

# 69-93 Hams Rd STAGE I OLIVER HUME

## 1. GENERAL NOTES:

- 1.1. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992 GENERAL CONDITIONS OF CONTRACT, THE ROAD & DRAINAGE SPECIFICATION, APPROVED MUNICIPALITY SPECIFICATIONS AND STANDARD DRAWINGS AND TO THE SATISFACTION OF SUPERINTENDENT AND THE CITY ENGINEER OR THEIR REPRESENTATIVE.
- 1.2. COUNCIL TO BE NOTIFIED SEVEN (7) CLEAR WORKING DAYS PRIOR TO THE COMMENCEMENT OF WORKS WITH A PRECOMMENCEMENT MEETING BEING HELD BETWEEN GREATER CITY OF GEELONG COUNCIL, THE CONSULTANT AND THE CONTRACTOR, BEFORE WORKS COMMENCE. A SITE MANAGEMENT PLAN IS TO BE SUBMITTED PRIOR TO COMMENCEMENT OF WORKS.
- 1.3. PRIOR TO COMMENCEMENT OF THE WORKS, THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION:
  - 1.3.1. SOURCE OF QUARRY MATERIAL
  - 1.3.2. N.A.T.A. APPROVED TESTS RESULTS FOR THE F.C.R. THAT IS TO BE USED
  - 1.3.3. IF THE SOURCE OF THE QUARRY MATERIAL IS CHANGED DURING THE COURSE OF THE WORKS, THEN NEW TEST RESULTS SHALL BE PROVIDED.
- 1.4. PRIOR TO COMMENCEMENT OF WORKS ON SITE, THE CONTRACTOR MUST ENSURE THAT ALL MATTERS RELATING TO THE WORK SAFE HEALTH AND SAFETY ACT, HAVE BEEN AND WILL BE COMPLIED WITH.
- 1.5. ON COMMENCEMENT OF CONSTRUCTION WORKS, THE CONTRACTOR MUST COMPLY WITH THE RECOMMENDATIONS OF THE ENVIRONMENTAL PROTECTION AUTHORITY PUBLICATION "CONSTRUCTION TECHNIQUES FOR SEDIMENT POLLUTION CONTROL." APPROPRIATE SILTATION CONTROL IS TO BE MAINTAINED THROUGHOUT THE CONSTRUCTION AND MAINTENANCE PERIOD OF THE WORKS.
- 1.6. THE LOCATION OF EXISTING SERVICES SHOULD BE DETERMINED BY THE CONTRACTOR PRIOR TO COMMENCING ANY EXCAVATION BY CONTACTING ALL LOCAL SERVICE AUTHORITIES. ANY EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE OFFERED AS A GUIDE ONLY AND ARE NOT GUARANTEED AS CORRECT.
- 1.7. ANY BUILDINGS, TROUGHS, FENCES AND OTHER STRUCTURES ON SITE ARE TO BE REMOVED AS DIRECTED BY THE ENGINEER. THE COST OF REMOVAL IS TO BE INCLUDED IN THE OVERALL EARTHWORKS FIGURE UNLESS A SPECIFIC ITEM FOR REMOVAL IS DENOTED IN THE SCHEDULE.
- 1.8. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS 1742-3.
- 1.9. ALL EXISTING ASSETS AFFECTED BY THE WORKS; EG SIGNS, VEHICLE CROSSINGS, FOOTPATHS, KERB AND LINEMARKING SHALL BE REINSTATED BY THE CONTRACTOR PRIOR TO THE COMPLETION OF THE WORKS TO THE SATISFACTION OF THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.

## 2. SURVEY & SETOUT

- 2.1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA 94) ZONE 55.
- 2.2. ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE
- 2.3. ALL CHAINAGES REFER TO ROAD CENTRELINES
- 2.4. T.B.M'S TO BE RE-ESTABLISHED BY THE LICENSED SURVEYOR IF FOUND TO BE MISSING AT THE COMMENCEMENT OF CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR CARE AND MAINTENANCE OF T.B.M.'S THEREAFTER.
- 2.5. ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES AND ARE ACCURATE TO WITHIN ±0.05m.
- 2.6. SETOUT DRAWING IN DWG FORMAT WILL BE PROVIDED FOR A ALL SETOUT OF DRAINAGE/KERBS/SEWERS/FOOTPATHS etc.

## 3. EARTHWORKS:

- 3.1. ALL FILLING TO COMPLY WITH EDMC STANDARD SECTION 12.3 EARTHWORKS & FILLING REQUIREMENTS (A.S.3798-1996 APPENDIX B, LEVEL 1 AS SPECIFIED). LEVEL 1 FILLING OVER 300mm IS TO BE SUPERVISED AND TESTED BY NATA REGISTERED SOIL LABORATORY. THE DETAILS OF FILLING SUCH AS AREA OF FILL DEPTH OF FILL AND THE COMPACTION TEST RESULTS ARE TO BE SUBMITTED TO COUNCIL WHEN REQUEST THE STATEMENT OF COMPLIANCE.
- 3.2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL IMPORTED FILL MATERIAL, INCLUDING TOPSOIL, SATISFIES THE DESCRIPTION FOR CLEAN FILL MATERIAL IN EPA BULLETIN PUBLICATION NO 448 (SEPT '95) AND SUBSEQUENT REVISIONS. THE CONTRACTOR SHALL IF REQUIRED PROVIDE VERIFICATION INCLUDING TEST CERTIFICATES TO THE CHIEF EXECUTIVE OFFICER AND/OR THEIR REPRESENTATIVE.
- 3.3. THE DISPOSAL SITE FOR SPOIL REMOVAL FROM SITE AND TRUCK ROUTE IS TO BE SUBMITTED TO AND APPROVED BY COUNCIL AND/OR THEIR REPRESENTATIVE IN WRITING PRIOR TO THE COMMENCEMENT OF ANY WORKS
- 3.4. ALL BATTERS SHALL BE 1 IN 6, UNLESS OTHERWISE SHOWN.
- 3.5. NO FILL OR STOCKPILING OF MATERIAL IS TO BE PLACED ON ANY RESERVE FOR PUBLIC OPEN SPACE UNLESS OTHERWISE DIRECTED BY THE SUPERINTENDENT.
- 3.6. ALL EXISTING DAMS ARE TO BE BREACHED, DRAINED, DESLUDGED AND SHALL BE EXCAVATED TO A CLEAN FIRM BASE. THE SURFACE SHALL BE INSPECTED APPROVED AND LEVELLED BY THE ENGINEER PRIOR TO COMMENCEMENT OF FILLING. THE FILL SHALL BE APPROVED SELECTED ON SITE MATERIAL OR APPROVED IMPORTED MATERIAL. THE FILL SHALL BE PLACED UNDER CONTROLLED MOISTURE CONDITIONS IN ACCORDANCE WITH THE SPECIFICATION
- 3.7. NO BLASTING TO BE CARRIED OUT WITHIN THE MUNICIPALITY WITHOUT OBTAINING COUNCILS SPECIAL PERMISSION. RESTRICTED BLASTING WITHIN 20 METRES OF WATER MAINS AND WITHIN 6 METRES OF TELSTRA CONDUITS
- 3.8. ALL EXCAVATED ROCK TO BE REMOVED AND DISPOSED OFF SITE.

## 4. TREE PROTECTION ZONE:

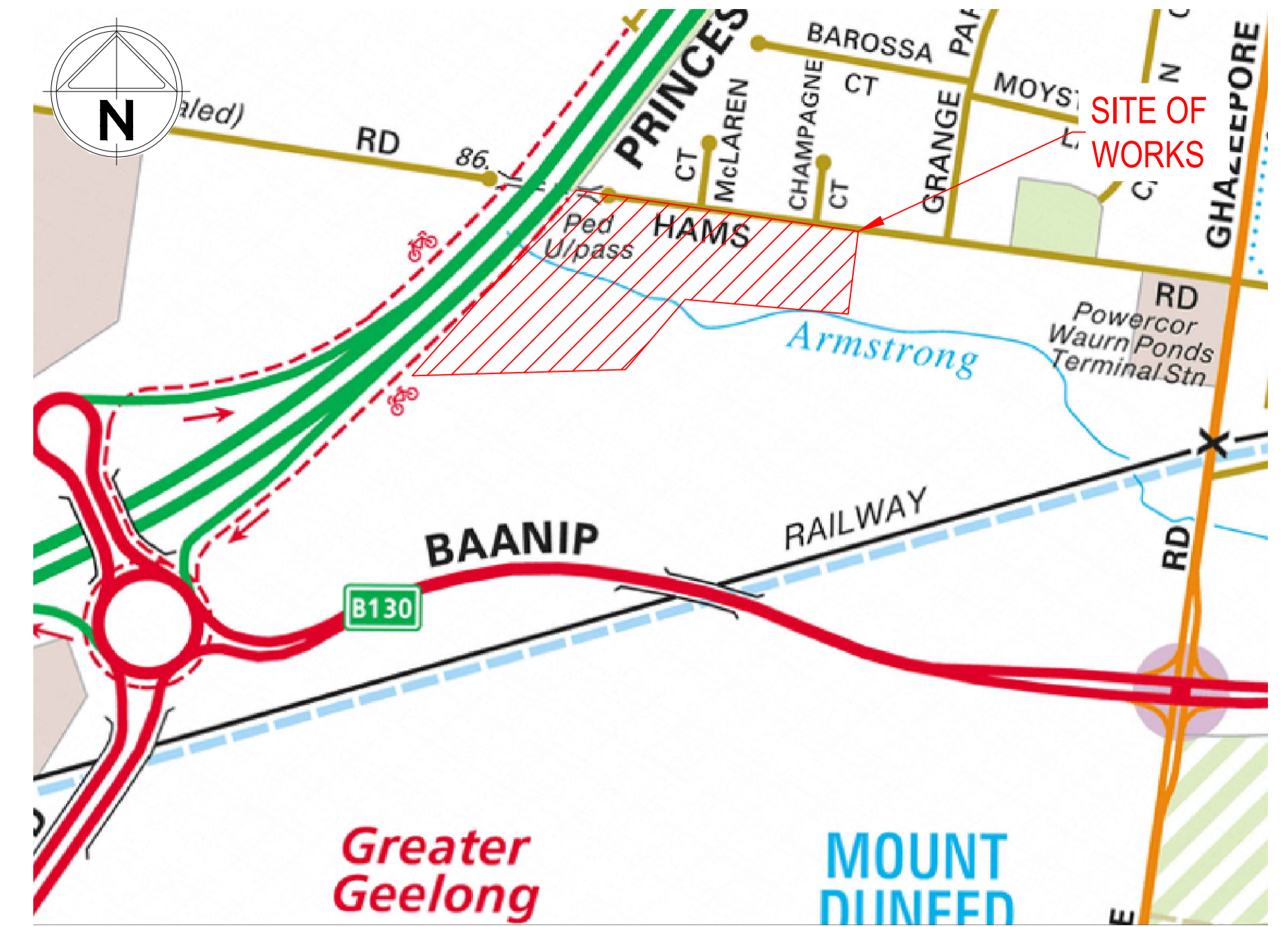
- 4.1. ALL TREES AND SHRUBS ARE TO BE RETAINED UNLESS OTHERWISE SHOWN. IF ROAD AND DRAINAGE CONSTRUCTION NECESSITATES THEIR REMOVAL, WRITTEN PERMISSION MUST BE OBTAINED FROM THE ENGINEER.
- 4.2. A TEMPORARY 1.5m HIGH POST & WIRE FENCE SHALL BE ERECTED AND MAINTAINED AROUND EXISTING TREES, NOMINATED TO BE RETAINED AS PER A TREE PROTECTION ZONE (TPZ) CONDITION. AT ALL TIMES DURING CONSTRUCTION, UNDER NO CIRCUMSTANCES SHALL SITE SHEDS, VEHICLES, MACHINERY AND EQUIPMENT BE STORED OR PLACED WITHIN FENCED ZONE OF THESE TREES.
- 4.3. PRIOR TO REMOVAL OF ANY TREES THE CONTRACTOR IS TO ENGAGE A SUITABLY QUALIFIED ENVIRONMENTAL CONSULTANT TO ASSESS RISKS TO ANIMALS LIVING OR NESTING IN ANY OF THE TREES. IF SO, THESE ANIMALS MUST BE SUITABLY RELOCATED TO APPROPRIATE AREA TO THE SATISFACTION OF THE RESPONSIBLE AUTHORITY.

