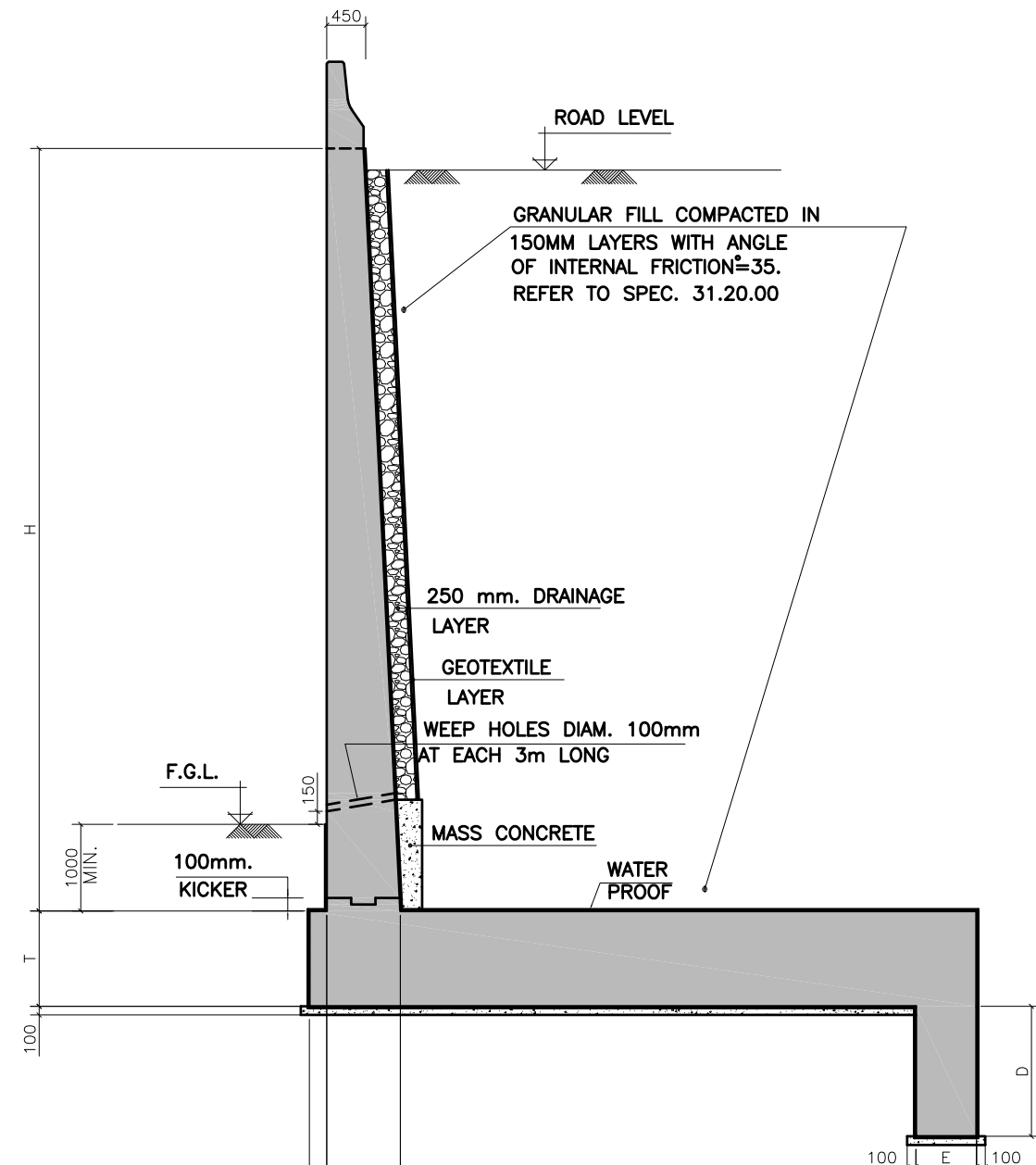
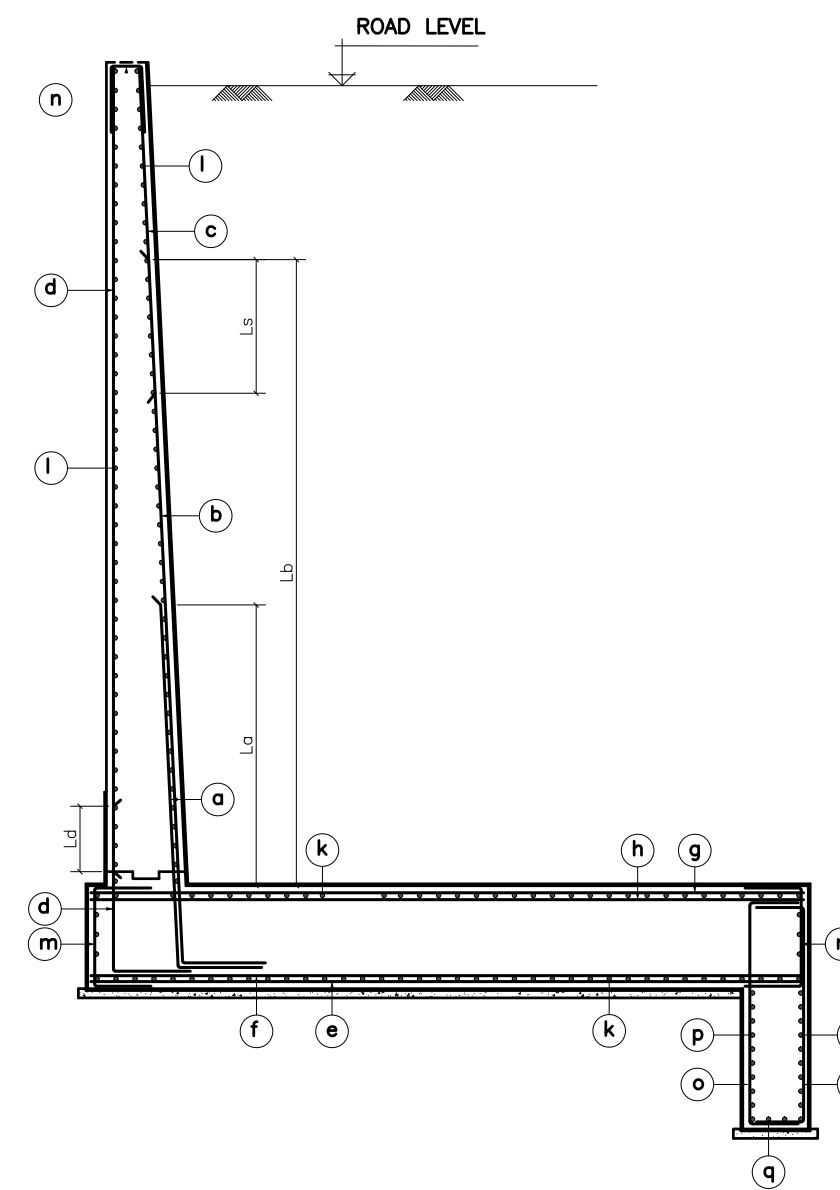


