

GENERAL DESIGN NOTES:

- G1. THE ELEMENTS OF THE RETAINING WALL ARE DESIGNED TO AS4678-2002.
 - (i). TABLE 1.1 CLASSIFICATION B1
 - (ii). TABLE 3.1 DESIGN LIFE 60 YEARS.
 - (iii). TABLE 4.1 LIVE LOAD SURCHARGE 5kPa MAX ALLOWED.
- G2. CONCRETE ELEMENTS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600-2018.
- G3. ASSUMING THE SOIL IS NON-AGGRESSIVE AND NOT ACID SULFATE SOIL BASED ON TABLE 4.3 IN AS3600-2018, 'A1' EXPOSURE CLASSIFICATION HAS BEEN DECIDED, AND MINIMUM CONCRETE GRADE IS N20.
- G4. THE LOAD COMBINATION IS DESIGNED TO AS/AZS1170.0-2002 AND AS4678-2002: PERMANENT LOAD HAS A FACTOR OF SAFETY OF 1.25 AND IMPOSED LOADS HAVE A FACTOR OF SAFETY OF 1.50.
- G5. SOIL CONDITION AND DESIGN PARAMETERS HAS BEEN ASSUMED FROM GEOTECHNICAL REPORT No.RGS21087.1-AC

PARAMETERS	VALUE	UNITS
FRICITION ANGLE (RETAINED)	25	DEGREE
FRICITION ANGLE (FOUNDATION)	28	DEGREE
COHESION (RETAINED)	5	kPa
COHESION (FOUNDATION)	10	kPa
SOIL UNIT DENSITY (RETAINED)	18	kN/m³
SOIL UNIT DENSITY (FOUNDATION)	19	kN/m³

- G6. IF THE EMBEDMENT SOIL FOR PILE IS BACKFILL, THIS DESIGN WAS BASED ON THE ASSUMPTION OF LEVEL 1 CONTROL FILL, IF ANY UN-COMPACTED SOIL CONDITION OCCUR, THE MAIN CONTRACTOR SHALL INFORM THE DESIGN ENGINEER.
- G7. STEEL POSTS ARE TO BE MIN. GRADE 300 MPa TO AS 3679.1 AND HOT DIP GALVANISED TO 600gm/m2 OR 85um COATING THICKNESS FOR EVERY gm/m2 TO AS4680.
- G8. CONCRETE PANELS ARE TO BE MIN. GRADE N40 TO AS 3600 AND THE STEEL REINFORCEMENT IS D500L GRADE AS PER AS4671.
- G9. THE RETAINING WALL STRUCTURES ARE DESIGNED FOR A DEFLECTION IN THE ORDER OF 20 mm.
- G10. THE PIER DEPTH AND PIER DIAMETER WILL CHANGE SUBJECT TO SOIL UNIT WEIGHT(Y), EFFECTIVE COHESION(C) AND ANGLE OF FRICTION(Ø) WITHIN THE EMBEDMENT OF THE PIERS THE CERTIFYING ENGINEER OR INSPECTING ENGINEER WILL HAVE ABSOLUTE DISCRETION TO CHANGE DESIGN "L" BASED ON SITE INSPECTION.
- G11. THE POST SECTION IN PIERS IS SUBJECT TO CHANGE BASED ON SOIL CONDITIONS ON SITE.
- G12. A GLOBAL STABILITY ANALYSIS HAS NOT BEEN UNDERTAKEN AS PART OF THIS DESIGN. CLIENT IS RESPONSIBLE TO ENGAGE A GEOTECHNICAL ENGINEER TO PERFORM THESE WORKS.
- G13. NO WATER PRESSURE ASSUMED IN DESIGN OF RETAINING WALL.
- G14. IF THE UTILITIES/SERVICES PIPES INVERT LEVEL IS INSIDE THE ZONE OF INFLUENCE, THE PIER DEPTH MUST BE DRILLED FURTHER DOWN PAST THE INVERT OF THE LOWEST PIPES WITHIN THE ZONE OF INFLUENCE BY 'H' VALUE THIS IS AS PER PROVISION IN SECTION 30B OLD WORKPLACE HEALTH AND SAFETY ACT 1995 (WH&SACT).
- G15. PIER EMBEDMENT ON STRUCTURAL FILL ARE DESIGNED BASED ON MINIMUM 100KPA, LEVEL 1 COMPACTION CERTIFICATION MEETING AS3798 CLAUSE 8.1. WHERE LEVEL 1 COMPACTION CERTIFICATE IS NOT PROVIDED BY G.I.T.A WITH RPEQ CERTIFICATIONS.
- G16. NO EFFECTIVE STRESS ALLOWED FOR DESIGN OF PIERS AND RETAINING EARTH PRESSURE FOR LONG TERM SITUATION UNLESS C,PHI & Y ARE PROVIDED BY CLIENT. IF ANY SOIL CONDITION WORSE THAN ESTIMATED IN G5 SPECIAL DESIGN IS REQUIRED.
- G17. THE DESIGN DRAWINGS ARE JOB SPECIFIC AND WILL VARY CASE BY CASE. THE MAIN CONTRACTOR MUST NOTE THAT ANY CHANGES TO THE ENVIRONMENT, SOIL CONDITION, OR THE WATER TABLE WILL INFLUENCE THE WALL SAFETY. ANY CHANGE IN LAND USE OR CHANGE IN OVERALL CIVIL DESIGN CONCEPT COULD INFLUENCE THE WALL DESIGN SAFETY. IF ANY OF THE CHANGES ARE TO BE TAKEN PLACE. THE WALL ENGINEER MUST BE ANNOUNCED.
- G18. THIS DESIGN HAS BEEN CHECKED FOR VARIOUS DESIGN METHOD AS AN EMBEDDED RETAINING WALL ANALYSIS AND NOT A RETAINING WALL ABOVE GROUND. VARIOUS METHOD OF ANALYSIS FOR EMBEDDED WALL HAS BEEN TAKEN TO CONFIRM THE PIER DEPTH, SPACING AND SIZE OF THE PIER INCLUDING A SINGLE PIER UNDER LATERAL LOAD AS PER AS2159 TO CORRELATE THE EMBEDDED WALL DEPTH.
- G19. WALL SETTING OUT IS BASED ON THE INSTRUCTION FROM THE MAIN CONTRACTOR AND THE PROJECT ENGINEER PROVIDING THE RP LINE TO BE DEFINED CLEARLY FOR THE WALL BUILDER TO BUILD THE RIGHT LOCATION, I.E BACK OF PIER OR FRONT OF PIER OR ANY OFFSET FROM THE WALL STRUCTURE. THIS MUST BE PROVIDED IN WRITTEN INSTRUCTION OR DRAWINGS TO THE WALL BUILDER.
- G20. ALL SETOUT DIMENSIONS AND LEVELS SHOWN ON DRAWINGS TO BE VERIFIED BEFORE CONSTRUCTION.
- G21. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONS.
- G22. THE WALL DESIGNS HAVE RELIED ON PLANS AND SOFT DRAWINGS PROVIDED TO ENGINEER.
- G23. IF SITE CONDITIONS ARE FOUND TO DIFFER THEN ENGINEER SHOULD BE CONSULTED TO REFINE THE DESIGN (IF REQUIRED).
- G24. NO CONSTRUCTION LOADS ARE TO BE PLACED WITHIN A DISTANCE EQUAL TO THE HEIGHT OF THE WALL.
- G25. ALWAYS CROSS REFERENCE CIVIL DRAWINGS AGAINST ENGINEER DRAWINGS PRIOR TO CONSTRUCTION. IF THERE ARE DISCREPANCIES DESIGN ENGINEER TO BE NOTIFIED BEFORE CONSTRUCTION COMMENCES.

- G26. NO ALLOWANCE IN THE FOLLOWINGS BELOW HAS BEEN MADE TO THESE DRAWINGS FOR THE DESIGN SINCE THE DESIGN INFORMATION ARE PROVIDED BASED ON LAYOUT OF WALL LOCATION AND HEIGHT ONLY FROM THE PROJECT ENGINEER AND MAIN CONTRACTOR. THIS DESIGN DOES NOT TAKE INTO CONSIDERATION ON THE OVERALL CIVIL DESIGN ASPECT IN TOTALITY THE EXCLUSION IN DESIGN PARAMETER HERE ARE AS FOLLOWS:
 - OVERLAND FLOW PATH CAUSING IMPACT FORCE TO WALL.
 - WATER STAGNATION CAUSING LOSS IN SOR STRENGTH ON THE PIER HEAD LEVEL OR TOP OF WALL.
 - GLOBAL STABILITY CAUSING IMPACT TO WALL TO BE UNDERTAKEN BY THE PROJECT ENGINEER/MAIN CONTRACTOR.
 - ADDITIONAL EARTH FILL/CUT OF SOIL CHANGING THE PROFILE OF THE SURFACE WATER FLOW OR LOADING TO THE WALL
 - EXCAVATION WITHIN THE WALL LINE OF INFLUENCE LOAD AREA CAUSING CONTAMINATION TO THE BACKFILL MATERIAL DAMAGED GEOFABRIC DAMAGED/CHOKED SUBSOL DRAINAGE AND BACKFILL MATERIAL BEING REMOVED OR ALTER EITHER DURING OF POST CONSTRUCTION.
 - PERMANENT AND TEMPORARY LOADING CREATED MORE THAN THE DESIGN LOAD.
 - NO COMPACTION DONE TO CLAY PLUG ON THE SWALE OR OVERLAND FLOW PATH.
 - POOR CONSTRUCTION OF GEOFABRIC MATERIAL AND NOT INSTALLED CORRECTLY OR FOLDED OR TUCKED IN TIGHTLY TO PREVENT CONTAMINATION.
 - FENCING POST FOOTING CREATING LATERAL PRESSURE DIRECTLY BEHIND THE POST OR PANELS.
 - BUILDING LOCATION CAUSING ADDITIONAL LOAD WITHIN THE LINE OF INFLUENCE MEASURE 45 DEGREE FROM THE PIER HEAD
 - LANDSCAPE GARDEN, SHED, SWIMMING POOL STRUCTURES AND DRIVEWAY CREATED NEXT TO WALL OR WITHIN THE LINE OF INFLUENCE LOAD AREA
 - ANY BUILDERS OR OWNER'S CHANGES BE IT ADDITION OR OMISSION TO THE ORIGINAL DESIGN PARAMETER, ENVIRONMENT OR SOIL PROFILE THAT RESULT IN THE WALL SAFETY.
 - RETAINING WALL DESIGNED TO HANDLE LOAD FROM FENCE. FENCE CONNECTION TO BE DESIGNED BY OTHERS.
 - BACKFILL BEHIND THE WALL IS TO BE CLEAN FREE DRAINING 20-40mm GRANULAR MATERIAL ENCOMPASSING A CONTINUOUS 200mm DIAMETER SLOTTED PVC OR CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH AS2566. SUBSOIL DRAINAGE PIPES TO DISCHARGE FROM WALLS EVERY 20m UNO AND ARE TO BE CONNECTED TO A LAWFUL POINT OF DISCHARGE BY OTHERS.
 - ALL CUT STEEL POSTS AND WELDED SURFACES TO BE SURFACE TREATED IN ACCORDANCE WITH AS4680.

REINFORCEMENT NOTES:

- R1. REINFORCEMENTS ARE SHOWN DIAGRAMATICALLY AND IS NOT NECESSARILY IN TRUE PROJECTION. SPLICES TO REINFORCEMENT SHALL BE MADE ONLY AT THE LOCATION SHOWN OR AS OTHERWISE APPROVED BY THE ENGINEER. WELDING OF REINFORCEMENT SHALL BE CARRIED OUT BY A QUALIFIED WELDER IN ACCORDANCE WITH AS/NZS 1554 AND THE REINFORCEMENT SUPPLIER RECOMMENDATIONS. THE INTERPASS TEMPERATURE SHALL BE LESS THAN 200 DEGREES IN ACCORDANCE WITH AS/NZS 1554 PART 3.
- R2. MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT INCLUDING TIES AND STIRRUPS SHALL BE AS FOLLOWS UNO.

EXPOSURE CLASSIFICATION	MINIMUM COBER (MM)				
	CONCRETE STRENGTH (fc)				
	20 MPa	25 MPa	32 MPa	40 MPa	≥50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	--	(60)	40	30	25
B2	--	--	(65)	45	35
C1	--	--	--	(70)	50

- R3. ALL REINFORCEMENT SHALL BE FIRMLY SUPPORTED ON MILD STEEL PLASTIC TIPPED CHAIRS, PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT MORE THAN 1 METER CENTRE BOTH WAYS. BARS SHALL BE TIED AT ALTERNATE INTERSECTIONS. IN EXPOSURE CONDITIONS GREATER THAN B1 USE ONLY PLASTIC CHAIRS.
- R4. REINFORCEMENT SYMBOLS:
 - Y - DENOTES GRADE 410 Y BARS TO AS 1302 GRADE Y.
 - N - DENOTES GRADE 500 N BARS TO AS 1302.
 - R - DENOTES GRADE 230 R HOT ROLLED PLAIN BARS TO AS 1302.
 - F - DENOTES GRADE 450 F HARD-DRAWN WIRE REINFORCING FABRIC TO AS 1304.
 - L - LOW DUCTILITY CLASS HARD DRAWN 500L WIRE REINFORCING MESH WITH fsy=500mPa.

NO OF BARS GROUP NOMINAL BAR SIZE IN MM

 12 N 20 - 200

BAR GRADE AND TYPE SPACING IN MM

- R5. HOOKS AND COGS SHALL COMPLY WITH AS3600 UNLESS NOTED OTHERWISE. ALL PULL OUT BARS SHALL BE TEMP CORE BARS OR APPROVED EQUIVALENT.
- R6. BENDING AND REBENDING OF BARS SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3600, AS/NZS 4671, THE SPECIFICATIONS AND THE REINFORCEMENT SUPPLIER RECOMMENDATIONS. BARS SHALL NOT BE HEATED ABOVE 400 DEGREES WITHOUT THE ENGINEER'S WRITTEN APPROVAL. THERMAL CRAYONS SHALL BE USED TO ENSURE COMPLIANCE WITH THIS TEMPERATURE LIMIT.

- R7. REINFORCEMENT BAR LAPS AS FOLLOWS

BAR	LAP
N12	500mm
N16	600mm
N20	800mm
N24	1000mm
N28	1200mm
N32	1400mm


CONCRETE NOTES: SHALL COMPLY TO AS3600 & AS3610

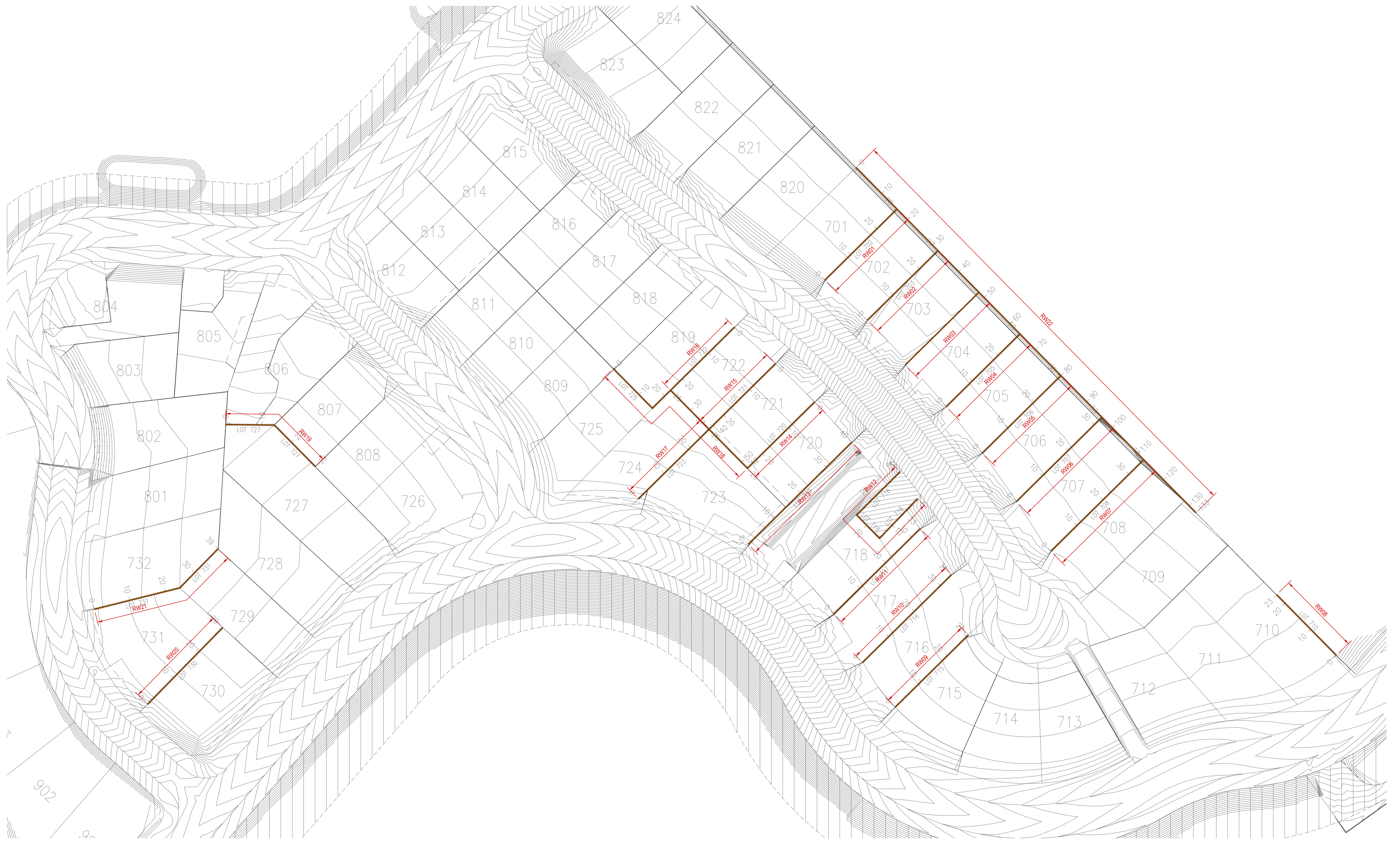
- C1. CONCRETE WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH AS3600. CONCRETE STRENGTH:
 - 1. SLEEPERS = N40
 - 2. FOOTING = N25
- C2. NO HOLES, CHASES OR EMBEDMENT OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN CONCRETE ELEMENTS WITHOUT ENGINEER'S APPROVAL.
- C3. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND LOCATED TO THE SATISFACTION OF THE ENGINEER BUILDER SHALL ALLOW FOR ALL NECESSARY CONSTRUCTION JOINTS.
- C4. NO ALLOWANCE HAS BEEN MADE FOR STACKING OF MATERIALS OR MACHINERY ON THE CONCRETE STRUCTURE U.N.O.
- C5. EXTERNAL CONCRETE ELEMENTS SHALL MEET THE FOLLOWING REQUIREMENTS: MINIMUM PORTLAND CEMENT CONTENT 330 kg/m³, MAXIMUM WATER/CEMENT RATIO 0.5, AND THE CHLORIDE CONTENT RESTRICTED AS PER CLAUSE 4.9 OF AS3600.
- C6. ALL CONCRETE SUPPLIED SHALL HAVE A SLUMP OF 80mm AND A MAXIMUM NOMINAL AGGREGATE SIZE OF 20mm. VARIATIONS FROM THESE SHALL BE APPROVED BY THE ENGINEER.
- C7. THE MIX DESIGN WITH THE 7 AND 28 DAYS TARGET STRENGTHS AND THE BASIC SHRINKAGE STRAIN AT 56 DAYS SHALL BE SUBMITTED FOR REVIEW PRIOR TO POURING ANY CONCRETE. ALL CONCRETE IN CONTACT WITH AGGRESSIVE SOIL SHALL HAVE SULPHATE RESISTING CEMENT. THE C3A CONTENT OF THE CEMENT SHALL BE LESS THAN 5%.

CONSTRUCTION NOTES:

- D1. ALL STEEL SECTIONS, IF REQUIRED, SHALL BE GALVANISED IN ACCORDANCE WITH AUSTRALIAN STANDARDS. ACCEPTABLE MANUFACTURERS AND PROCESSORS OF STEEL MUST HOLD A VALID CERTIFICATE OF APPROVAL ISSUED BY THE AUSTRALIAN CERTIFICATION AUTHORITY FOR REINFORCING STEELS (ACRS). ALL STEEL SECTION TO BE 300MPa.
- D2. NO MACHINES (IMPOSING MORE THAN 5KPa SURCHARGE) ARE ALLOWED WITHIN THE ZONE OF INFLUENCE BEHIND THE WALL KNOWN AS THE ACTIVE ZONE AREA.
- D3. NO EXCAVATION IS ALLOWED AT TOE OF WALL. UNLESS IT HAS BEEN DESIGNED FOR EXCAVATION DISTURBANCE AS DIRECTED BY PROJECT ENGINEER. DESIGN ENGINEER DO NOT TAKE RESPONSIBILITY ON THE DESIGN SAFETY IF THIS IS INSTRUCTED.
- D4. NO CONCENTRATED OVERLAND FLOW PATH IS TO BE CREATED BEHIND ANY WALL. REFER TO STORMWATER CONSULTANT FOR ADVICE.
- D5. THE ENGINEER SHALL CARRY OUT PERIODIC INSPECTION OF RETAINING WALL WORKS. THE FIRST DRILL HOLE MUST BE WITNESSED BY THE ENGINEER.
- D6. BORE HOLES TO BE RECORDED AND PHOTOGRAPHED FOR DEPTH AND DIAMETER OF HOLE. EACH BOREHOLE PHOTOGRAPH TO BE IDENTIFIED WITH A NUMBER AND ITS LOCATION REFERENCED.
- D7. CONCRETE TESTING SHALL BE CARRIED OUT AS PER SETOUT IN AS3600-2018. CONCRETE TEST-SAMPLES SHALL BE TAKEN AT A MINIMUM FREQUENCY OF ONE SAMPLE FOR EACH 30m3.
- D8. EACH PIER MUST BE CONCRETED AT ONE TIME, TO AVOID FORMATION OF COLD JOINTS. IF COLD JOINT IS FORMED, A CONCRETE BOND 'CONCRESEIVE 2525' TO APPLIED PRIOR TO NEXT POUR AS PER TECHNICAL MANUAL.
- D9. AGGREGATE FOR BACKFILL MUST BE CLEAN AND FREE FROM CONTAMINATION FULLY WRAPPED WITH NO LOOSE, SLACK FABRIC CAUSING "DROP OFF" OR NOT HOLDING GRAVEL IN PLACE. ALL EARTHWORKS BACKFILL MATERIAL BEHIND RETAINING WALL SHALL BE COMPACTED TO LEVEL 1 BY PRINCIPAL CONTRACTOR.
- D10. THE RETAINING WALLS ARE NOT INTENDED TO SUPPORT BUILDING LOADS. THE UNDERSIDE OF A BUILDING FOOTING IS NOT TO BE LOCATED ABOVE A LINE DRAWN FROM THE BOTTOM OF THE RETAINING WALL AT A SLOPE OF 1.5H : 1V CLAY AND 2H : 1V IN SAND.
- D11. ALL SURFACE AND SUBSURFACE DRAINAGE SHALL BE DESIGNED IN ACCORDANCE WITH AS4678.
- D12. A MINIMUM OF 1V:40H CROSS FALL AWAY FROM THE TOW OF THE WALL IS REQUIRED FOR DRAINAGE.
- D13. WHERE NOTED SLEEPER WALLS ARE DESIGNED FOR STABILITY WHILST ALL SERVICE TRENCHES ARE BACKFILLED AND COMPACTED IF THE SERVICE TRENCHES NEAR WALLS NEED TO BE EXCAVATED THEN TEMPORARY PROPPING OR DISMANTLING OF THE SLEEPER WALL WILL BE REQUIRED DUE TO INSTABILITY.
- D14. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 AND AS1554 EXCEPT WHERE VARIED BY THE SPECIFICATION.

