

32A,34,36,38 NAREEN PARADE NORTH NARABEEN DRIVEWAY REMEDIATION AND DRAINAGE WORKS

GENERAL

- THE DRAWINGS ARE A DIAGRAMMATIC REPRESENTATION ONLY OF THE WORK TO BE CARRIED OUT AND DIMENSIONS SHALL NOT BE OBTAINED BY SCALING.
- ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH NORTHERN BEACHES COUNCIL CONSTRUCTION SPECIFICATIONS AND ASSOCIATED DEVELOPMENT CONTROL PLAN. ROADS AND MARITIME THEN AUSTRALIAN STANDARDS TO BE USED IN OTHER INSTANCES.
- ALL LOCATION, ORIENTATION AND LEVELS SHALL BE VERIFIED ON SITE BEFORE COMMENCING ANY WORK. ANY DISCREPANCIES IN THE DRAWINGS AND/OR SPECIFICATIONS SHALL BE REFERRED TO THE PRINCIPAL FOR CLARIFICATION BEFORE PROCEEDING. NATURAL SURFACE LEVELS ARE INDICATIVE ONLY.
- PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR SHALL SATISFY HIMSELF OF THE CORRECT LOCATION OF EXISTING SERVICES WHETHER INDICATED OR NOT ON THE DRAWINGS.
- ADJUST ALL UTILITY SERVICE COVERS TO SUIT NEW GRADES & LEVELS. FLUSH WITH SURROUNDING AREA.
- EXISTING STATE SURVEY MARKS AFFECTED BY THE WORKS ARE TO BE RECOVERED IN ACCORDANCE WITH SURVEYOR GENERAL'S DIRECTION No. 11 - "PRESERVATION OF SURVEY INFRASTRUCTURE".

SITE MANAGEMENT:

- PROVIDE BARRIERS AROUND ALL CONSTRUCTION WORKS WITHIN THE FOOTPATH AREA TO PROVIDE SAFE ACCESS FOR PEDESTRIANS.
- CONCRETE PUMPS AND CRANES ARE TO OPERATE FROM WITHIN THE DESIGNATED WORK AREA AND ARE NOT TO OPERATE FROM THE PUBLIC ROADWAY UNLESS SPECIFIC COUNCIL PERMISSION IS OBTAINED.
- DELIVERY VEHICLES MUST NOT STAND WITHIN THE PUBLIC ROADWAY FOR MORE THAN 20 MINUTES AT A TIME.
- TOILET FACILITIES MUST BE EITHER FLUSHING TYPE OR APPROVED PORTABLE CHEMICAL CLOSET. CHEMICAL CLOSETS ARE TO BE MAINTAINED AND SERVICES ON A REGULAR BASIS SO THAT OFFENSIVE ODOUR IS NOT EMITTED.
- TRAFFIC MANAGEMENT MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE RMS TRAFFIC CONTROL AT WORKSITES MANUAL AND AS1742, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- PEDESTRIAN CONTROL MEASURES ARE REQUIRED TO BE IMPLEMENTED AND MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH AS1742, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT ALL WORK CARRIED OUT AT THE SITE IS IN ACCORDANCE WITH COUNCIL'S WORK HEALTH & SAFETY POLICY.
- DO NOT STORE OR PLACE MATERIALS INSIDE THE DRIP LINE OF ANY TREE. CONSTRUCTION ACTIVITIES, VEHICLE PARKING OR MAINTENANCE, MATERIALS STORAGE OR LOCATING OF CONTAINERS AND SITE SHEDS MUST NOT OCCUR WITHIN THE DRIP LINE OF ANY TREES OR WITHIN 5M OF TREES WHERE THE DRIP LINE RADIUS IS LESS THAN 5M.
- THE CONTRACTOR SHALL EFFECT TEMPORARY DRAINAGE MEASURES TO AVOID LOCALISED PONDING.

EARTHWORKS:

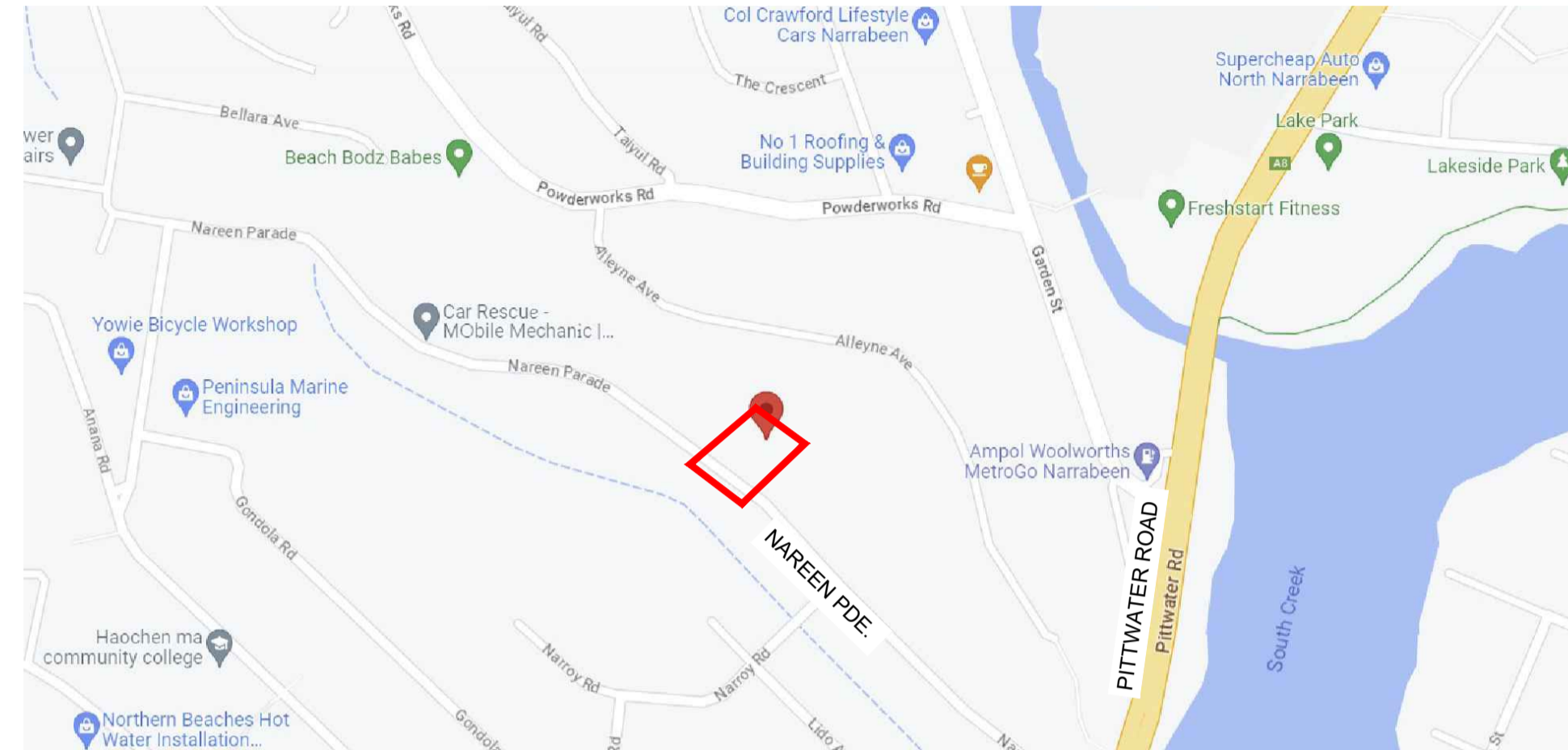
- EARTHWORKS ARE TO BE CARRIED OUT IN ACCORDANCE WITH THE DRAWINGS AND GEOTECHNICAL ENGINEERS RECOMMENDATIONS. THE DESIGN AS DETAILED ON THESE DRAWINGS ASSUMES A PROPERLY PREPARED UNIFORM AND STABLE SUBGRADE.
- THE DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ANY GEOTECHNICAL REPORT PREPARED FOR THE WORKS.
- STRIP OFF ALL VEGETATION, RUBBISH AND TOPSOIL CONTAINING ORGANIC OR ROOT MATTER FROM THE AREA OF THE WORKS AND REMOVE FROM SITE/STOCKPILE FOR RE-USE.
- PRIOR TO ANY FILLING, THE EXPOSED SUBGRADE SHALL BE PROOF ROLLED WITH A MINIMUM OF 10 PASSES OF A 5 TONNE (MIN) DEAD WEIGHT VIBRATING ROLLER IN THE PRESENCE OF THE SUPERINTENDENT OR GEOTECHNICAL ENGINEER AND ANY SOFT OR YIELDING MATERIALS REMOVED AND REPLACED WITH APPROVED FILLING COMPACTED AS HEREAFTER SPECIFIED.
- FILL SHALL BE SOUND WELL GRADED MATERIAL WITH A HIGH GRANULAR CONTENT AND SHALL BE THE BEST OF EXCAVATED MATERIALS FROM THE SITE, OR APPROVED SOUND IMPORTED MATERIAL FREE OF RUBBISH, PLASTIC CLAY OR LARGE PIECES THAT WOULD PRECLUDE COMPACTION.
- FILL SHALL BE SPREAD IN LAYERS NOT EXCEEDING 200MM AND COMPACTED USING SUITABLE MECHANICAL EQUIPMENT AT OPTIMUM MOISTURE CONTENT $\pm 2\%$ TO NOT LESS THAN 98% MAXIMUM STANDARD DRY DENSITY (MSDD) IN ACCORDANCE WITH AS1289 - E11 UNLESS OTHERWISE NOTED.
- FINISH FILLING LEVELS TO SUIT CONSTRUCTION OVER, ALLOWING FOR MIN 75MM OF BASE COURSE (DGB20) COMPACTED TO 98% MAXIMUM MODIFIED DRY DENSITY (MMDD) WHERE NOTED ON DRAWINGS.
- DENSITY TESTING OF FILLING (AND BASE COURSE WHERE APPLICABLE) SHALL BE CARRIED OUT AT THE RATE OF 1 TEST PER 200 SQUARE METRES EACH LAYER (MINIMUM 2 TESTS). TESTING SHALL BE BY A NATA REGISTERED LABORATORY AND SHALL BE ALLOWED FOR BY THE CONTRACTOR.
- THE CONTRACTOR SHALL PROGRAM AND UNDERTAKE THE EARTHWORKS OPERATIONS SUCH THAT WORKING AREAS ARE ADEQUATELY DRAINED DURING CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THESE REQUIREMENTS SHALL BE RECTIFIED AT THE CONTRACTORS EXPENSE.

STORMWATER DRAINAGE

- STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S SPECIFICATION.
- PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
- ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O.
- PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
- MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
- PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
- BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200MM LAYERS TO 98% OF STANDARD DENSITY
- ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS
- PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1000mm TO HAVE CLIMB IRONS.
- INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.
- PIT LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING COUNCIL'S REPRESENTATIVE.
- HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
- TRENCHING AND BEDDING DETAILS TO BE IN ACCORDANCE WITH AS3500 TO HS2 DETAIL UNLESS OTHERWISE NOTED.

GRASSING

- ALL DAMAGED EXISTING TURF AREAS ARE TO BE REMOVED. EXCAVATE OR FILL AREAS TO BE TURFED AS SPECIFIED TO 100mm BELOW FINISHED SURFACE LEVELS. BREAK UP AND CULTIVATE SUBGRADE TO A MINIMUM DEPTH OF 150mm. BACKFILL AND CONSOLIDATE WITH MINIMUM 50mm DEPTH OF TURF UNDERLAY AS SUPPLIED BY AUSTRALIAN NATIVE LANDSCAPES OR APPROVED SIMILAR.
- LIGHTLY RAKE TO REMOVE ANY MOUNDS OR TROUGHS TO ALLOW LAWN TO FINISH IN A CONTINUAL GRADE BETWEEN CONTAINING EDGES. SURFACE OF SOIL TO BE MOISTENED LIGHTLY PRIOR TO INSTALLING TURF.
- NEW TURFED AREAS SHALL BE TURFED USING CERTIFIED SPECIES TO MATCH EXISTING.
- LAY TURF IN STRETCHER BOND PATTERN WITH STAGGERED AND CLOSELY BUTTED JOINTS. LIGHTLY TAMP TO AN EVEN SURFACE IMMEDIATELY AFTER LAYING. DO NOT USE A ROLLER. APPLY A LAYER OF TOP DRESSING BETWEEN THE STRIPS OF TURF. WATER IN THOROUGHLY AND FINISH WITH AN EVEN SURFACE.
- WATER AND MAINTAIN SPECIFICALLY TO THE ESTABLISHMENT GUIDELINES OF THE SUPPLIER. ALL NEW AND EXISTING TURF AREAS SHALL RECEIVE AN APPLICATION OF LAWN STARTER FERTILISER, AT RECOMMENDED RATES.



OVERALL SITE PLAN

N.T.S.