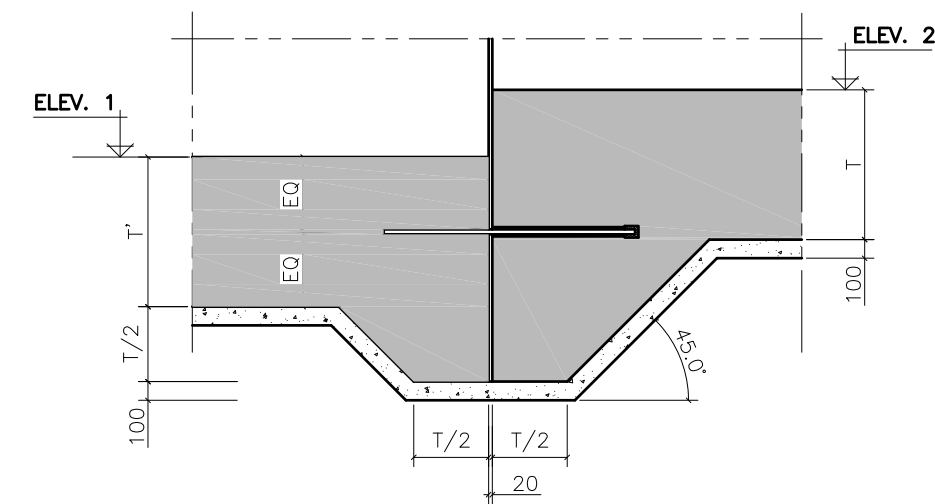
— TYPICAL WALL PANEL ELEVATION
— SCALE N.T.S