ISSUE FOR CONSTRUCTION

			CLIENT:	CONSULTANT:		DRAWING TITLE:		SCALE:	VERIFIED BY:	DATE:	SCALE:	
						GENERAL NOTES		NTS	NW	02-11-2024	N.T.S	
						PROJECT:		VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.	AN	PROJECT NO:	REV:	
00 10-11-2024 ISSUE FOR CONSTRUCTION REVISION RECORD REV No. DATE DESCRIPTION					SANCTUARY STG 7		IK		DRAWING NO:	S001	SHEET SIZE:	00
REVISION RECORD											A1	



RETAINING WALL LAYOUT PLAN
SCALE:1:500

LEGEND

— CONCRETE SLEEPER RETAINING WALL


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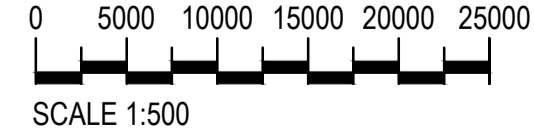
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DRAWING TITLE:
RETAINING WALLS LAYOUT PLAN

PROJECT:
SANCTUARY STG 7

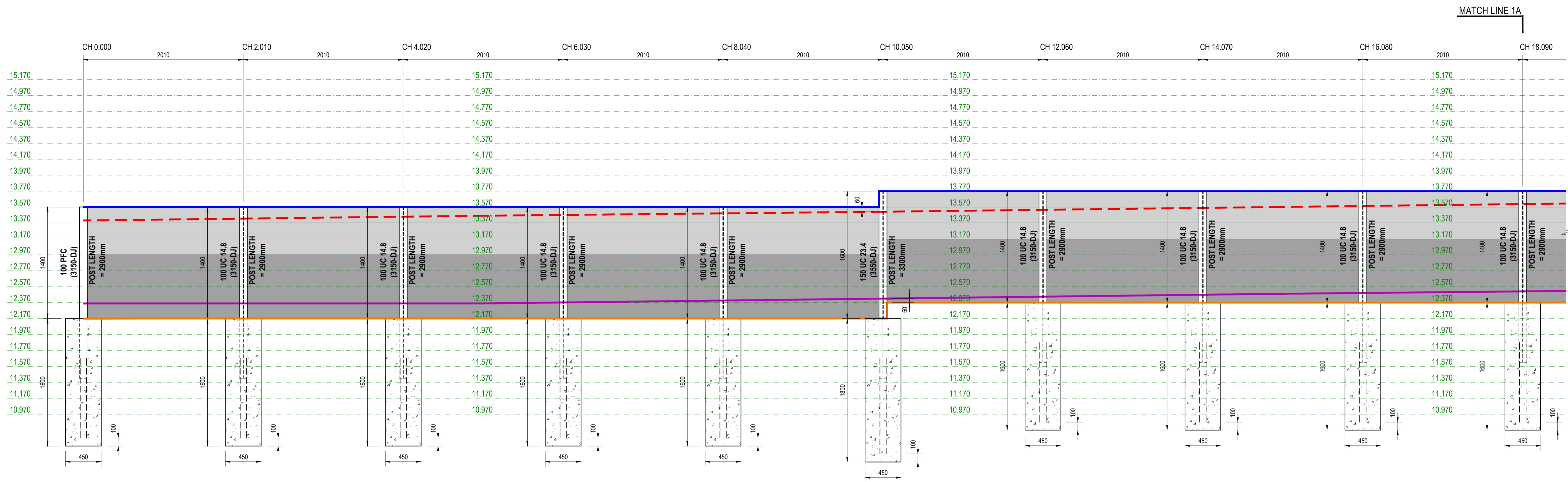
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SCALE 1:500

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DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S100	SHEET SIZE: A1



RETAINING WALL - RW01 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND		LEGEND	
	200mm HIGH CONCRETE SLEEPER		SURFACE TOP LEVEL
	800mm HIGH CONCRETE SLEEPER		SURFACE BOTTOM LEVEL
	SECOND SLEEPER		TOP OF WALL
			BOTTOM OF WALL

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REV No.	DATE	DESCRIPTION
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DRAWING TITLE:
RETAINING WALL - 1 ELEVATIONS

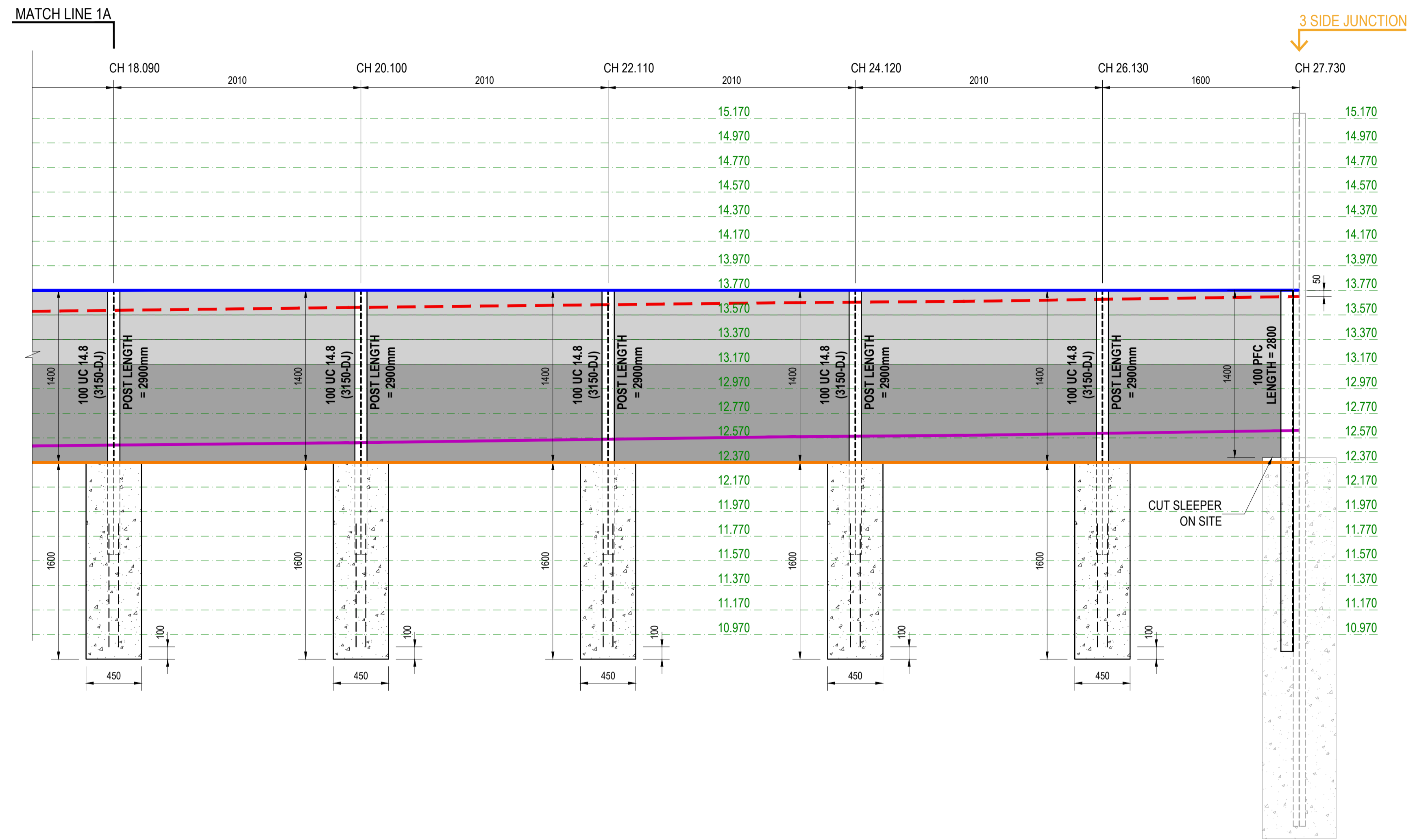
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SCALE:

SCALE 1:25




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DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S110	SHEET SIZE: A1







CONT. RETAINING WALL - RW01 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

-  200mm HIGH CONCRETE SLEEPER
-  800mm HIGH CONCRETE SLEEPER
-  SECOND SLEEPER

LEGEND

-  SURFACE TOP LEVEL
-  SURFACE BOTTOM LEVEL
-  TOP OF WALL
-  BOTTOM OF WALL


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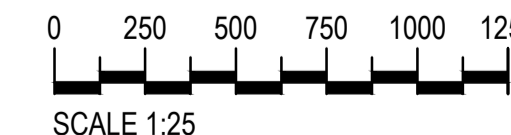
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RETAINING WALL - 1 ELEVATIONS

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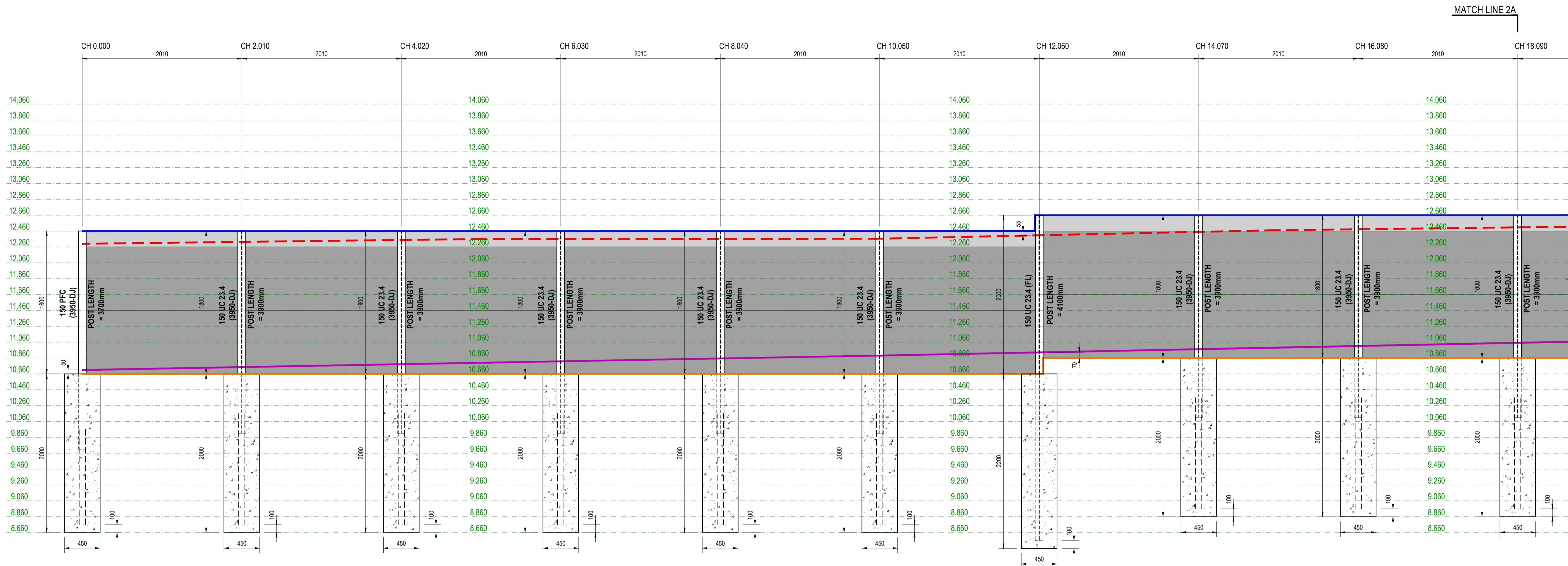
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RETAINING WALL - RW02 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

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CONSULTANT:

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DRAWING TITLE:
RETAINING WALL - 2 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

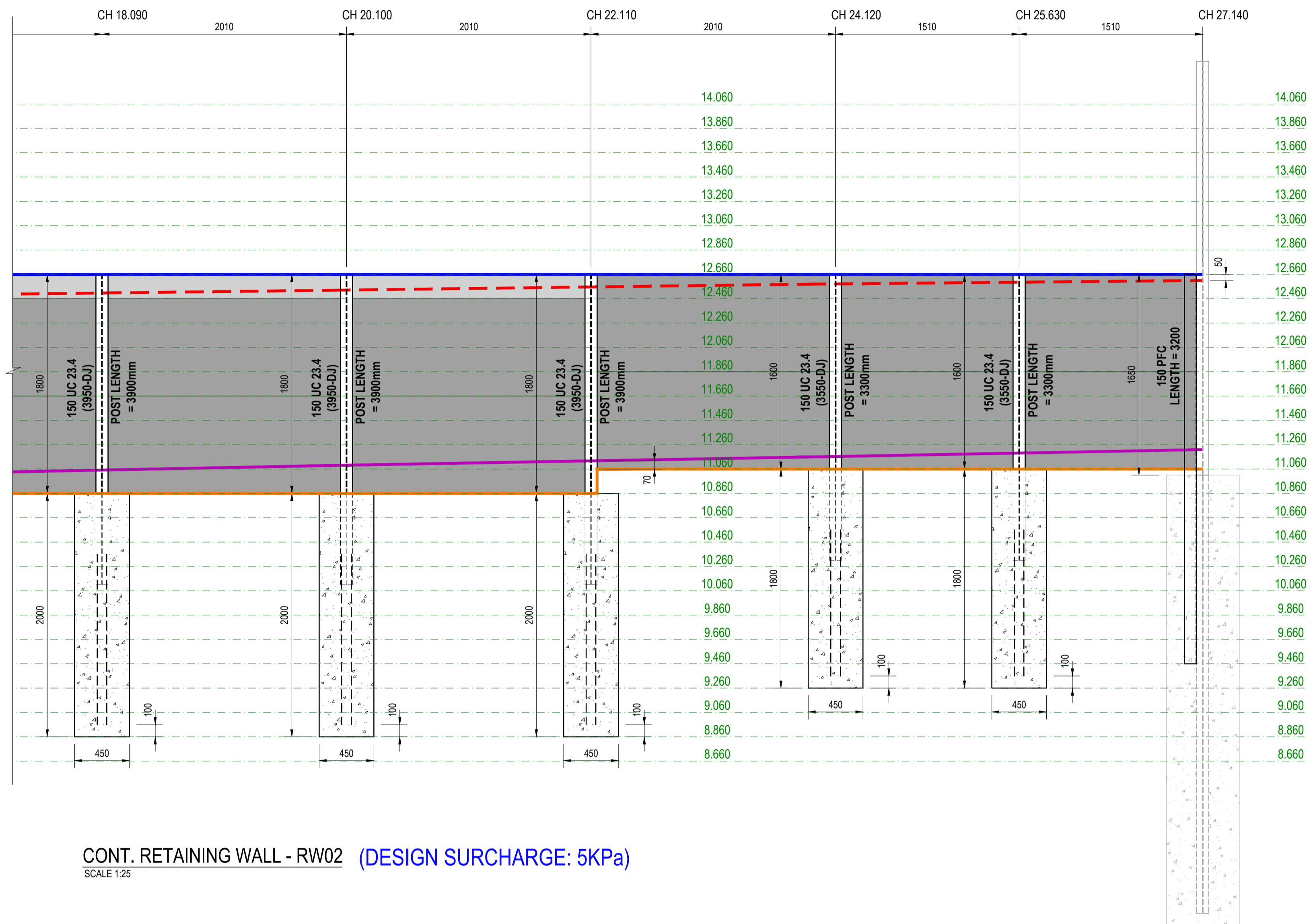
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DRAWN BY: IK	DRAWING NO: S120	SHEET SIZE: A1

MATCHLINE 2A

3 SIDE JUNCTION



CONT. RETAINING WALL - RW02 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

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RETAINING WALL - 2 ELEVATIONS

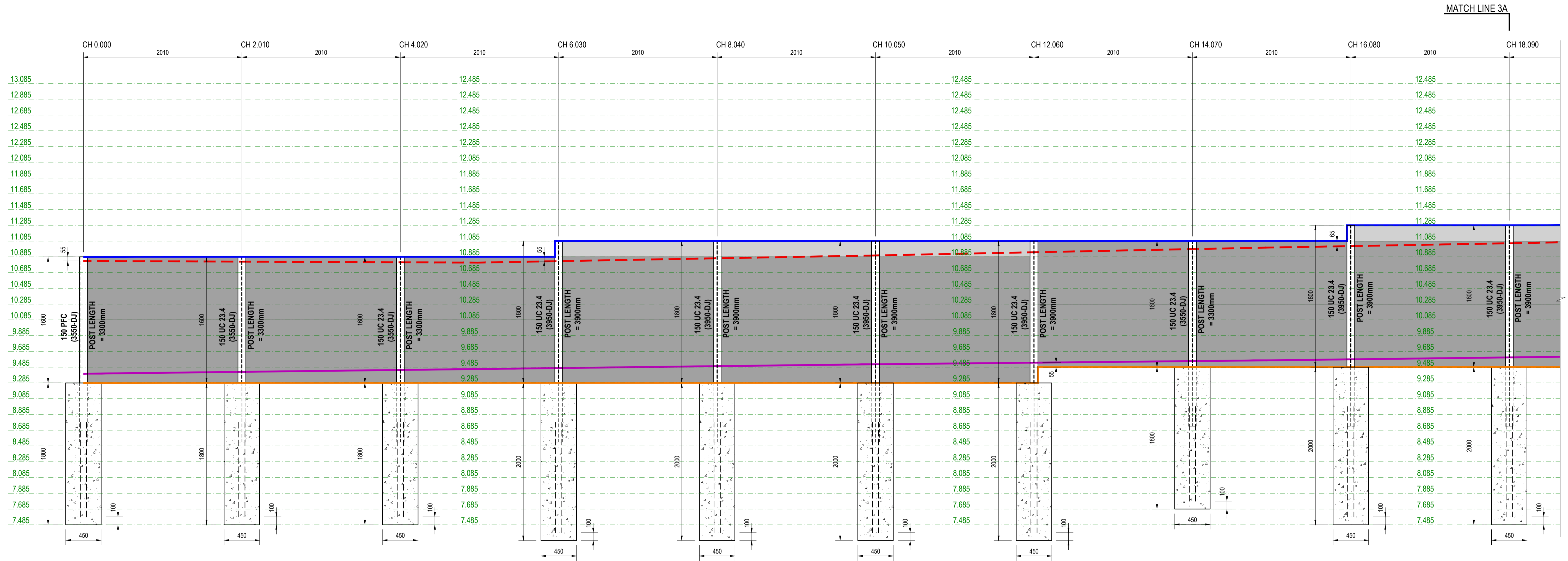
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SCALE 1:25

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DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S121	SHEET SIZE: A1



RETAINING WALL - RW03 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND		LEGEND	
	200mm HIGH CONCRETE SLEEPER		SURFACE TOP LEVEL
	800mm HIGH CONCRETE SLEEPER		SURFACE BOTTOM LEVEL
	SECOND SLEEPER		TOP OF WALL
			BOTTOM OF WALL

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REV No.	DATE	DESCRIPTION
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RETAINING WALL - 3 ELEVATIONS

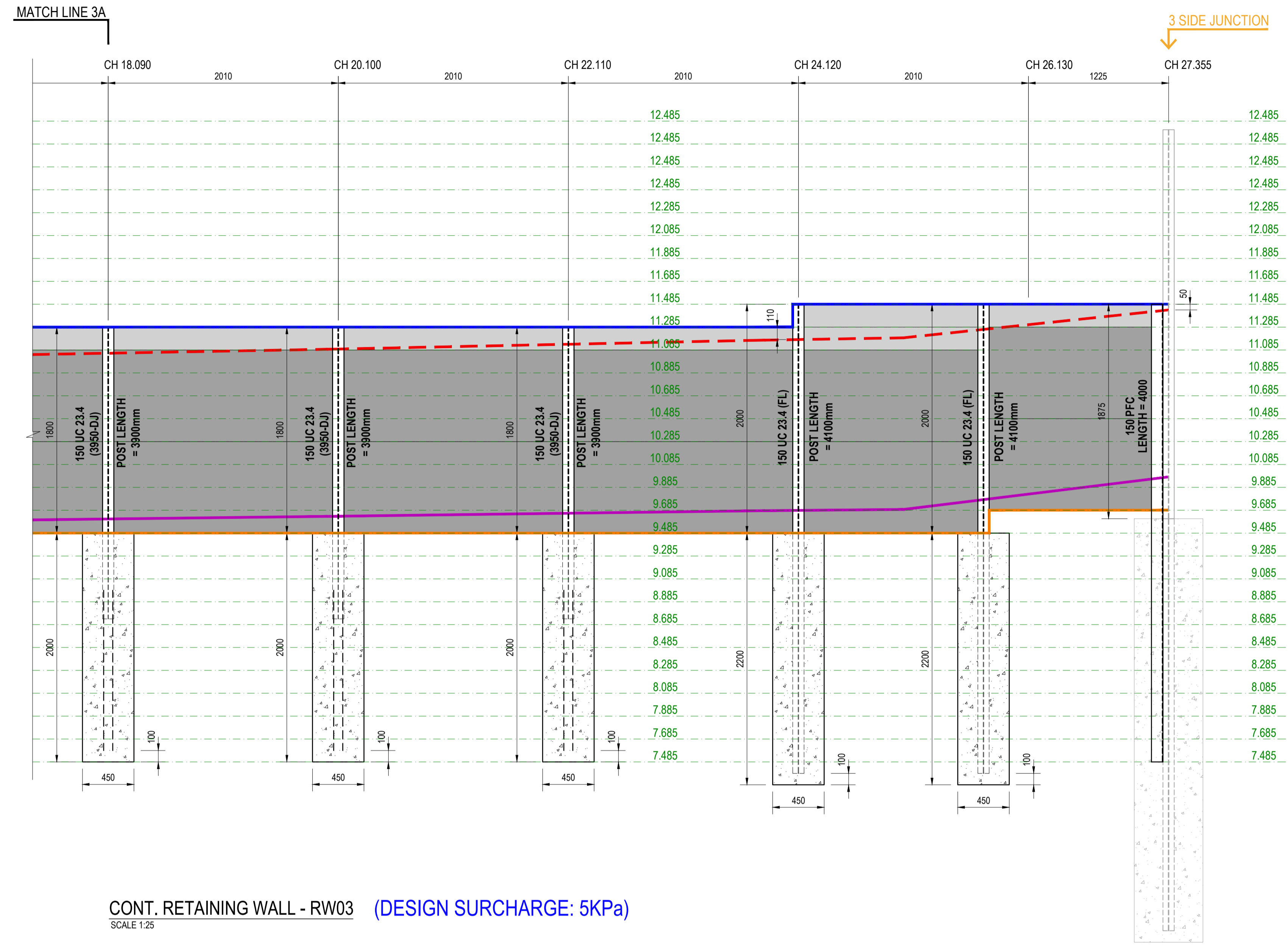
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SANCTUARY STG 7

SCALE:

SCALE 1:25

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VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S130	SHEET SIZE: A1



CONT. RETAINING WALL - RW03 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND		LEGEND	
	200mm HIGH CONCRETE SLEEPER		SURFACE TOP LEVEL
	800mm HIGH CONCRETE SLEEPER		SURFACE BOTTOM LEVEL
	SECOND SLEEPER		TOP OF WALL
			BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 3 ELEVATIONS

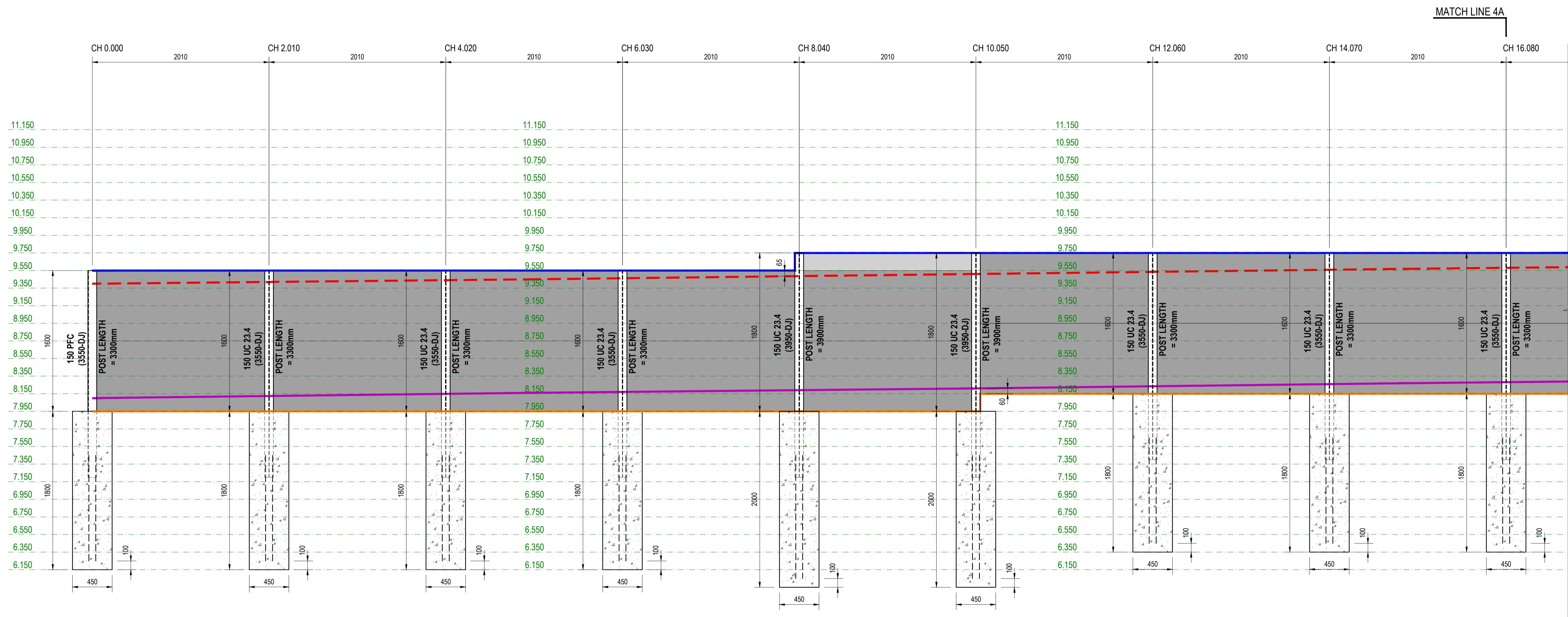
PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S131	SHEET SIZE: A1



RETAINING WALL - RW04 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 4 ELEVATIONS

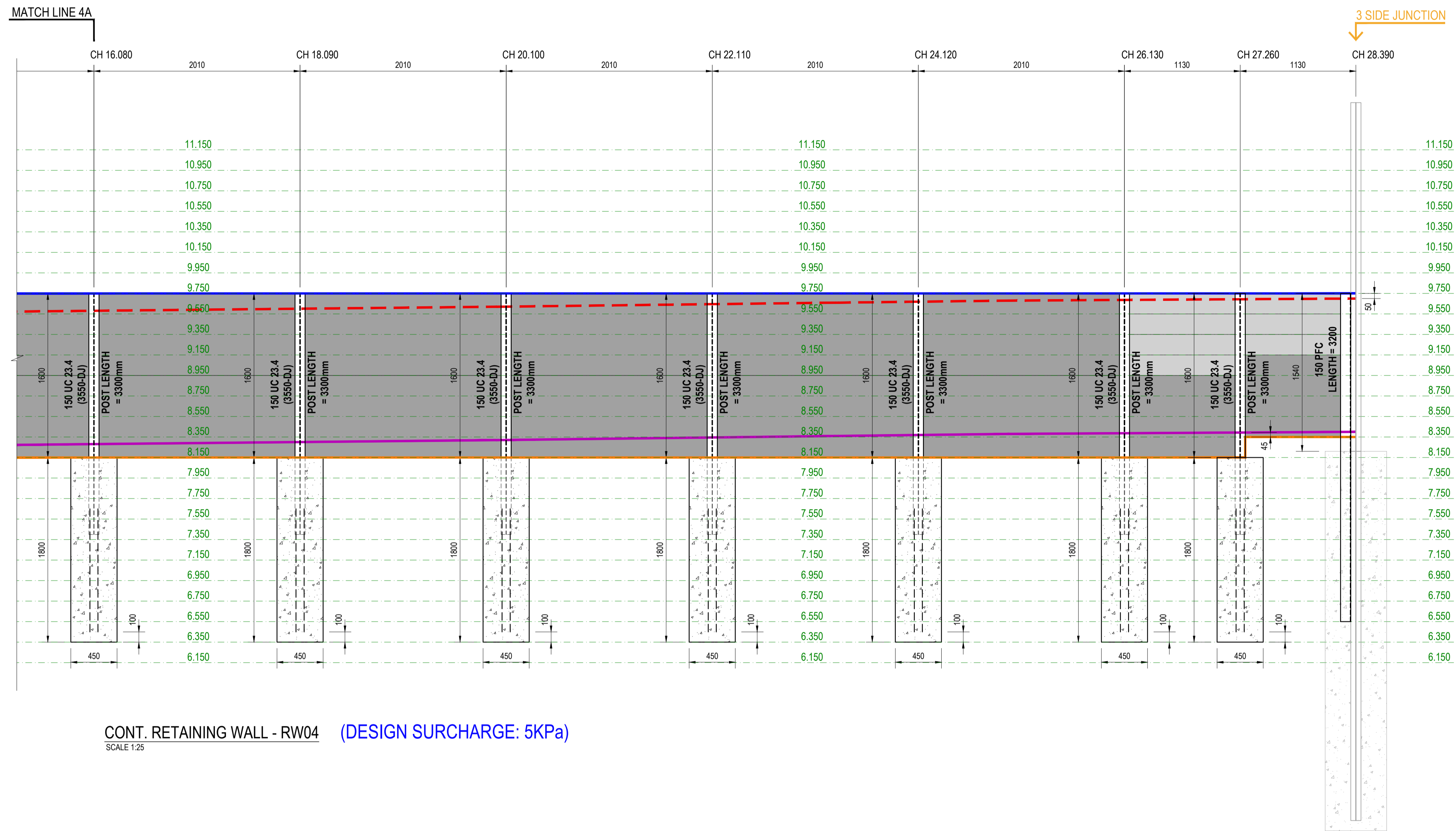
PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S140	SHEET SIZE: A1