EROSION AND SEDIMENT CONTROL

- GENERAL MEASURES
 - SOIL EROSION AND SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION SHALL CONFORM WITH GUIDELINES IN ACCORDANCE WITH "MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION - VOLUME 1, LANDCOM 2004" AND COUNCIL'S POLICY
 - PERIMETER CONTROL MEASURES SHALL BE PLACED PRIOR TO OR IN CONJUNCTION WITH THE FIRST PHASE OF THE EARTHWORKS. THESE MEASURES SHALL BE APPLIED TO PROTECT ADJOINING PROPERTIES FROM EROSION AND SILT DAMAGE.
 - EARTH STOCKPILES SHALL BE CONFINED TO ONE CENTRAL AREA WHERE POSSIBLE. ALL STOCKPILES OF EXCAVATED OR CONSTRUCTION SOILS MUST HAVE A SILT FENCE ERECTED IMMEDIATELY DOWNHILL FOR THE FULL EXTENT OF THE STOCKPILE. WHERE SITE REGRADING OR FILLING IS BEING UNDERTAKEN PROVISION SHALL BE MADE TO ENSURE THAT NO WATER IS PONDED IN ANY LOT.
 - ALL AREAS NOT SUBJECT TO CONSTRUCTION WORKS SHALL BE RETAINED FREE FROM DISTURBANCE OR DAMAGE DURING THE CURRENCY OF THE WORK. SHOULD THESE AREAS BECOME DISTURBED OR DAMAGED THEY SHALL BE REINSTATED AS DIRECTED BY THE SUPERINTENDENT.
- SEDIMENT CONTROL DEVICES (S.C.D.)
 - THESE DEVICES SHALL BE CONSTRUCTED AT INLETS TO STORMWATER SYSTEMS TO TRAP THE SEDIMENT IN RUN-OFF.
- STABILISATION OF DISTURBED AREAS
 - STABILISATION OF DISTURBED AREAS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS INDICATED IN GENERAL NOTES ABOVE.
 - THE FOLLOWING SHALL BE APPLIED FOR THE CONTROL OF EROSION AND SEDIMENTATION:-
 - STABILISATION OF DENUDED AREAS SHALL COMMENCE AS SOON AS POSSIBLE AFTER THE AREAS HAVE BEEN DISTURBED.
 - STABILISATION OF ALL CUT AND FILL SLOPES SHALL BE COMMENCED AS SOON AS PRACTICABLE AFTER COMPLETION OF FORMATION.
 - ALL STABILISATION MEASURES SHALL BE TAKEN PRIOR TO THE END OF THE MAINTENANCE PERIOD.
- MAINTENANCE
 - ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE MAINTAINED IN A SATISFACTORY WORKING ORDER THROUGHOUT THE CONTRACT. MAINTENANCE AND DEFECTS LIABILITY PERIODS OR UNTIL SUCH EARLIER TIME AS THE AREA HAS BEEN STABILISED AND COUNCIL'S ENGINEER DIRECTS THAT THE DEVICE BE REMOVED. ALL DEVICES SHALL BE INSPECTED AFTER EACH STORM FOR STRUCTURAL DAMAGE OR CLOGGING BY SILT AND OTHER DEBRIS AND MAKE PROMPT REPAIRS OR REPLACEMENT.

DEMOLITION:

- CARRY OUT ALL DEMOLITION WORK IN ACCORDANCE WITH AS 2601.
- UNTIL PERMANENT SUPPORT IS PROVIDED, PROVIDE TEMPORARY SUPPORT FOR SECTIONS OF EXISTING STRUCTURES WHICH ARE TO BE ALTERED AND WHICH NORMALLY RELY FOR SUPPORT ON WORK TO BE DEMOLISHED.
- SUPPORT EXCAVATIONS FOR DEMOLITION OF UNDERGROUND SERVICES.
- PROVIDE SUPPORT TO ADJACENT STRUCTURES WHERE NECESSARY, SUFFICIENT TO PREVENT DAMAGE RESULTING FROM THE WORKS.
 - LATERAL SUPPORTS: PROVIDE LATERAL SUPPORT AT LEAST EQUAL TO THAT GIVEN BY THE STRUCTURE TO BE DEMOLISHED, USING SHORING.
 - VERTICAL SUPPORTS: PROVIDE SUPPORT WHERE NECESSARY USING PILING OR UNDERPINNING, OR BOTH.
- PROVIDE DUST PROOF SCREENS, BULKHEADS AND COVERS TO PROTECT EXISTING FINISHES AND THE IMMEDIATE ENVIRONMENT FROM DUST AND DEBRIS.
- DO NOT USE EXPLOSIVES.
- HAZARDOUS MATERIALS. GIVE NOTICE IMMEDIATELY IF HAZARDOUS MATERIALS OR CONDITIONS ARE FOUND, INCLUDING THE FOLLOWING:
 - ASBESTOS OR MATERIAL CONTAINING ASBESTOS.
 - FLAMMABLE OR EXPLOSIVE LIQUIDS OR GASES.
 - TOXIC, INFECTIVE AND CONTAMINATED MATERIALS.
 - RADIATION OR RADIOACTIVE MATERIALS.
 - NOXIOUS OR EXPLOSIVE CHEMICALS.
 - TANK OR OTHER CONTAINERS WHICH HAVE BEEN USED FOR STORAGE OF EXPLOSIVE, TOXIC, INFECTIVE OR CONTAMINATED SUBSTANCES.

WORK NEAR EXISTING TREES AND TREE PROTECTION

GENERAL:

- TREES MUST NOT BE REMOVED OR LOPPED OR OTHERWISE DAMAGED, UNLESS SPECIFIED AND APPROVAL TO DO SO IS GIVEN BY THE SUPERINTENDENT. ALL CARE MUST BE TAKEN NOT TO DAMAGE OR INJURE ANY EXISTING TREES THAT ARE TO BE RETAINED. A QUALIFIED ARBORIST OR TREE PRESERVATION OFFICER IS TO BE CONSULTED PRIOR TO ANY EARTHWORKS BEING CONDUCTED NEAR EXISTING TREES WITHIN THE CONSTRUCTION ZONE. ANY DAMAGE INCURRED TO TREES THAT ARE TO BE RETAINED IS TO BE MADE GOOD AS SOON AS POSSIBLE FOLLOWING ADVICE BY AN APPROVED ARBORIST.

PROTECTION:

- IT IS THE SITE SUPERVISOR'S RESPONSIBILITY TO PROTECT ALL TREES IDENTIFIED FOR RETENTION.
- TREES TO BE RETAINED ARE TO BE PROTECTED WITH FENCING AND/OR TREE ARMOUR AS INDICATED ON THE DRAWINGS.
- COMPACTION OF SOIL IS TO BE AVOIDED WITHIN THE TREE PROTECTION ZONES SHOWN ON THE DRAWINGS.
- WHERE WORK IS REQUIRED TO BE UNDERTAKEN WITHIN THE TREE PROTECTION ZONES, TREE ARMOUR IS TO BE ERECTED AROUND THE TRUNK OF THE TREES AS INDICATED ON PLAN.

TREE PROTECTION FENCING:

- TREES ARE TO BE PROTECTED BY TEMPORARY CHAIN-WIRE CONSTRUCTION FENCING INSTALLED AT THE DRIPLINE IF POSSIBLE. TEMPORARY SIGNAGE LABELLED "TREE PROTECTION AREA. NO STORAGE OF MATERIALS OR MACHINERY" IS TO BE INSTALLED ON ALL TREE PROTECTION FENCING.

TREE ARMOUR:

- PROVIDE TREE ARMOUR AROUND TRUNKS OF TREES AS INDICATED ON PLAN BEFORE COMMENCEMENT OF ANY WORKS. ARMOUR IS TO CONSIST OF JUTE MATTING AND TIMBER BATTENS WRAPPED AROUND TREE TRUNKS AS INDICATED IN DRAWINGS.
- INSTALL A PROTECTIVE LAYER OF JUTE MAT AROUND TREE TRUNKS PRIOR TO INSTALLING TIMBER BATTENS AROUND TREE TRUNKS.
- TIMBER BATTENS ARE TO BE 1800 X 90 X 20mm. SECURE BATTENS INTO POSITION WITH THREE STRANDS OF WIRE OR NYLON WEBBING STAPLED OR NAILED TO CREATE A CONTINUOUS STRING, LONG ENOUGH TO SURROUND EACH TREE.
- ENSURE ARMOUR IS ATTACHED SECURELY AROUND THE TREE. ARMOUR SHOULD BE ATTACHED TO ITSELF. NAILS OR FASTENERS ARE NOT TO BE ATTACHED DIRECTLY TO THE TREE TRUNK. ARMOUR IS TO REMAIN IN PLACE AS LONG AS MACHINERY IS REQUIRED ON SITE.

STORAGE OF MATERIALS:

- DO NOT STORE OR OTHERWISE PLACE BULK MATERIALS AND HARMFUL MATERIALS UNDER OR NEAR TREES WITHIN THE TREE PROTECTION ZONE. STORAGE OF MATERIALS, MIXING OF MATERIALS, VEHICLE PARKING, DISPOSAL OF LIQUIDS, MACHINERY REPAIRS AND REFUELLING, SITE OFFICE AND SHEDS MUST NOT OCCUR WITHIN THE DRIP LINE OF ANY EXISTING TREES, OR WITHIN 5M OF ANY EXISTING TREES WHERE THE DRIP LINE RADIUS IS LESS THAN 5m.
- DO NOT PLACE SPOIL FROM EXCAVATIONS AGAINST TREE TRUNKS, EVEN FOR SHORT PERIODS. PREVENT WIND-BLOWN MATERIALS SUCH AS CEMENT FROM HARMING TREES AND PLANTS.

WORK UNDER TREES:

- MINIMISE EXCAVATION OR FILLING AROUND TREES. IF CONSTRUCTION WORKS ARE NECESSARY AROUND TREES THEN MINIMISE THE USE OF MACHINERY. LEAVE TRENCHES OR EXCAVATED AREAS EXPOSED FOR AS SHORT A PERIOD AS POSSIBLE.

ROOTS:

- TREE ROOTS EXCEEDING 100mm DIAMETER ARE NOT TO BE CUT UNLESS ADVICE IS FIRST SOUGHT FROM AN ARBORIST.
- USE HAND TOOLS OR A CHAINSAW TO MAKE CLEAN CUTS TO ROOTS THAT REQUIRE CUTTING.

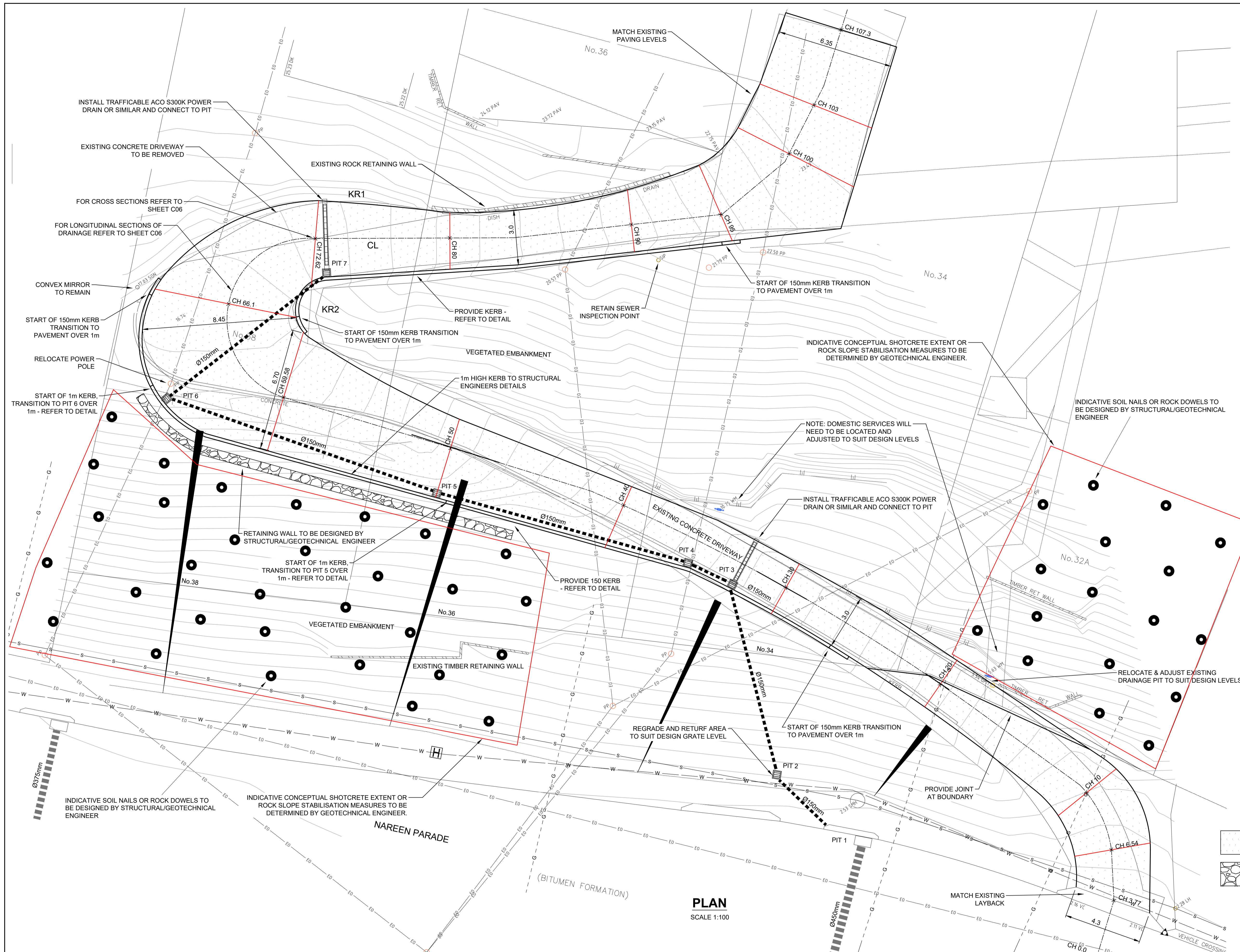
BACKFILLING:

- MINIMISE CHANGES TO SOIL SURFACE LEVELS AROUND TREES.
- RETURN NATURAL SOILS TO EXCAVATED AREAS OR USE OTHER VIRGIN EXCAVATED NATURAL MATERIAL (VENM) TO BACKFILL.
- ROAD MILLINGS, WASTE CONCRETE, ASPHALT OR OTHER FOREIGN MATERIALS ARE NOT TO BE USED FOR BACKFILLING WITHIN TREE ROOT ZONES.
- DO NOT BACKFILL AROUND TREE TRUNKS TO A HEIGHT GREATER THAN 300MM ABOVE THE ORIGINAL GROUND SURFACE UNLESS AUTHORISED.
- THOROUGHLY WATER THE SOIL FOLLOWING EXCAVATION WITHIN TREE ROOT ZONES.