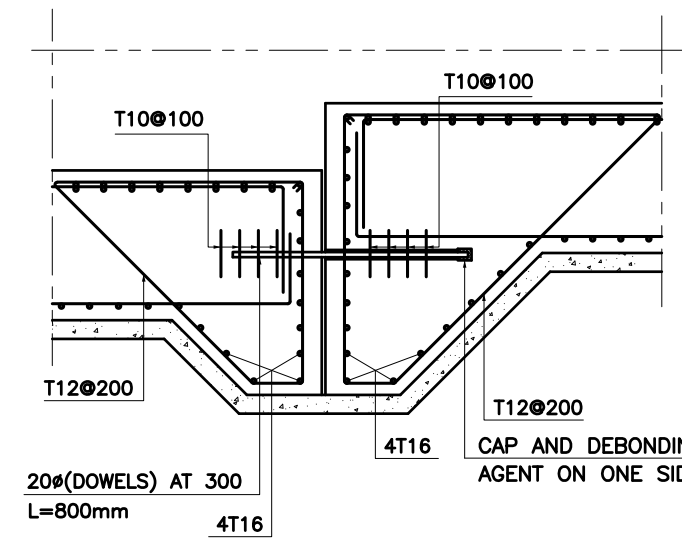
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— SCALE N.T.S