CONT. RETAINING WALL - RW04 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

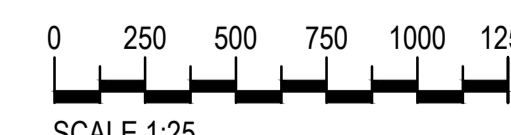
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 4 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

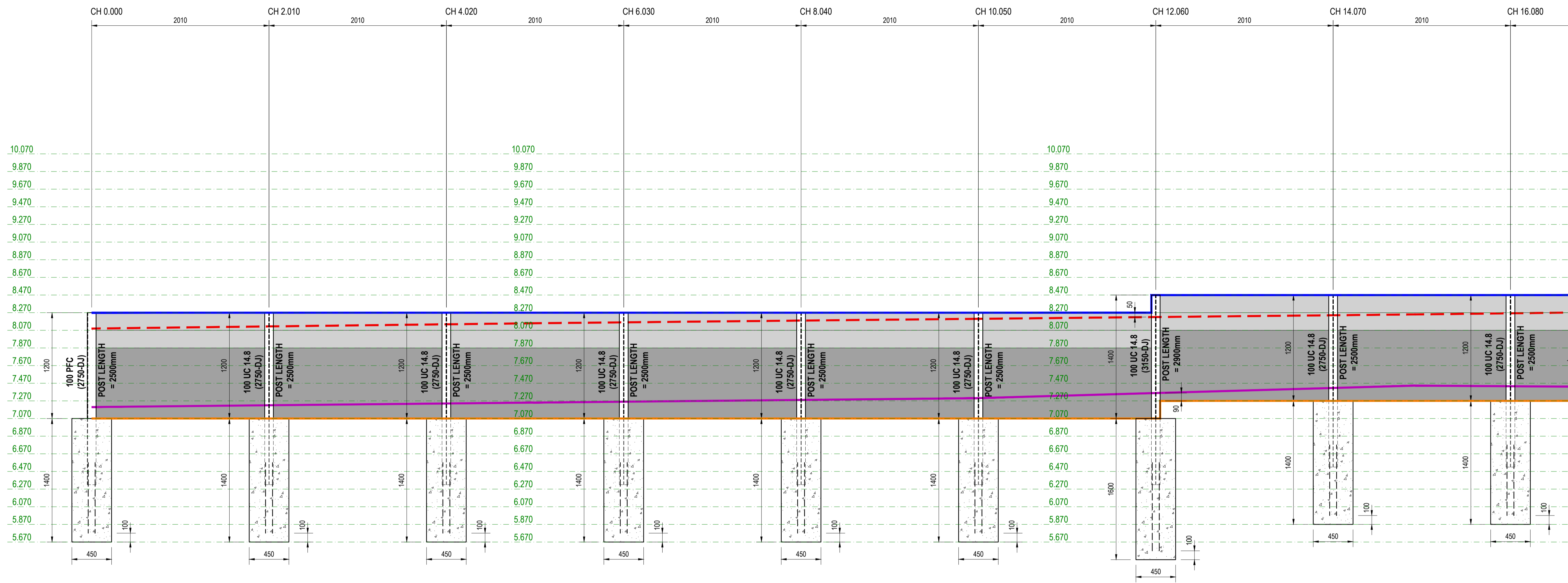


SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S141	SHEET SIZE: A1

MATCH LINE 5A



RETAINING WALL - RW05 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND		LEGEND	
	200mm HIGH CONCRETE SLEEPER		SURFACE TOP LEVEL
	800mm HIGH CONCRETE SLEEPER		SURFACE BOTTOM LEVEL
	SECOND SLEEPER		TOP OF WALL
			BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 5 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

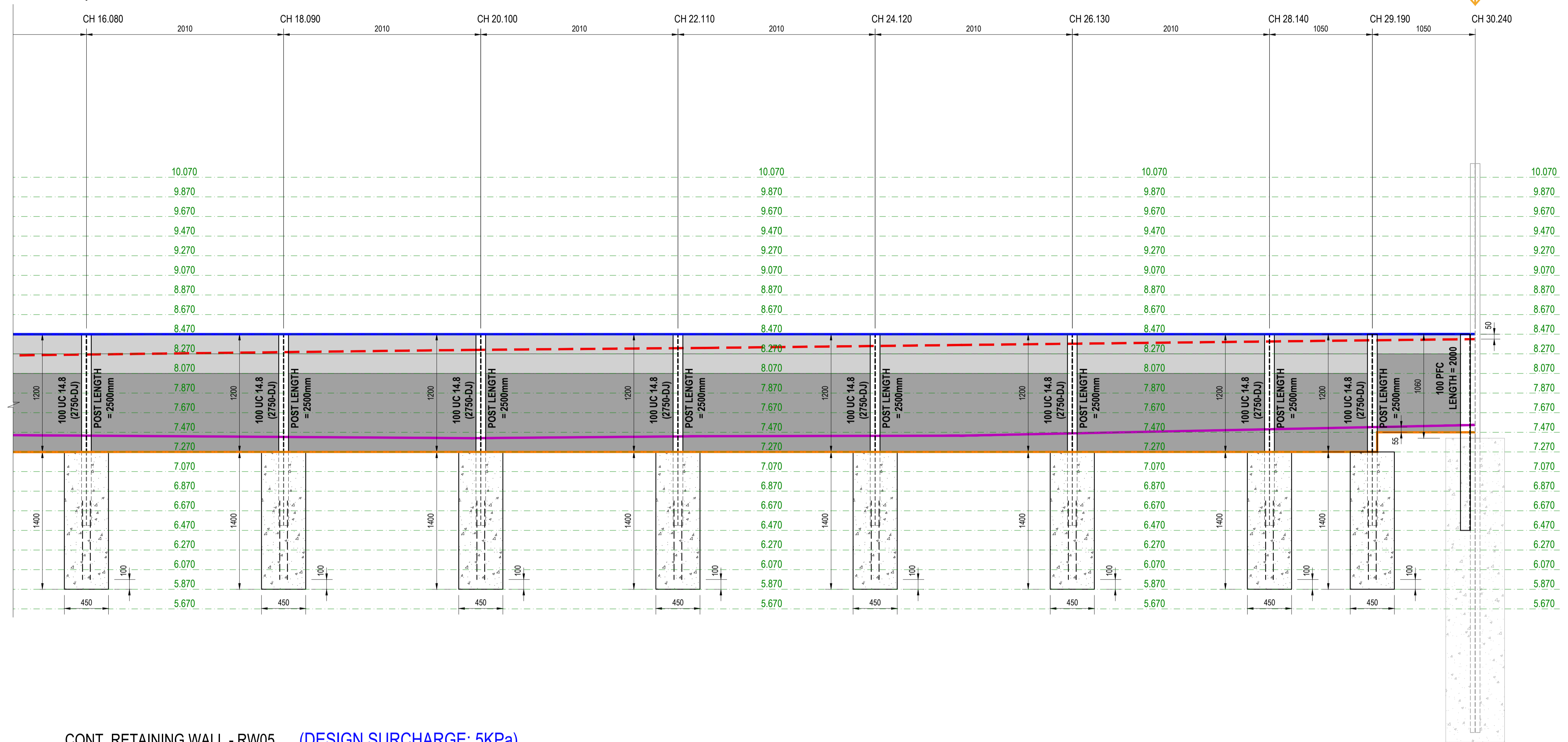
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S150	SHEET SIZE: A1

MATCH LINE 5A

3 SIDE JUNCTION



CONT. RETAINING WALL - RW05 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

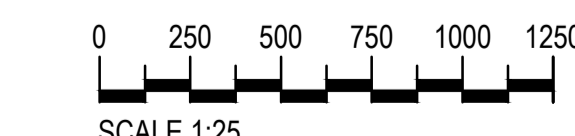
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 5 ELEVATIONS

PROJECT:
SANCTUARY STG 7

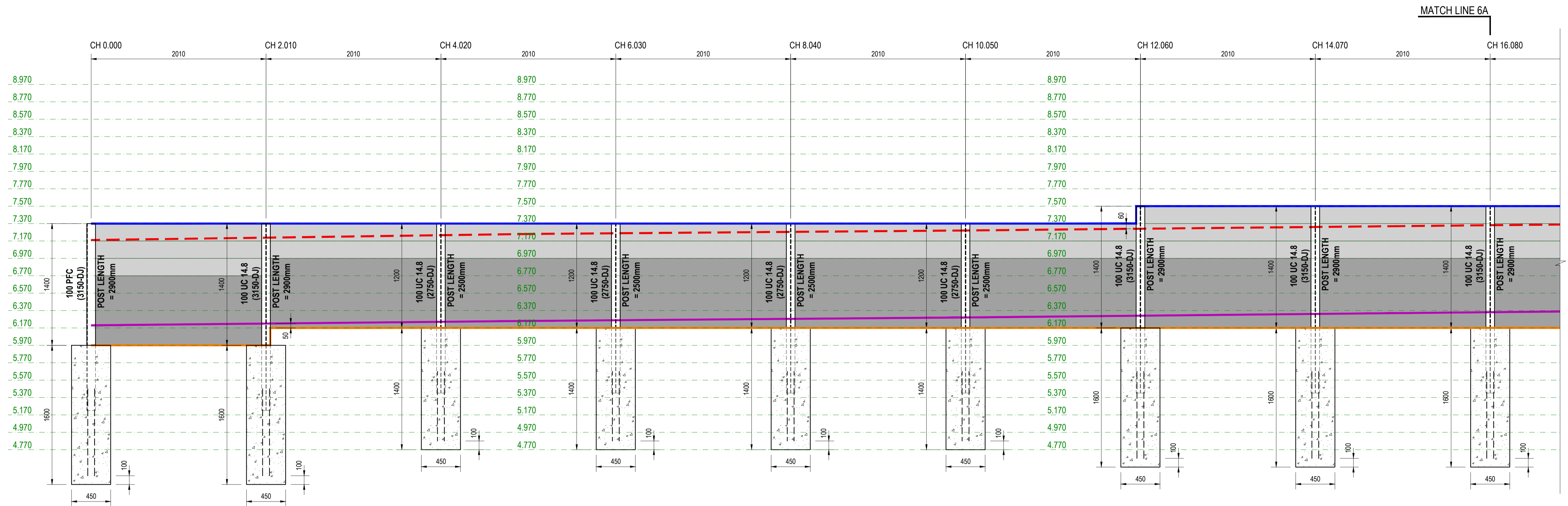
SCALE:



SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S151	SHEET SIZE: A1



RETAINING WALL - RW06 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

KONSEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 6 ELEVATIONS

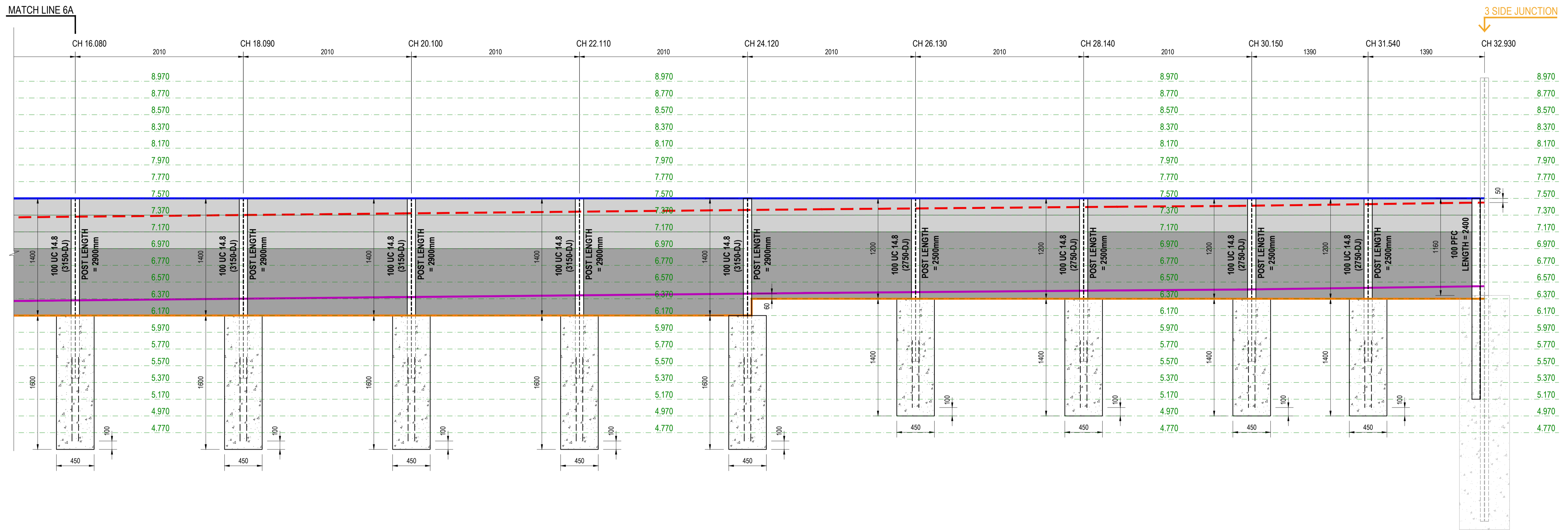
PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S160	SHEET SIZE: A1



CONT. RETAINING WALL - RW06 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL


ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:


CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 6 ELEVATIONS

PROJECT:
SANCTUARY STG 7

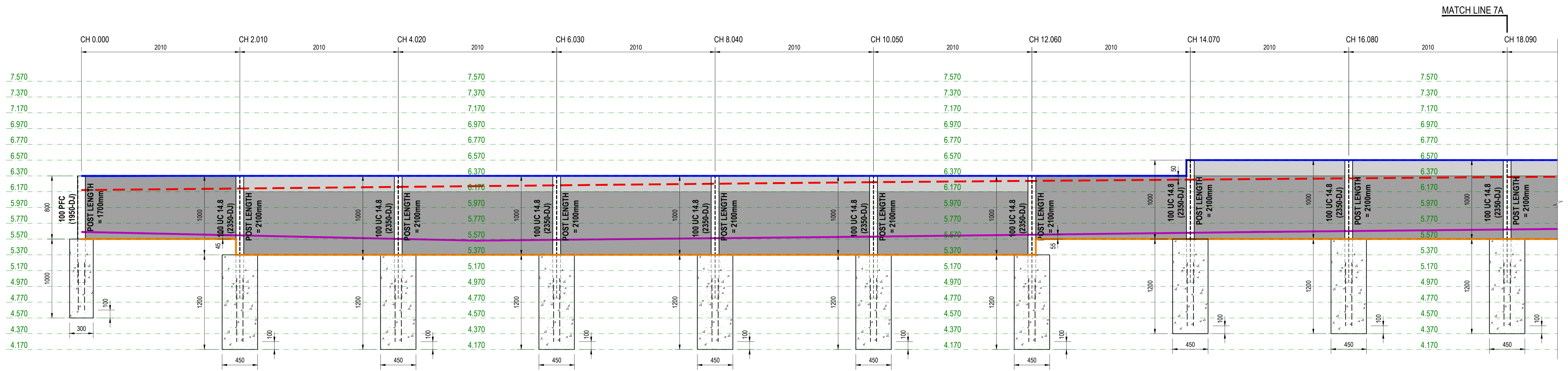
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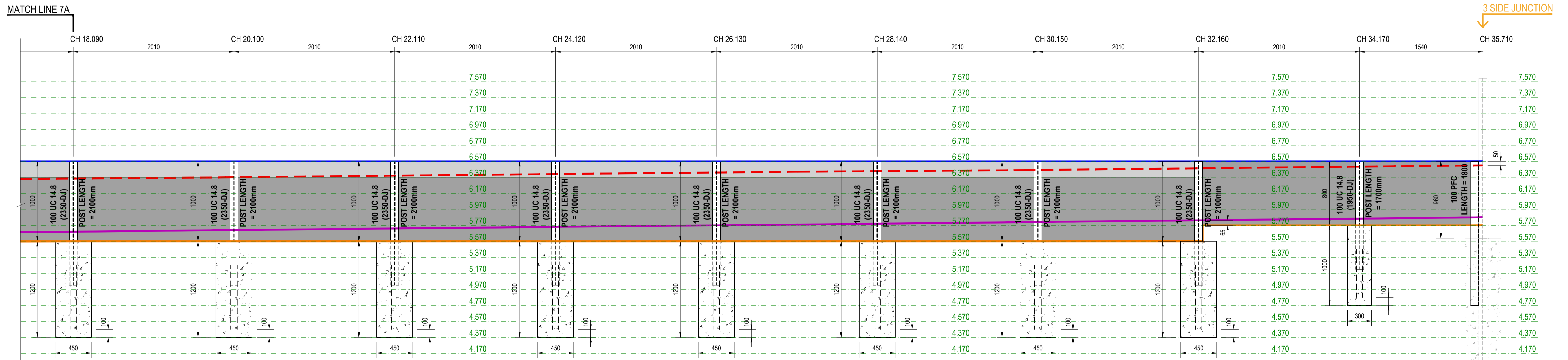
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S161	SHEET SIZE: A1



RETAINING WALL - RW07 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW07 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

- | | | | |
|--|-----------------------------|--|----------------------|
| | 200mm HIGH CONCRETE SLEEPER | | SURFACE TOP LEVEL |
| | 800mm HIGH CONCRETE SLEEPER | | SURFACE BOTTOM LEVEL |
| | SECOND SLEEPER | | TOP OF WALL |
| | | | BOTTOM OF WALL |

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

DRAWING TITLE:
RETAINING WALL - 7 ELEVATIONS

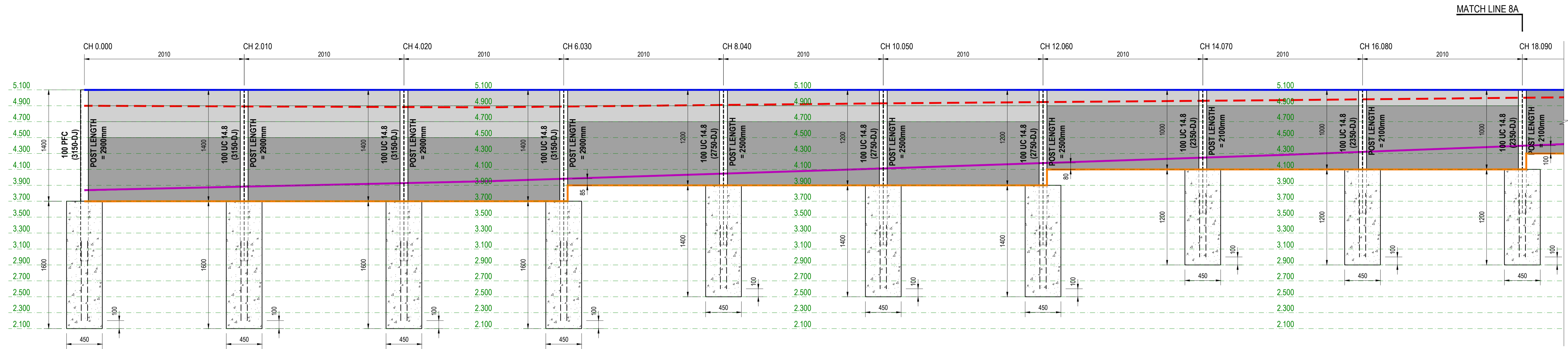
PROJECT:
SANCTUARY STG 7

SCALE:

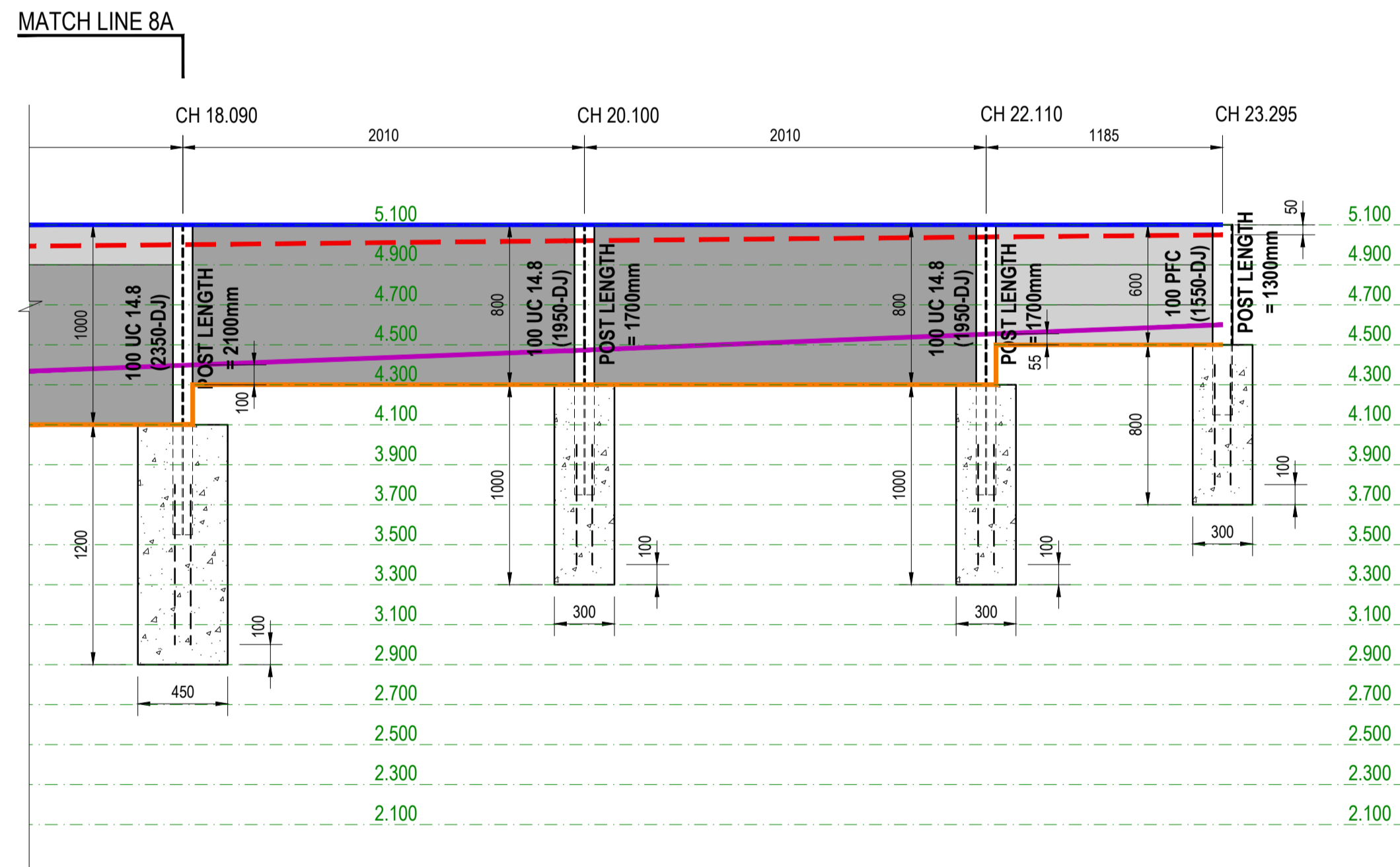
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S170	SHEET SIZE: A1



RETAINING WALL - RW08 (DESIGN SURCHARGE: 5kPa)
SCALE 1:25



CONT. RETAINING WALL - RW08 (DESIGN SURCHARGE: 5kPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 8 ELEVATIONS

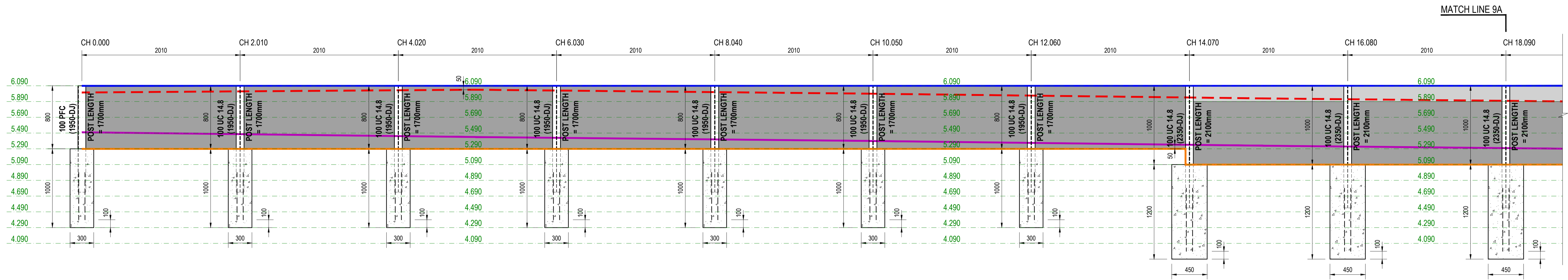
PROJECT:
SANCTUARY STG 7

SCALE:

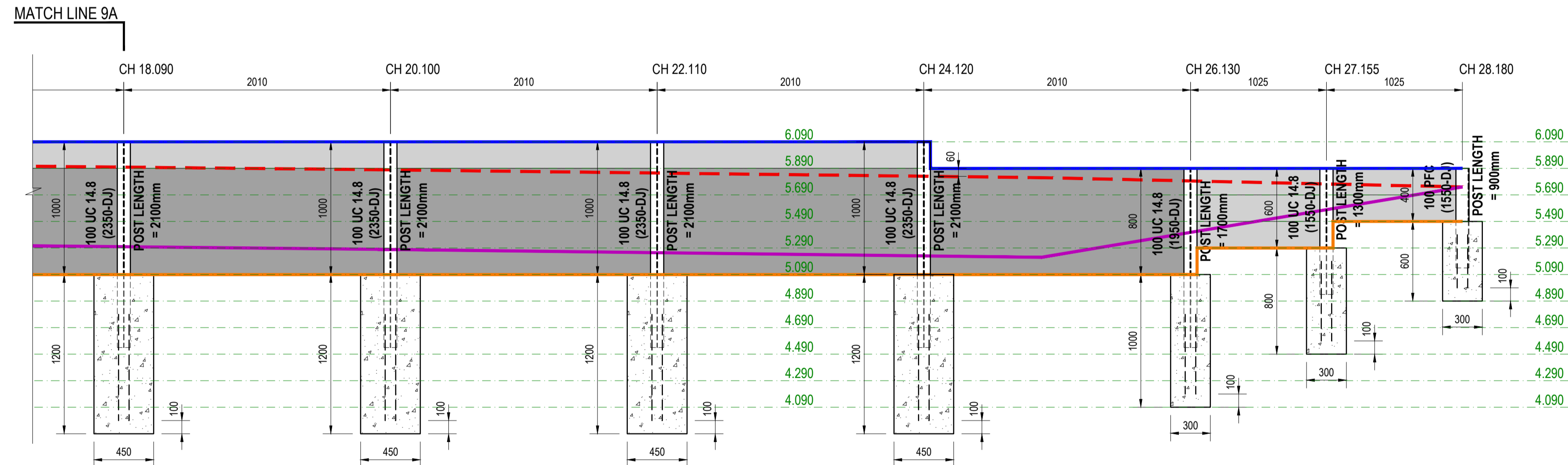
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S180	SHEET SIZE: A1