SHEET INDEX

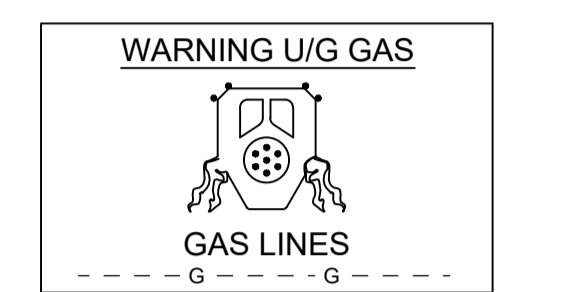
SHEET No	REV	DESCRIPTION
C00	D	COVER SHEET AND NOTES
C01	D	SURVEY PLAN
C02	D	CONSTRUCTION PLAN
C03	D	SETOUT PLAN
C04	D	LONGITUDINAL SECTIONS CL, KR1 AND KR2
C05	D	CROSS SECTIONS CH3.77 TO 59.58
C06	D	CROSS SECTIONS CH66.1 TO 107.5
C07	D	LONGITUDINAL DRAINAGE SECTIONS/DETAILS
C08	D	B85-SWEPT PATHS AND PROFILES

D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24	DATUM AHD	SURVEYOR CMS	APPROVED C.J.	DATE 28/7/03		SHIRE CIVIL DESIGN CIVIL, HYDRAULIC & TRAFFIC ENGINEERING MOBILE: 0422 008 325 EMAIL: COLIN@SHIRECIVILDESIGN.COM.AU ADDRESS: PO BOX 1381 CRONULLA NSW2230 WWW.SHIRECIVILDESIGN.COM.AU	CLIENT: D.W.KNOX & PARTNERS 32A,34,36,38 NAREEN PDE, NTH NARRABEEN DRIVEWAY REMEDIATION COVER SHEET AND NOTES	SCALES AS-NOTED NORTH POINT 	PROJECT No. C19112	A1 ORIGINAL		
C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24	AZIMUTH MGA	FIELD BOOK	CHECKED C.J.	DATE 28/7/23					SHEET 1 OF 9 SHEETS			
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24	RELATED PLANS		DESIGNED B.A.	DATE 28/7/23					DRAWING No. C19112		SHEET No. C00	ISSUE D
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24												
ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE												

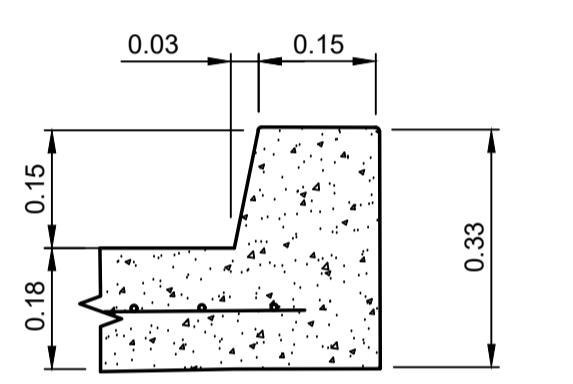


PLAN
SCALE 1:100

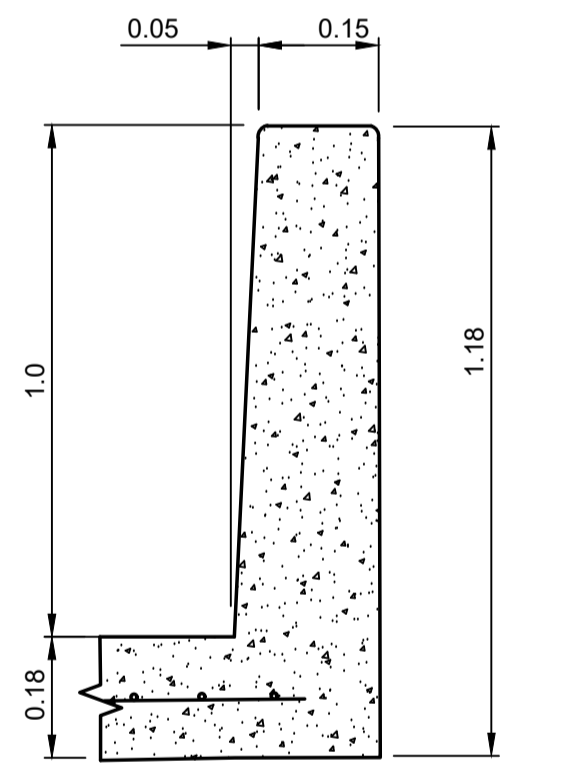
WARNING
UNDERGROUND SERVICES HAVE BEEN PLOTTED FROM RECORDS SUPPLIED BY THE PUBLIC AUTHORITIES TO SCD 12/8/23
LOCATIONS HAVE BEEN INTERPRETED FROM THESE RECORDS AND ARE APPROXIMATE ONLY.
EXTREME CAUTION SHOULD BE TAKEN BY PERSONS EXCAVATING.



CAUTION BEFORE EXCAVATION
FOR LEGAL REASONS TELSTRA PLANS MUST BE ON SITE AT ALL TIMES DURING CONSTRUCTION
CALL "DIAL BEFORE YOU DIG" 1100
OBTAIN UPDATED SERVICE LOCATIONS PRIOR TO COMMENCEMENT
TELSTRA REFERENCE # 228271719
date of search 12/08/2023



DETAIL - 150 KERB
NTS.



DETAIL - 1m KERB
NTS.

- LEGEND**
- BROOM (HARD) FINISH, CONCRETE DRIVEWAY 180mm THICK SL82 MESH SUBJECT TO REVIEW BY STRUCTURAL ENGINEER
 - CONCRETE BLOCK RETAINING WALL TO BE DESIGNED BY STRUCTURAL/GEOLOGICAL ENGINEER
 - INDICATIVE SOIL NAILS OR ROCK DOWELS TO BE DESIGNED BY STRUCTURAL/GEOLOGICAL ENGINEER

ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE
D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24
C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24

DATUM	SURVEYOR	APPROVED	DATE
AHD	CMS	C.J.	28/7/03
AZIMUTH	FIELD BOOK	CHECKED	DATE
MGA		C.J.	28/7/23
RELATED PLANS	DESIGNED	DATE	
	B.A.	28/7/23	



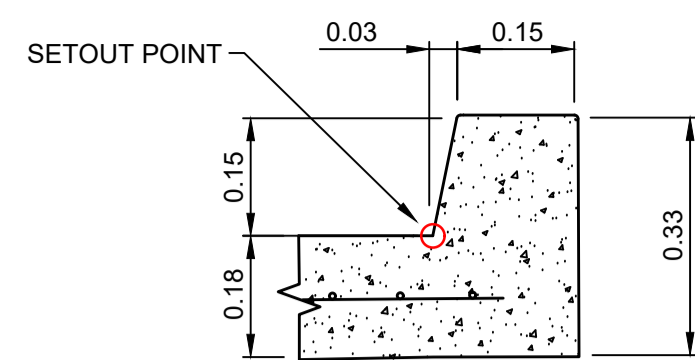
SHIRE CIVIL DESIGN
CIVIL, HYDRAULIC & TRAFFIC ENGINEERING
MOBILE: 0422 008 325
EMAIL: COLIN@SHIRECIVILDISEGN.COM.AU
ADDRESS: PO BOX 1381 CRONULLA NSW2230
WWW.SHIRECIVILDISEGN.COM.AU

CLIENT: D.W.KNOX & PARTNERS
32A,34,36,38 NAREEN PDE, NTH NARRABEEN
DRIVEWAY REMEDIATION
CONSTRUCTION PLAN

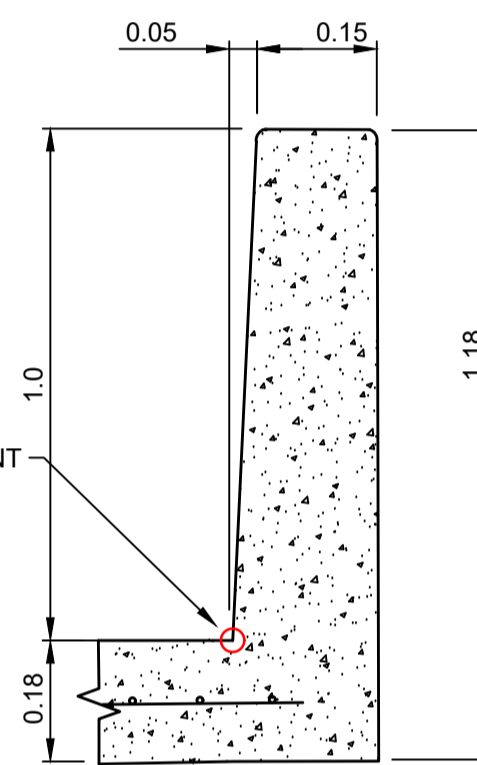
SCALES	PROJECT No.	C19112	A1 ORIGINAL
AS-NOTED NORTH POINT	SHEET 3 OF 9 SHEETS		
	DRAWING No. C19112	SHEET No. C02	ISSUE D

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 OBTAIN UPDATED SERVICE LOCATIONS PRIOR TO COMMENCEMENT
 TELSTRA SERVICE # 228271719
 DATE OF RECORD: 12/08/2023



DETAIL - KERB
 NTS.



DETAIL - 1m KERB
 NTS.

POINT No.	EASTING	NORTHING	R.L.	DESCRIPTION
1	1015.023	892.257	MATCH	KR1 - TP
2	1015.547	893.504	2.370	KR1
3	1015.769	894.668	2.580	KR1
4	1015.599	896.748	3.325	KR1 - 3/4
5	1015.025	898.182	3.880	KR1 - TP
6	1011.409	904.629	5.705	KR1 - TP
7	1008.772	908.868	6.950	KR1
8	1008.111	909.849	7.244	KR1
9	1005.968	912.844	8.160	KR1
10	1002.631	916.959	9.469	KR1 - TP/PIT 4
11	999.087	919.882	10.564	KR1
12	991.597	926.061	12.993	KR1 - PIT 5
13	984.205	932.155	15.329	KR1
14	981.514	934.374	15.666	KR1 - TP
15	980.102	936.955	15.889	KR1 - PIT 6
16	980.030	939.307	16.106	KR1 - MID
17	980.983	941.832	16.359	KR1 - 3/4
18	983.203	943.366	16.612	KR1 - TP
19	985.427	944.121	16.841	KR1 - 1/4
20	987.758	944.408	17.090	KR1 - MID
21	990.098	944.214	17.359	KR1 - 3/4
22	992.351	943.547	17.623	KR1 - TP
23	995.532	941.831	18.390	KR1 - MID
24	998.656	940.013	19.120	KR1 - TP
25	1003.254	938.277	20.168	KR1
26	1008.076	937.205	21.193	KR1
27	1012.220	936.824	22.415	KR1 - TP
28	1013.697	937.141	22.808	KR1 - MID
29	1015.007	937.851	MATCH	KR1 - TP
30	1017.079	939.549	MATCH	KR1
31	1019.965	942.542	MATCH	KR1

POINT No.	EASTING	NORTHING	R.L.	DESCRIPTION
59	1002.515	904.551	2.510	GRATE LEVEL PIT 2
60	1004.358	914.931	8.790	GRATE LEVEL PIT 3

POINT No.	EASTING	NORTHING	R.L.	DESCRIPTION
32	1018.119	889.305	MATCH	KR2
33	1018.690	890.548	2.250	KR2
34	1019.568	892.457	2.597	KR2 - TP
35	1020.024	893.914	2.853	KR2 - 1/4
36	1020.094	895.449	3.109	KR2 - MID
37	1019.779	896.945	3.365	KR2 - 3/4
38	1019.087	898.322	3.628	KR2 - TP
39	1014.025	906.218	5.858	KR2 - TP
40	1011.327	910.431	7.066	KR2
41	1008.355	914.623	8.308	KR2
42	1005.217	918.631	9.538	KR2 - TP
43	1001.659	922.222	10.737	KR2
44	994.536	929.450	13.217	KR2 - TP
45	991.550	932.993	14.374	KR2 - MID
46	988.895	936.792	15.532	KR2 - TP

