENDED; CHD./VER.; APPROVED	PROJECT: DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)	REHABILITATION & IMPROVEMENT OF THOOTI TO KHOWAR ROAD TYPICAL LAYOUT PLAN & SECTIONS OF CAUSEWAYS; DATE; DRAWING No.; SCALE HOR=1:7 VER =1:7; REV. 0

Table of Dimensions of Proposed Causeways of Thoti to Khuwar Road, LADP Dasu Project

Sr. No.	No. of Structures	Length	Upstream			Downstream			Thickness of Apron
			Cut-off Depth	Concrete Floor	Length of Apron	Cut-off Depth	Concrete Floor	Length of Apron	
		L1	D1	L2	L4	D2	L3	L5	T
		(m)	(m)	(m)	(m)	(m)	(m)	(m)	(m)
1	6	5.00	1.50	1.50	2.50	2.00	2.00	3.00	0.50
2	3	7.00	1.50	1.50	2.50	2.00	2.00	3.00	0.50
3	3	10.00	1.50	1.50	2.50	2.00	2.00	3.00	0.50
4	2	15.00	2.00	2.00	3.00	2.25	2.25	3.75	0.50
5	1	20.00	2.00	2.00	3.50	2.50	2.50	4.00	0.50
6	1	25.00	2.25	2.25	3.75	2.75	2.75	4.25	0.50
7	1	35.00	2.25	2.25	3.50	2.50	2.50	4.25	0.50

CLIENT
WATER AND POWER DEVELOPMENT AUTHORITY (WAPDA)

CONSULTANT
NATIONAL ENGINEERING SERVICES PAKISTAN (PVT.) LTD.
HEAD OFFICE:- NESPAK HOUSE, I-C, BLOCK-N, MODEL TOWN EXTENSION, LAHORE, PAKISTAN.

REV.	DATE	DESCRIPTION	APPROVED
04			
03			
02			
01			

DRAWN	F.A
SUBMITTED	
RECOMMENDED	
CHD./VER.	
APPROVED	

PROJECT
DETAILED DESIGN AND CONSTRUCTION SUPERVISION / IMPLEMENTATIONS OF LOCAL AREA DEVELOPMENT PROGRAM (LADP) PUBLIC HEALTH, LIVELIHOOD DEVELOPMENT AND DOWNSTREAM FISHERIES PLANS; NAMELY LADP IMPLEMENTATION CONSULTANTS (LADP-ICS)

REHABILITATION & IMPROVEMENT OF THOTI TO KHUWAR ROAD
TABLE OF DIMENSIONS OF CAUSEWAYS AND TYPICAL

SCALE

DATE: MAY, 2025

DRAWING No.

REV. 0

GH C:\Users\NESPAK\Downloads\Typical Causway .dwg,