RETAINING WALL - RW09 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW09 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

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CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 9 ELEVATIONS

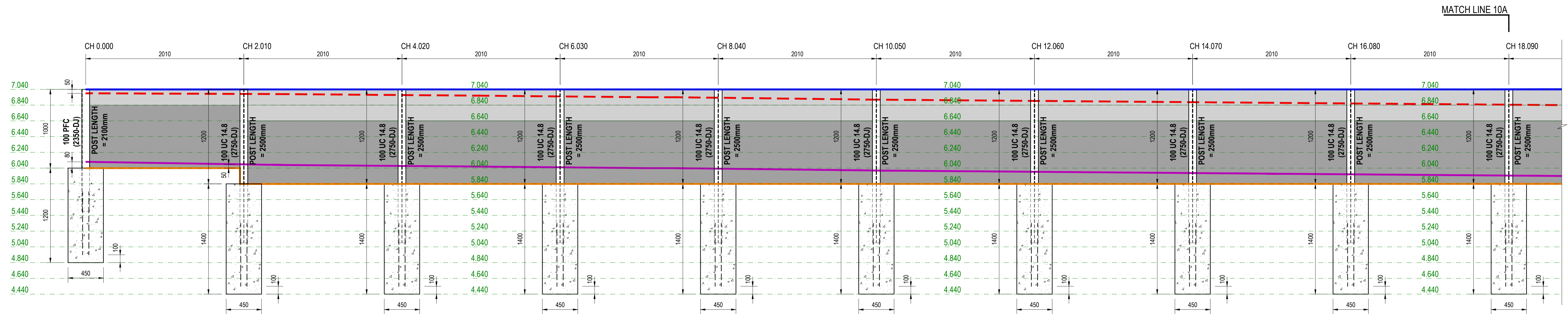
PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

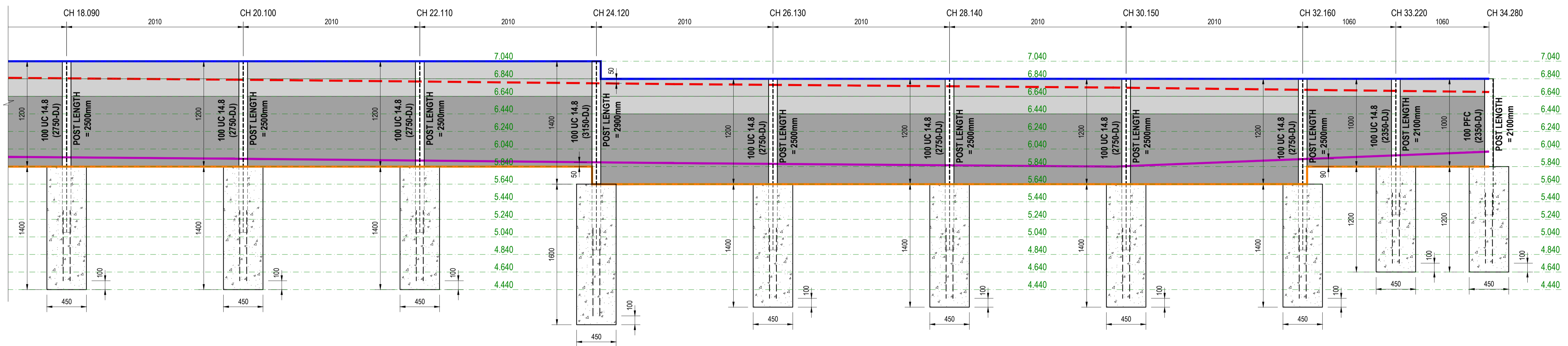
VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S190	SHEET SIZE: A1



RETAINING WALL - RW10 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

MATCHLINE 10A



CONT. RETAINING WALL - RW10 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL


ISSUE FOR CONSTRUCTION

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00	10-11-2024	ISSUE FOR CONSTRUCTION

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CONSULTANT:




KONSEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 10 ELEVATIONS

PROJECT:
SANCTUARY STG 7

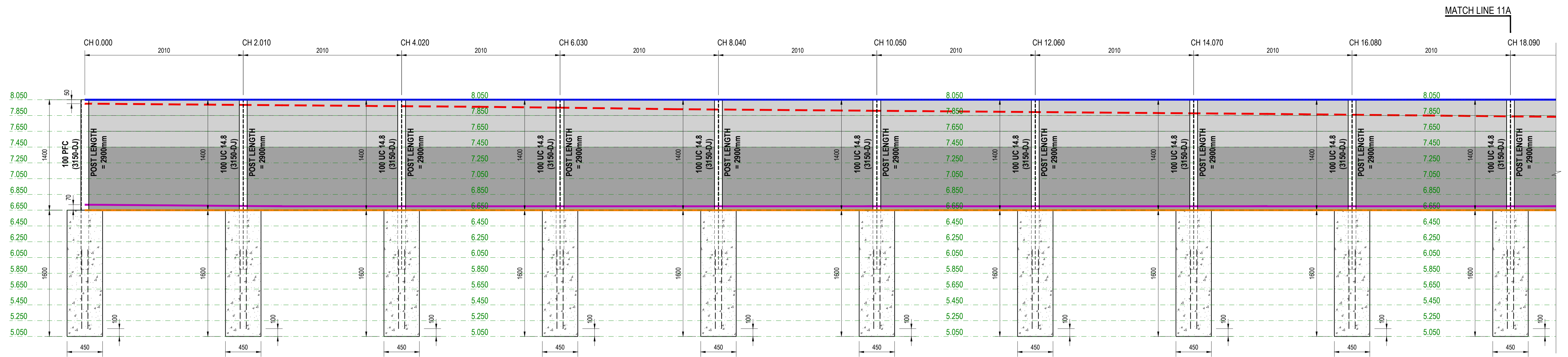
SCALE:



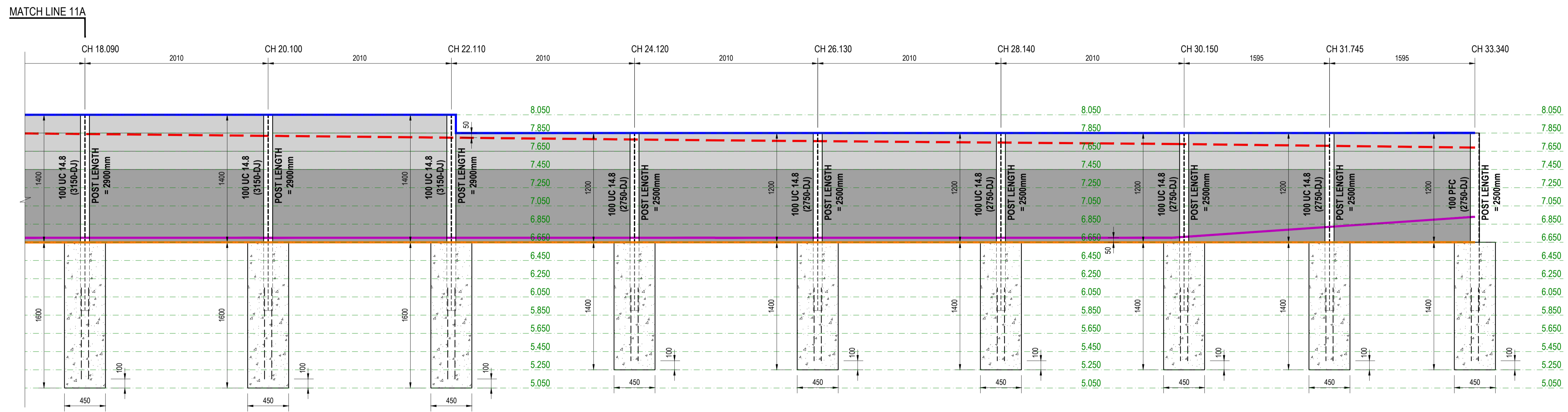
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S200	SHEET SIZE: A1






RETAINING WALL - RW11 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25







CONT. RETAINING WALL - RW11 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

-  200mm HIGH CONCRETE SLEEPER
-  800mm HIGH CONCRETE SLEEPER
-  SECOND SLEEPER

LEGEND

-  SURFACE TOP LEVEL
-  SURFACE BOTTOM LEVEL
-  TOP OF WALL
-  BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

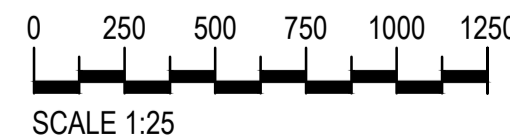
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 11 ELEVATIONS

PROJECT:
SANCTUARY STG 7

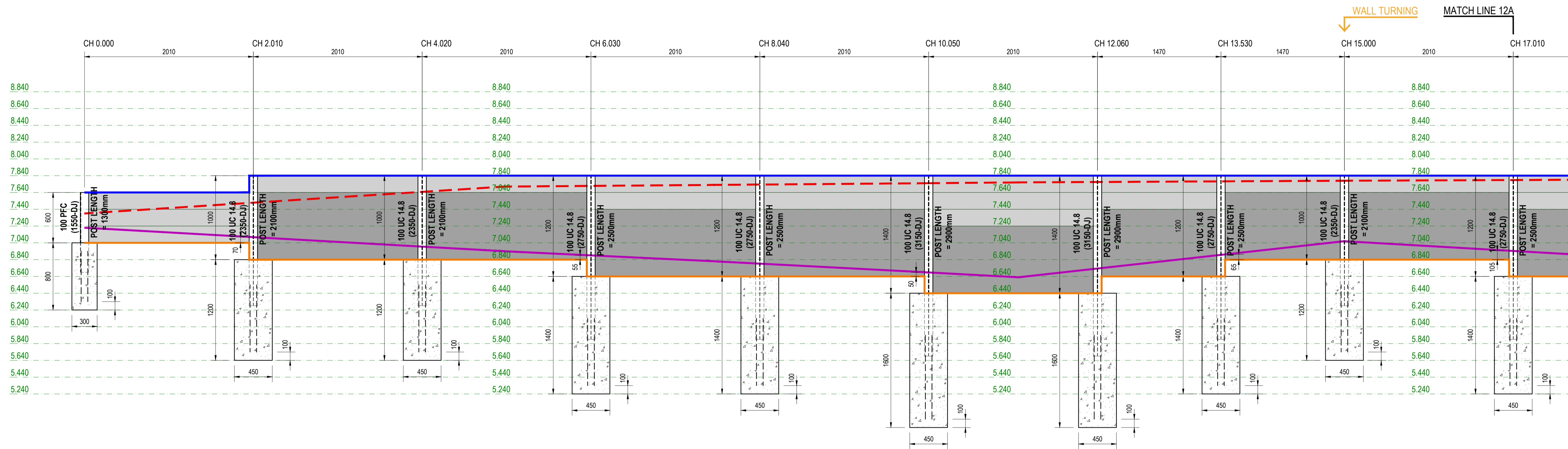
SCALE:



SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S210	SHEET SIZE: A1



RETAINING WALL - RW12 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

NOTE:

DEPTH OF PIERS INCREASED IN RW12
CH. 23.95 TO CH. 40.75 DUE TO TOE SLOPE

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER
- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

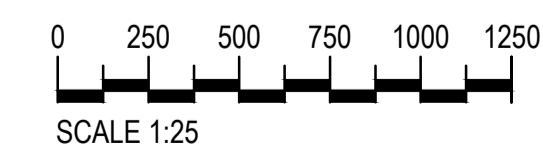
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 12 ELEVATIONS

PROJECT:
SANCTUARY STG 7

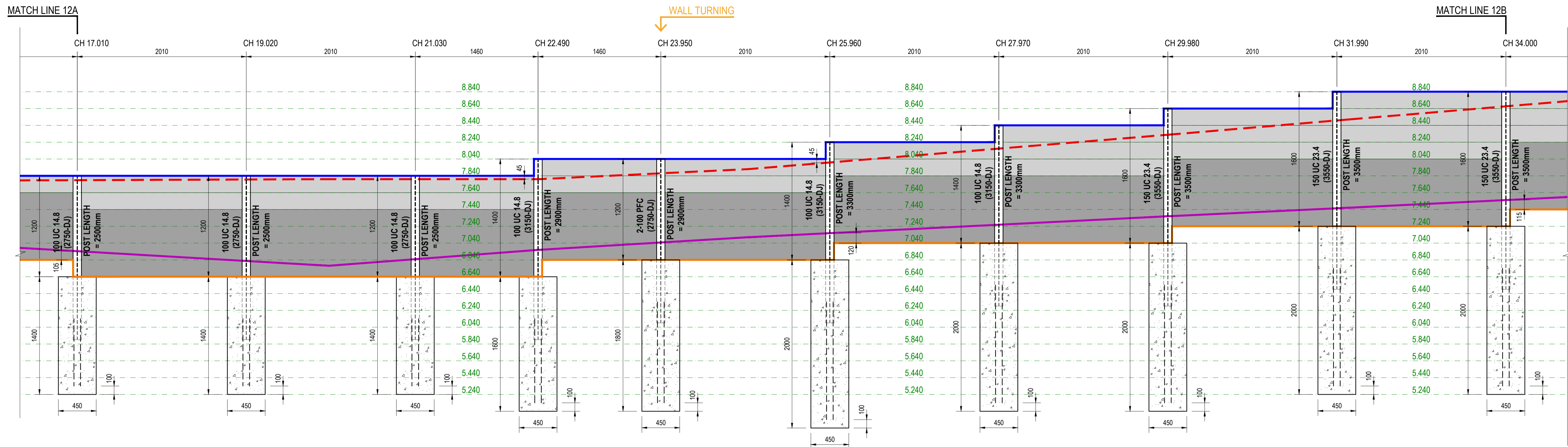
SCALE:



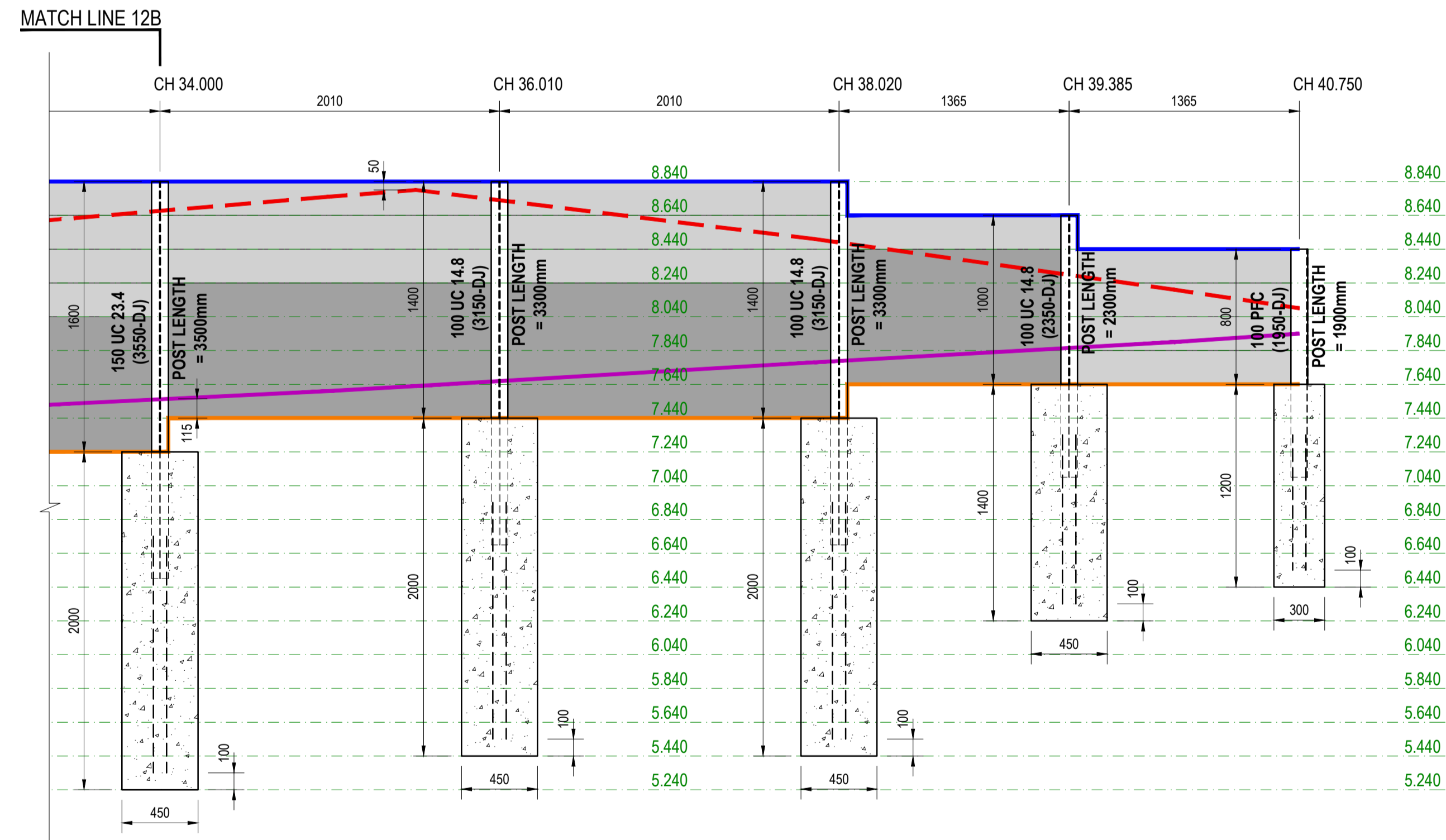
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S220	SHEET SIZE: A1



CONT. RETAINING WALL - RW12 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW12 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

NOTE:

DEPTH OF PIERS INCREASED IN RW12
CH. 23.95 TO CH. 40.75 DUE TO TOE SLOPE

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION
REVISION RECORD		

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 12 ELEVATIONS

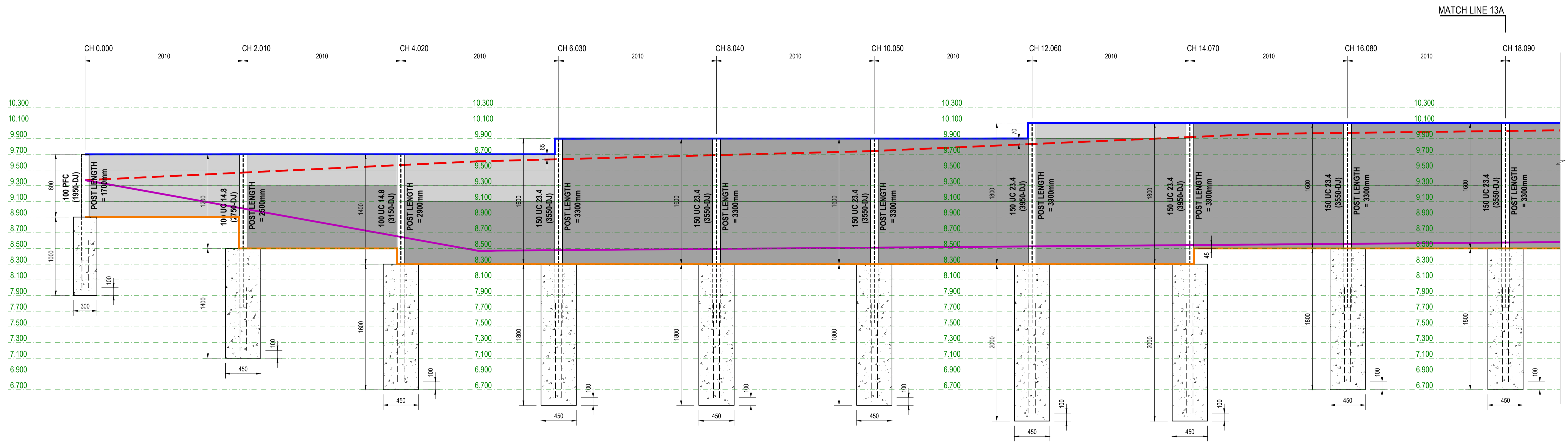
PROJECT:
SANCTUARY STG 7

SCALE:








SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S221	SHEET SIZE: A1



RETAINING WALL - RW13 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25


- | | |
|---|--|
|  200mm HIGH CONCRETE SLEEPER |  SURFACE TOP LEVEL |
|  800mm HIGH CONCRETE SLEEPER |  SURFACE BOTTOM LEVEL |
|  SECOND SLEEPER |  TOP OF WALL |
| |  BOTTOM OF WALL |
- ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

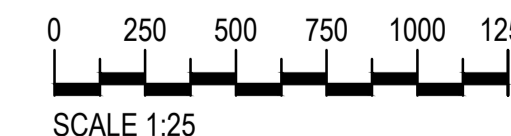
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 13 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:



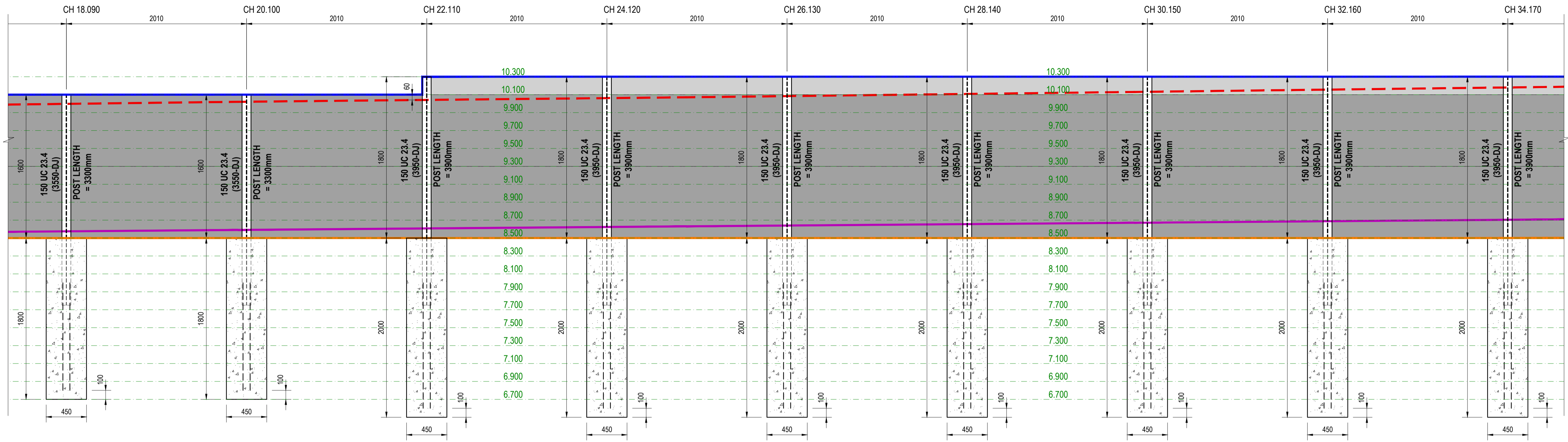
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S230	SHEET SIZE: A1

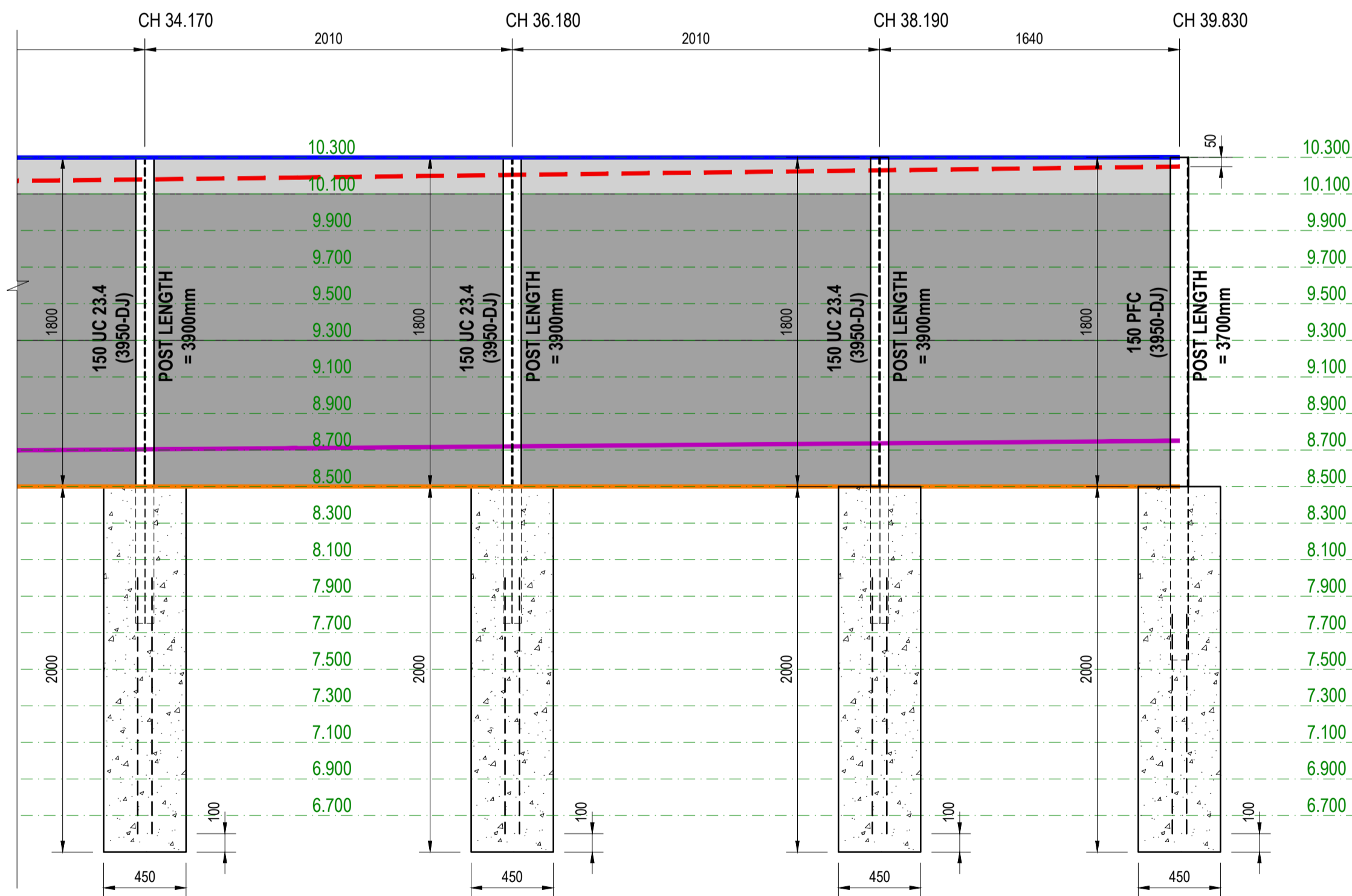
MATCH LINE 13A

MATCH LINE 13B



CONT. RETAINING WALL - RW13 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