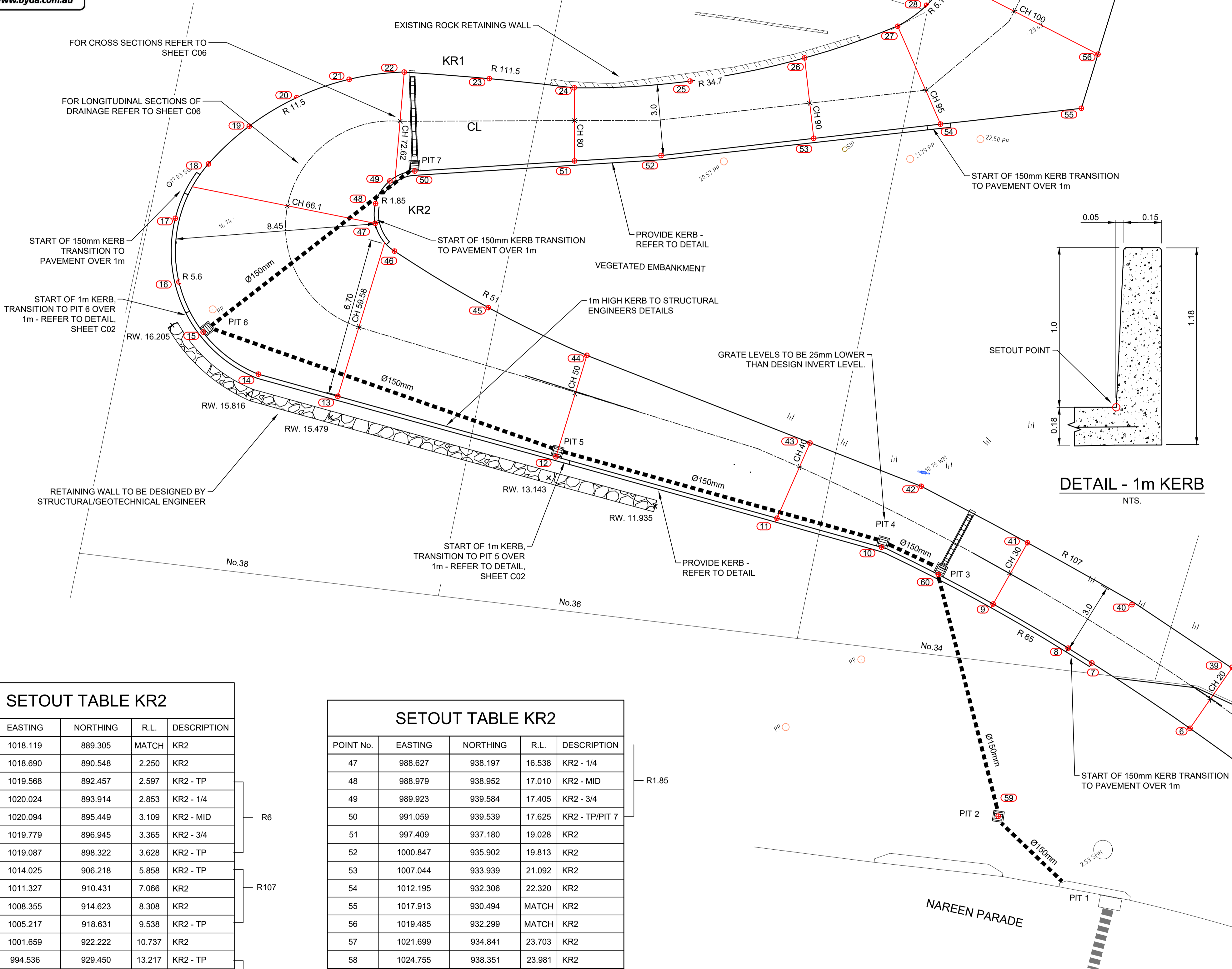
POINT No.	EASTING	NORTHING	R.L.	DESCRIPTION
47	988.627	938.197	16.538	KR2 - 1/4
48	988.979	938.952	17.010	KR2 - MID
49	989.923	939.584	17.405	KR2 - 3/4
50	991.059	939.539	17.625	KR2 - TP/PIT 7
51	997.409	937.180	19.028	KR2
52	1000.847	935.902	19.813	KR2
53	1007.044	933.939	21.092	KR2
54	1012.195	932.306	22.320	KR2
55	1017.913	930.494	MATCH	KR2
56	1019.485	932.299	MATCH	KR2
57	1021.699	934.841	23.703	KR2
58	1024.755	938.351	23.981	KR2

LEGEND



RW. 11.935 x TOP OFF RETAINING WALL HEIGHT

NOTE:
 SETOUT TABLES EASTING AND NORTHINGS ARE BASED ON SURVEY PROVIDED IN DWG FORMAT.
 GRATE LEVEL IS TO BE 25mm BELOW INVERT LEVEL PROVIDED.



PLAN
 SCALE 1:100

ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE
D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24
C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24

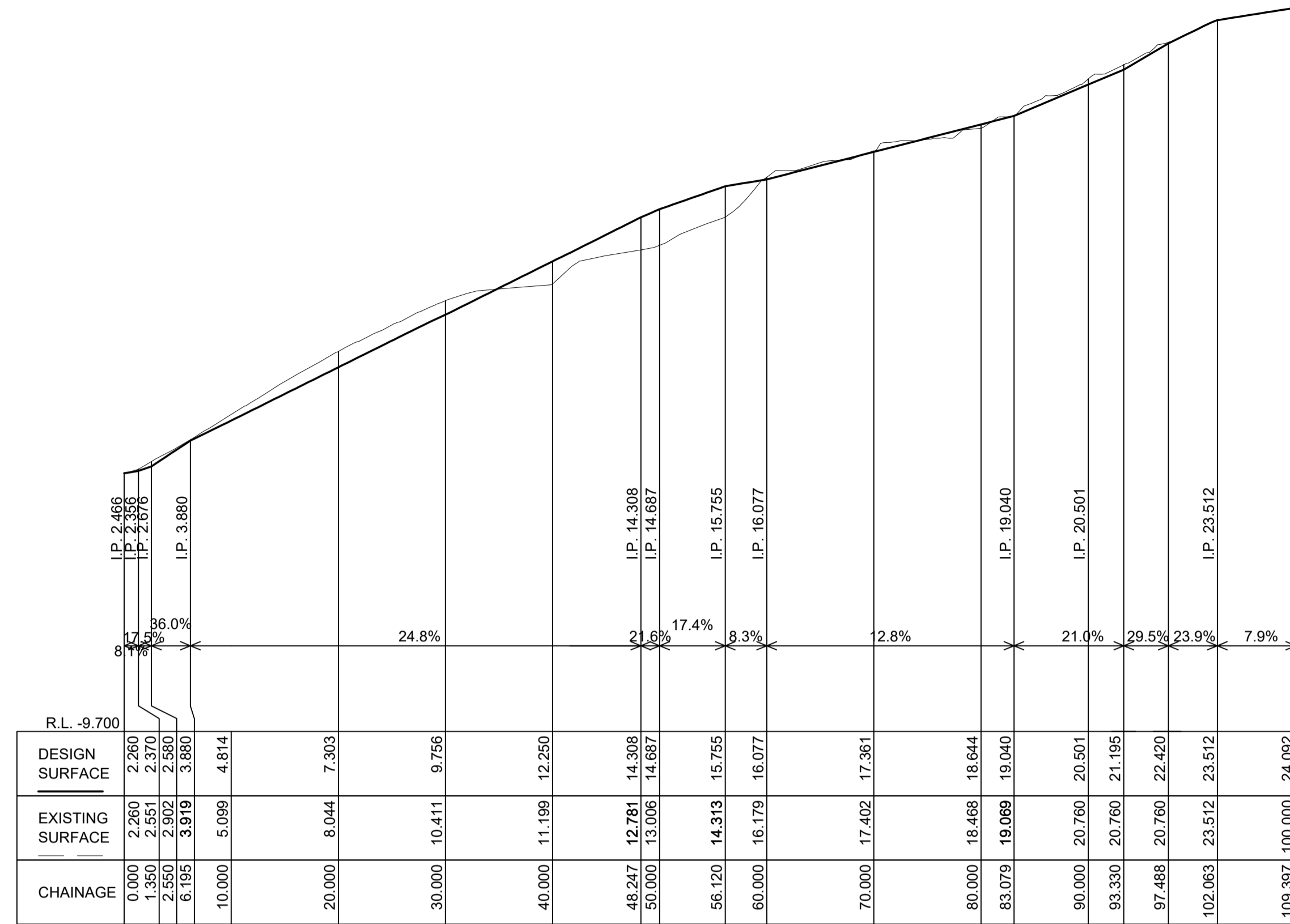
DATUM	SURVEYOR	APPROVED	DATE
AHD	CMS	C.J.	28/7/03
AZIMUTH	FIELD BOOK	CHECKED	DATE
MGA		C.J.	28/7/23
RELATED PLANS	DESIGNED	B.A.	DATE
			28/7/23



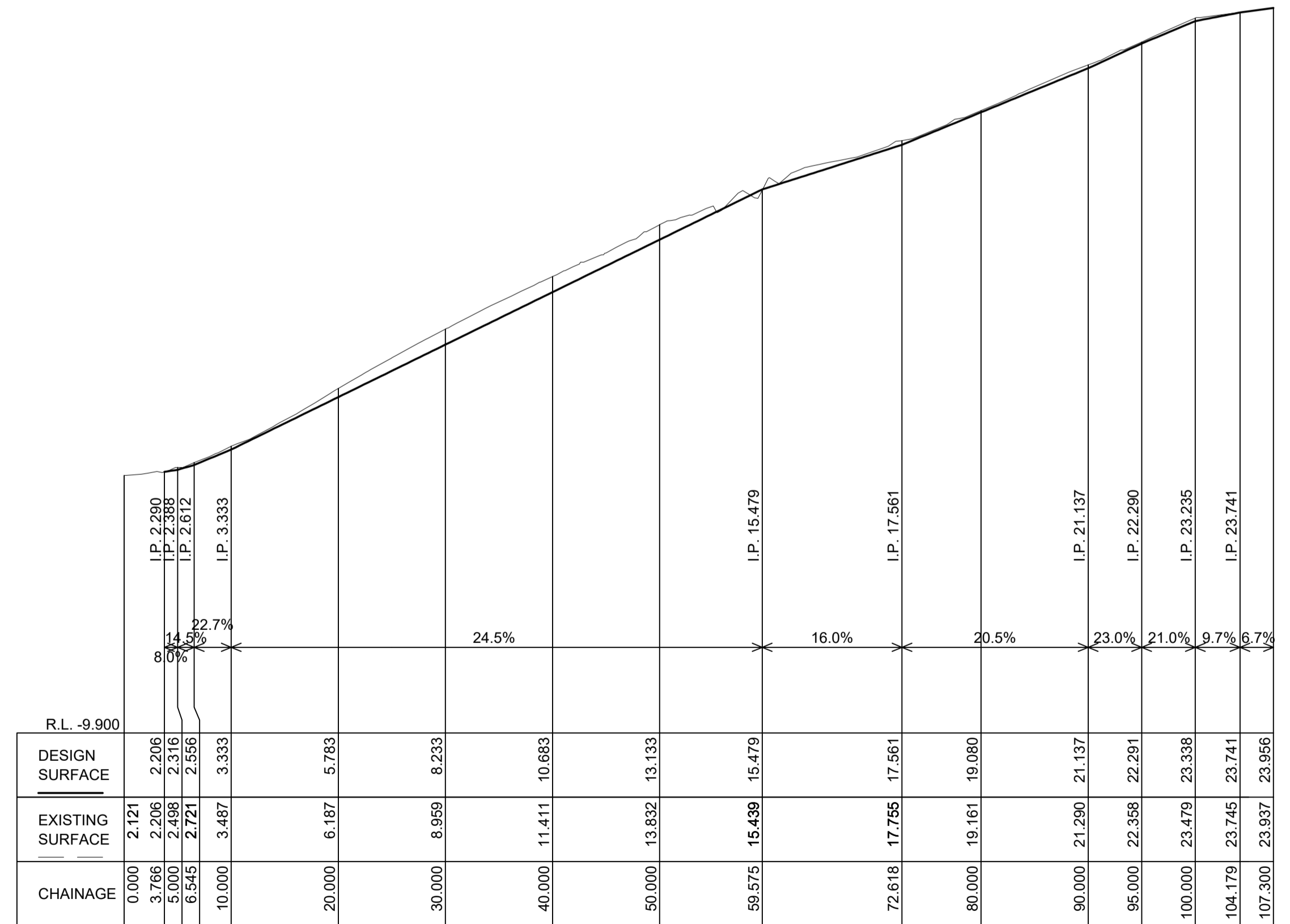
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 DRIVEWAY REMEDIATION
 SETOUT PLAN