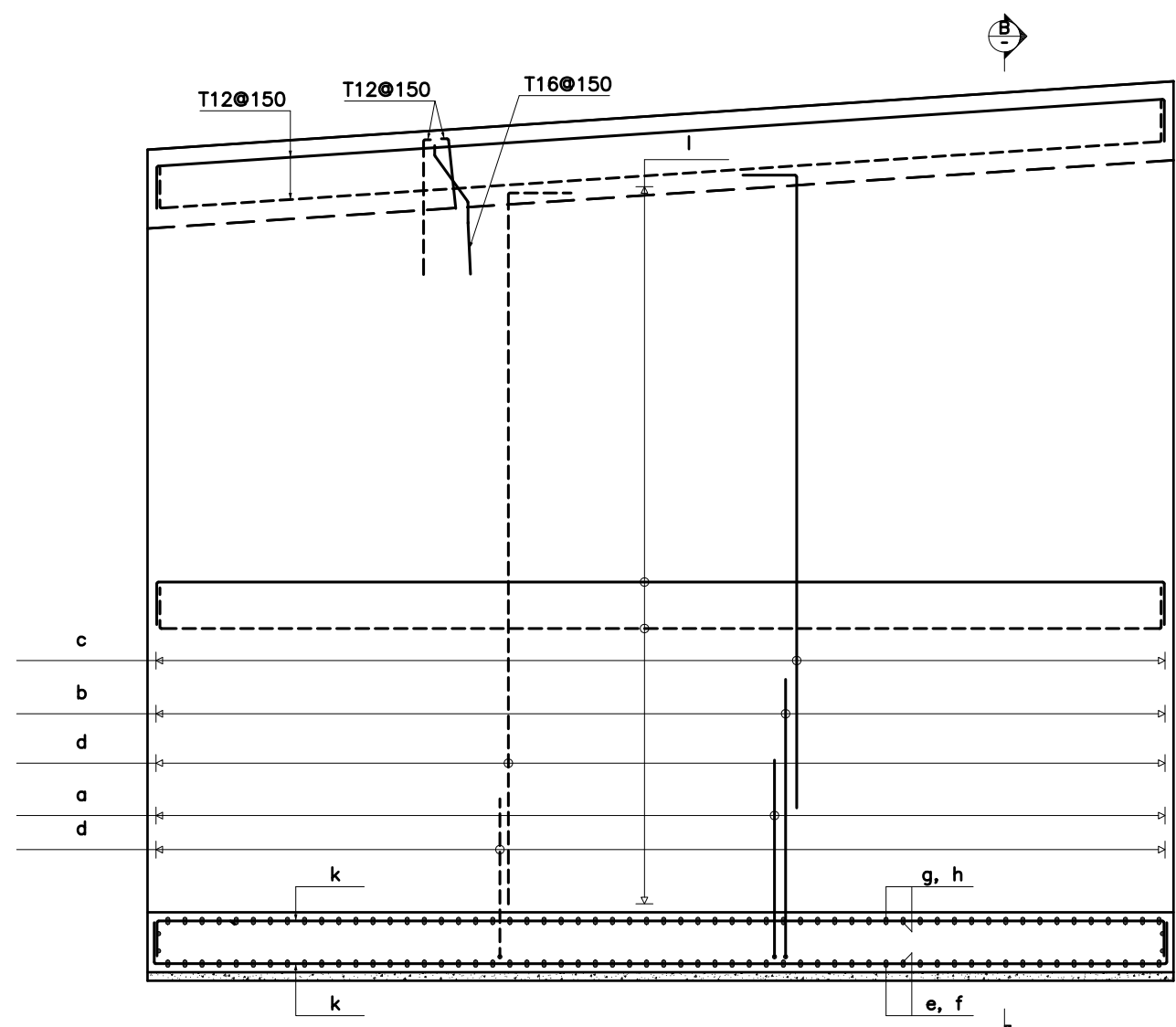
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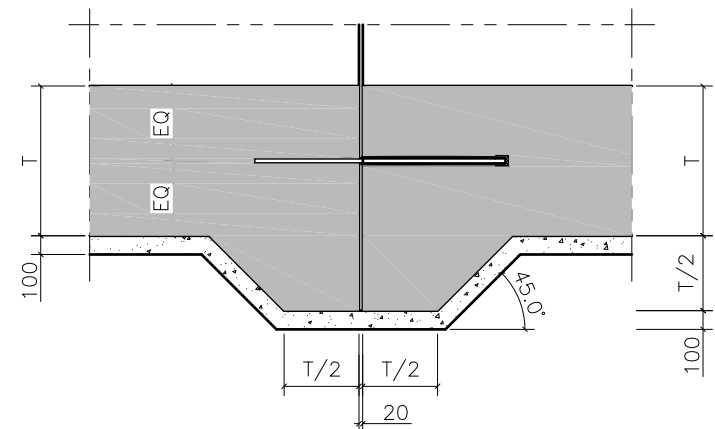
— FOUNDATION EJ DIF. T (DIMENSION)
— SCALE 1:25