MATCH LINE 13B



CONT. RETAINING WALL - RW13 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 13 ELEVATIONS

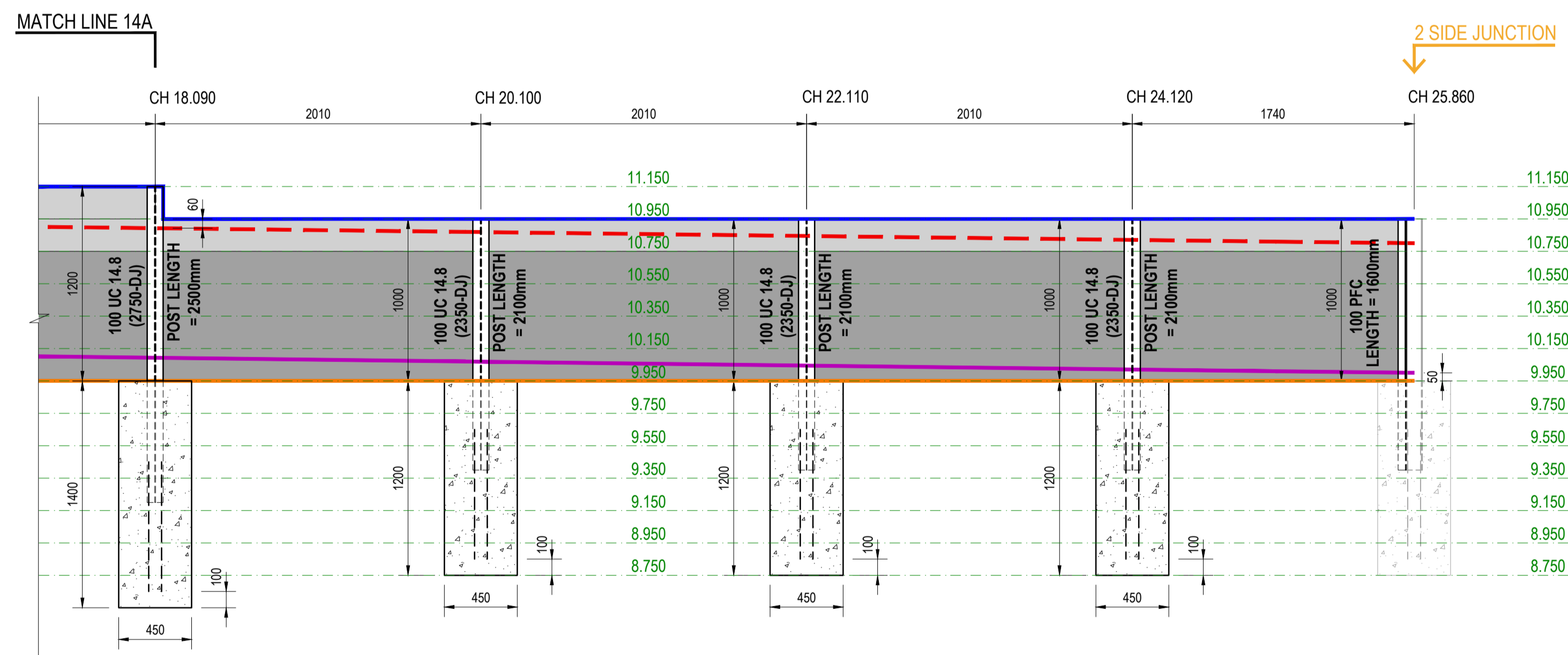
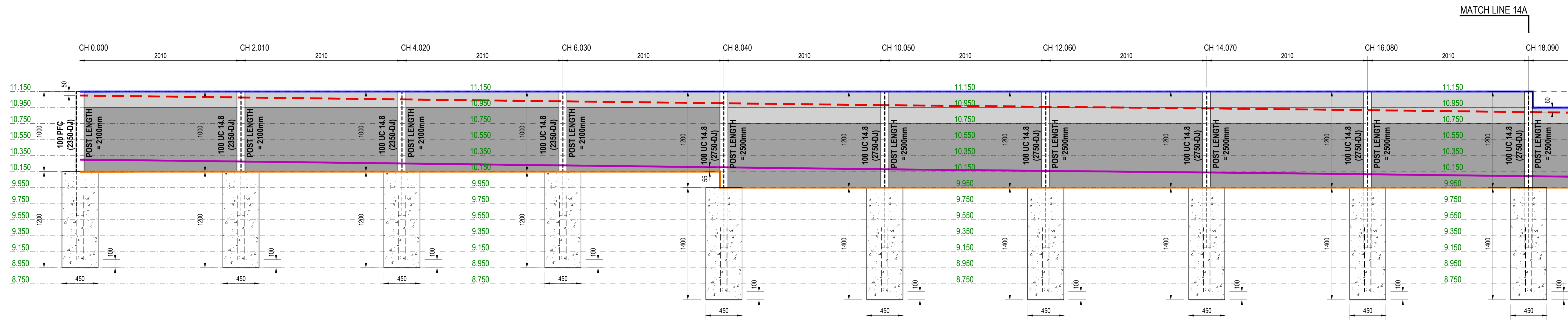
PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S231	SHEET SIZE: A1



LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL


ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:



KONCEPTUAL
CONSULTING ENGINEERS

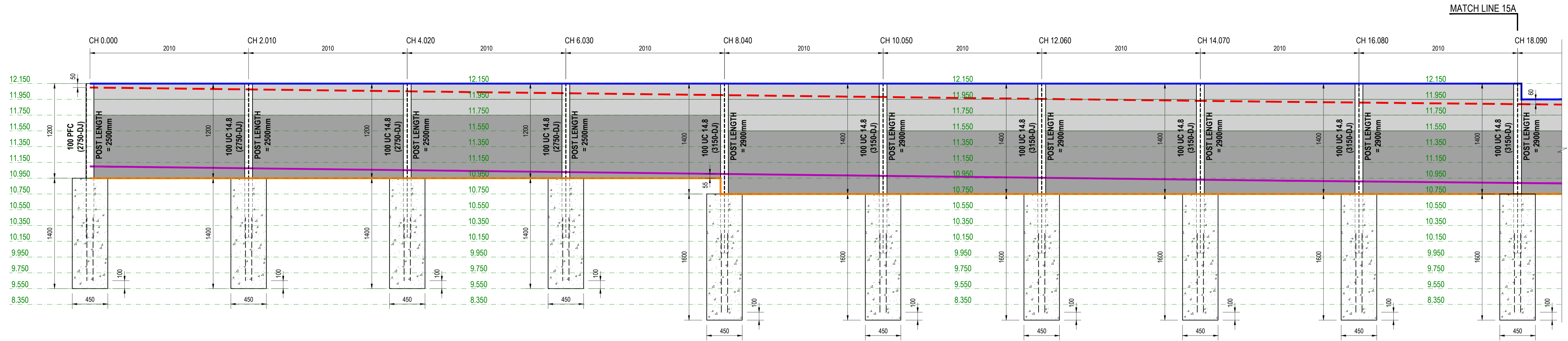
DRAWING TITLE:
RETAINING WALL - 14 ELEVATIONS

PROJECT:
SANCTUARY STG 7

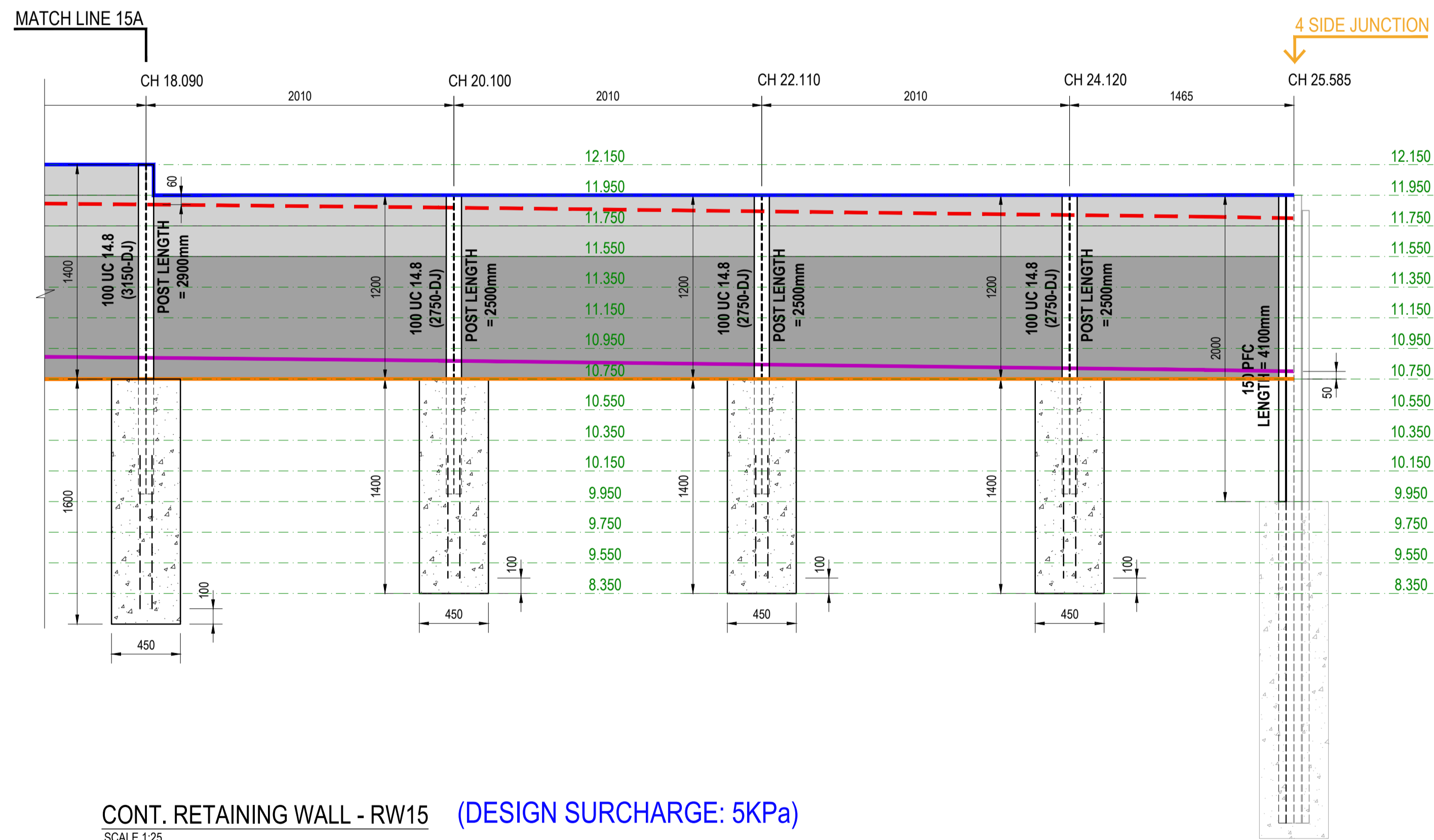
SCALE:
0 250 500 750 1000 1250
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S240	SHEET SIZE: A1



RETAINING WALL - RW15 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW15 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25


- LEGEND**
- 200mm HIGH CONCRETE SLEEPER
 - 800mm HIGH CONCRETE SLEEPER
 - SECOND SLEEPER
 - SURFACE TOP LEVEL
 - SURFACE BOTTOM LEVEL
 - TOP OF WALL
 - BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

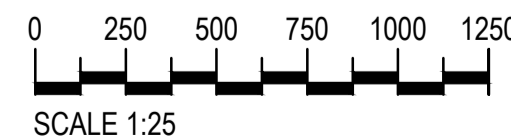
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 15 ELEVATIONS

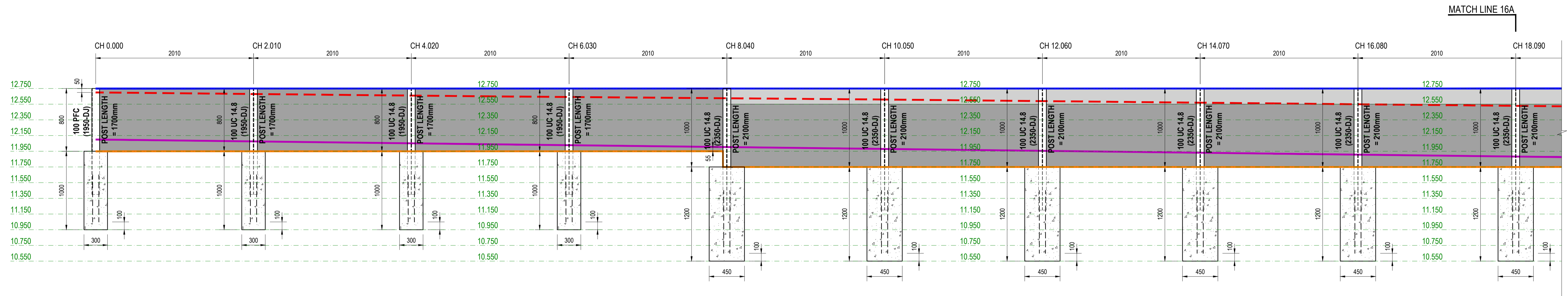
PROJECT:
SANCTUARY STG 7

SCALE:



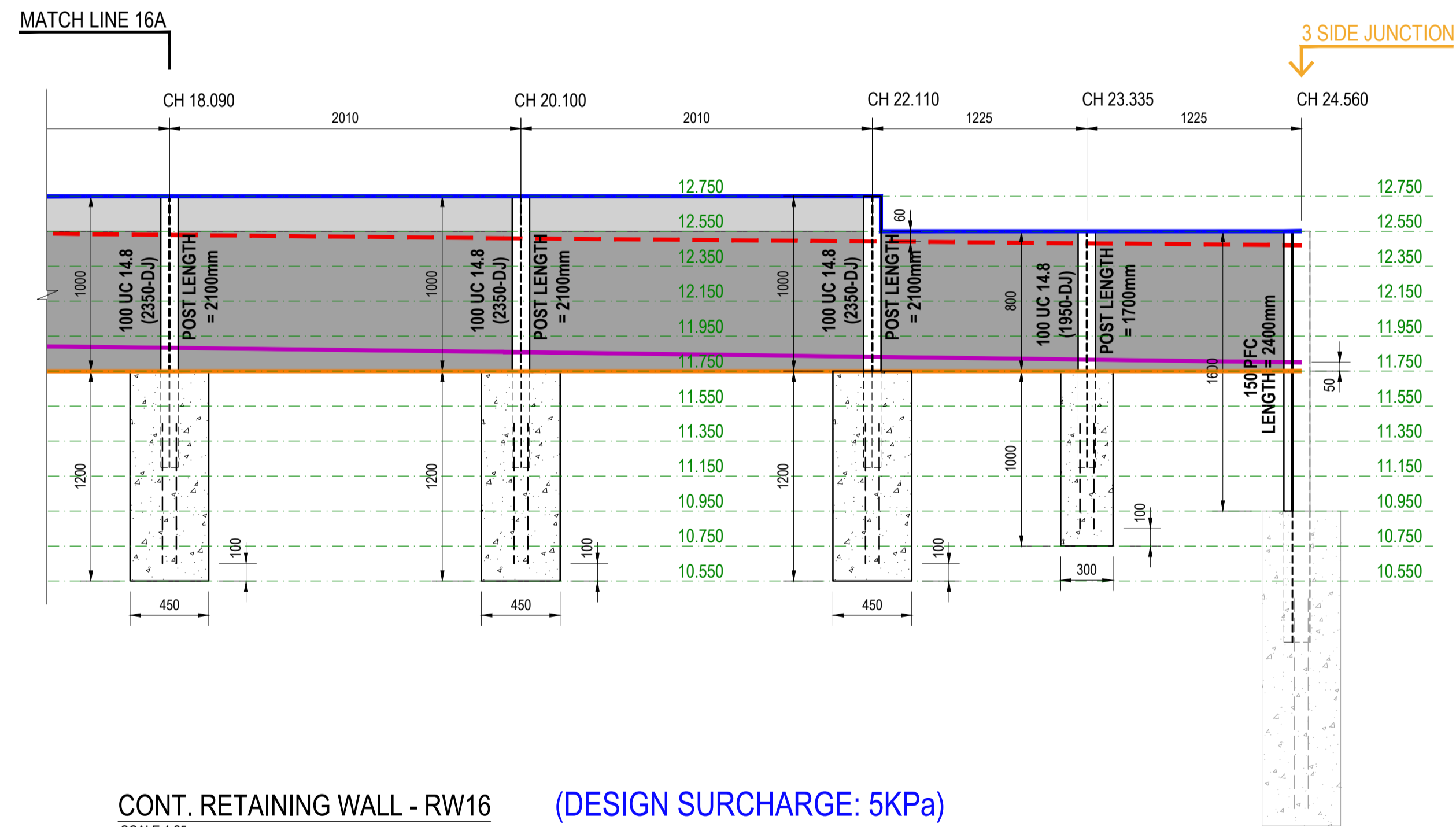
VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S250	SHEET SIZE: A1



RETAINING WALL - RW16 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25



CONT. RETAINING WALL - RW16 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION
REVISION RECORD		

CLIENT:

CONSULTANT:

KONSEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 16 ELEVATIONS

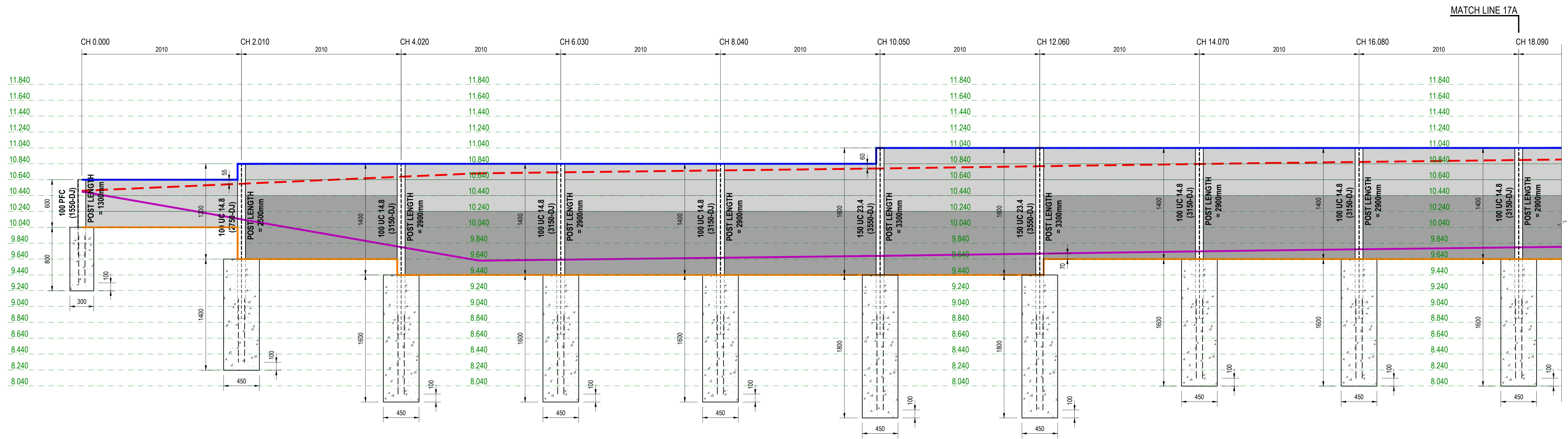
PROJECT:
SANCTUARY STG 7

SCALE:

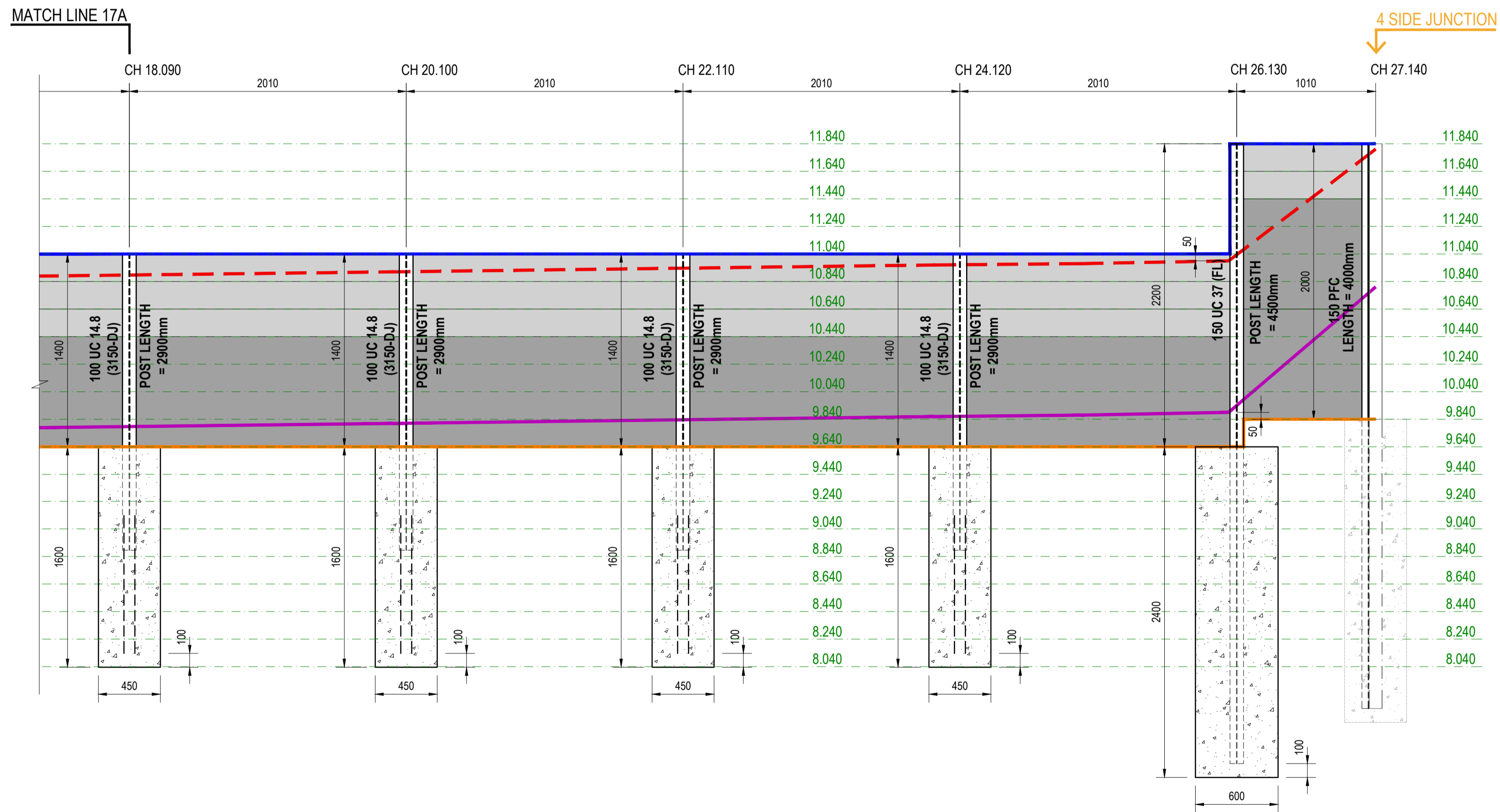
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S260	SHEET SIZE: A1



RETAINING WALL - RW17 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW17 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

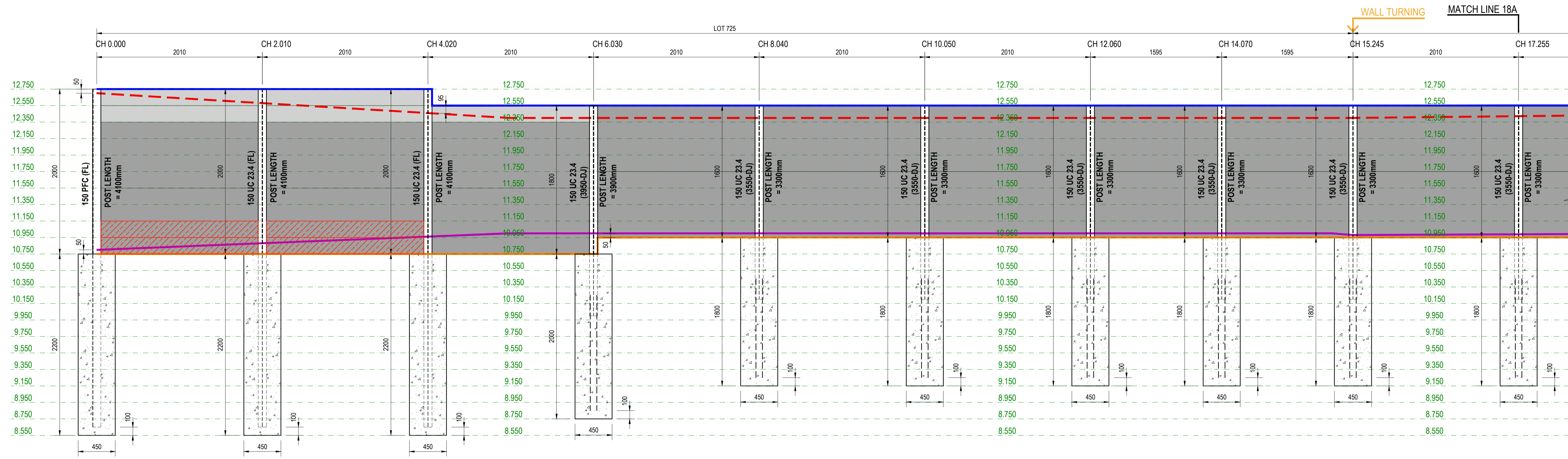
DRAWING TITLE:
RETAINING WALL - 17 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S270	SHEET SIZE: A1