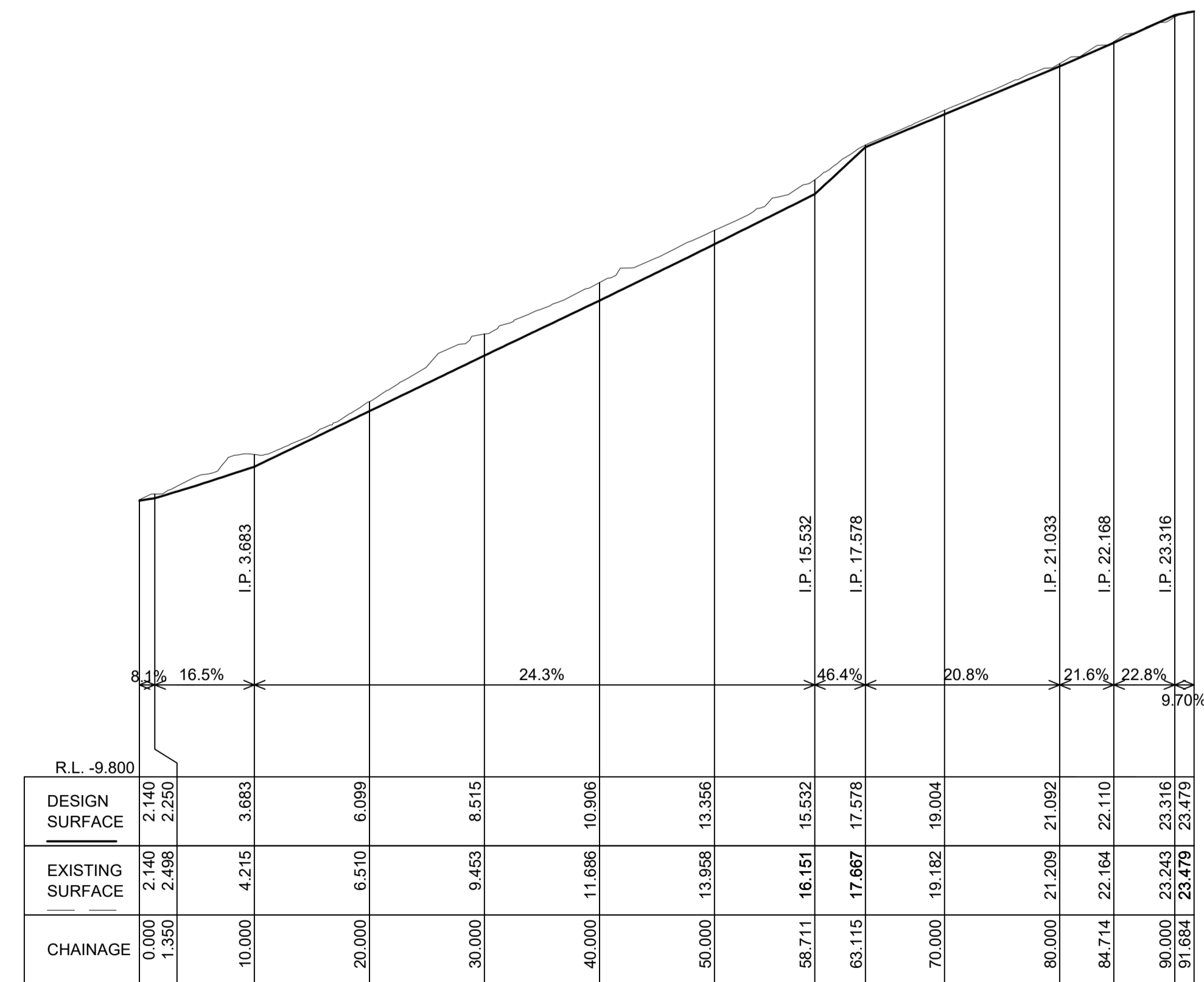
SCALES	PROJECT No.	C19112	A1 ORIGINAL
AS-NOTED	SHEET 4 OF 9 SHEETS		
NORTH POINT	DRAWING No.	C19112	C03
	SHEET No.		D



LONGITUDINAL SECTION KERB 1 (KR1)
 KR1 Ch 0.000 to Ch 109.397
 SCALES: HORIZONTAL 1:400 VERTICAL 1:200



LONGITUDINAL SECTION CENTRE LINE (CL)
 CL Ch 0.000 to Ch 107.300
 SCALES: HORIZONTAL 1:400 VERTICAL 1:200



LONGITUDINAL SECTION KERB 2 (KR2)
 KR2 Ch 0.000 to Ch 91.684
 SCALES: HORIZONTAL 1:400 VERTICAL 1:200

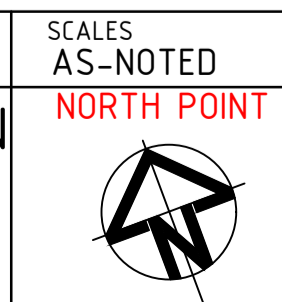
ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE
D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24
C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24

DATUM	SURVEYOR	APPROVED	DATE
AHD	CMS	C.J.	28/7/23
AZIMUTH	FIELD BOOK	CHECKED	DATE
MGA	-	C.J.	28/7/23
RELATED PLANS		DESIGNED	DATE
		B.A.	28/7/23

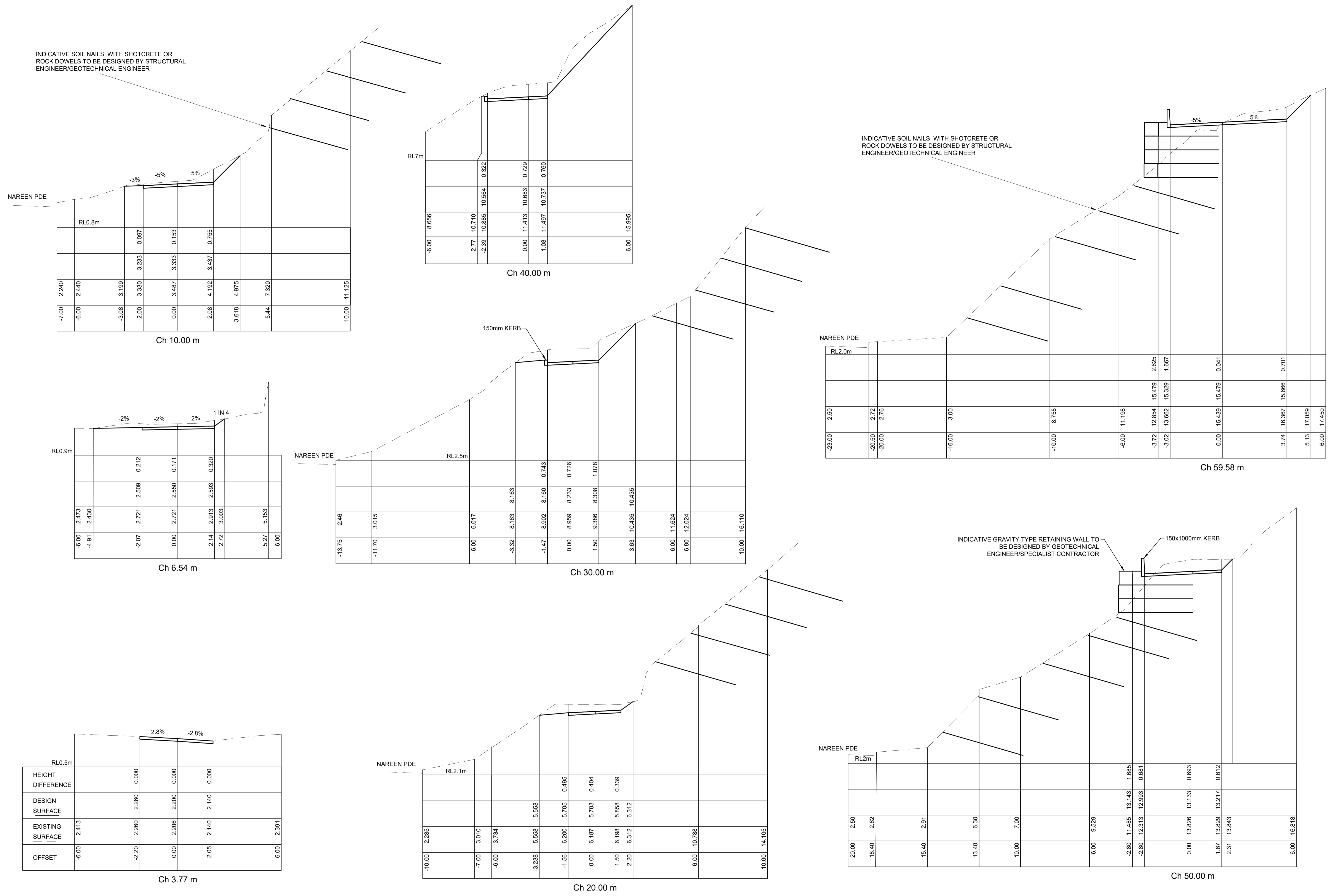


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 DRIVEWAY REMEDIATION
 LONGITUDINAL SECTIONS-CL, KR1 AND KR2



PROJECT No.	C19112	A1 ORIGINAL
SHEET 5 OF 9 SHEETS		
DRAWING No.	C19112	ISSUE
SHEET No.	C04	D



ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE
D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24
C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24