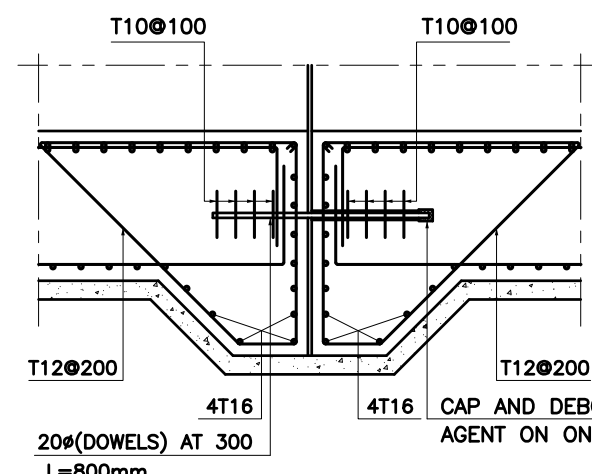
— FOUNDATION EJ DIF. T (REINF.)
— SCALE 1:25



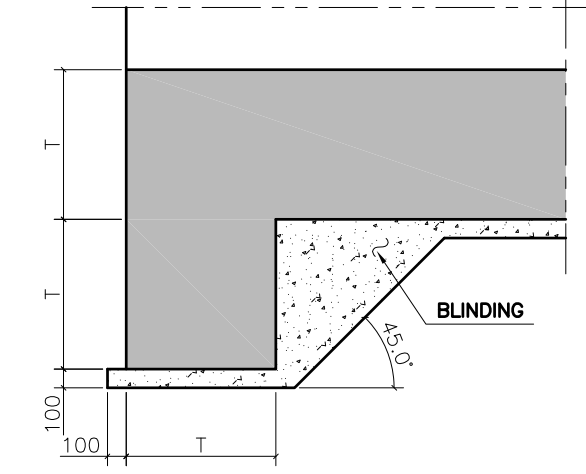
— TYPICAL WALL PANEL ELEVATION SHOWING (REINF.)
— SCALE N.T.S



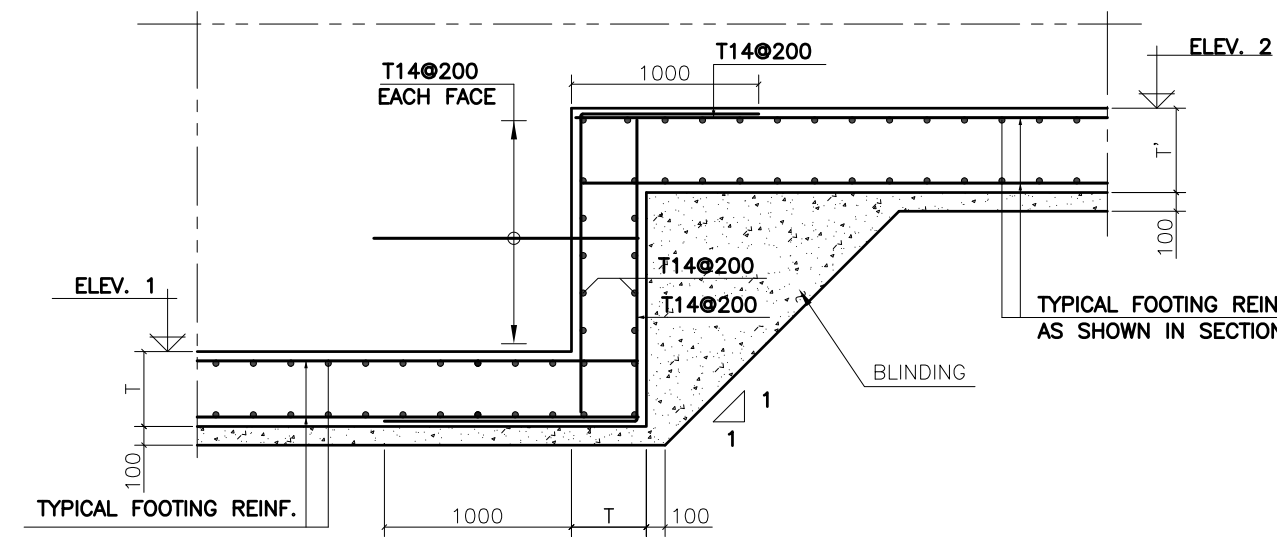
— FOUNDATION EXPANSION JOINT (DIMENSION)
— SCALE 1:25