## 5. SERVICES & TRENCHING:

- 5.1. BEFORE COMMENCING WORK ON THE TRENCHES IN EXCESS OF 1.5 METRES DEEP, NOTICE OF SUCH PROPOSAL IS TO BE SENT TO THE PRINCIPAL MINING INSPECTOR, VICTORIA WORKCOVER AUTHORITY IN ACCORDANCE WITH THE MINES ACT 1958 & O.H.S. ACT 2004. A FOREMAN, QUALIFIED AS A NOMINATED PERMITTED MINES MANAGER, MUST BE IN ATTENDANCE AT ALL TIMES DURING SUCH EXCAVATION.
- 5.2. WHERE WORKS ARE IN THE VICINITY OF EXISTING SERVICES, THESE SERVICES ARE TO BE LOCATED AND EXPOSED/PROVED PRIOR TO COMMENCEMENT OF WORKS, AND THE RELEVANT AUTHORITIES NOTIFIED SEVEN (7) CLEAR DAYS PRIOR TO THE COMMENCEMENT OF THE WORKS.
- 5.3. DRAINAGE BACKFILL TO BE AS PER IDM STD SD 310. DRAINAGE PIPES WITHIN THE ROAD RESERVE REQUIRE TO BE BACKFILLED WITH 20mm CLASS 3 FCR.
- 5.4. ALL SERVICE TRENCHES UNDER DRIVEWAYS, FOOTPATHS AND PARKING BAYS TO BE BACKFILLED WITH CLASS 2 CRUSHED ROCK. SERVICE TRENCHES LESS THAN 750mm BEHIND PARKING BAYS ARE ALSO TO BE BACKFILLED WITH COMPACTED CLASS 2 CRUSHED ROCK.
- 5.5. WATER CONDUITS ARE TO BE Ø50mm CLASS 12 P.V.C. WITH THE FOLLOWING MINIMUM COVER TO FINISHED SURFACE LEVELS:
  - 5.5.1. VERGE, FOOTPATHS - 750mm
- 5.6. ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAVEMENTS TO BE BACKFILLED WITH 2% CEMENT TREATED CRUSHED ROCK.
- 5.7. WATER TAPPINGS TO BE LOCATED IN CENTRE OF ALLOTMENTS UNLESS OTHERWISE SHOWN. REFER TO WATER DESIGN DRAWINGS FOR NOMINATED OFFSETS.
- 5.8. SERVICE CROSSING LOCATIONS SHALL BE MARKED ON KERBS IN ACCORDANCE WITH EDMC 303
- 5.9. ALL FIRE HYDRANTS ARE TO BE MARKED IN ACCORDANCE WITH "IDENTIFICATION OF STREET HYDRANTS FOR FIREFIGHTING PURPOSES" PUBLICATION (DEVELOPED BY C.F.A. M.F.E.S.B & N.R.E). MARKINGS TO BE VIA BLUE PAVEMENT MARKER AND A (RED TOPPED) WHITE POST.

## 6. CONCRETE WORKS:

- 6.1. FOOTPATHS ARE TO BE 0mm OFFSET FROM TITLE BOUNDARIES UNLESS NOTED OTHERWISE. VEHICLE CROSSING ALIGNMENTS ARE GENERALLY TO BE PARALLEL TO THE SIDE BOUNDARY
- 6.2.1. FOOTPATHS TO BE 125mm THICK CONCRETE WITH SL72 MESH (CENTRALLY LOCATED) ON 100mm THICK 20mm NOMINAL SIZE CLASS 3 FCR COMPACTED TO COUNCIL APPROVAL AS PER SD 205.
- 6.2.2. FOOTPATH CONNECTION TO PEDESTRIAN CROSSINGS TO BE IN ACCORDANCE WITH SD 270
- 6.2.3. FOOTPATHS TO BE CONSTRUCTED IN ACCORDANCE WITH SD 205.
- 6.2.4. PRAM CROSSINGS AND KERB RAMPS TO BE IN ACCORDANCE WITH STANDARD DETAILS WITHIN THIS DRAWING SET.
- 6.3. VEHICLE CROSSINGS TO BE 125mm THICK CONCRETE WITH SL82 MESH (CENTRALLY LOCATED) ON 100mm THICK CLASS 3 FCR COMPACTED TO COUNCIL APPROVAL AS PER SD 240. REFER STANDARD DETAILS WITHIN THIS DRAWING SET.
- 6.4. ANY EXPOSED AGGREGATE CONCRETE WORKS TO BE ACHIEVED BY SANDBLASTING ONLY. WASHING AGGREGATE OFF WITH WATER IS NOT PERMITTED.
- 6.4. KERB & CHANNEL TO BE IN ACCORDANCE WITH SD 105, SD 110 AND SD 115.
- 6.5. ALL KERB RETURN RADII ARE TO LIP OF KERB UNLESS OTHERWISE SPECIFIED.
- 6.6. SEWER PITS IN FOOTPATH ARE COMPLETELY SURROUNDED BY CONCRETE AND DO NOT HAVE EXPANSION JOINTS CUTTING THROUGH THEM.



LOCALITY PLAN N.T.S. COPYRIGHT MELWAY PUBLISHING Pty. Ltd. REPRODUCED WITH PERMISSION

## SHEET INDEX

SHEET NO.	REVISION	DESCRIPTION
1	1	COVER SHEET
2	1	DETAIL PLAN - 1
3	1	DETAIL PLAN - 2
4	1	EXISTING FEATURES - 1
5	1	EXISTING FEATURES - 2
6	1	TYPICAL XS AND SOT
7	1	ROAD LONGITUDINAL SECTIONS - 1
8	1	ROAD LONGITUDINAL SECTIONS - 2
9	1	ROAD CROSS SECTIONS - 1
10	1	ROAD CROSS SECTIONS - 2
11	1	ROAD CROSS SECTIONS - 3
12	1	ROAD CROSS SECTIONS - 4
13	1	ROAD CROSS SECTIONS - 5
14	1	ROAD CROSS SECTIONS - 6
15	1	INTERSECTION DETAILS - 1
16	1	INTERSECTION DETAILS - 2
17	1	DRAINAGE LONGITUDINAL SECTIONS - 1
18	1	DRAINAGE LONGITUDINAL SECTIONS - 2
19	1	DRAINAGE LONGITUDINAL SECTIONS - 3
20	1	DRAINAGE LONGITUDINAL SECTIONS - 4
21	1	DRAINAGE PIT SCHEDULE
22	1	STANDARD DETAILS - 1
23	1	STANDARD DETAILS - 2
24	1	STANDARD DETAILS - 3
25	1	SIGNAGE & LINEMARKING - 1
26	1	SIGNAGE & LINEMARKING - 2

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

**WARNING**  
BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

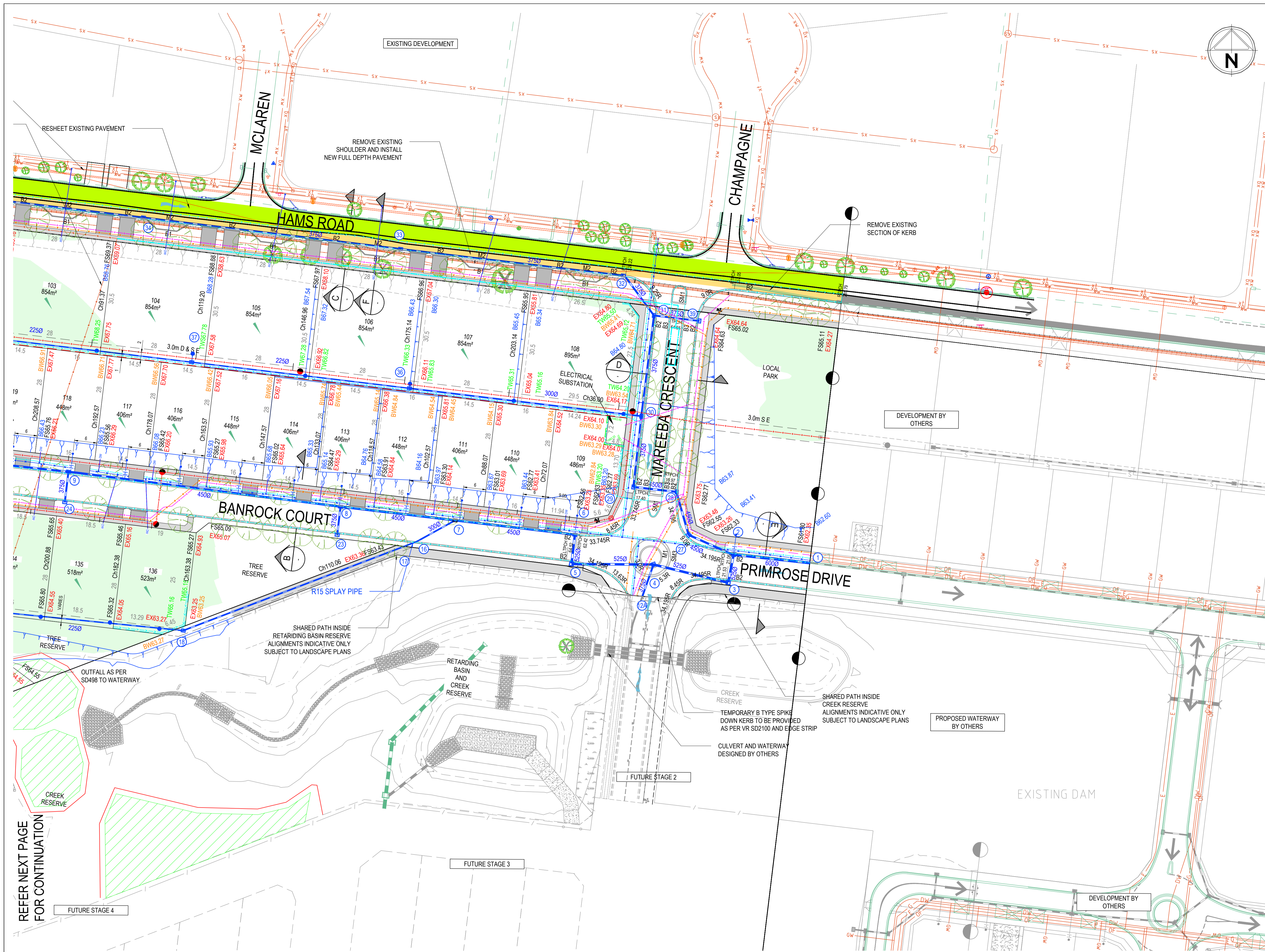


PM	A.CHUDLEIGH
DESIGNED	17.05.2022
DESIGNED BY	S.FALKENSTEIN
CHECKED	17.05.2022
CHECKED BY	T.BARBOR
AUTHORISED	17.05.2022
AUTHORISED BY	T.BARBOR
MELWAYS	Melway Ref
POS No.	PS905325B
STATUS:	