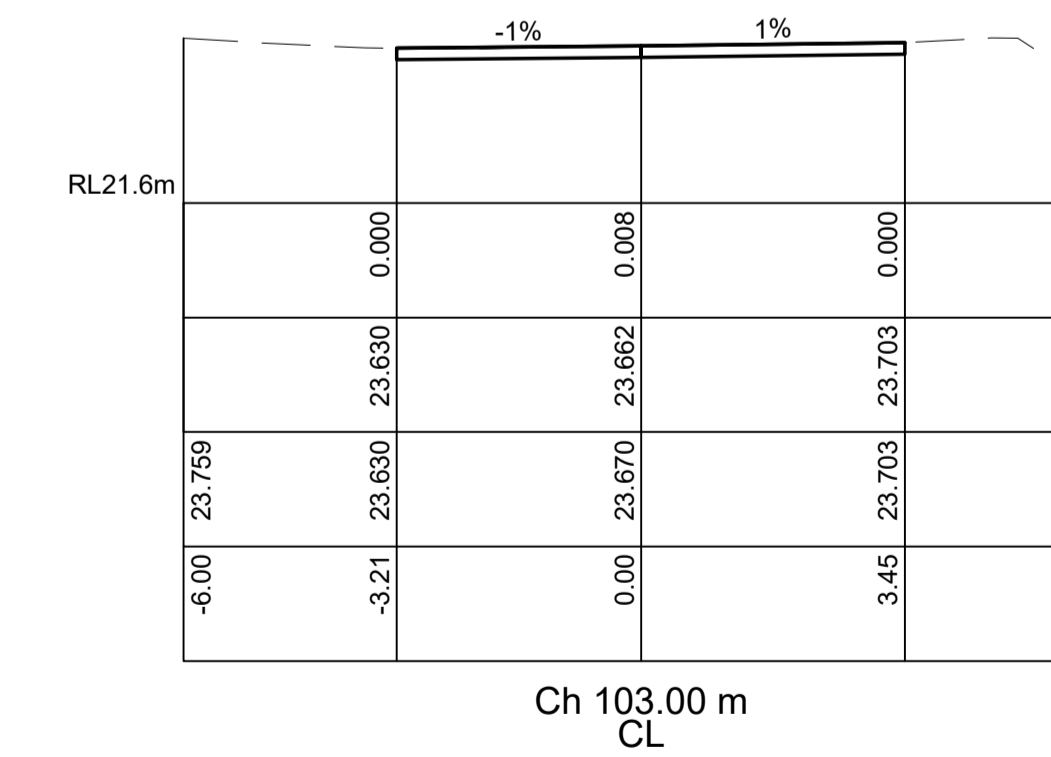
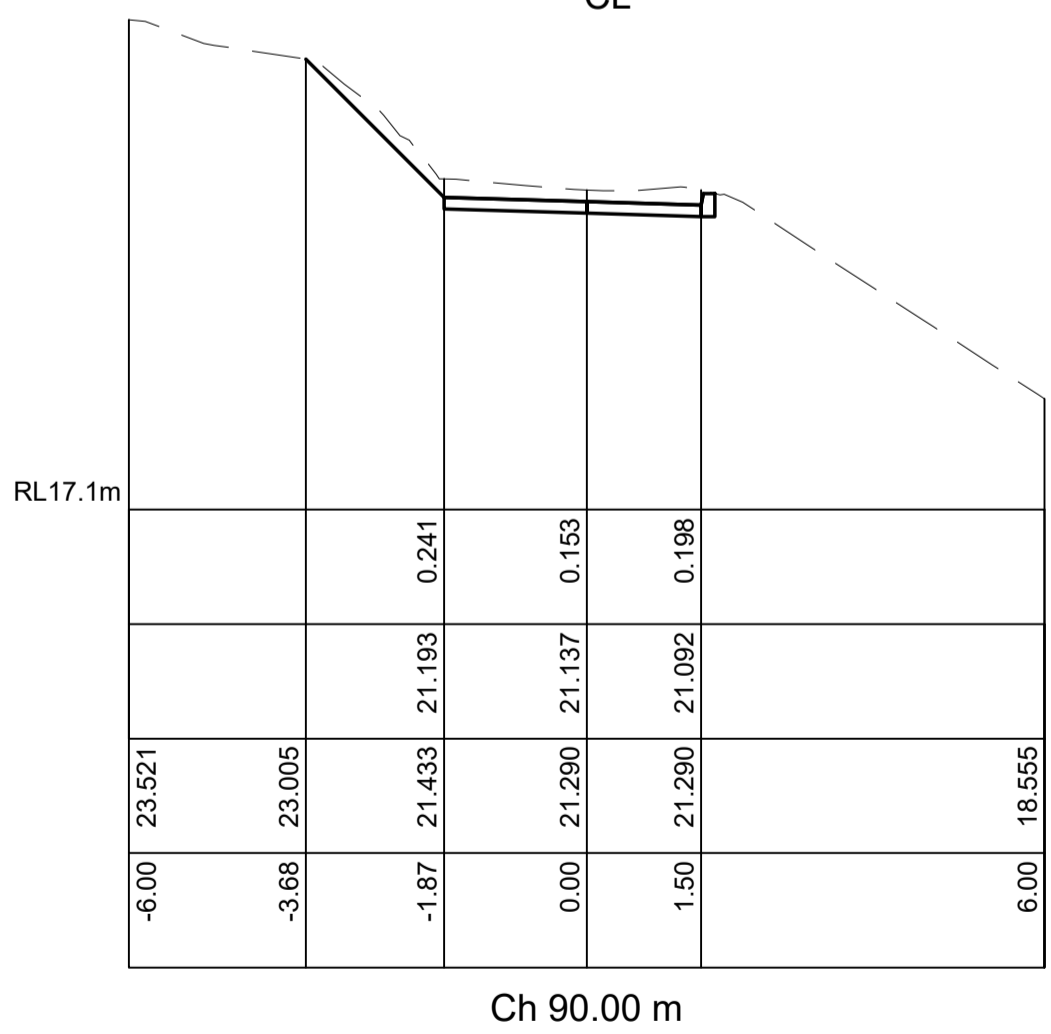
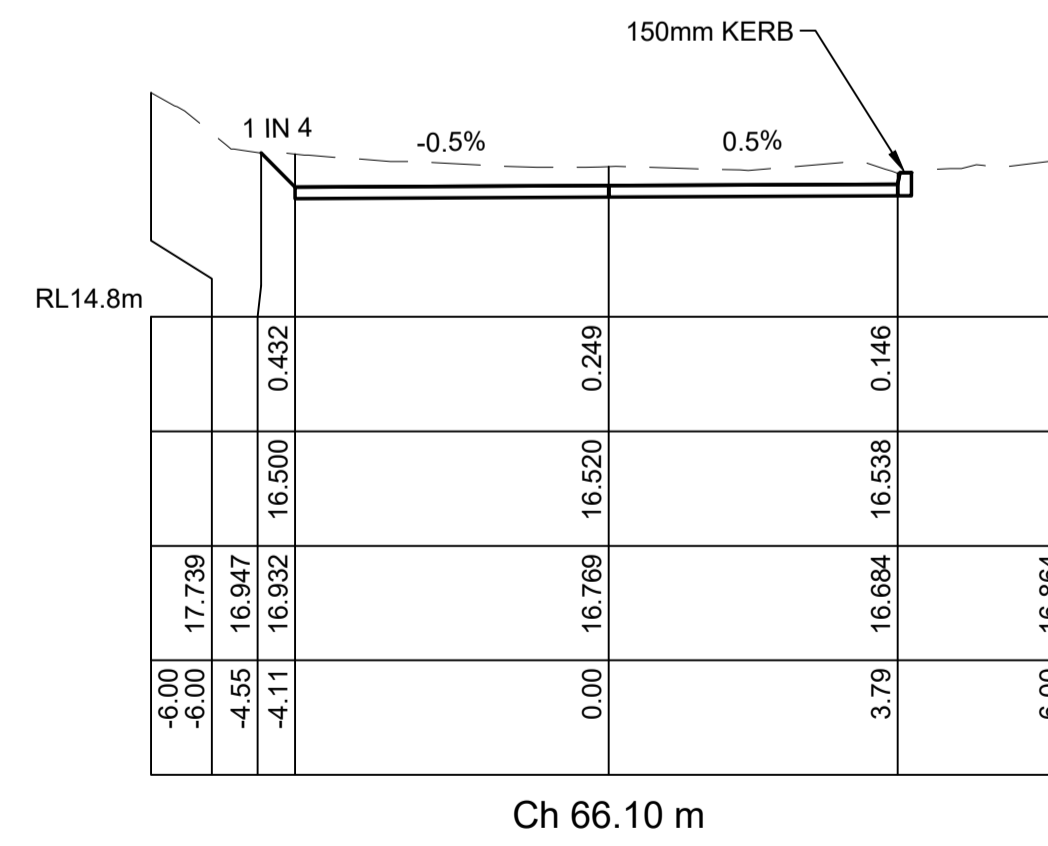
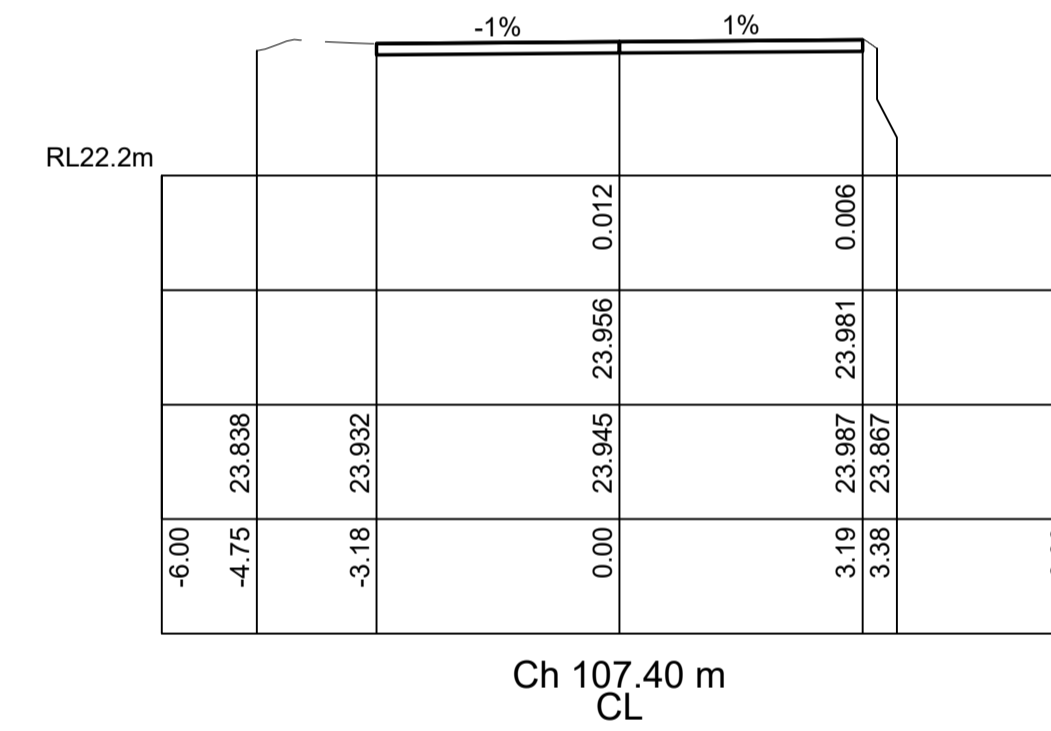
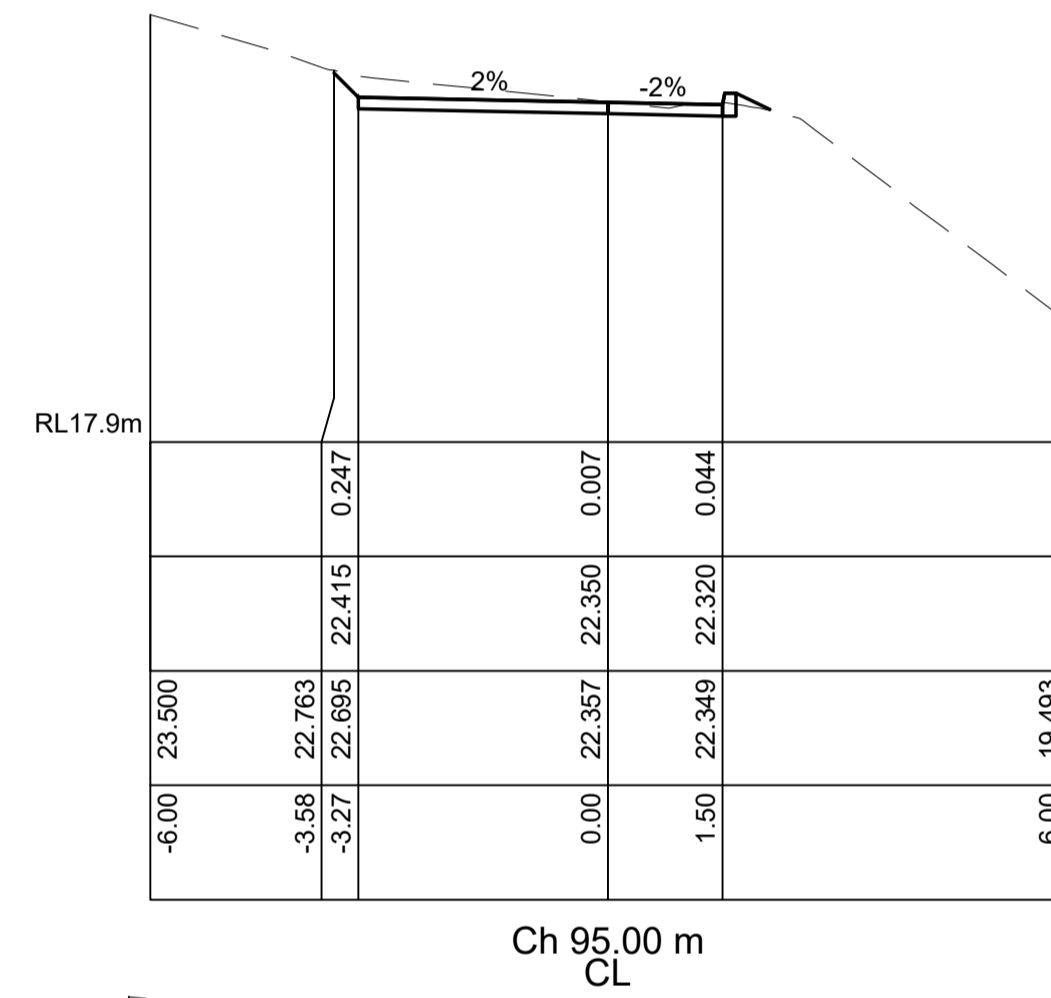
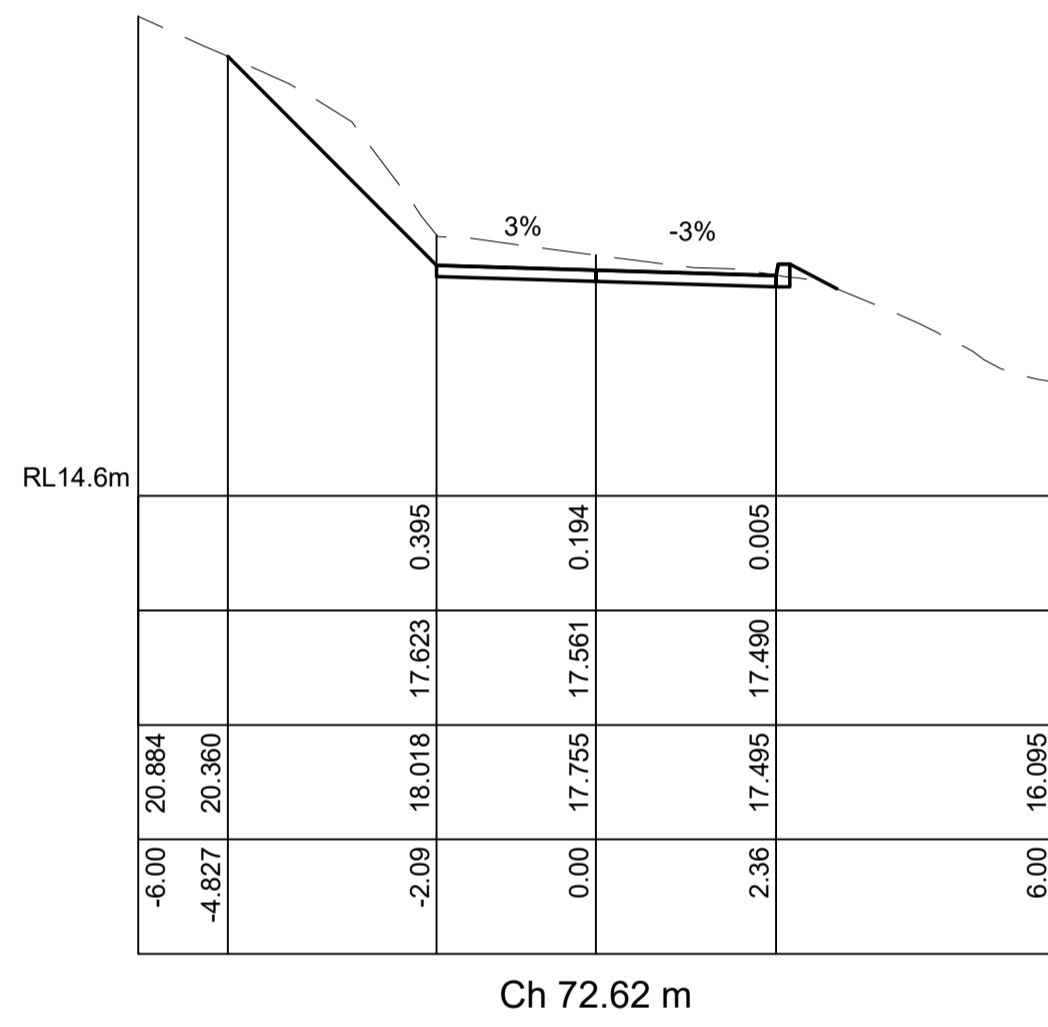
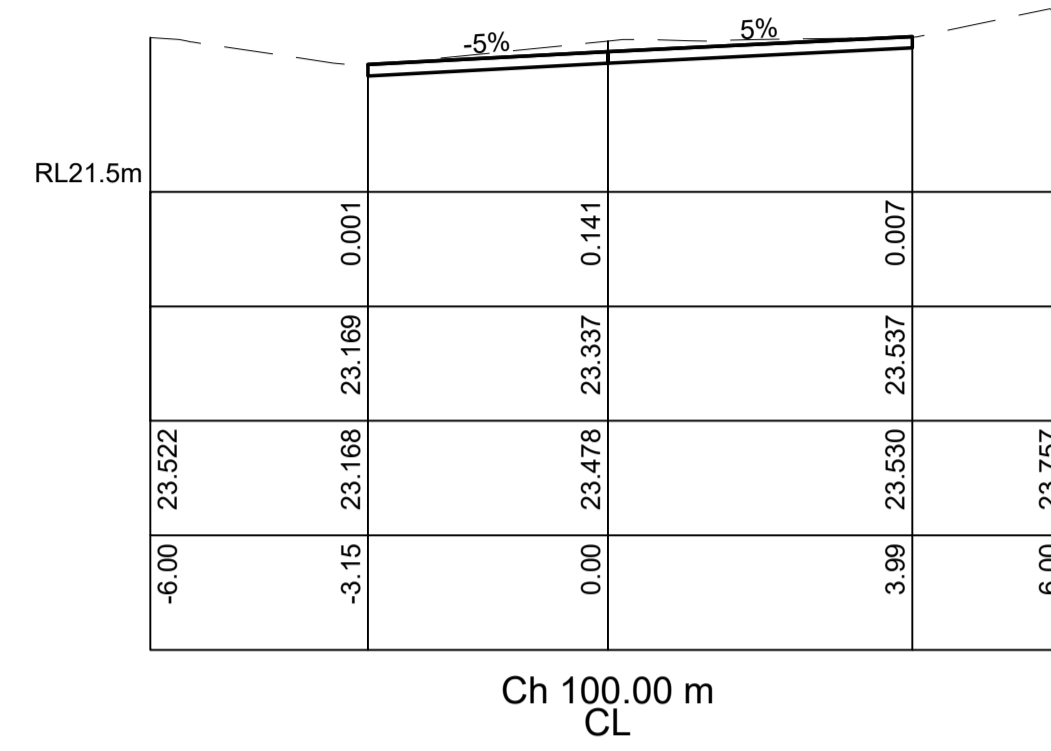
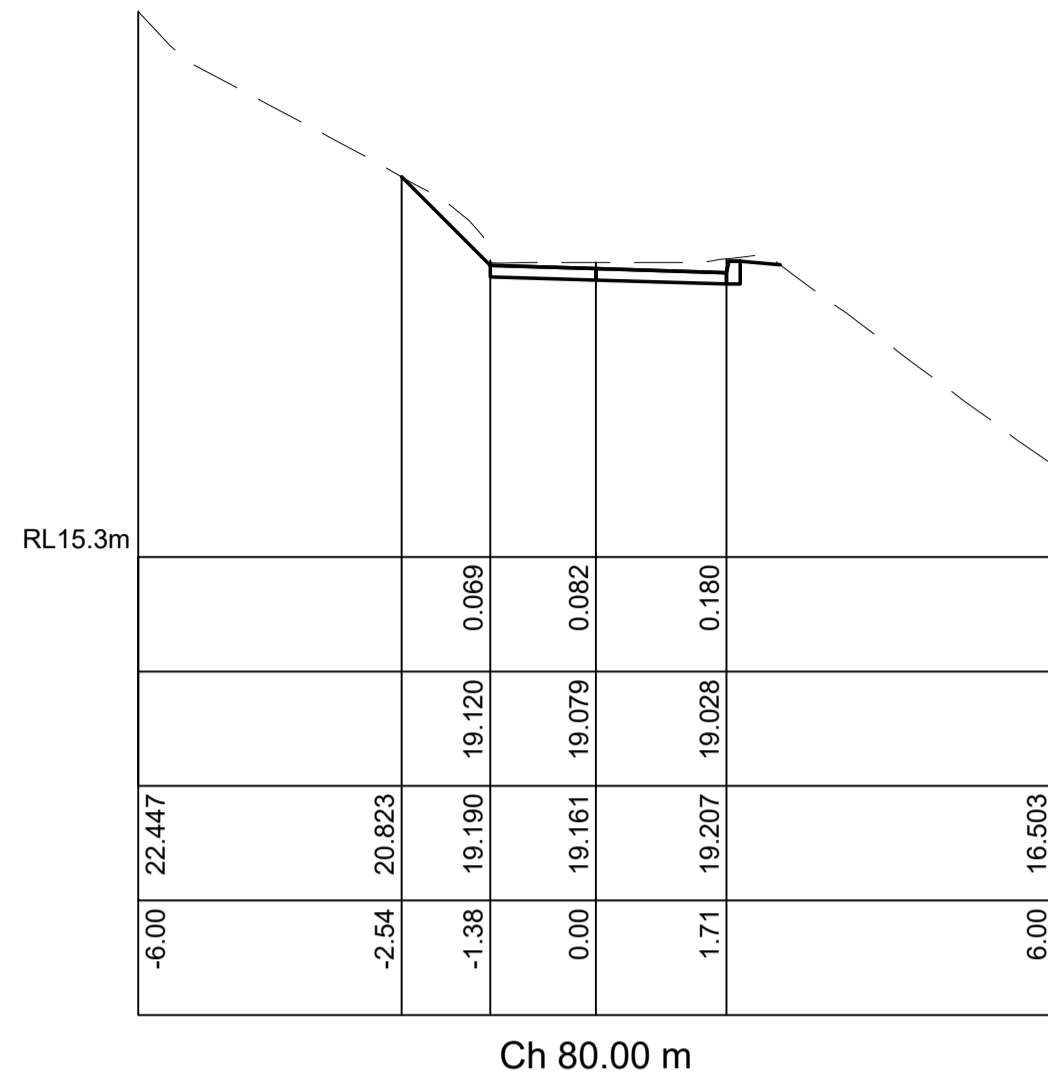
DATUM	SURVEYOR	APPROVED	DATE
AHD	CMS	C.J.	28/7/23
AZIMUTH	FIELD BOOK	CHECKED	DATE
MGA	-	C.J.	28/7/23
RELATED PLANS		DESIGNED	DATE
		B.A.	28/7/23