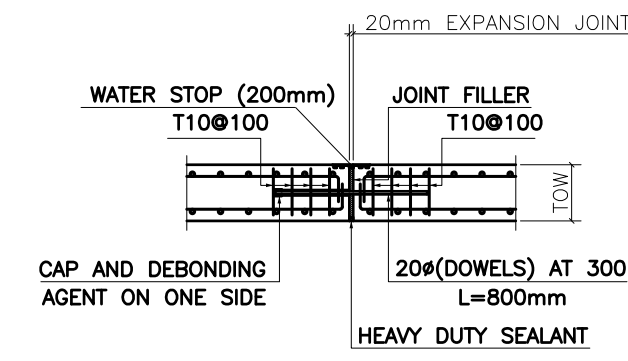
— FOUNDATION EXPANSION JOINT (REINF.)
— SCALE 1:25



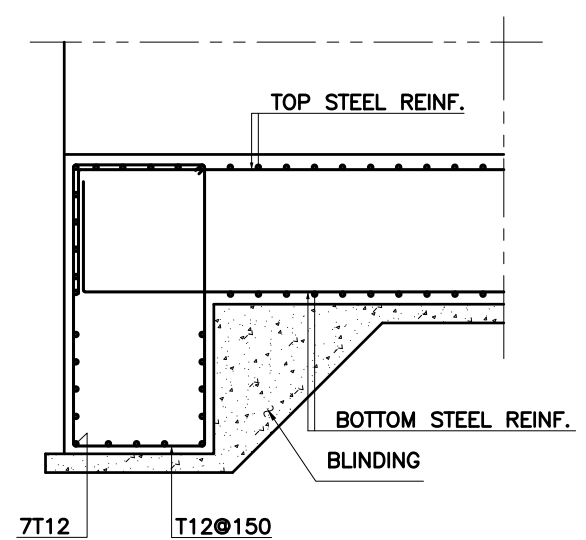
— WALL FOUNDATION ENDING (DIMENSION)
— SCALE N.T.S