**69-93 Hams Rd  
STAGE 1  
City of Greater Geelong  
COVER SHEET**

Scale	NOT TO SCALE	CONSTRUCTION	21-0347-01RD01	SHEET No.	1 OF 26
REV.					1





- LEGEND:**
- EXISTING WATER MAIN
  - EXISTING RECYCLED WATER MAIN
  - EXISTING UNDERGROUND ELECTRICITY
  - EXISTING OVERHEAD ELEC & POLE
  - EXISTING TELSTRA & SERVICE PIT
  - EXISTING OPTIC FIBRE
  - EXISTING GAS MAIN
  - EXISTING FENCE
  - EXISTING SEWER & MANHOLE
  - EXISTING SEWER RISING MAIN
  - EXISTING STORMWATER DRAIN & PIT
  - EXISTING HOUSE DRAIN
  - EXISTING SURFACE CONTOUR MINOR
  - EXISTING SURFACE CONTOUR MAJOR
  - EXISTING TOP OF BATTER
  - EXISTING TOE OF BATTER
  - EXISTING KERB
  - EXISTING FOOTPATH
  - EXISTING FILL LEVEL
  - EXISTING SURFACE LEVEL
  - EXISTING BUILDING
  - EXISTING SIGN AND POST
  - EXISTING PERMANENT SURVEY MARK
  - ROAD RESERVE
  - LOT BOUNDARY
  - EASEMENT
  - KERB & CHANNEL + TYPE
  - SAWCUT PAVEMENT
  - CONCRETE EDGE STRIP
  - LIMIT OF ROAD WORKS
  - ALLOTMENT NUMBER
  - ROAD CHAINAGE
  - ROAD CHAINAGE
  - SET-OUT POINT
  - FINISHED SURFACE CONTOUR MINOR
  - FINISHED SURFACE CONTOUR MAJOR
  - FINISHED SURFACE LEVEL
  - TOP OF BATTER LEVEL
  - EXISTING LEVEL
  - BOTTOM OF WALL LEVEL
  - TOP OF WALL LEVEL
  - PROPOSED WATER MAIN
  - PROPOSED RECYCLED WATER MAIN
  - PROPOSED ELECTRICITY
  - PROPOSED TELSTRA
  - PROPOSED OPTIC FIBRE CONDUIT
  - PROPOSED GAS MAIN
  - PROPOSED SEWER
  - PROPOSED SEWER RISING MAIN
  - PROPOSED STORMWATER DRAIN & PIT
  - PROPOSED HOUSE DRAIN
  - PROPOSED DRAINAGE INLET
  - AUTHORITY DRAIN & PIT
  - PIT NUMBER
  - PROPOSED FOOTPATH
  - PROPOSED DRIVEWAY
  - PROPOSED INDUSTRIAL DRIVEWAY
  - GAS & WATER CONDUIT
  - PROPOSED AG DRAIN
  - PROPOSED CATCH DRAIN
  - PROPOSED SWALE DRAIN
  - 5 YEAR FLOW ARROW
  - 100 YEAR FLOW ARROW
  - TEMPORARY BENCH MARK (TBM)
  - PROPOSED PERMANENT SURVEY MARK
  - PROPOSED BOLLARD
  - PROPOSED LIGHT & POLE
  - PROPOSED LOW POST & RAIL FENCE
  - PROTECTIVE TREE FENCING
  - PROPOSED TOP OF BATTER
  - PROPOSED TOE OF BATTER
  - RIDGE / CHANGE OF GRADE
  - PROPOSED SLEEPER RETAINING WALL TYPE 2
  - PROPOSED ROCK SLEEPER RETAINING WALL
  - PROPOSED SLEEPER RETAINING WALL 0.5m OFFSET FROM TITLE TYPE 2
  - EXISTING TREE TO BE RETAINED (SURVEYED CANOPY)
  - EXISTING TREE TO BE REMOVED
  - SHOULDER TO BE REMOVED AND FULL DEPTH PAVEMENT CONSTRUCTED
  - HAMS ROAD ASPHALT RESHEET
  - FILL GREATER THAN 300
  - NATIVE VEGETATION TO BE RETAINED

REFER NEXT PAGE FOR CONTINUATION

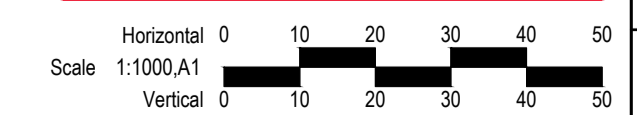
REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

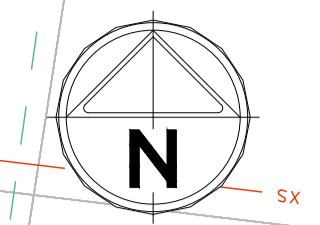
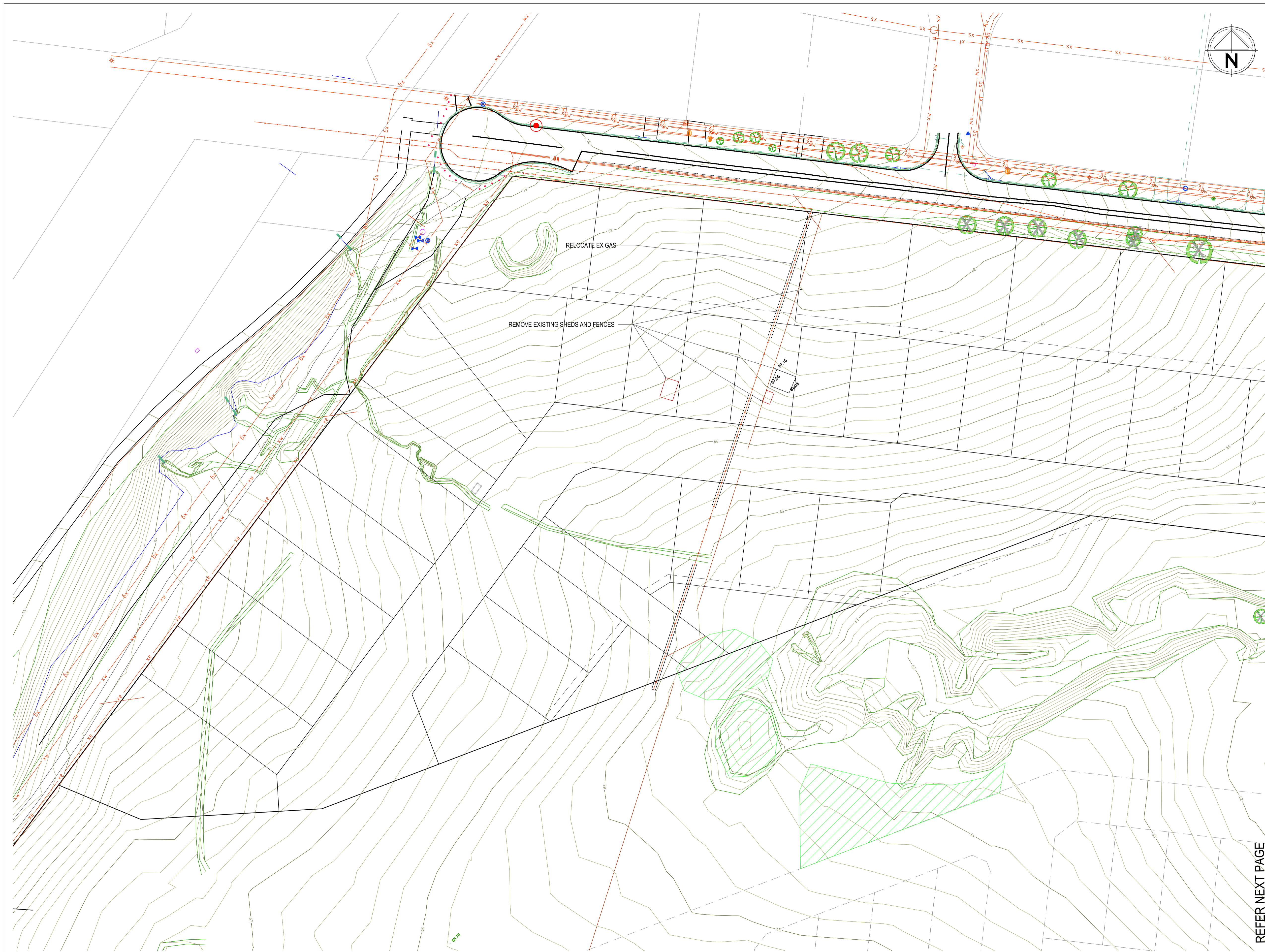
**WARNING**  
 BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
 THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



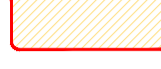

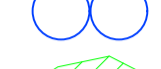
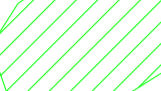


DESIGNED	A.CHUDLEIGH
DESIGNED	17.05.2022
CHECKED	S.FALKENSTEIN
CHECKED	17.05.2022
AUTHORISED	T.BARBOR
AUTHORISED	17.05.2022
MELWAYS	T.BARBOR
MELWAYS	Melway Ref
STATUS	PS905325B

**69-93 Hams Rd**  
 STAGE 1  
 City of Greater Geelong  
 DETAIL PLAN - 2





- LEGEND:**
-  EXISTING TREE TO BE RETAINED (SURVEYED CANOPY)
  -  EXISTING TREE TO BE REMOVED
  -  EXISTING BUILDING TO BE DEMOLISHED
  -  EXISTING WATER BODIES TO BE FILLED
  -  EXISTING WATER TANKS TO BE REMOVED
  -  NATIVE VEGETATION TO BE RETAINED