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 DRIVEWAY REMEDIATION
 CROSS SECTIONS CH 3.77 TO 59.58

SCALES	PROJECT No.	PROJECT No.	PROJECT No.
AS-NOTED	C19112	C19112	C19112
NORTH POINT	SHEET 6 OF 9	SHEET No. C05	ISSUE D



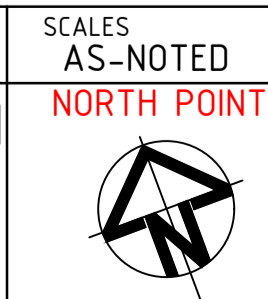
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C	UPDATE TITLE DETAILS	C.J.	C.J.	16/5/24
B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24
ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE

DATUM	AHD	SURVEYOR	CMS	APPROVED	DATE
AZIMUTH	MGA	FIELD BOOK	-	CHECKED	DATE
RELATED PLANS				DESIGNED	DATE
				B.A.	28/7/23

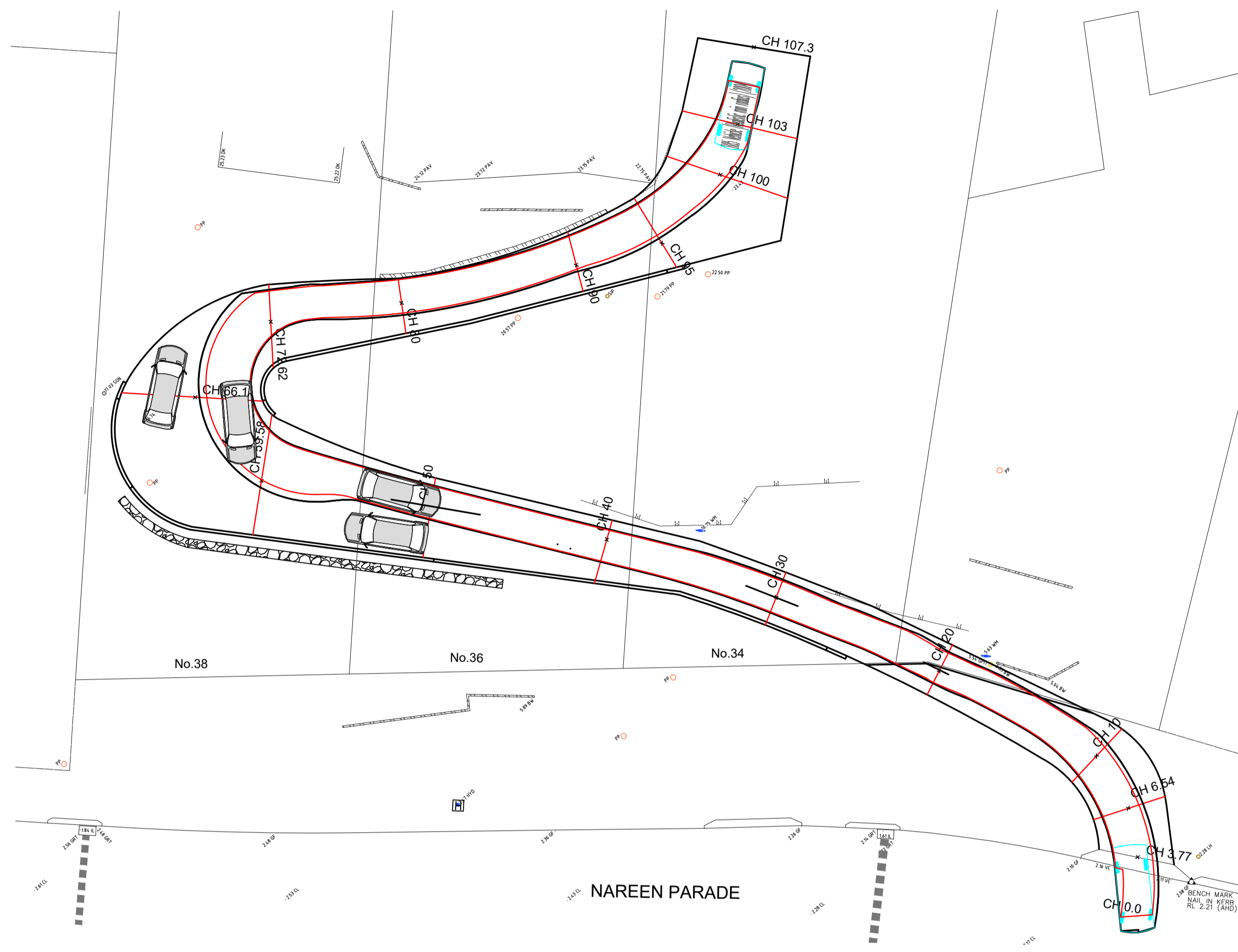


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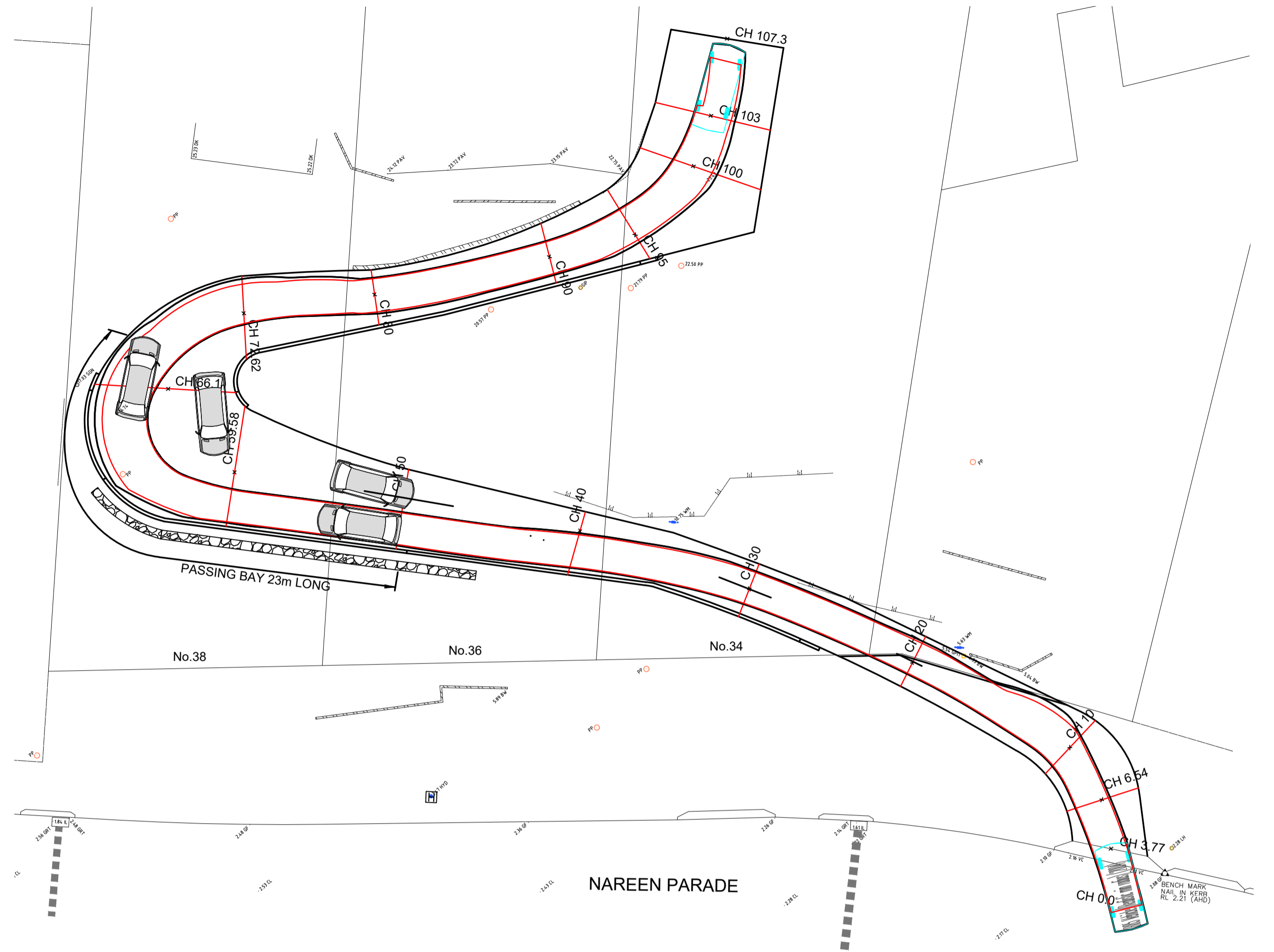
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 DRIVEWAY REMEDIATION
 CROSS SECTION CH 66.1 TO 105