RETAINING WALL - RW18 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER
- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

LEGEND

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION
REVISION RECORD		

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 18 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFIED BY: NW
DATE: 02-11-2024
SCALE: 1:25

DESIGNED BY: AN
PROJECT NO: 2410181
REV: 00

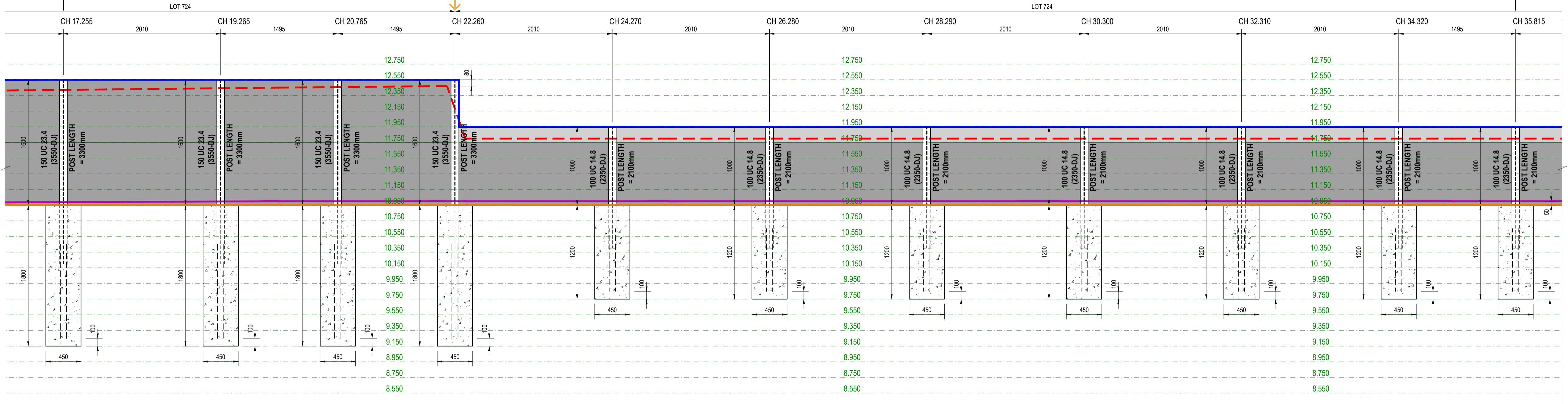
DRAWN BY: IK
DRAWING NO: S280
SHEET SIZE: A1

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY:	DATE:	SCALE:
NW	02-11-2024	1:25
DESIGNED BY:	PROJECT NO:	REV:
AN	2410181	00
DRAWN BY:	DRAWING NO:	SHEET SIZE:
IK	S280	A1

MATCH LINE 18A

MATCH LINE 18B



CONT. RETAINING WALL - RW18 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 18 ELEVATIONS

PROJECT:
SANCTUARY STG 7

SCALE:

SCALE 1:25

VERIFIED BY: NW
DATE: 02-11-2024
SCALE: 1:25

DESIGNED BY: AN
PROJECT NO: 2410181
REV: 00

DRAWN BY: IK
DRAWING NO: S281
SHEET SIZE: A1

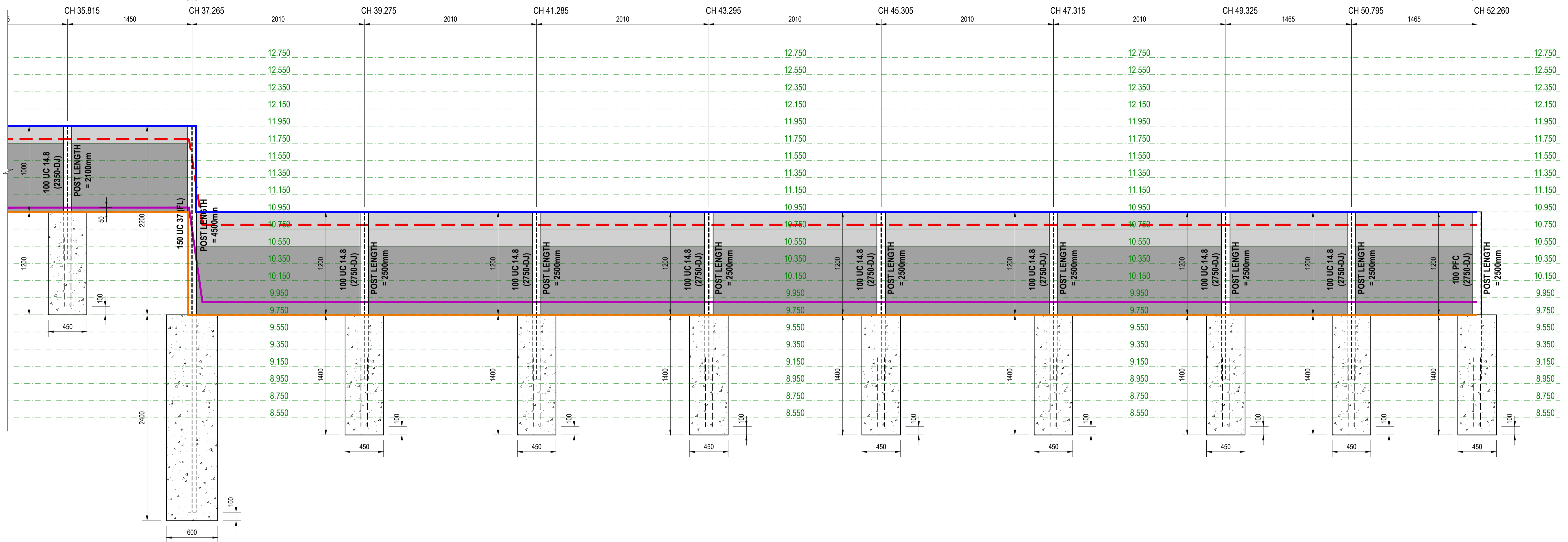
VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S281	SHEET SIZE: A1

MATCH LINE 18B

4 SIDE JUNCTION

LOT 723



CONT. RETAINING WALL - RW18 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

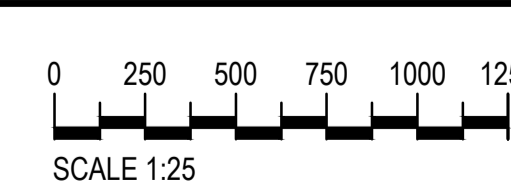


KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 18 ELEVATIONS

PROJECT:
SANCTUARY STG 7

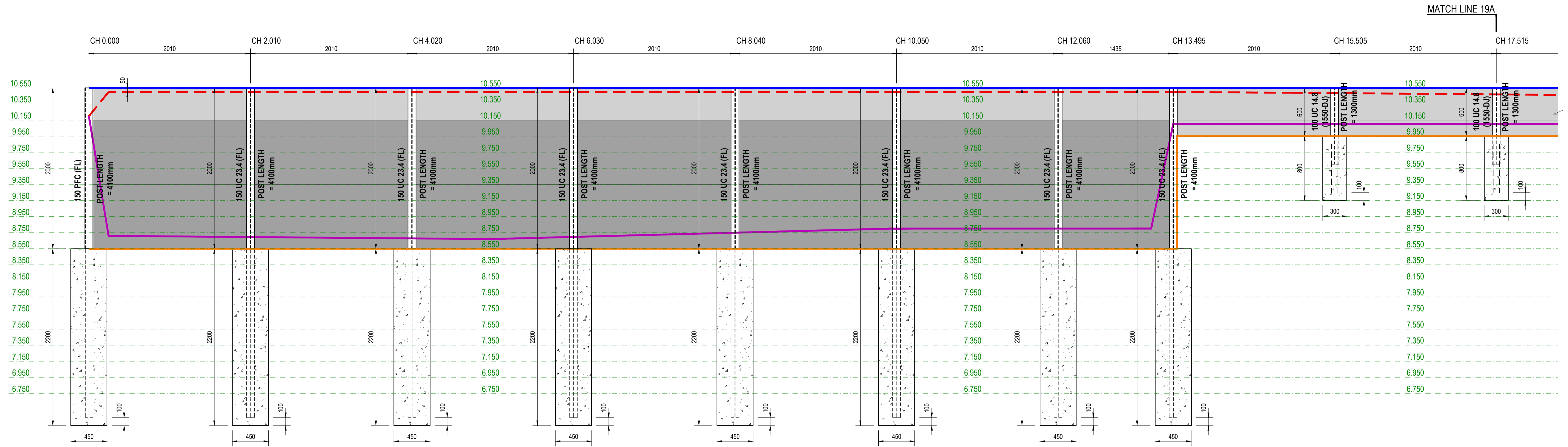
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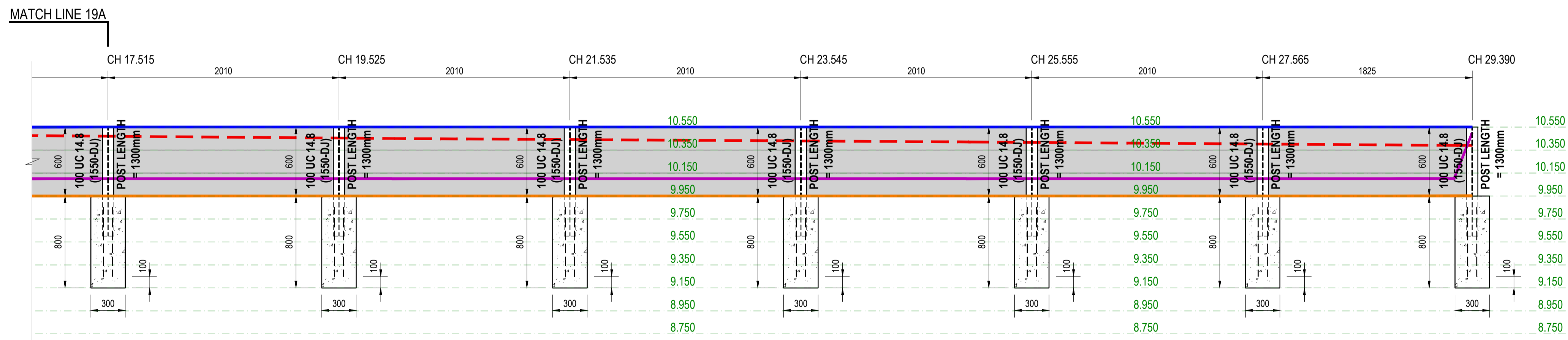
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S282	SHEET SIZE: A1



RETAINING WALL - RW19 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW19 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION
REVISION RECORD		

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CONSULTANT:

KONSEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:
RETAINING WALL - 19 ELEVATIONS

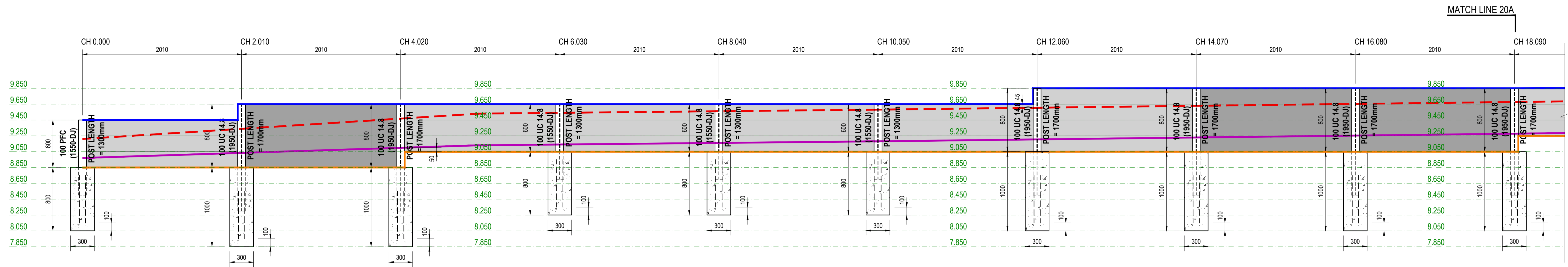
PROJECT:
SANCTUARY STG 7

SCALE:

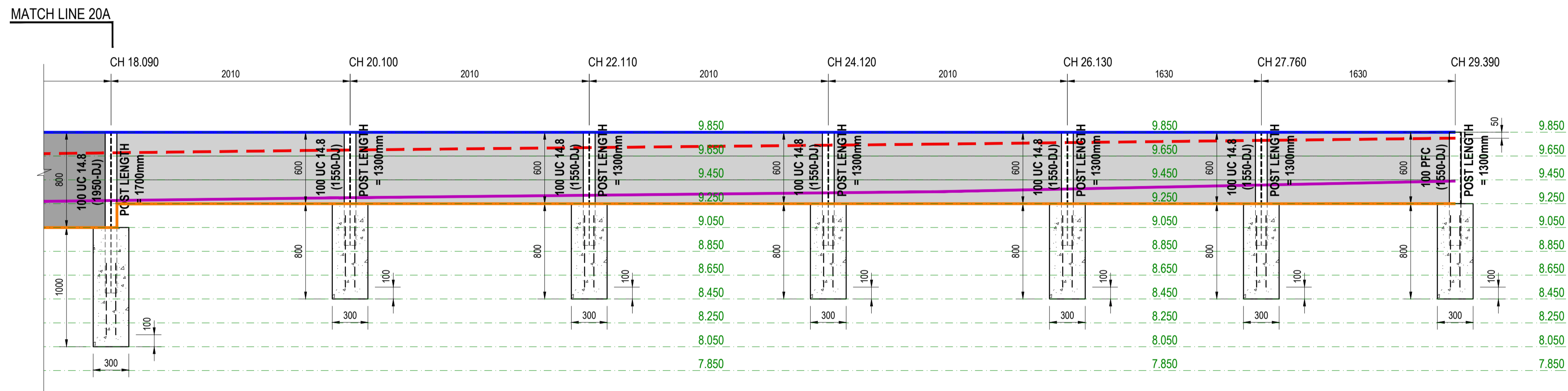
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VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S290	SHEET SIZE: A1



RETAINING WALL - RW20 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

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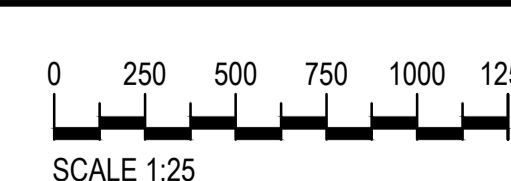
CONSULTANT:



DRAWING TITLE:
RETAINING WALL - 20 ELEVATIONS

PROJECT:
SANCTUARY STG 7

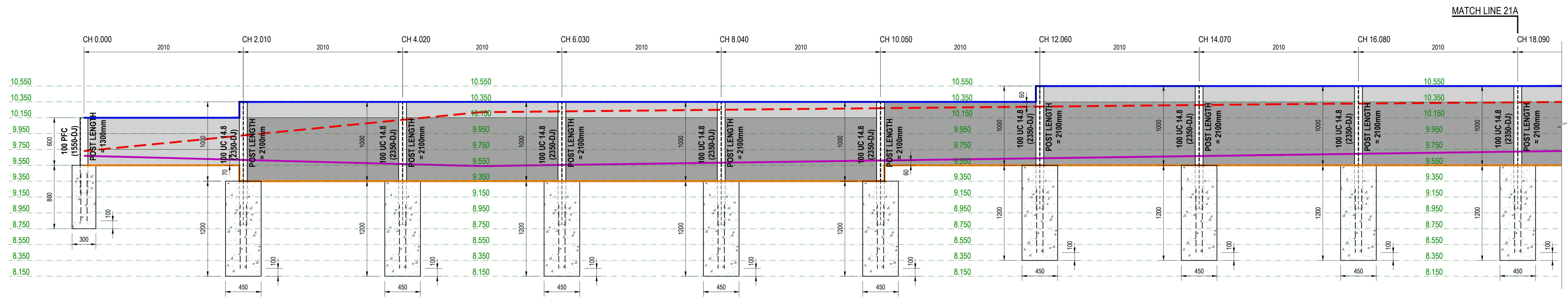
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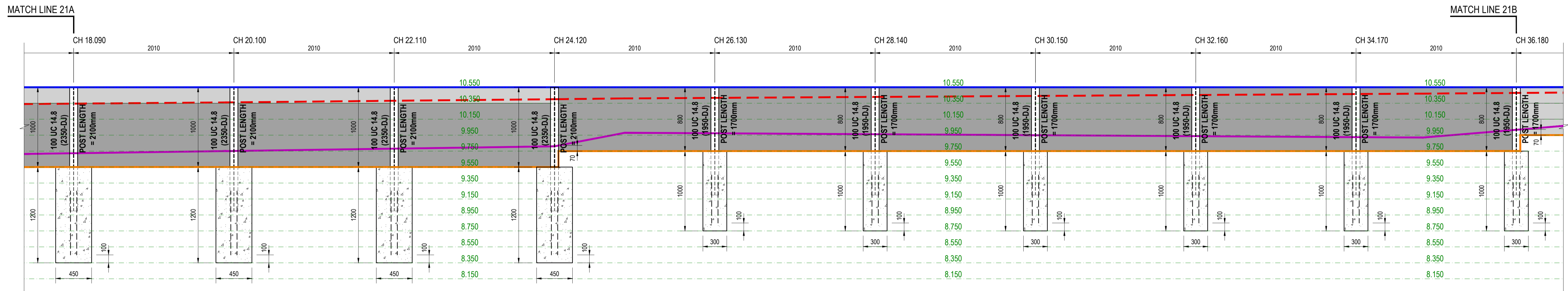
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

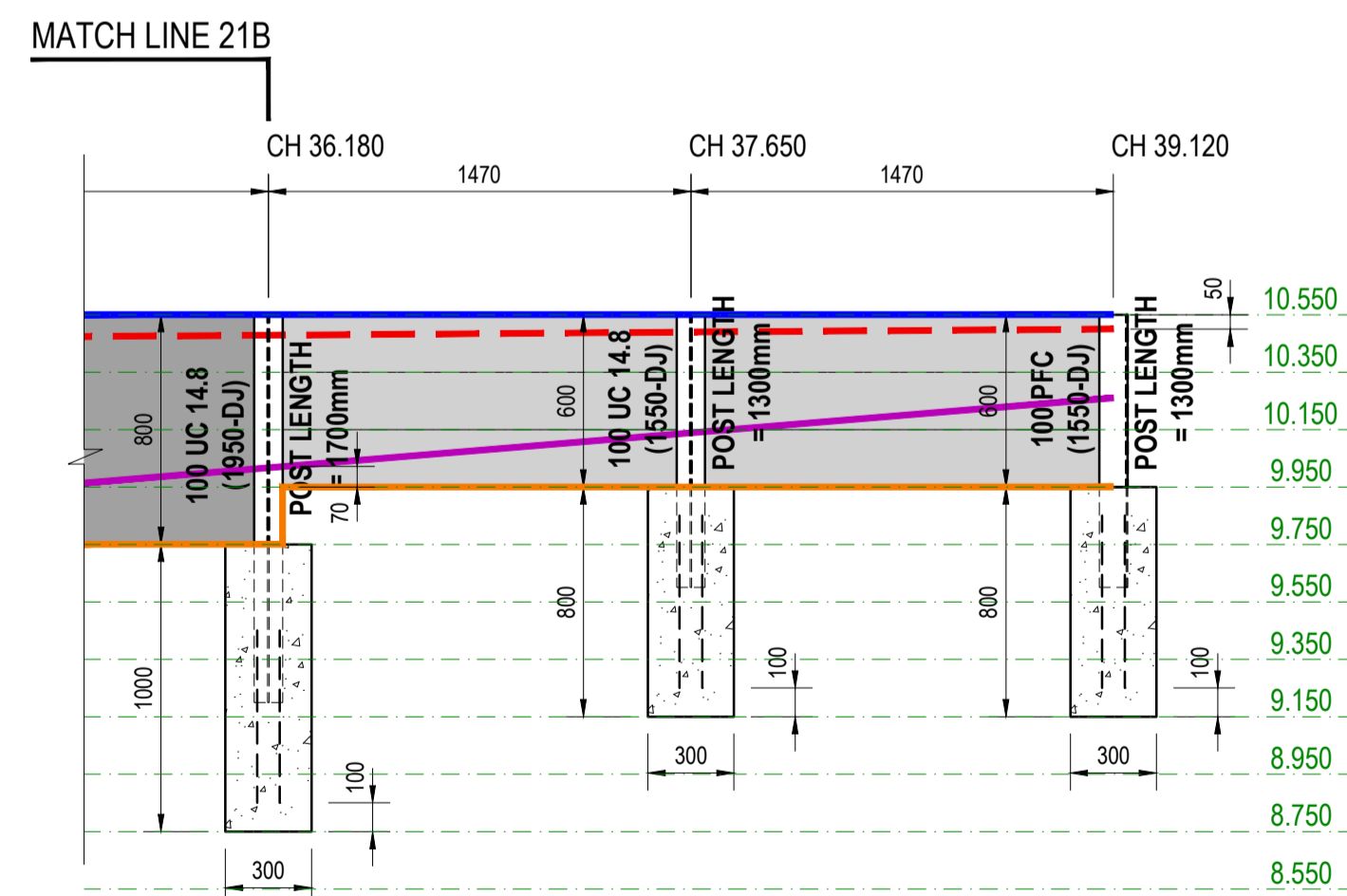
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DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S300	SHEET SIZE: A1



RETAINING WALL - RW21 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW21 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25



CONT. RETAINING WALL - RW21 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:



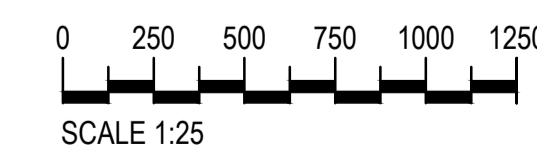
DRAWING TITLE:

RETAINING WALL - 21 ELEVATIONS

PROJECT:

SANCTUARY STG 7

SCALE:



VERIFIED BY:

NW

DATE:

02-11-2024

SCALE:

1:25

DESIGNED BY:

AN

PROJECT NO:

2410181

REV:

00

DRAWN BY:

IK

DRAWING NO:

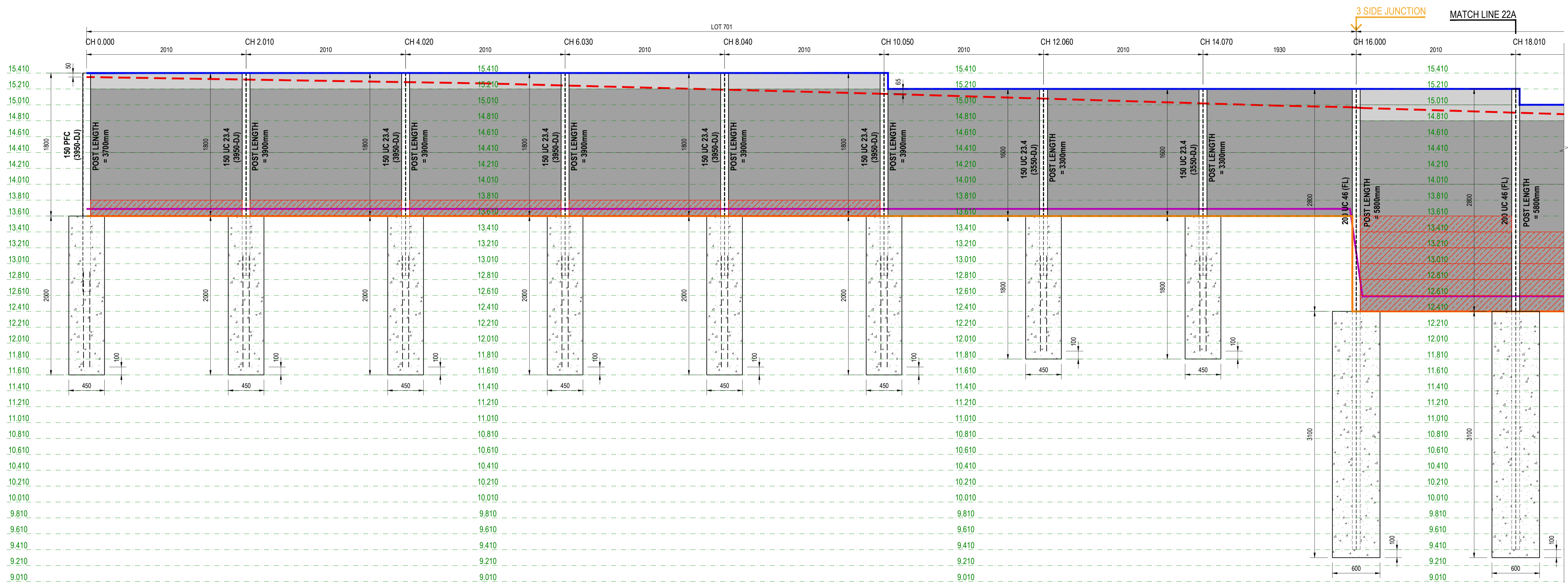
S310

SHEET SIZE:

A1

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD



RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

- | | |
|-----------------------------|----------------------|
| LEGEND | LEGEND |
| 200mm HIGH CONCRETE SLEEPER | SURFACE TOP LEVEL |
| 800mm HIGH CONCRETE SLEEPER | SURFACE BOTTOM LEVEL |
| SECOND SLEEPER | TOP OF WALL |
| | BOTTOM OF WALL |