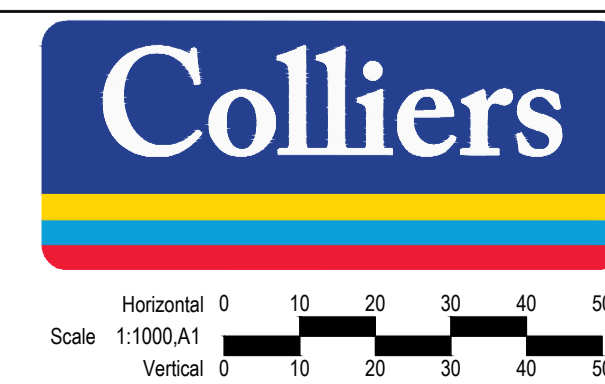
REFER NEXT PAGE FOR CONTINUATION

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

**WARNING**  
**BEWARE OF UNDERGROUND/OVERHEAD SERVICES**  
 THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

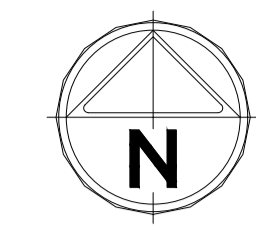
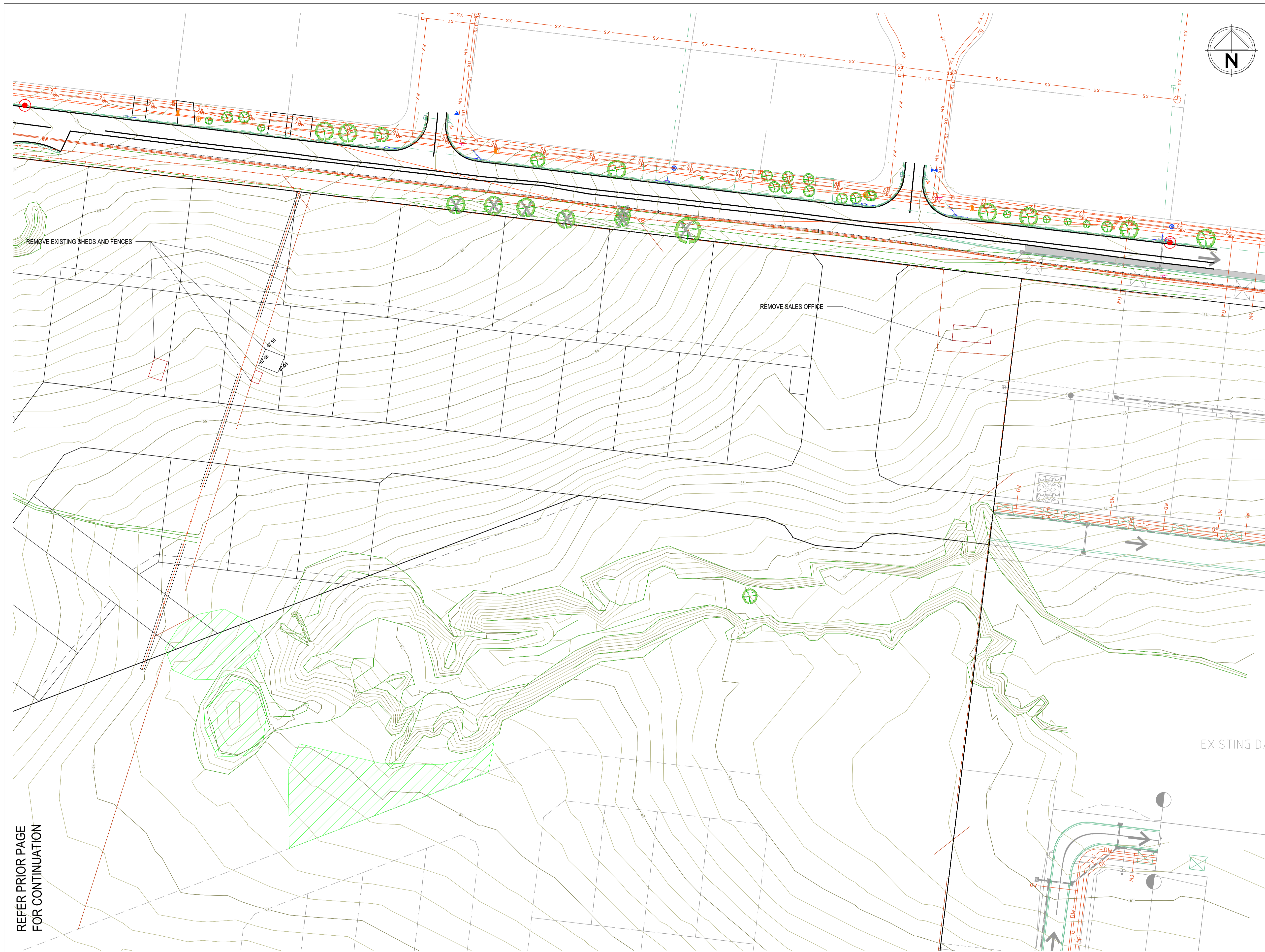




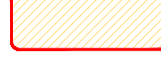

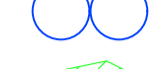
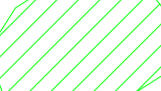
© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: 211226\_workspace\delia\delia\delia\21-0347-01\_102\plan02\_design\plan02 design\ACAD21-0347-01RD00.dwg LAYOUT: RD2-02 PLOTTED BY: Tanabala, Max PLOT DATE: 10/2023 4:01 PM



PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	17.05.2022
CHECKED	17.05.2022
T.BARBOUR	17.05.2022
AUTHORISED	17.05.2022
T.BARBOUR	17.05.2022
MELWAYS	Melway Ref
POS No:	P5905325B
STATUS:	

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
 EXISTING FEATURES - 1



- LEGEND:**
-  EXISTING TREE TO BE RETAINED (SURVEYED CANOPY)
  -  EXISTING TREE TO BE REMOVED
  -  EXISTING BUILDING TO BE DEMOLISHED
  -  EXISTING WATER BODIES TO BE FILLED
  -  EXISTING WATER TANKS TO BE REMOVED
  -  NATIVE VEGETATION TO BE RETAINED

REFER PRIOR PAGE FOR CONTINUATION

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

**WARNING**  
**BEWARE OF UNDERGROUND/OVERHEAD SERVICES**  
 THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.



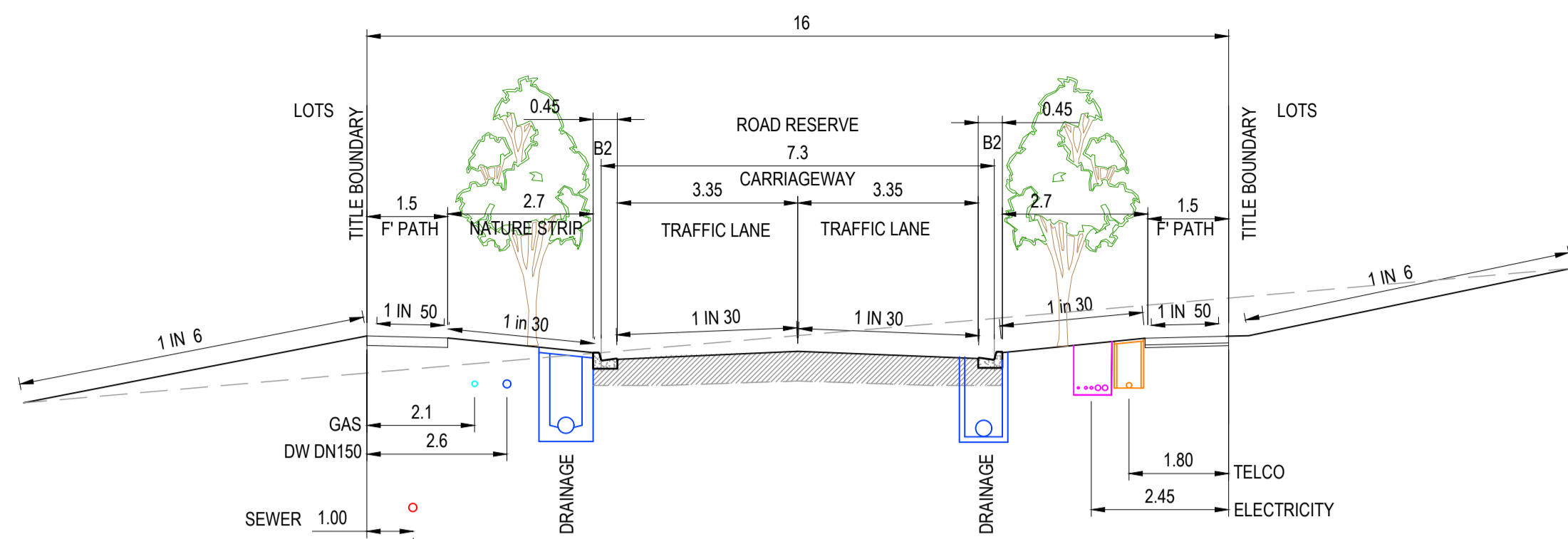
© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: 11126; workspace:delia@colliers.com; 101230102; design:ACAD21-0347-01RD00.dwg; LAYOUT: RD2-03 PLOTTED BY: Tarabala, Max PLOT DATE: 10/2023 4:01 PM

PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOR	
AUTHORISED	17.05.2022
T.BARBOR	
MELWAY REF	Melway Ref
POS No.	P5905325B
STATUS:	

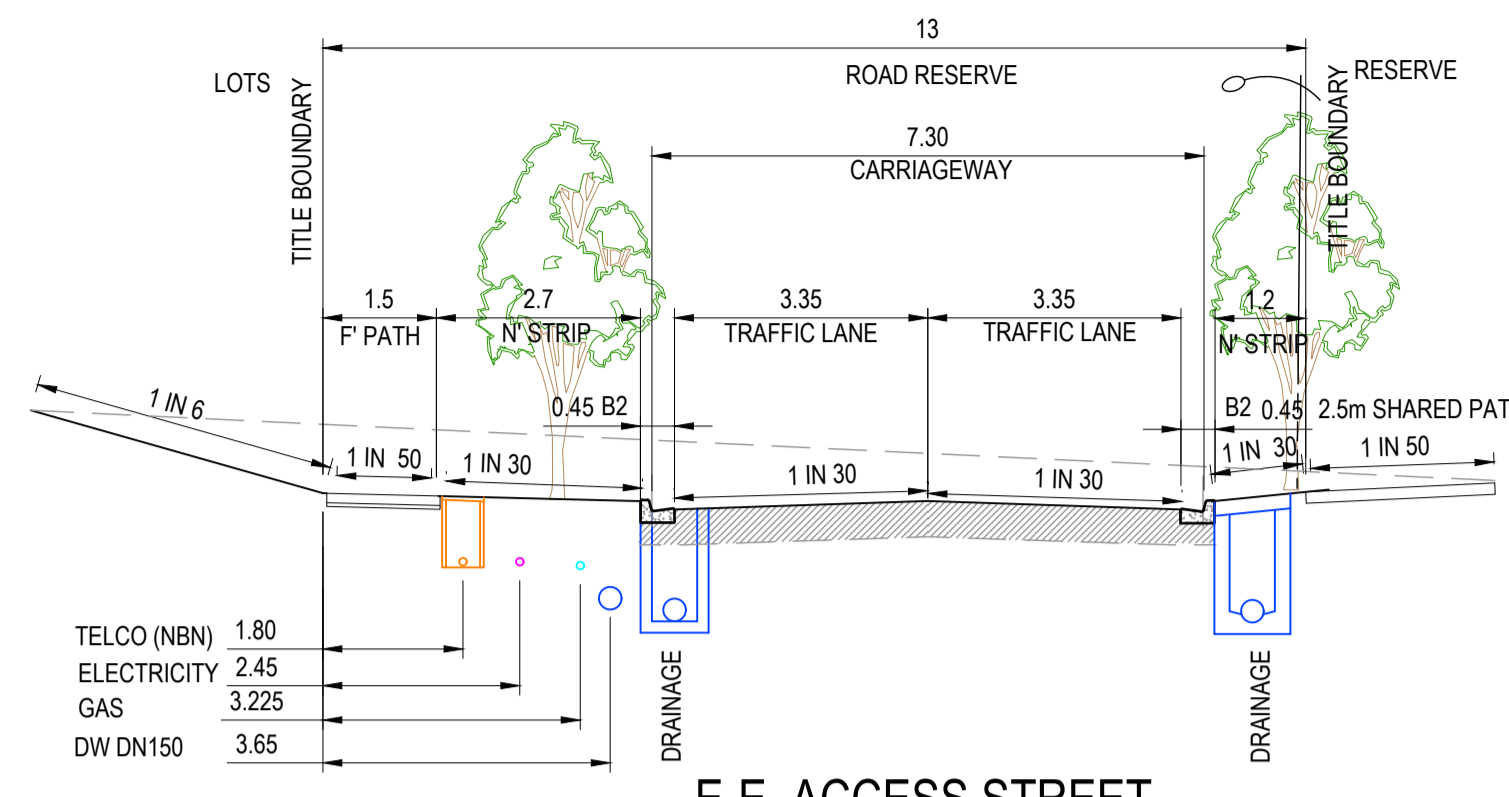
**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**EXISTING FEATURES - 2**