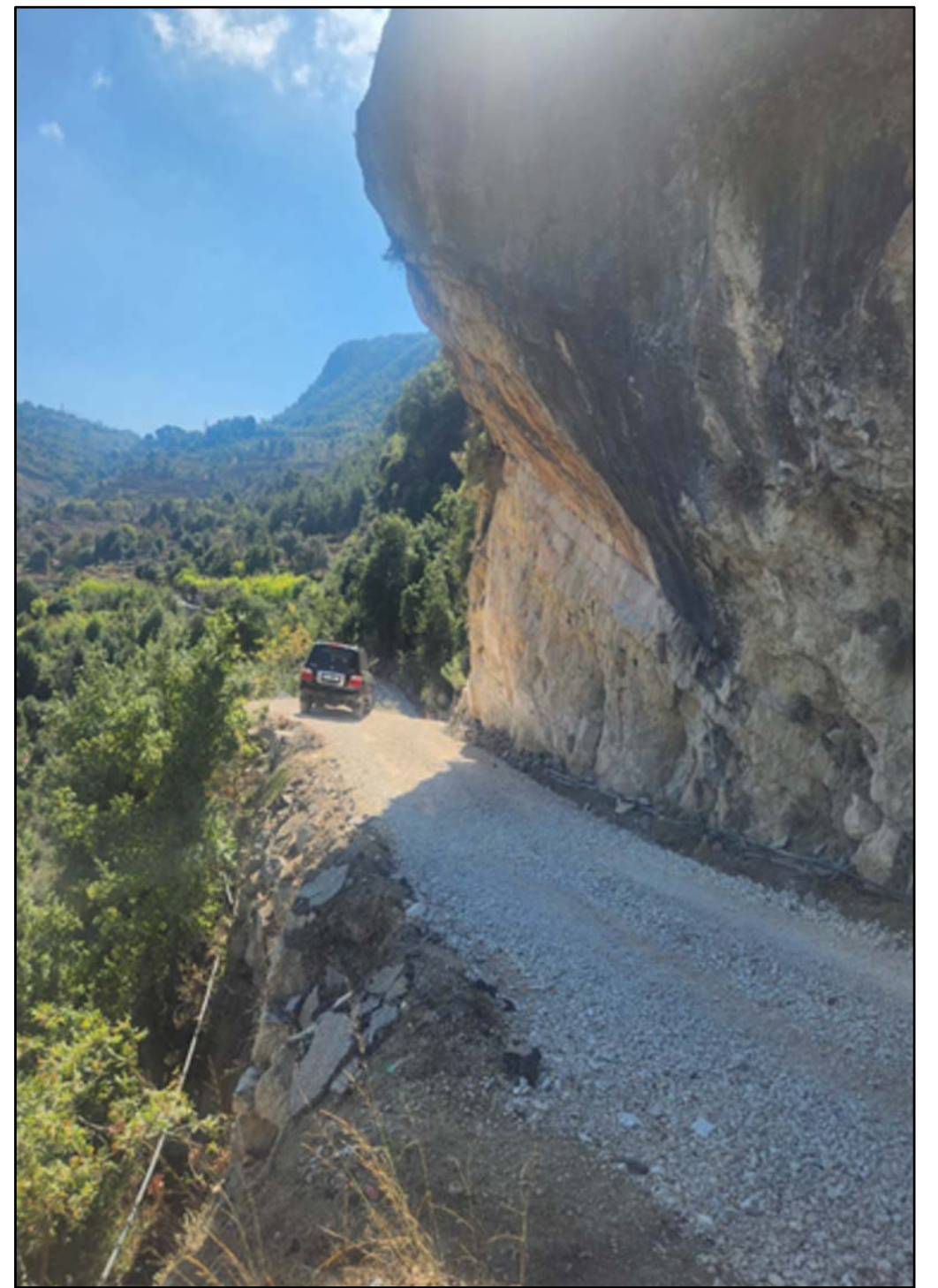
— TYPICAL DETAIL OF FOOTING STEP SHOWING (REINF.)
— SCALE 1:25



— WALL EXPANSION JOINT DETAILS
— SCALE N.T.S



— WALL FOUNDATION ENDING (REINF.)
— SCALE N.T.S



COORDINATION: (34.42212,36.069953)

BEARING CAPACITY= 150 Kpa

H (mm)	A (mm)	B (mm)	C (mm)	A+B+C (mm)	T (mm)	D (mm)	E (mm)	a	b	c	d	e	f	g	h	k	l	m	n	o	p	q	L _a (mm)	L _b (mm)	L _d (mm)	L _s (mm)
3500	250	683	4500	5500	700	700	500	T16Ø150	T20Ø150	---	T12Ø150	T20Ø150	---	T20Ø150	T20Ø150	T12Ø200	T14Ø200	T12Ø150	T12Ø150	T16Ø150	T12Ø150	T12Ø150	4000	UP TO TOP OF WALL	700	---
4500	250	750	4500	5500	700	700	500	T20Ø150	T20Ø150	---	T12Ø150	T20Ø150	---	T25Ø150	T25Ø150	T12Ø200	T14Ø200	T12Ø150	T12Ø150	T16Ø150	T12Ø150	T12Ø150	4000	UP TO TOP OF WALL	700	---