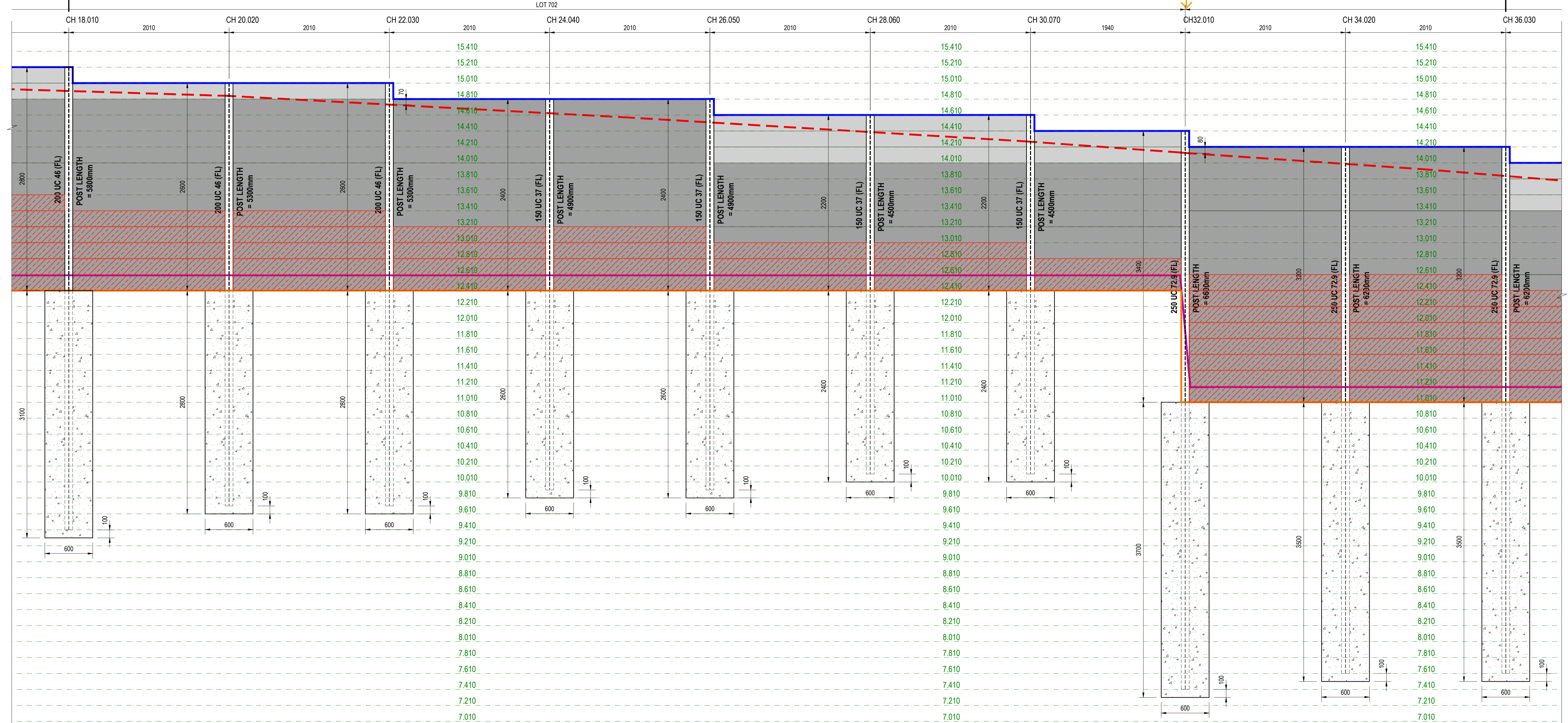
ISSUE FOR CONSTRUCTION

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00	10-11-2024	ISSUE FOR CONSTRUCTION																
REV No.	DATE	DESCRIPTION																
REVISION RECORD																		
					RETAINING WALL - 22 ELEVATIONS	SCALE 1:25	NW	02-11-2024	1:25									
					PROJECT:		DESIGNED BY:	PROJECT NO:	REV:									
					SANCTUARY STG 7	VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.	AN	2410181	00									
							DRAWN BY:	DRAWING NO:	SHEET SIZE:									
							IK	S320	A1									

MATCH LINE 22A

3 SIDE JUNCTION

MATCH LINE 22B



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:

KONSEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:

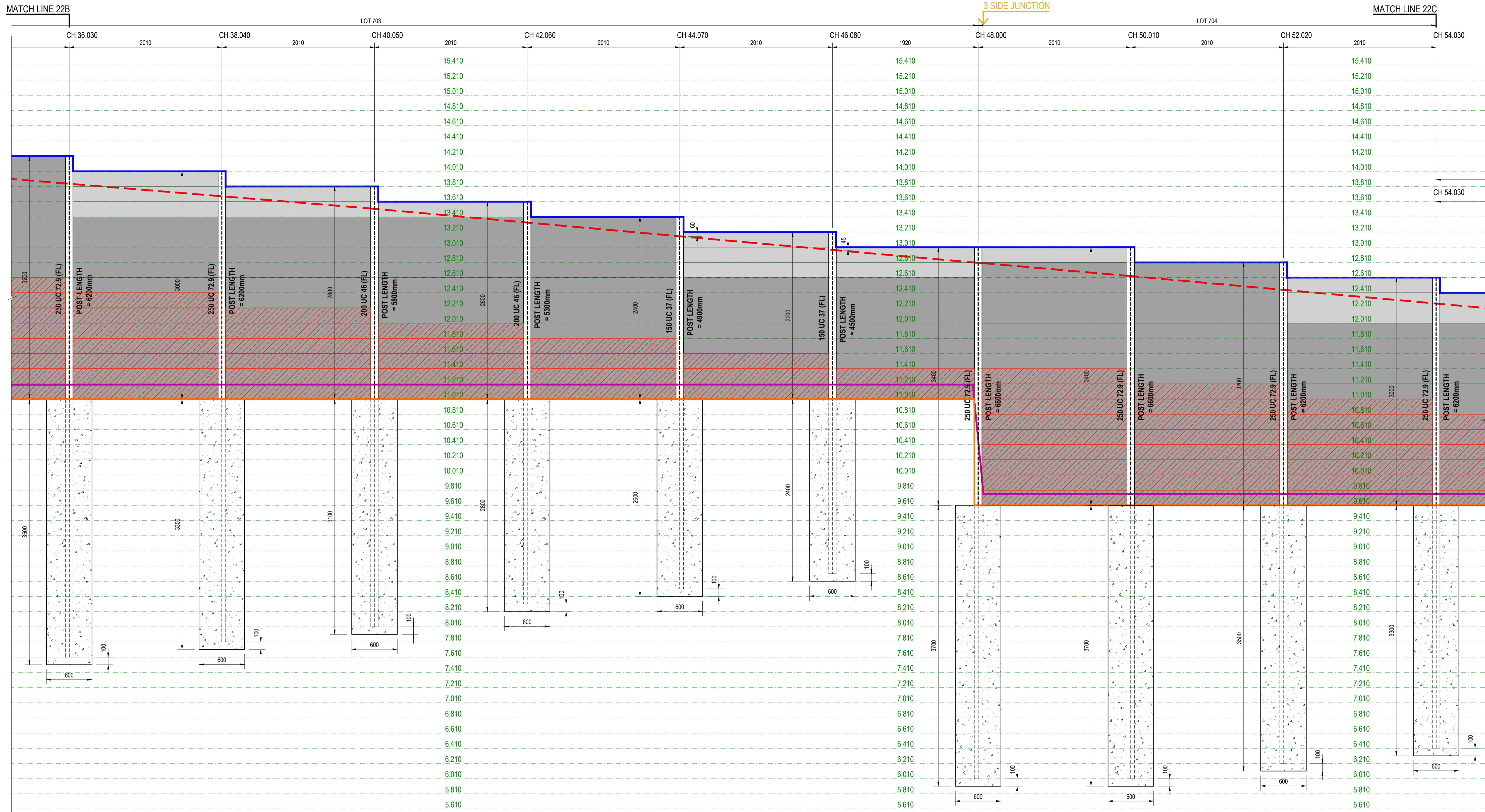
PROJECT: **SANCTUARY STG 7**

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S321	SHEET SIZE: A1



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

REVISION RECORD

CLIENT:

CONSULTANT:

KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:

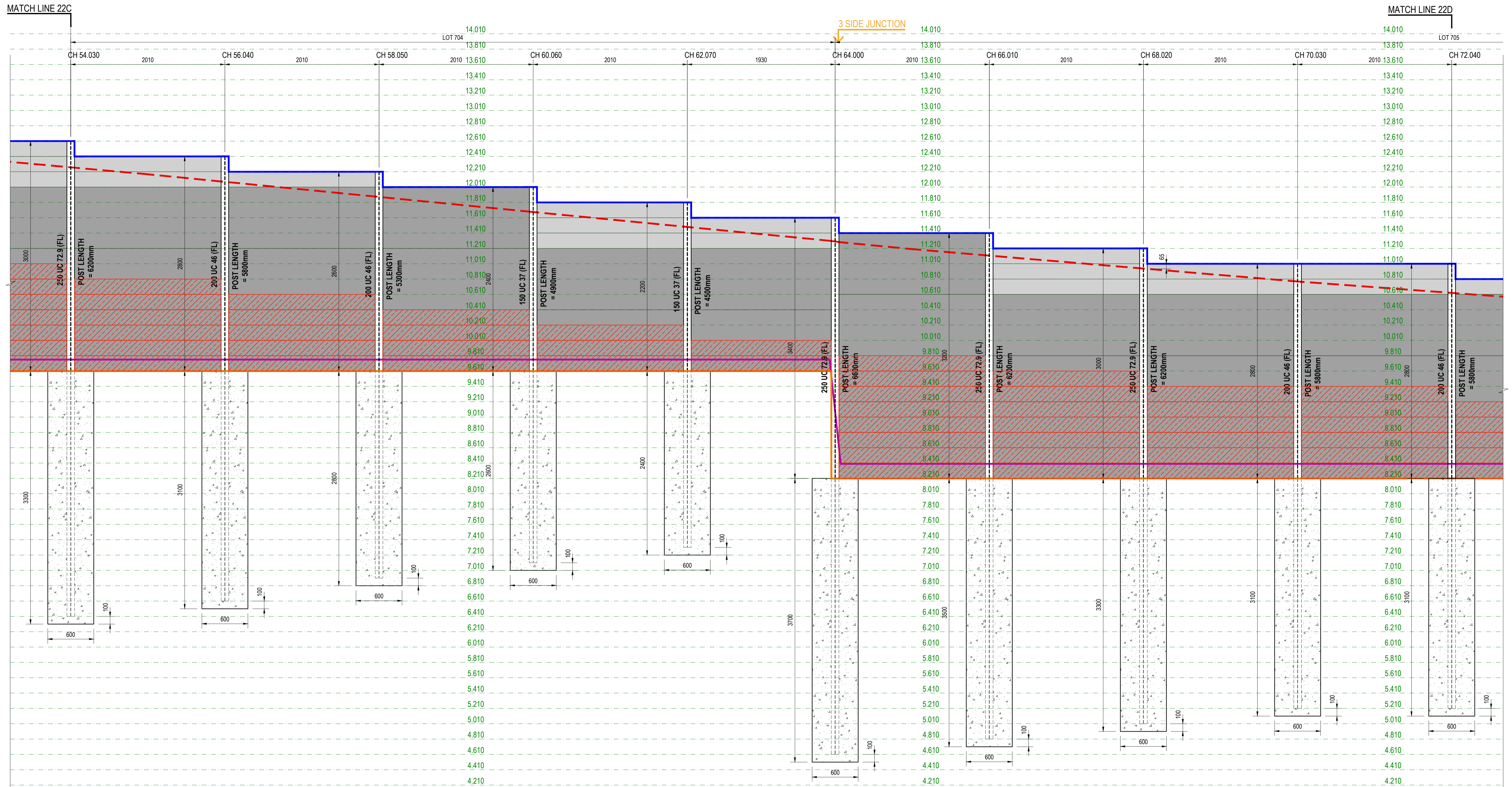
PROJECT: **SANCTUARY STG 7**

SCALE:

SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S322	SHEET SIZE: A1



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:


CONSULTANT:



DRAWING TITLE:

PROJECT: SANCTUARY STG 7

SCALE:



VERIFIED BY: NW

DESIGNED BY: AN

DRAWN BY: IK

DATE: 02-11-2024

PROJECT NO: 2410181

DRAWING NO: S323

SCALE: 1:25

REV: 00

SHEET SIZE: A1

VERIFIED BY: NW

DESIGNED BY: AN

DRAWN BY: IK

DATE: 02-11-2024

PROJECT NO: 2410181

DRAWING NO: S323

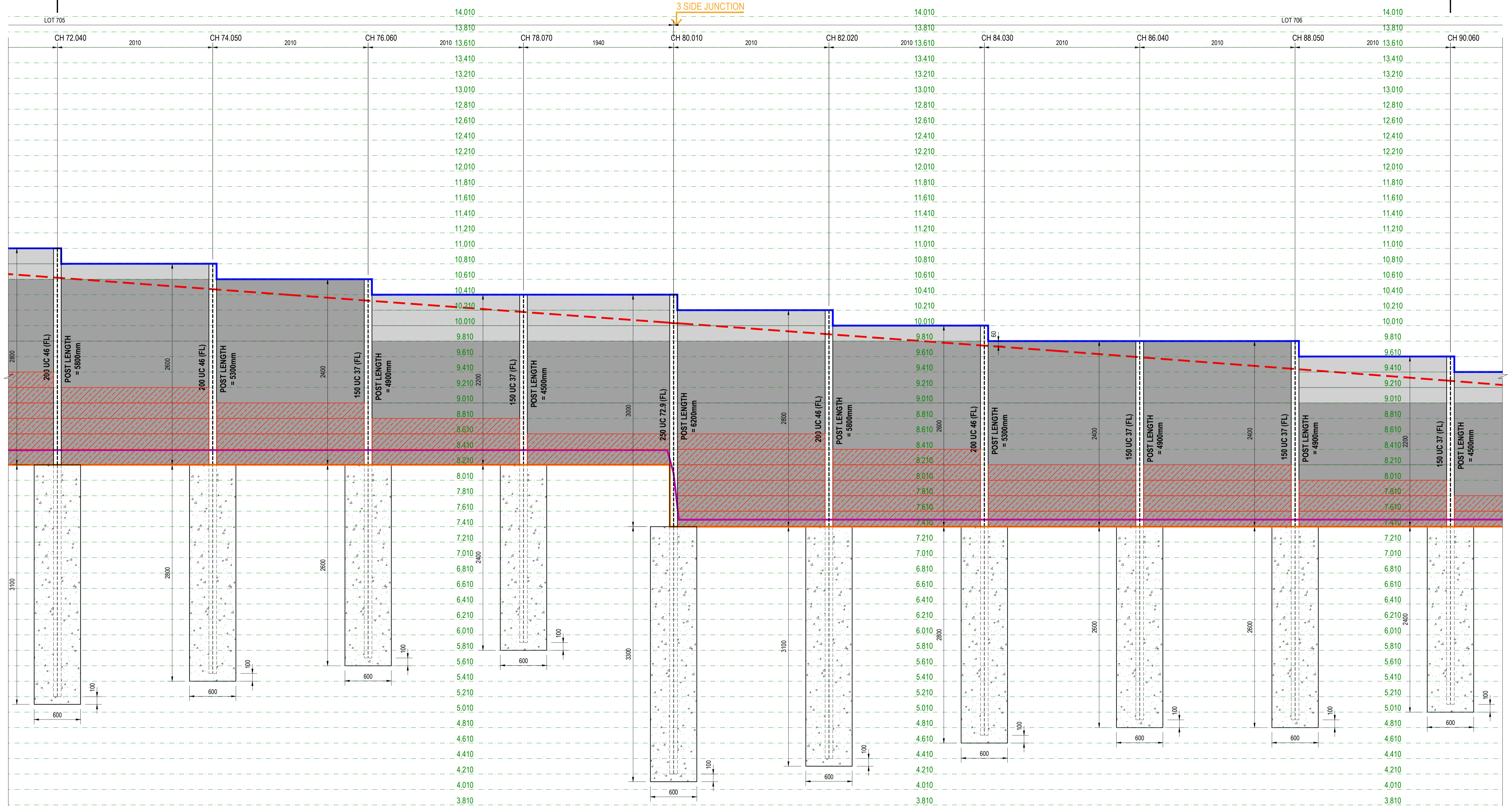
SCALE: 1:25

REV: 00

SHEET SIZE: A1

MATCH LINE 22D

MATCH LINE 22E



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)
SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:

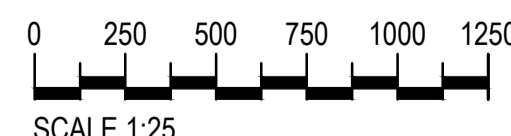


KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:

PROJECT: **SANCTUARY STG 7**

SCALE:



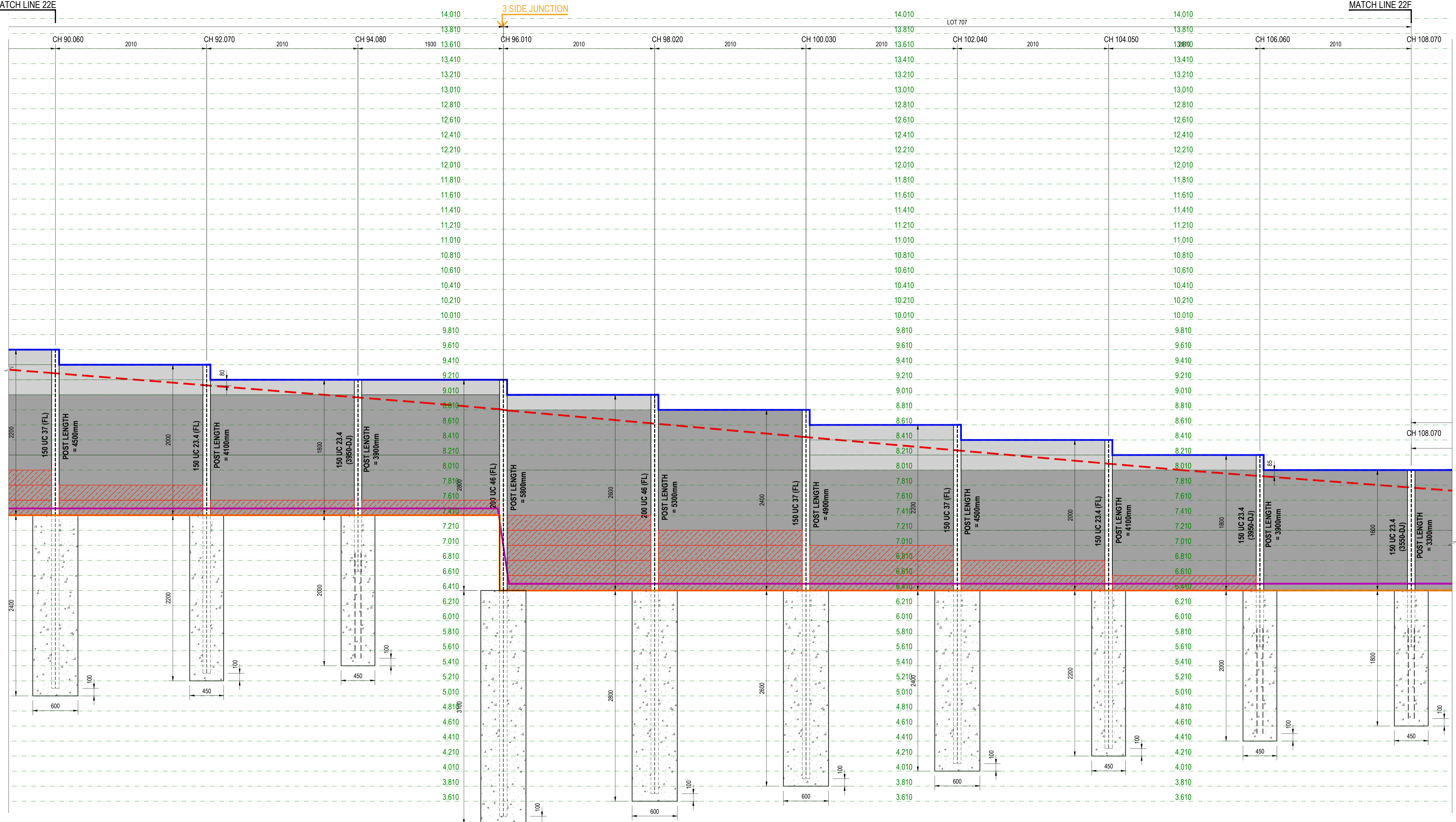
SCALE 1:25

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S324	SHEET SIZE: A1

MATCH LINE 22E

MATCH LINE 22F



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND


- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

REV No.	DATE	DESCRIPTION
00	10-11-2024	ISSUE FOR CONSTRUCTION

CLIENT:

CONSULTANT:




KONCEPTUAL
CONSULTING ENGINEERS

DRAWING TITLE:

PROJECT: **SANCTUARY STG 7**

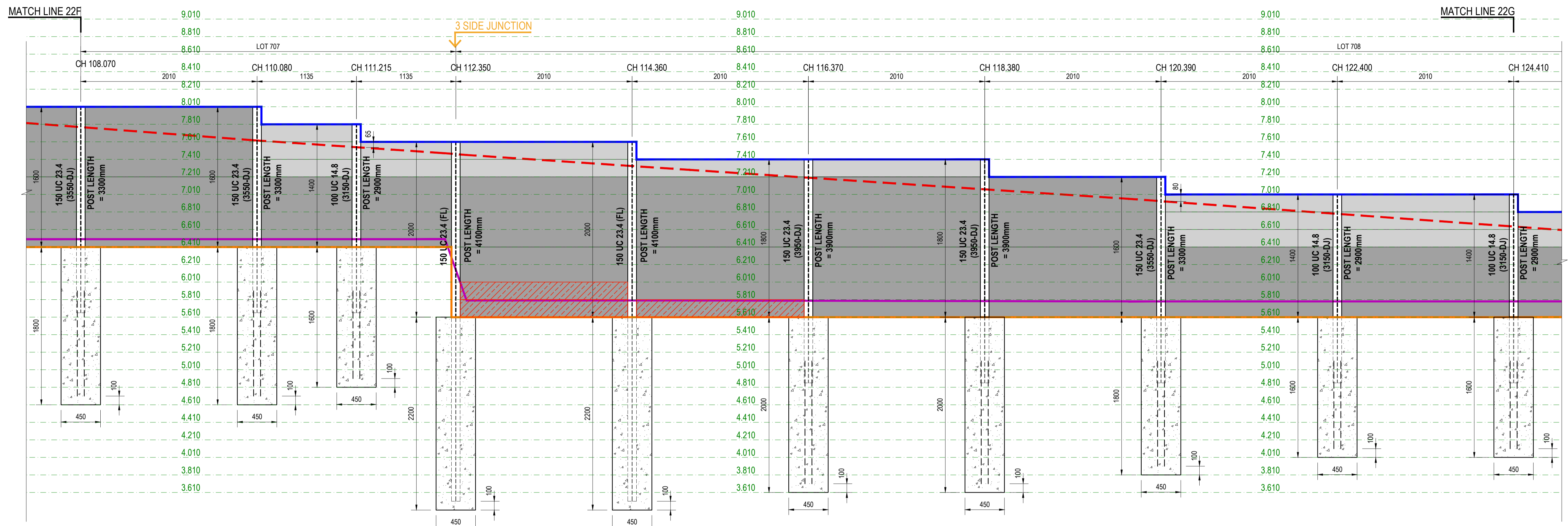
SCALE:



SCALE 1:25

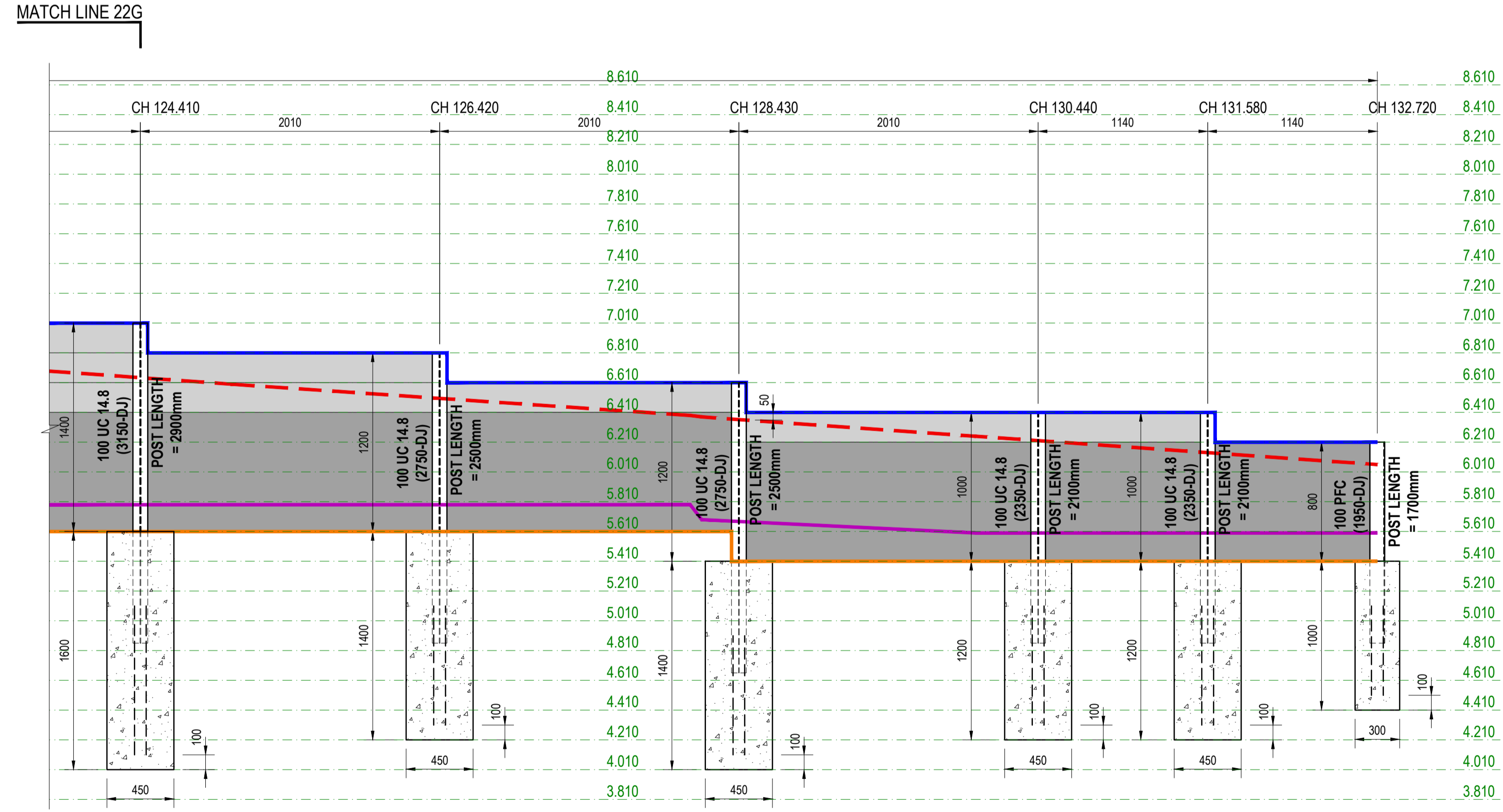
VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S325	SHEET SIZE: A1



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25



CONT. RETAINING WALL - RW22 (DESIGN SURCHARGE: 5KPa)

SCALE 1:25

NOTES:

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK. ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

LEGEND

- 200mm HIGH CONCRETE SLEEPER
- 800mm HIGH CONCRETE SLEEPER
- SECOND SLEEPER

LEGEND

- SURFACE TOP LEVEL
- SURFACE BOTTOM LEVEL
- TOP OF WALL
- BOTTOM OF WALL

ISSUE FOR CONSTRUCTION

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PROJECT: SANCTUARY STG 7

SCALE:

VERIFY ALL DIMENSIONS ON SITE BEFORE STARTING WORK ENGINEER TAKES NO RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR SCALE OF DRAWINGS SHARED ELECTRONICALLY. THIS DRAWING MAY USE COLOR, AND IMPORTANT DETAILS COULD BE LOST IF PRINTED IN BLACK & WHITE.