CONSTRUCTION 21-0347-01RD05

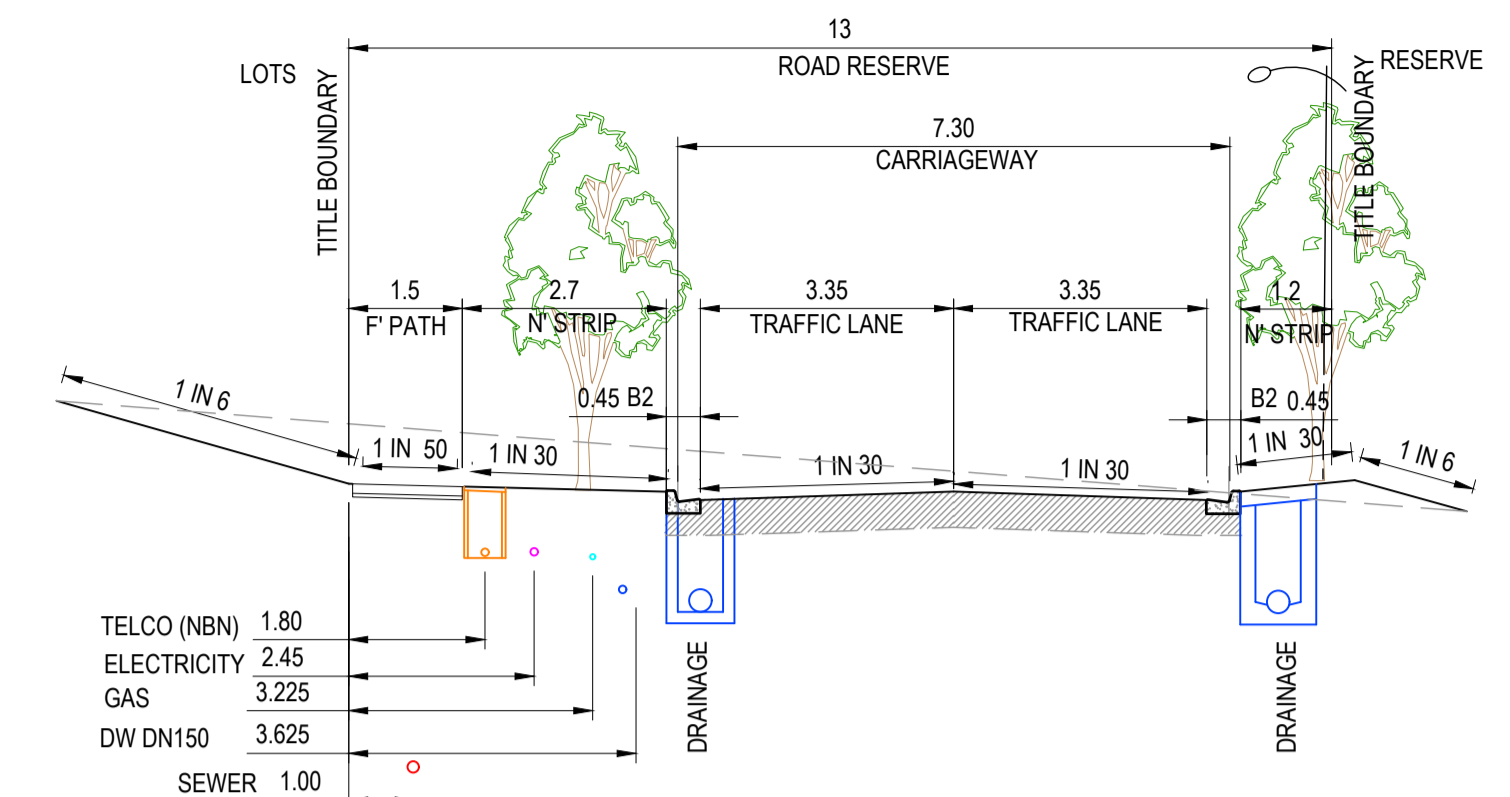
SHEET No.	5 OF 26
REV.	1



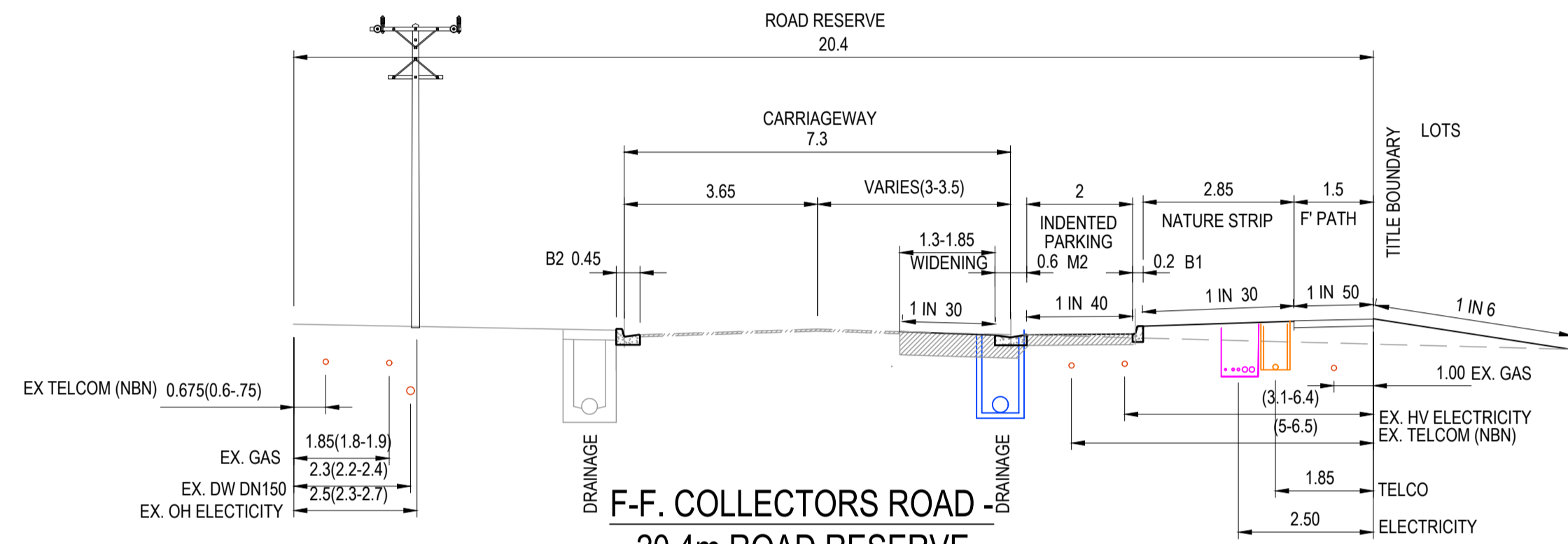
**A-A. ACCESS STREET - 16m ROAD RESERVE**  
BANROCK COURT



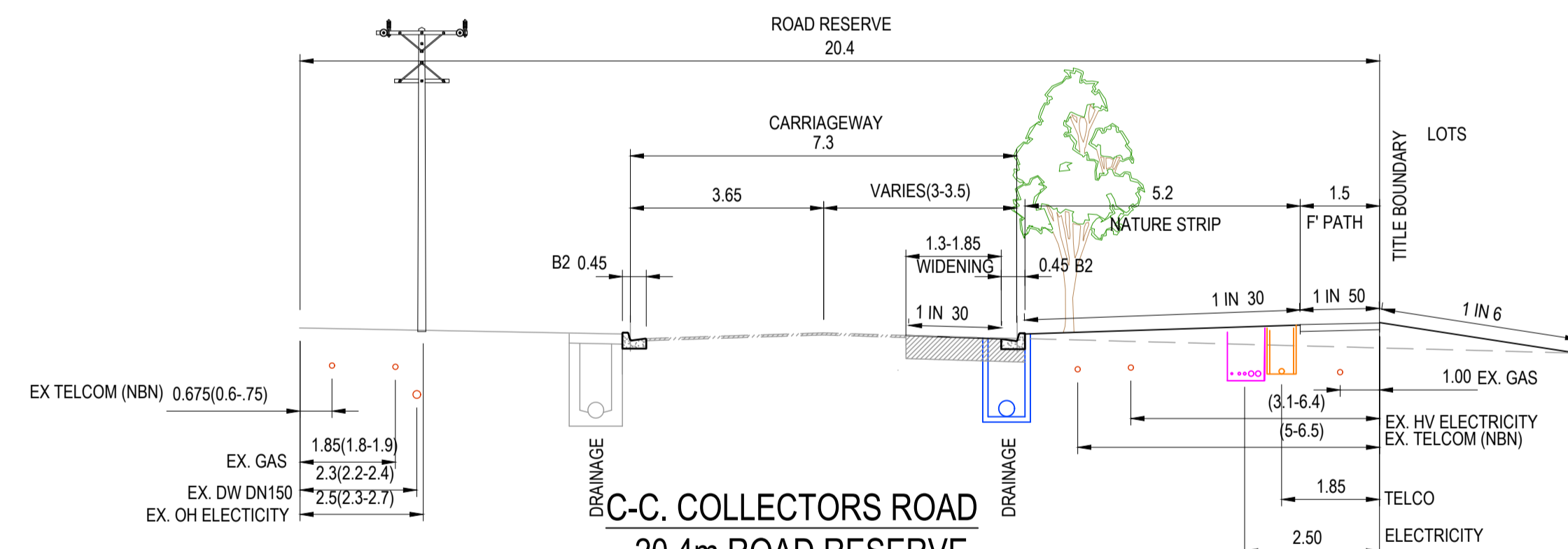
**E-E. ACCESS STREET - 13m ROAD RESERVE**  
PRIMROSE DRIVE