GEOTECHNICAL NOTES

- 1- A SHALLOW FOUNDATION SYSTEM IS NEEDED TO SUPPORT THE STRUCTURAL LOADS FROM THE RETAINING WALL.
- 2- THE FOUNDATIONS SHALL BE PLACED ON PROPER GROUND.
- 3- THE EXPECTED SUBSURFACE MATERIAL OVER WHICH FOUNDATIONS ARE LAID CONSISTS OF HIGHLY FRACTURED ROCK.
- 4- THE NET ALLOWABLE BEARING CAPACITY IS 200 KPA.
- 5- THE CONTRACTOR SHOULD CHECK THE SOIL/ROCK CONDITIONS PRIOR TO CONSTRUCTION.
- 6- PROPER PREPARATION AND COMPACTION OF THE AREAS TO RECEIVE FOUNDATION SHALL BE DONE PRIOR TO FOUNDATION CONSTRUCTION. THE PROPOSED FOUNDATION LEVEL SHOULD BE THOROUGHLY INSPECTED BY GEOTECHNICAL ENGINEER TO ENSURE THAT NO CLAY MATERIALS, FILL LAYERS, DEBRIS MATERIALS OR ANY OTHER PROBLEMATIC MATERIALS ARE ENCOUNTERED AT THIS LEVEL. ALL MANMADE FILL LAYERS SHALL BE REMOVED AND REPLACED BY CYCLOPEAN.
- 7- THE CONTRACTOR SHOULD CHECK IF UTILITIES DO EXIST AT THE RETAINING WALL LOCATION.
- 8- THE RECOMMENDED CEMENT TYPE FOR SUBSTRUCTURE ELEMENTS SHALL BE OPC TYPE I CEMENT TO ASTM C 150.
- 9- AS WATER TABLE IS NOT EXPECTED TO BE HIGH, WATERPROOFING USING TWO COATS OF BITUMINOUS PAINT SHALL BE APPLIED ON ALL SURFACES IN CONTACT WITH SOIL.
- 10- IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE ASSUMED 200 KPA BEARING CAPACITY IS ACTUALLY ACHIEVED ON SITE PRIOR TO CONSTRUCTION.

NOTES:

- 1- SOIL DENSITY = 20 KN/m³ BACKFILL ANGLE OF FRICTION = 35°. BACKFILL SLOPE ZERO.
- 2- SURCHARGE LOAD = 20 KN/m²
- 3- THE SPECIFIED 28 DAYS CYLINDER COMPRESSIVE STRENGTH OF REINFORCED CONCRETE = 27 MPa.
- 4- AT LEAST 1m COVER ABOVE THE TOP OF FOUNDATION SHALL BE PROVIDED.
- 5- ALL REINFORCING STEEL BARS SHALL BE DEFORMED HIGH GRADE STEEL HAVING A MINIMUM YIELD STRENGTH OF 420 MPa.
- 6- MINIMUM CONCRETE COVER FOR REINFORCEMENT UNLESS INDICATED ON DRAWING TO BE AS FOLLOWS: STRUCTURE, EXPOSED TO WEATHER 50mm. STRUCTURE, IN DIRECT CONTACT WITH SOIL 75mm.
- 7- EXPANSION JOINT SHALL BE IMPLEMENTED AT MAXIMUM 30m WALL LENGTH.

A.A.ALAAL	NOVEMBER 25	FINAL DESIGN	K&A	-
REV.	DD/MM/YY	DESCRIPTION	ISSUED BY	REQUESTED BY



DRAWN BY:	A.A.ALAAL	DATE:	11/11/25	CLIENT NAME:	MINISTRY OF PUBLIC WORKS AND TRANSPORT	DRAWING TITLE:	طريق بطرماز بيت حاويك RETAINING WALL DETAIL
DESIGNED BY:	M. HAJJAR	DATE:	11/11/25	PROJECT NAME:	طريق بطرماز بيت حاويك	PROJECT NO:	---
CHECKED BY:	O. OSMAN	DATE:	11/11/25	DRAWING NUMBER	BY - - - ST 001 00	DATE ISSUED:	NOVEMBER 25
APPROVED BY:	O. OSMAN	DATE:	11/11/25	SCALE:	AS SHOWN		
SIZE:	A1						