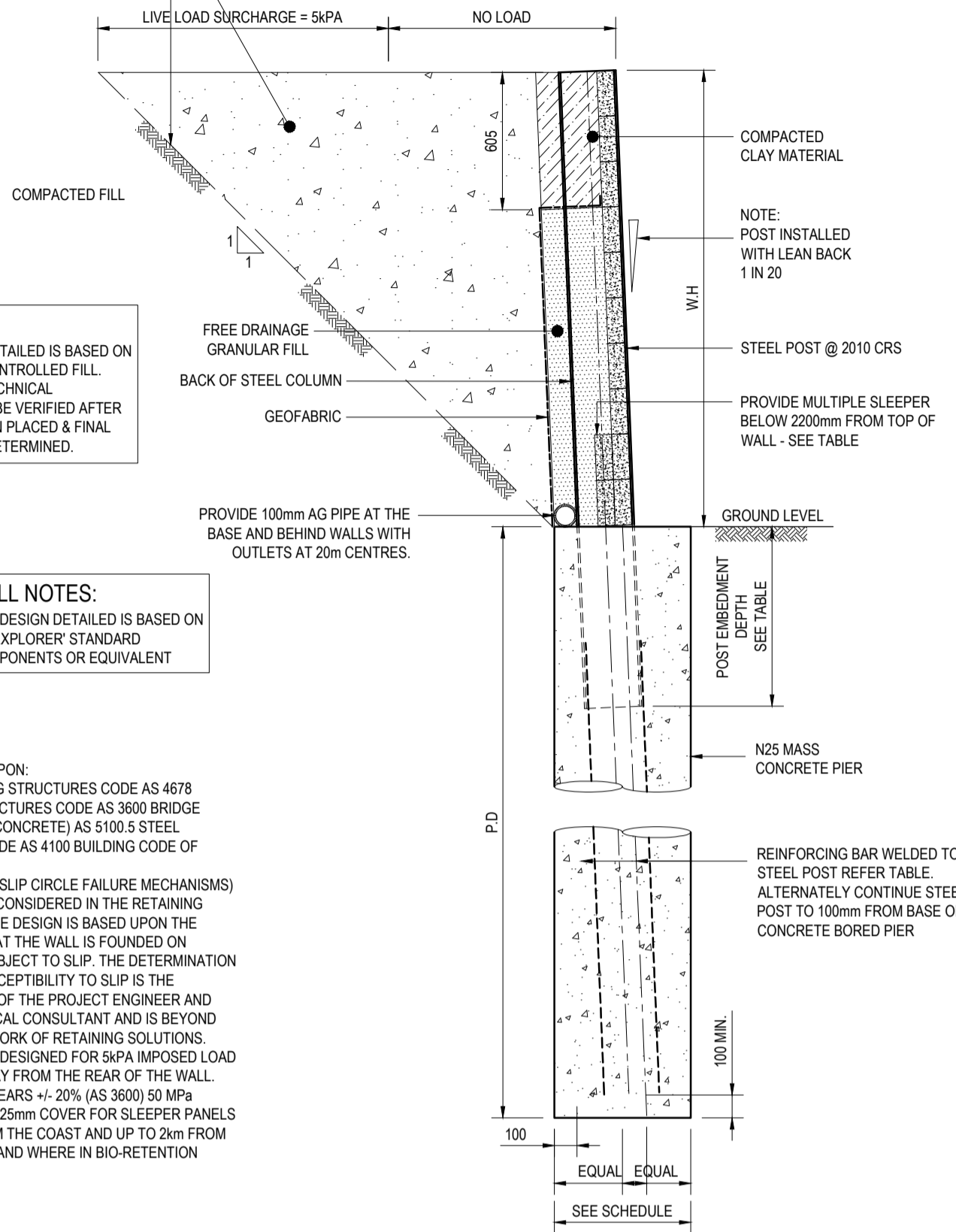
VERIFIED BY: NW	DATE: 02-11-2024	SCALE: 1:25
DESIGNED BY: AN	PROJECT NO: 2410181	REV: 00
DRAWN BY: IK	DRAWING NO: S326	SHEET SIZE: A1

CRITICAL BACKFILL WEDGE NOTE:
THE RETAINING WALL DESIGN DETAILED IS BASED ON GRANULAR BACKFILL WEDGE AS SHOWN. ABSOLUTE MAXIMUM TEMPORARY 1 IN 1 SLOPE OF BACKFILL MUST BE CONSTRUCTED TO AS SHOWN TO ACHIEVE THE CRITICAL BACKFILL WEDGE DESIGN

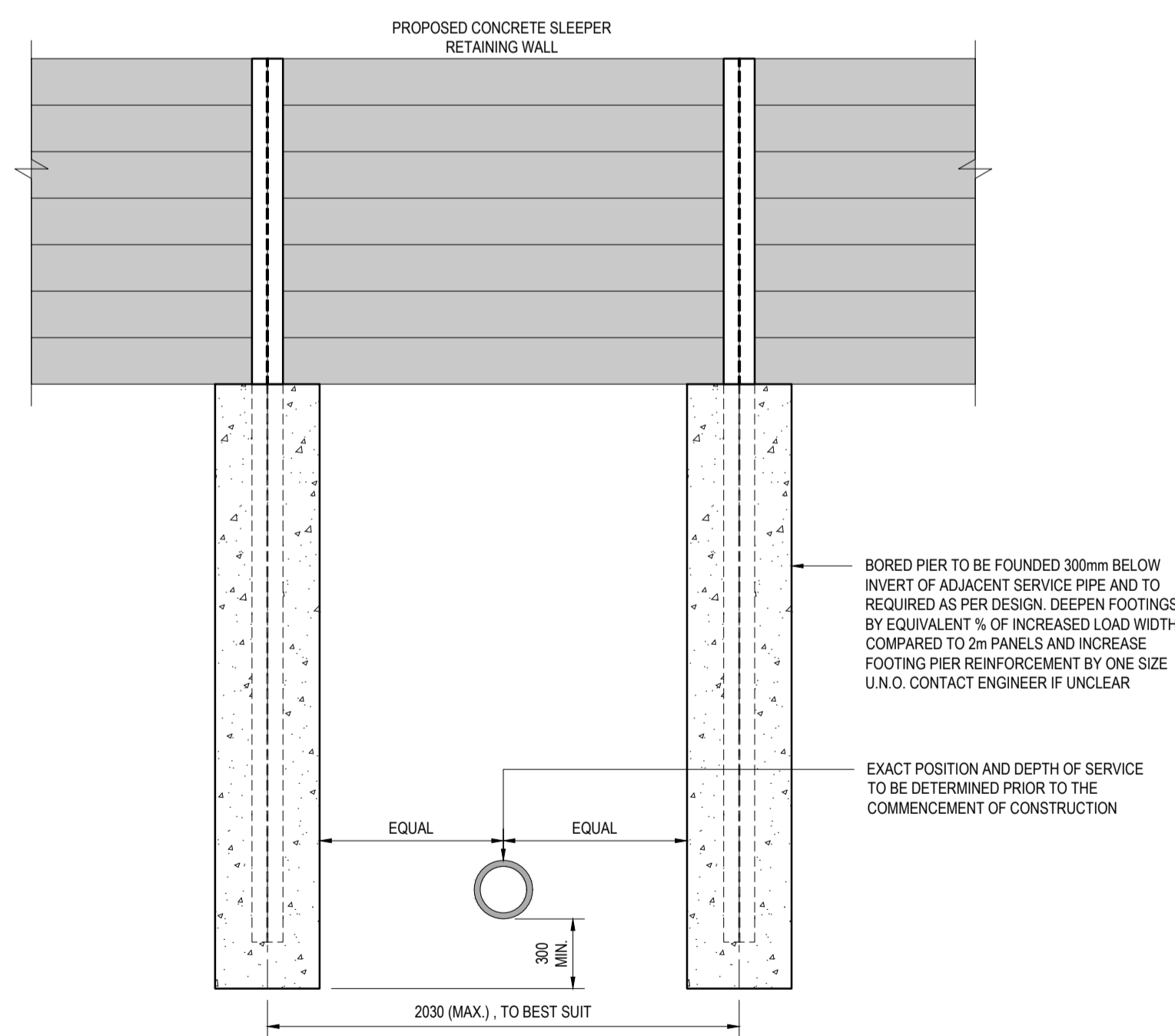
FOUNDATION NOTES:
THE RETAINING WALL DESIGN DETAILED IS BASED ON PRELIMINARY $C_u = 75kPa$ FOR CONTROLLED FILL. ADVICE FROM REGIONAL GEOTECHNICAL SOLUTIONS. THE DESIGN MUST BE VERIFIED AFTER THE CONTROLLED FILL HAS BEEN PLACED & FINAL GEOTECHNICAL PARAMETERS DETERMINED.

RETAINING WALL NOTES:
THE RETAINING WALL DESIGN DETAILED IS BASED ON AUSTRAL MASONRY EXPLORER STANDARD RETAINING WALL COMPONENTS OR EQUIVALENT

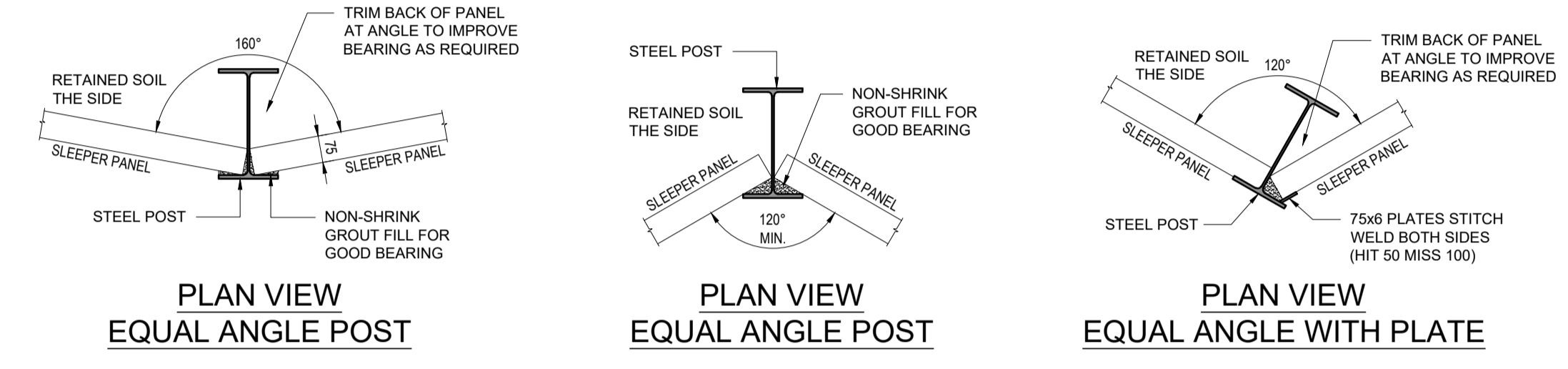
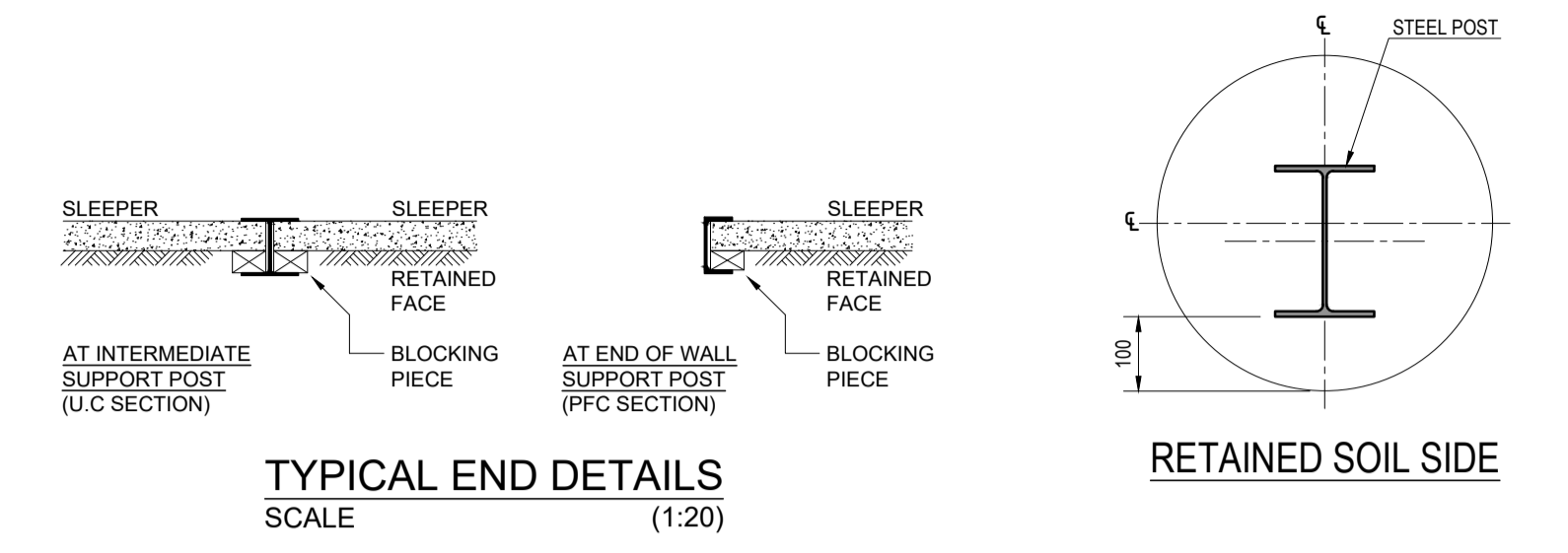
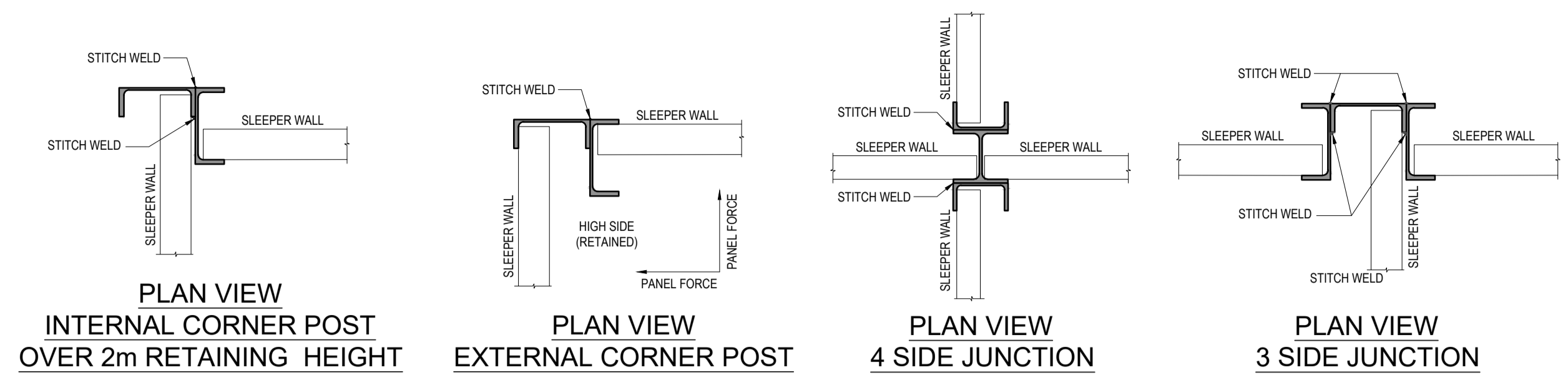
- NOTES:**
- DESIGN BASED UPON:
EARTH RETAINING STRUCTURES CODE AS 4678
CONCRETE STRUCTURES CODE AS 3600 BRIDGE DESIGN (PART 5 CONCRETE) AS 5100.5 STEEL STRUCTURES CODE AS 4100 BUILDING CODE OF AUSTRALIA.
 - LAND SLIPS (E.G. SLIP CIRCLE FAILURE MECHANISMS) HAVE NOT BEEN CONSIDERED IN THE RETAINING WALL DESIGN. THE DESIGN IS BASED UPON THE ASSUMPTION THAT THE WALL IS FOUNDED ON GROUND NOT SUBJECT TO SLIP. THE DETERMINATION OF THE SITE SUSCEPTIBILITY TO SLIP IS THE RESPONSIBILITY OF THE PROJECT ENGINEER AND THE GEOTECHNICAL CONSULTANT AND IS BEYOND THE SCOPE OF WORK OF RETAINING SOLUTIONS.
 - RETAINING WALL DESIGNED FOR 5kPa IMPOSED LOAD AT MIN. 0.6m AWAY FROM THE REAR OF THE WALL.
 - DESIGN LIFE 50 YEARS $\pm 20\%$ (AS 3600) 50 MPa CONCRETE WITH 25mm COVER FOR SLEEPER PANELS WITHIN 1m FROM THE COAST AND UP TO 2m FROM BREAKING SURF AND WHERE IN BIO-RETENTION BASINS.



TYPICAL SLEEPER WALL SECTION DETAIL



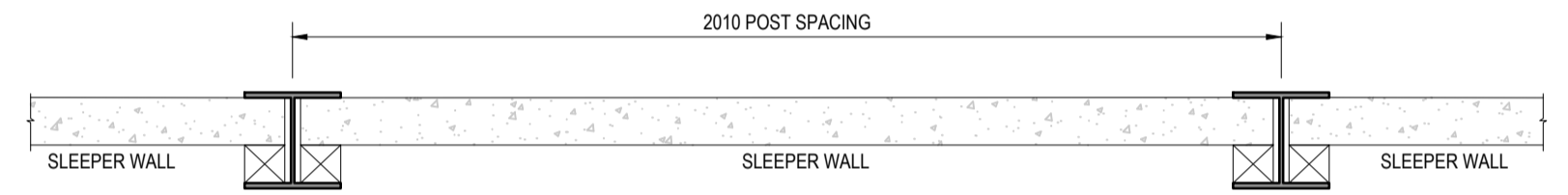
TYPICAL SLEEPER WALL BRIDGING DETAIL



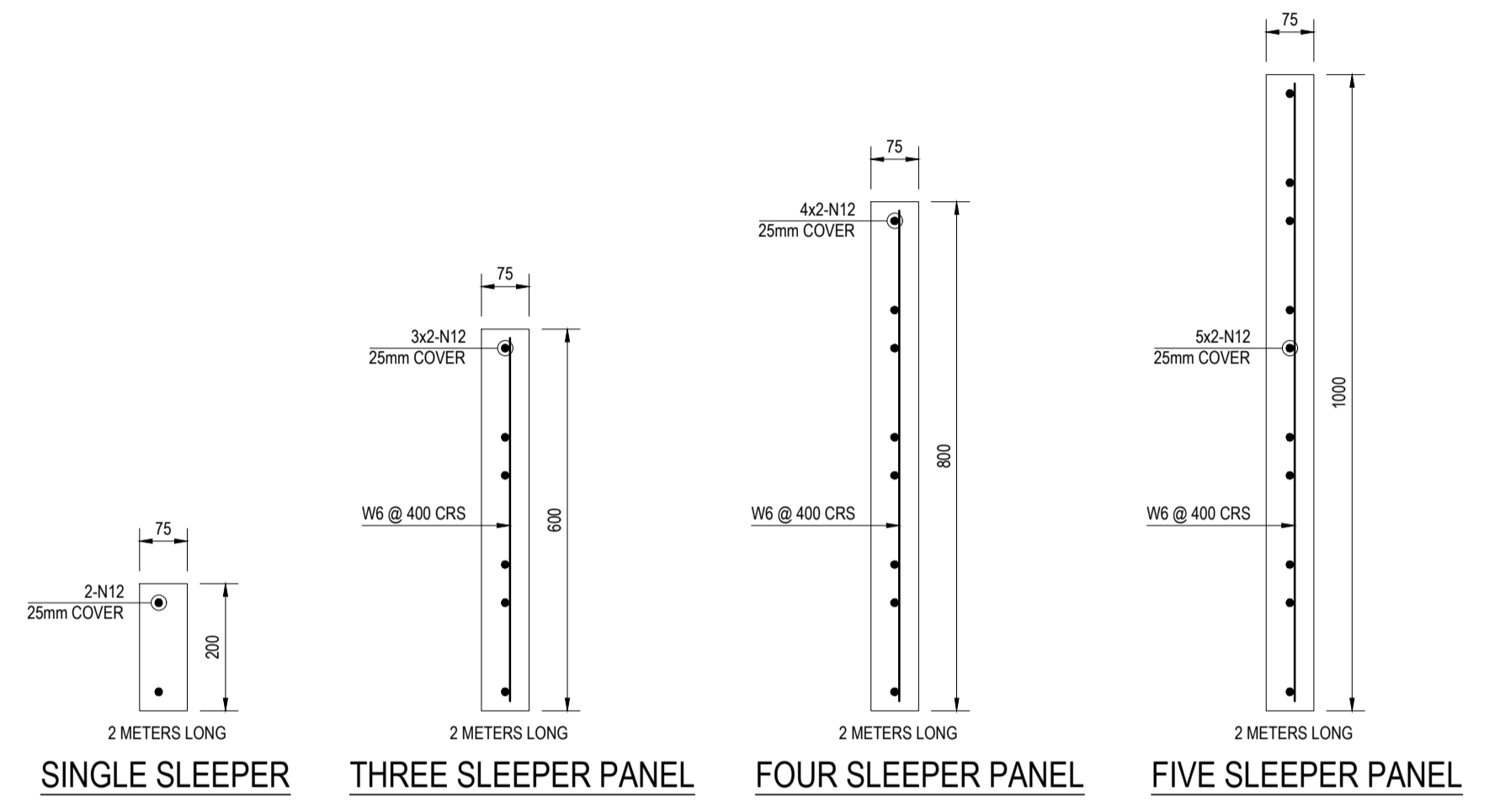
CONCRETE STANDARD - AS 3600
STANDARD DESIGN EXPOSURE CLASSIFICATION
SLEEPERS & POSTS - B1. FOOTINGS - A2

ELEMENT	GRADE	SLUMP	MIN. COVER
SLEEPER	N50	80mm	25mm
FOOTING	N25	80mm	25mm

* RIGID FORMWORK & INTENSE COMPACTION REINFORCEMENT STANDARD - AS/NZS 4671
YIELD 500 MPa
POST AND FOOTING REINFORCEMENT TO BE DUCTILITY CLASS N
PIER REINFORCEMENT TO BE DUCTILITY CLASS N



SLEEPER WALL - PLAN VIEW



SLEEPER RETAINING WALL - SANCTUARY STG-7 (5 kPa SURCHARGE)										REINFORCEMENT BARS	
WALL HEIGHT (m)	SLEEPER THICK (mm)	POST SPACING (m)	SIZE OF POST (MIDDLE)	SIZE OF POST (END)	PIER DIA (mm)	PIER DEPTH (mm)	POST TYPE	POST DESCRIPTION	SECOND SLPs FROM BASE OF WALL	RETAINED SOIL SIDE OUTER LAYER	AT FRONT FACE
0.21 - 0.4	75	2.010	100 UC 14.8	100 PFC	300	600	DEFORM BAR	(1550-DJ)	0	2-N12	2-N12
0.41 - 0.6	75	2.010	100 UC 14.8	100 PFC	300	800	DEFORM BAR	(1550-DJ)	0	2-N12	2-N12
0.61 - 0.8	75	2.010	100 UC 14.8	100 PFC	300	1000	DEFORM BAR	(1950-DJ)	0	2-N12	2-N12
0.81 - 1.0	75	2.010	100 UC 14.8	100 PFC	450	1200	DEFORM BAR	(2350-DJ)	0	2-N12	2-N12
1.01 - 1.2	75	2.010	100 UC 14.8	100 PFC	450	1400	DEFORM BAR	(2750-DJ)	0	2-N24	2-N16
1.21 - 1.4	75	2.010	100 UC 14.8	100 PFC	450	1600	DEFORM BAR	(3150-DJ)	0	2-N24	2-N16
1.41 - 1.6	75	2.010	150 UC 23.4	150 PFC	450	1800	DEFORM BAR	(3550-DJ)	0	2-N24	2-N16
1.61 - 1.8	75	2.010	150 UC 23.4	150 PFC	450	2000	DEFORM BAR	(3950-DJ)	1	2-N24	2-N16
1.81 - 2.0	75	2.010	150 UC 23.4	150 PFC	450	2200	FULL LENGTH	(FL)	2	--	--
2.01 - 2.2	75	2.010	150 UC 37	150 PFC	600	2400	FULL LENGTH	(FL)	3	--	--
2.21 - 2.4	75	2.010	150 UC 37	150 PFC	600	2600	FULL LENGTH	(FL)	4	--	--
2.41 - 2.6	75	2.010	200 UC 46	200 PFC	600	2800	FULL LENGTH	(FL)	5	--	--
2.61 - 2.8	75	2.010	200 UC 46	200 PFC	600	3100	FULL LENGTH	(FL)	6	--	--
2.81 - 3.0	75	2.010	250 UC 72.9	250 PFC	600	3300	FULL LENGTH	(FL)	7	--	--
3.01 - 3.2	75	2.010	250 UC 72.9	250 PFC	600	3500	FULL LENGTH	(FL)	8	--	--

PARAMETERS	VALUE	UNITS	NOTES
FRICITION ANGLE (RETAINED)	25	DEGREE	ASSUMING SOIL PROPERTIES FROM GEOTECHNICAL REPORT
FRICITION ANGLE (FOUNDATION)	28	DEGREE	
COHESION (RETAINED)	5	kPa	
COHESION (FOUNDATION)	10	kPa	
SOIL UNIT DENSITY (RETAINED)	18	kN/m ³	
SOIL UNIT DENSITY (FOUNDATION)	19	kN/m ³	

LEGEND
DJ = DEFORMED JOINER
FL = FULL LENGTH
NOTES: REINFORCEMENT TO BE CUT TO SUIT BORED PIER

ISSUE FOR CONSTRUCTION

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	REV No.	DATE	DESCRIPTION										
	00	10-11-2024	ISSUE FOR CONSTRUCTION										
			TYPICAL CONCRETE SLEEPER RETAINING WALL DETAILS	NTS	NW	02-11-2024	1:50						
			PROJECT:		DESIGNED BY:	PROJECT NO:	REV:						
			SANCTUARY STG 7		AN	2410181	00						
					DRAWN BY:	DRAWING NO:	SHEET SIZE:						
					IK	S400	A1						