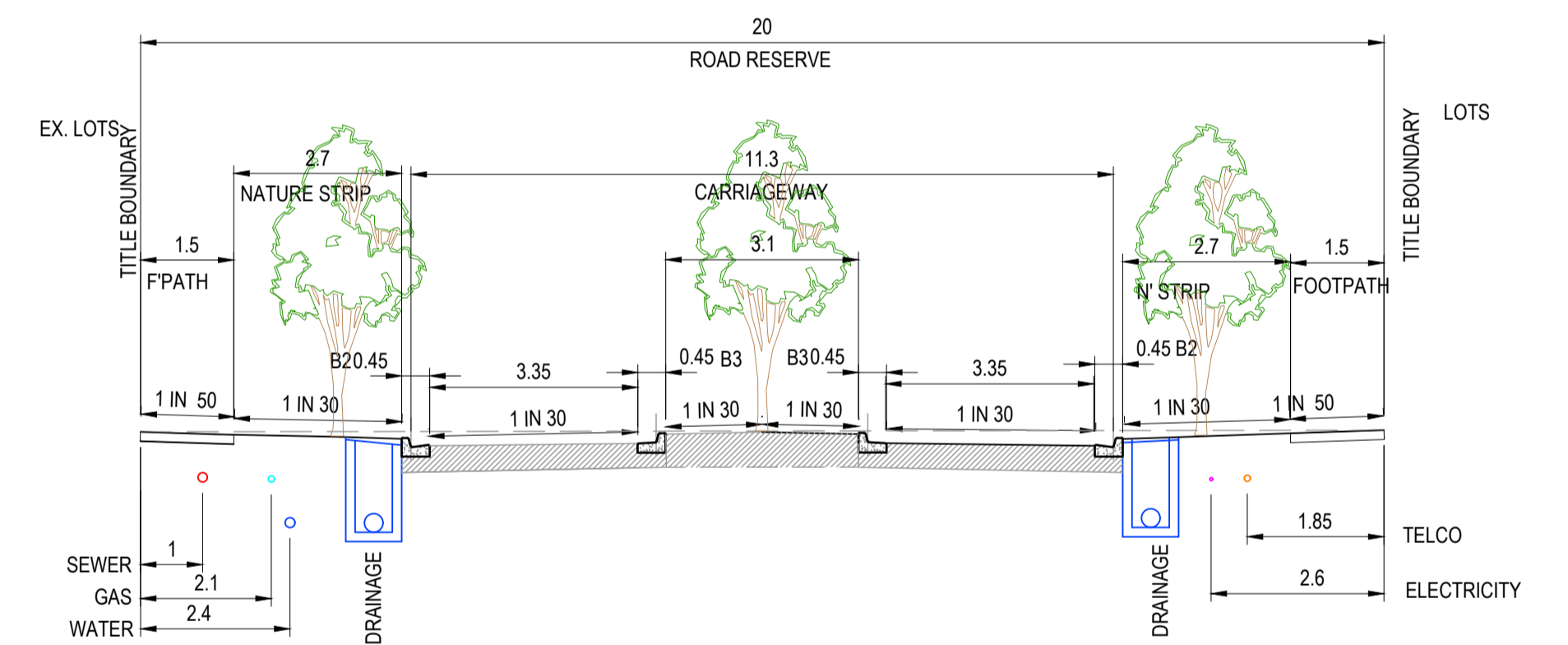
**B-B. ACCESS STREET - 13m ROAD RESERVE**  
BANROCK COURT



**F-F. COLLECTORS ROAD - 20.4m ROAD RESERVE**  
HAMS ROAD



**C-C. COLLECTORS ROAD - 20.4m ROAD RESERVE**  
HAMS ROAD



**D-D. ACCESS STREET - 20m ROAD RESERVE**  
MARBEEBA CRESCENT NORTH OF ROUND ABOUT

**SERVICE OFFSET TABLE**

ROAD NAME	ROAD RESERVE WIDTH	TREE	GAS		WATER				ELECTRICITY				COMMUNICATIONS/ NBN				BACK OF KERB	SHARED TRENCHING
			SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET	SIDE	OFFSET		
HAMS ROAD	20.4	Y	N	1.85	NA	NA	N	2.3	S	VARIES	N	VARIES	S	VARIES	S	VARIES	6.1 & 6.7	G, W & E, T
MARBEEBA CRESCENT (LOT 108-109)	20	Y	W	2.1	NA	NA	N	2.6	E	2.6	E	1BOK	W	1.85	W	1.85	4.2	G, W & E, T
PRIMROSE DRIVE	13	Y	N	3.225	NA	NA	N	3.625	N	2.4	N	1BOK	N	1.8	N	1.8	4.2 & 1.2	G, W & E, T
BANROCK COURT (LOTS 109-115)	13	Y	N	3.225	NA	NA	N	3.625	N	2.45	N	1BOK	N	1.8	N	1.8	4.2 & 1.2	G, W & E, T
BANROCK COURT (LOTS 119-129)	16	Y	W	2.1	NA	NA	W	2.6	E	2.45	E	1BOK	E	1.8	E	1.8	4.2	G, W & E, T

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

**WARNING**  
BEWARE OF UNDERGROUND/OVERHEAD SERVICES  
THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

NOTE: SIZE AND DEPTH OF SERVICES INDICATIVE ONLY



Scale AS SHOWN

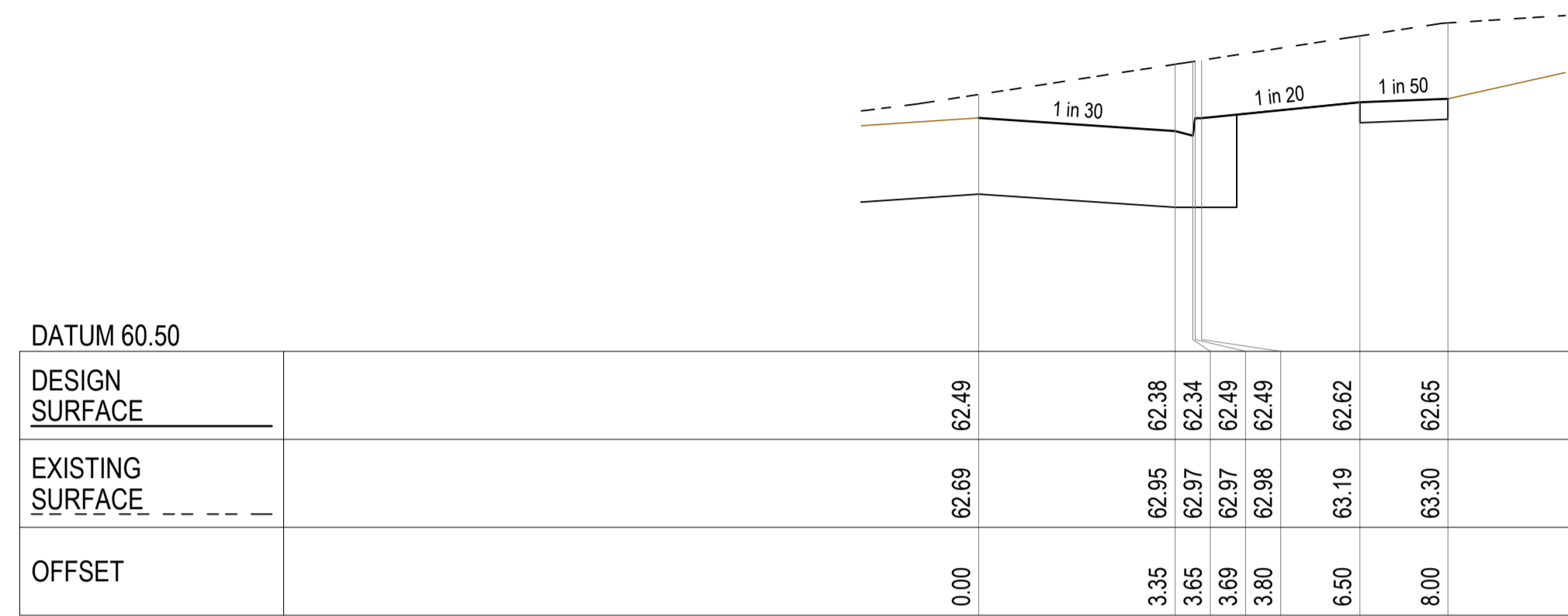
PM	A.CHUDLEIGH
DESIGNED	17.05.2022
DESIGNED BY	S.FALKENSTEIN
CHECKED	17.05.2022
CHECKED BY	T.BARBOR
AUTHORISED	17.05.2022
AUTHORISED BY	T.BARBOR
MELWAY	Melway Ref
POS No.	PS905325B
STATUS	