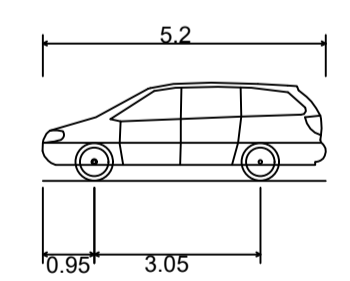
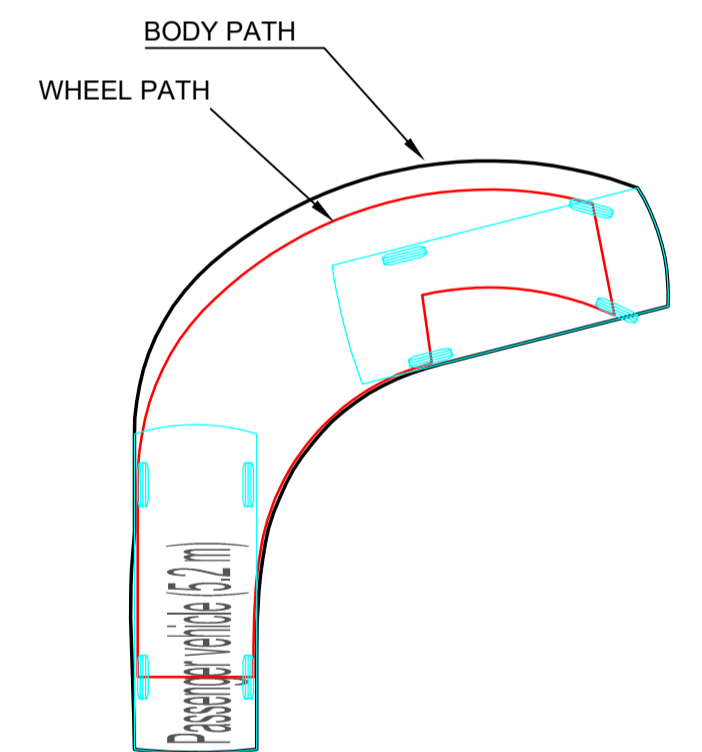
SCALES	AS-NOTED	PROJECT No.	C19112	A1
		SHEET	7 OF 9 SHEETS	ORIGINAL
		DRAWING No.	C19112	ISSUE
		SHEET No.	C06	D



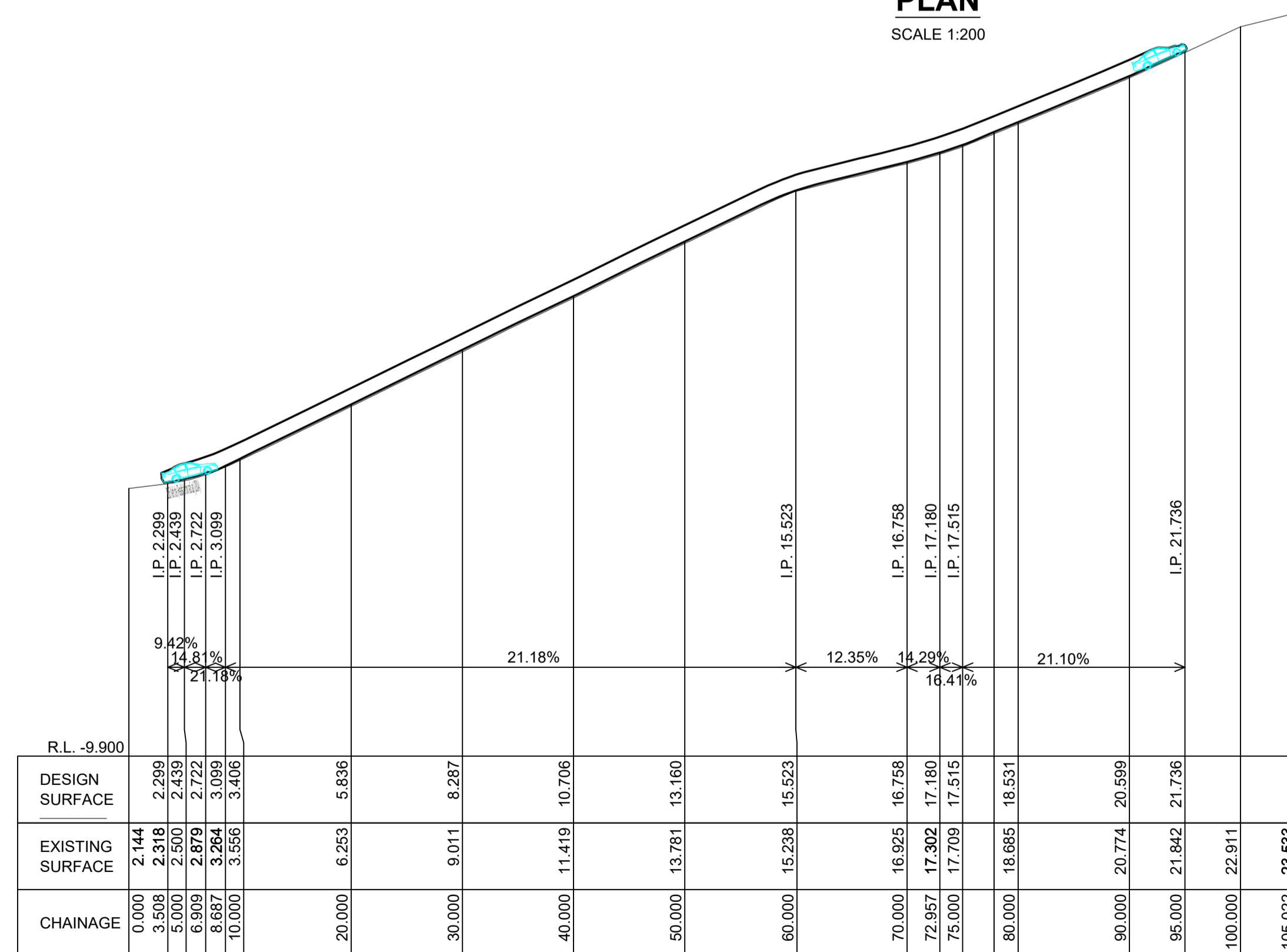
PLAN
SCALE 1:200



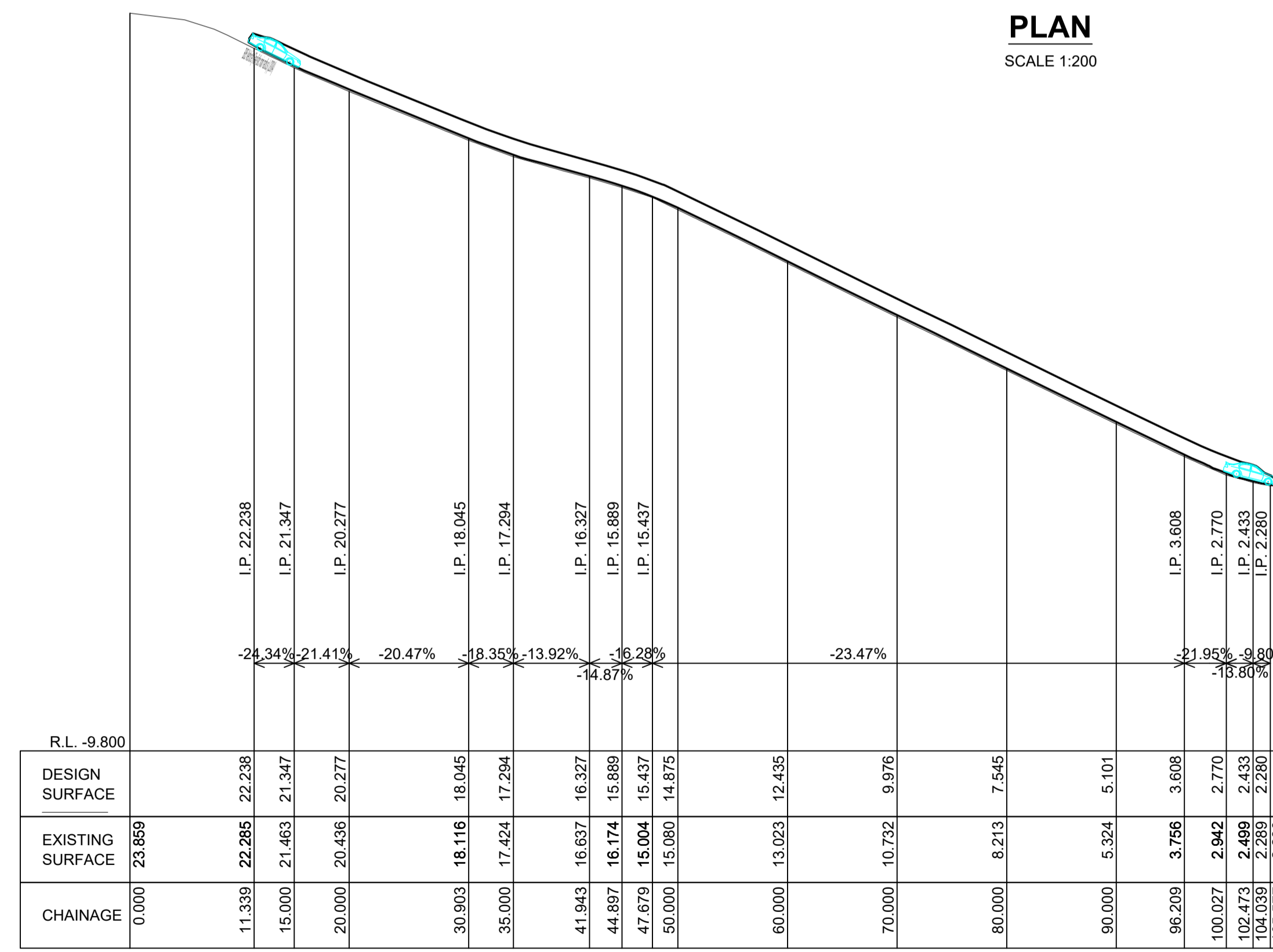
PLAN
SCALE 1:200



Passenger vehicle (5.2 m)
 Overall Length 5.200m
 Overall Width 1.940m
 Overall Body Height 1.804m
 Min Body Ground Clearance 0.295m
 Track Width 1.840m
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 6.300m



LONGITUDINAL SECTION
 Ch 0.000 to Ch 105.022
 SCALES: HORIZONTAL 1:400 VERTICAL 1:200
 CAR ASCENDING



LONGITUDINAL SECTION
 Ch 0.000 to Ch 105.577
 SCALES: HORIZONTAL 1:400 VERTICAL 1:200
 CAR DESCENDING

The turning paths illustrated in this drawing have been prepared using the AutoCAD Vehicle tracking modelling software in conjunction with AutoCAD Civil3D. The vehicle model was prepared by Vehicle Tracking based upon vehicle data provided by Austroads. While this modelling represents a conservative assessment of the vehicles ability, it is not possible to account for all vehicle types/characteristics or driver ability.

ISSUE	DESCRIPTION	DRAWN	APPR'D	DATE
D	COUNCIL COMMENTS	C.J.	C.J.	12/9/24
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B	ADJUST DRIVEWAY ALIGNMENT	C.J.	C.J.	19/4/24
A	ADJUST DRAINAGE LAYOUT AND DRIVEWAY ALIGNMENT	C.J.	C.J.	5/4/24

DATUM	SURVEYOR	APPROVED	DATE
AHD	CMS	C.J.	28/7/23
AZIMUTH	FIELD BOOK	CHECKED	DATE
MGA		C.J.	28/7/23
DESIGNED	DATE		
B.A.	28/7/23		



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 DRIVEWAY REMEDIATION
 B85-SWEPT PATHS AND PROFILES PLAN

SCALES	PROJECT No.	C19112	A1 ORIGINAL
AS-NOTED	SHEET 9 OF 9 SHEETS		
NORTH POINT	DRAWING No.	SHEET No.	ISSUE
	C19112	C08	D