**69-93 Hams Rd**  
STAGE 1  
City of Greater Geelong  
TYPICAL XS AND SOT



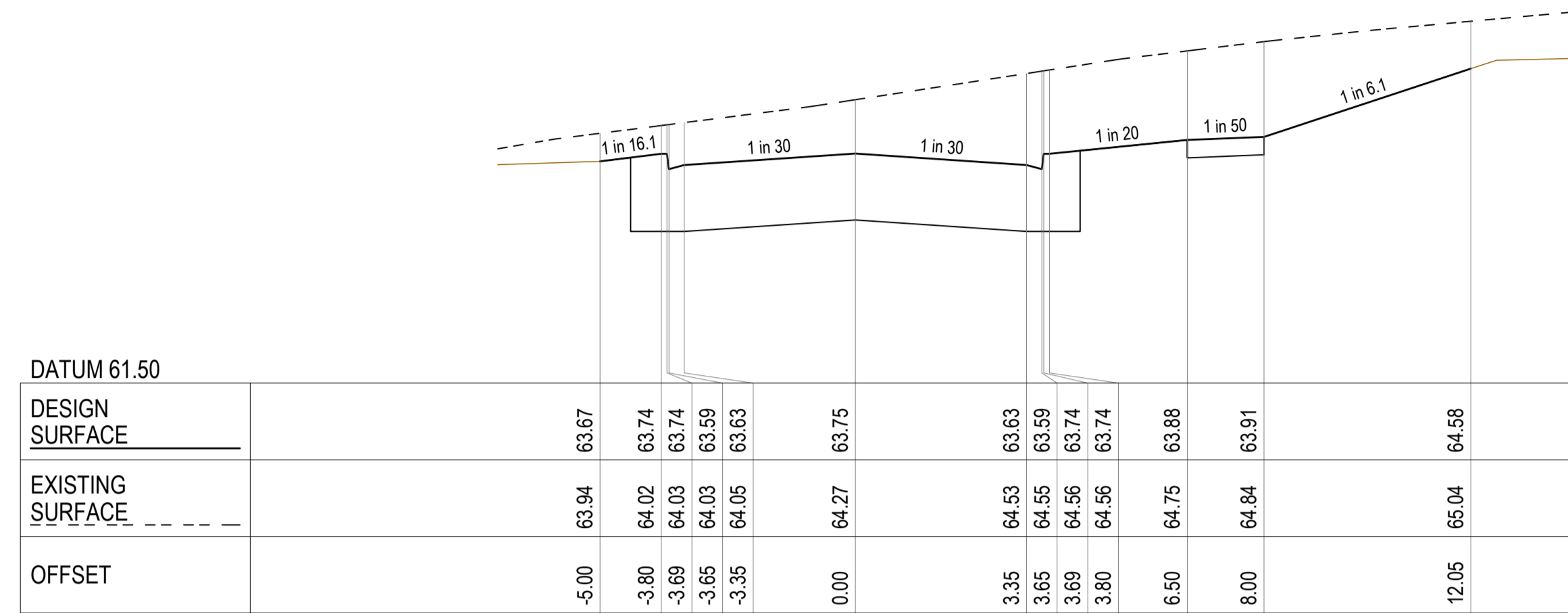






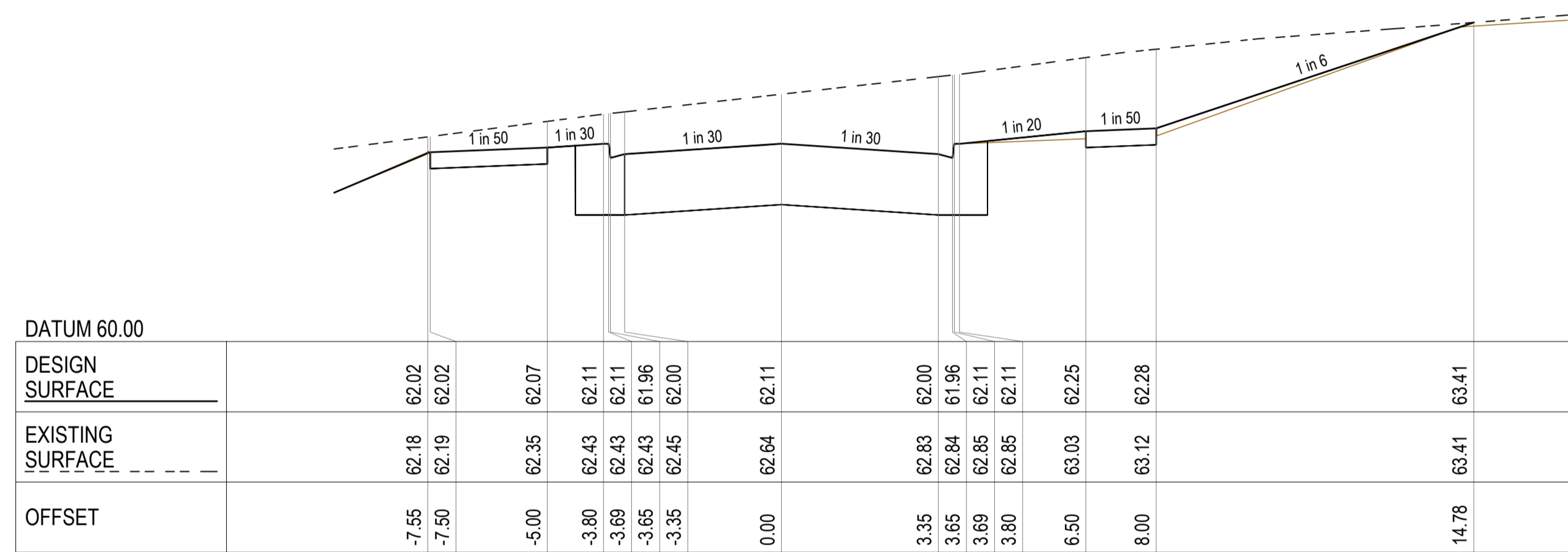
BANROCK COURT

CH. 64.52



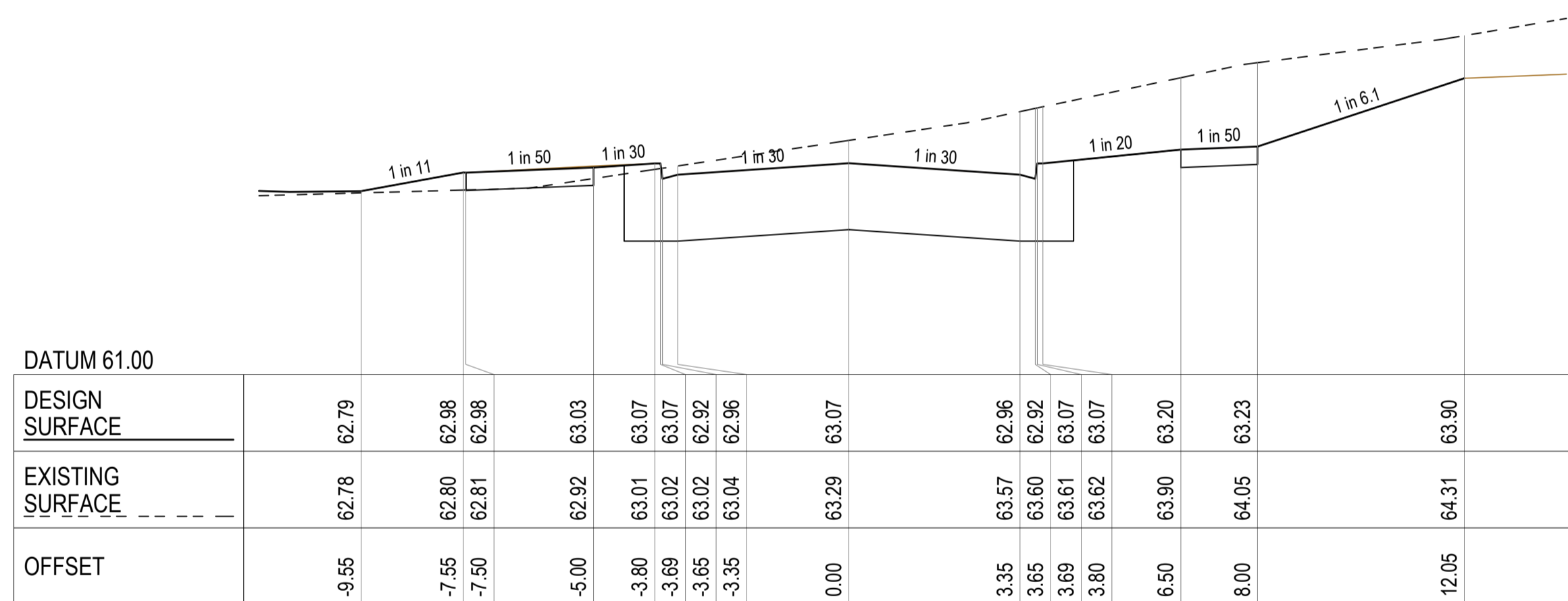
BANROCK COURT

CH. 118.57



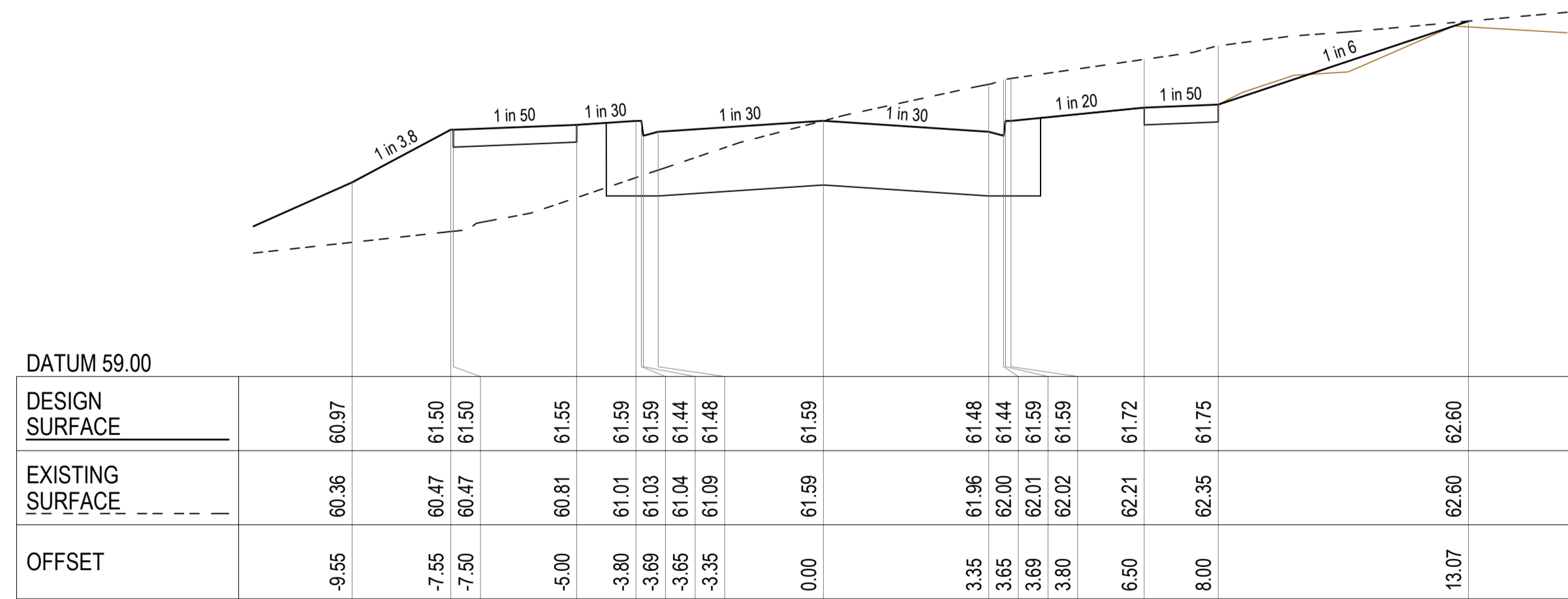
PRIMROSE DRIVE

CH. 21.06



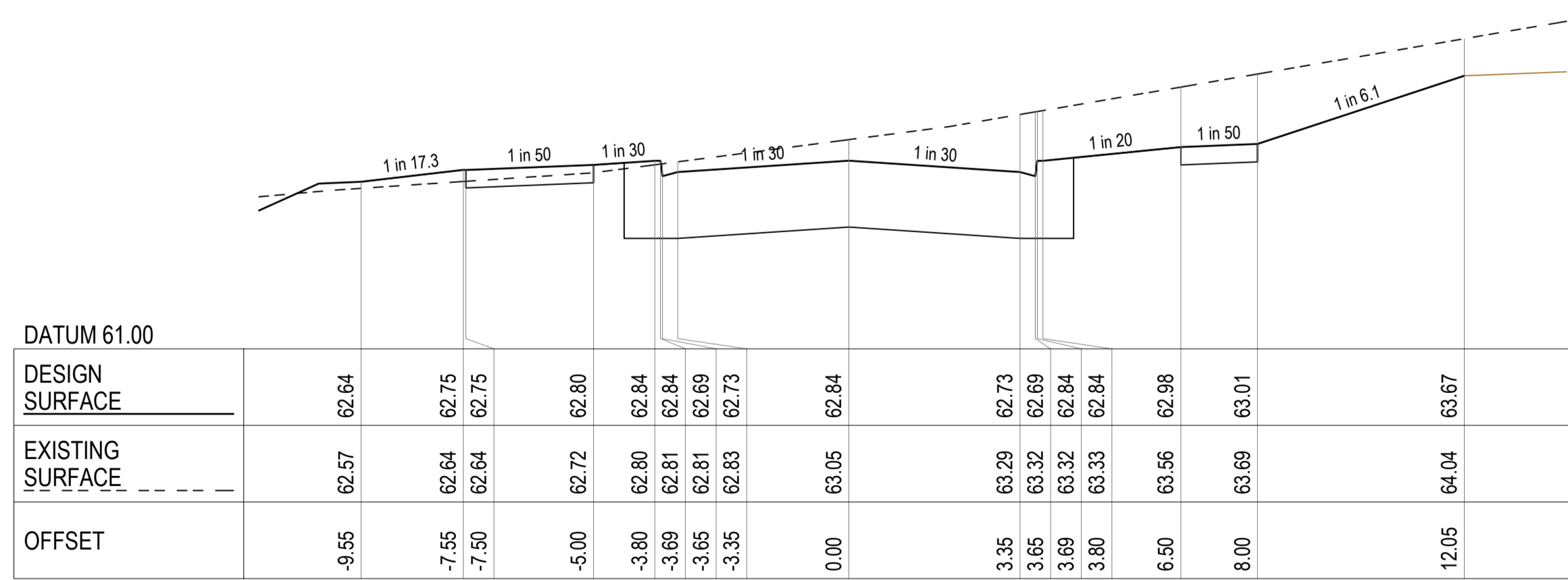
BANROCK COURT

CH. 100.00



PRIMROSE DRIVE

CH. 0.00



BANROCK COURT

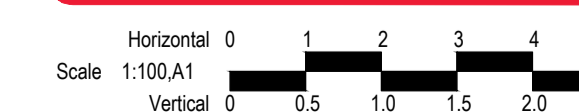
CH. 88.07

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

LEGEND:

- DESIGN CL SURFACE LEVEL
- - - EXISTING SURFACE
- ROAD BOXING
- ▨ SELECT COMPACTED FILL UNDER FOOTPATHS IN FILL ZONES WHERE EXISTING SURFACE LOWER THAN BOXING

© 2023 Colliers International Engineering & Design Pty Ltd  
 FILE: J:\1126a\_workspace\rd01\21-0347-01\_102\plan02\_design\01\_design\ACAD\21-0347-01-RD4-XS.dwg LAYOUT: RD4-01 PLOTTED BY: Tarabata\_Max PLOT DATE: 1/2/2023 4:02 PM

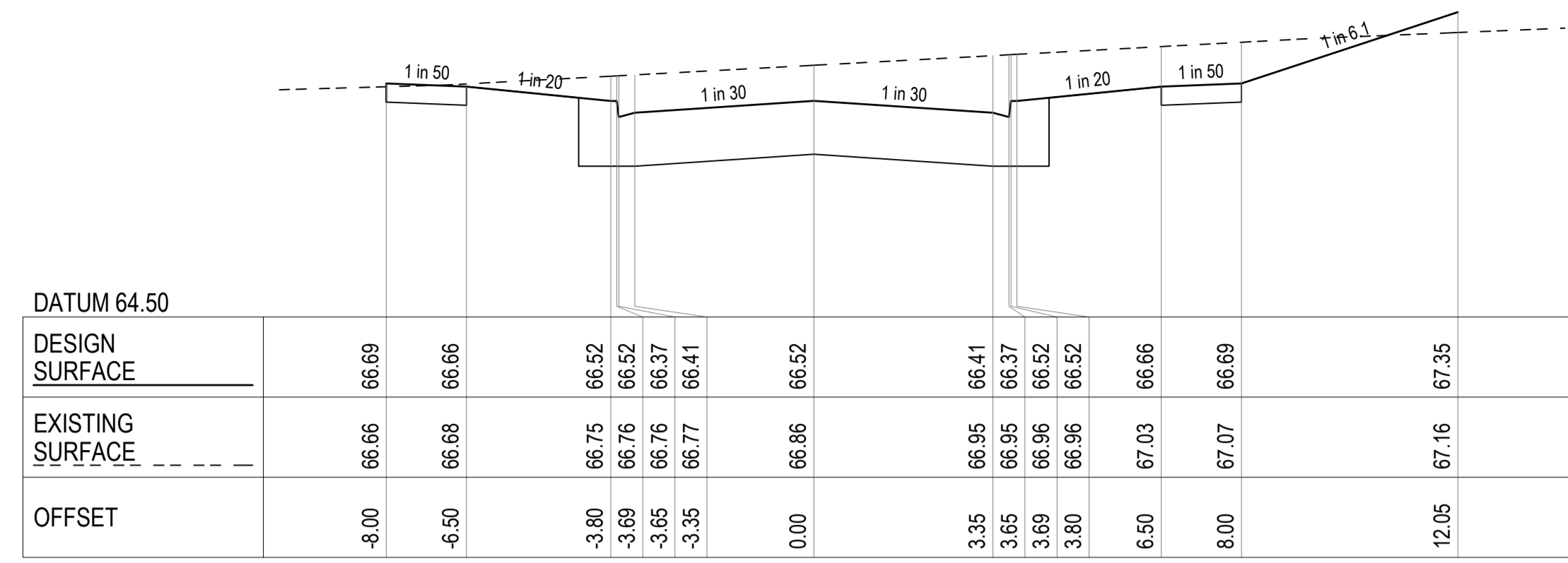


PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	17.05.2022
CHECKED	17.05.2022
T.BARBOUR	17.05.2022
AUTHORISED	17.05.2022
T.BARBOUR	17.05.2022
MELWAYS	Melway Ref
POS No:	PS905325B
STATUS:	

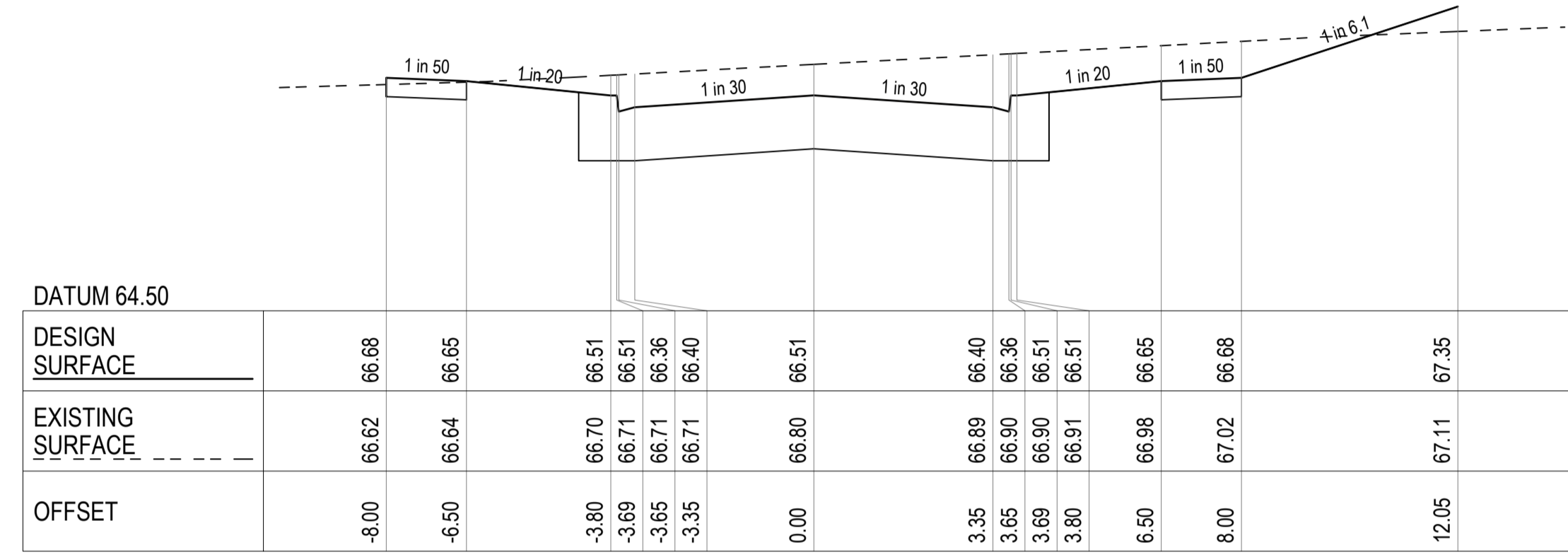
69-93 Hams Rd  
 STAGE 1  
 City of Greater Geelong  
 ROAD CROSS SECTIONS - 1

CONSTRUCTION	21-0347-01RD09	SHEET No:	9 OF 26
REV.	1		

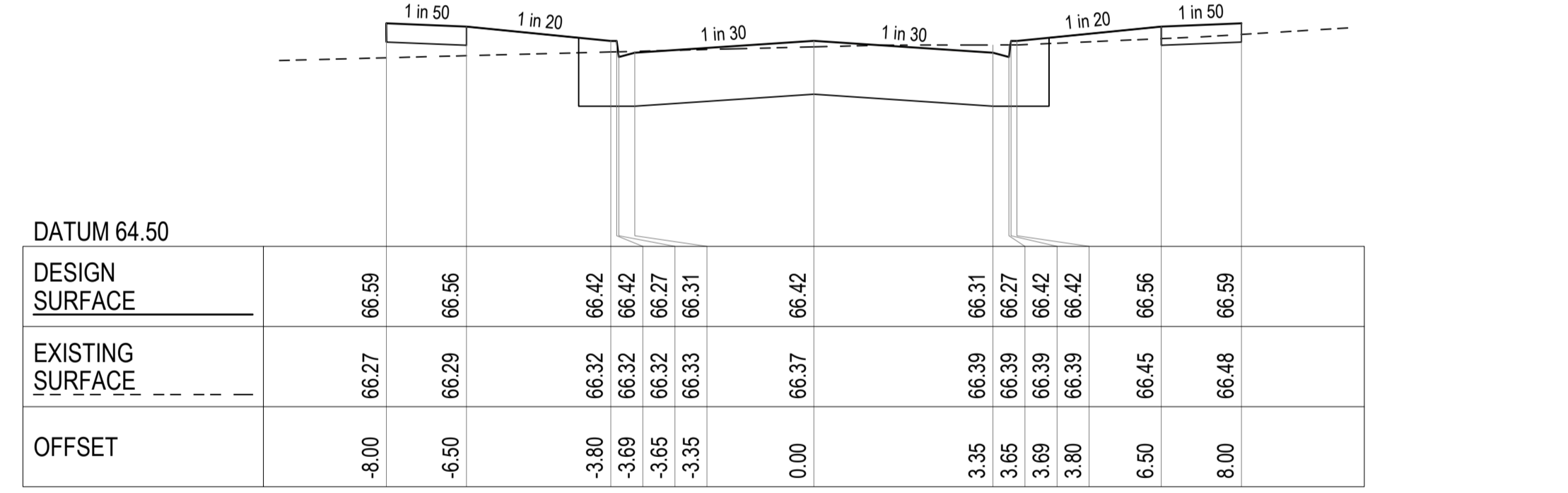




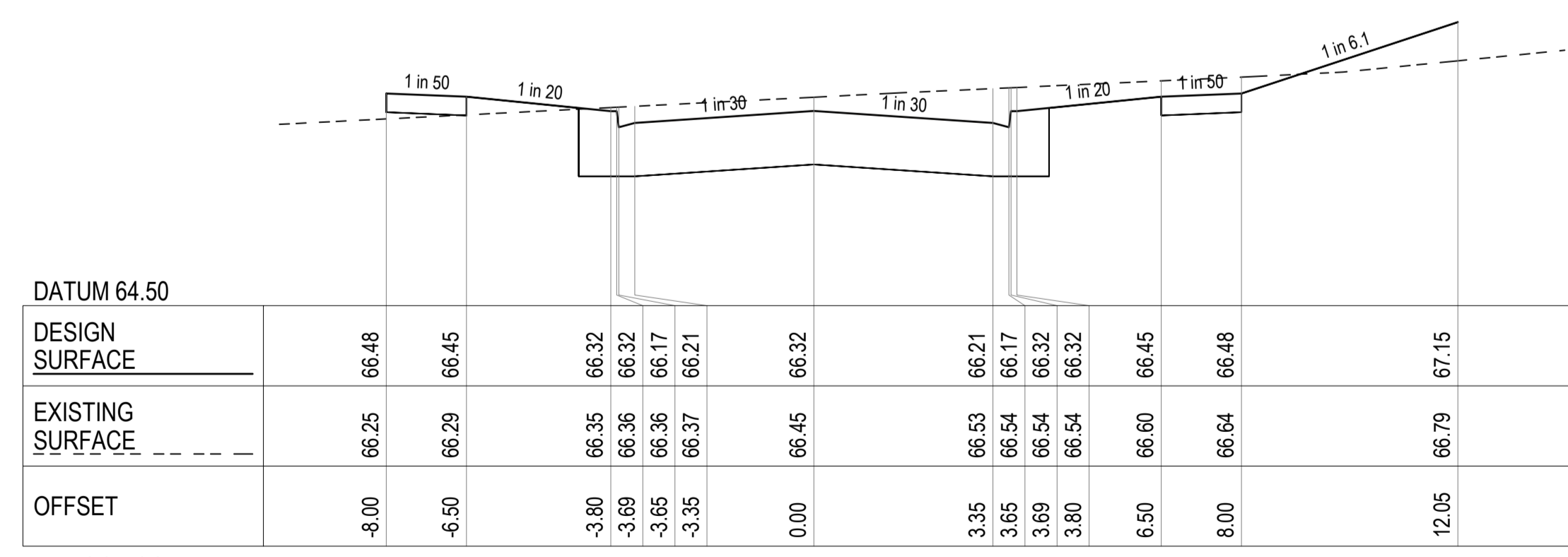
BANROCK COURT CH. 300.00



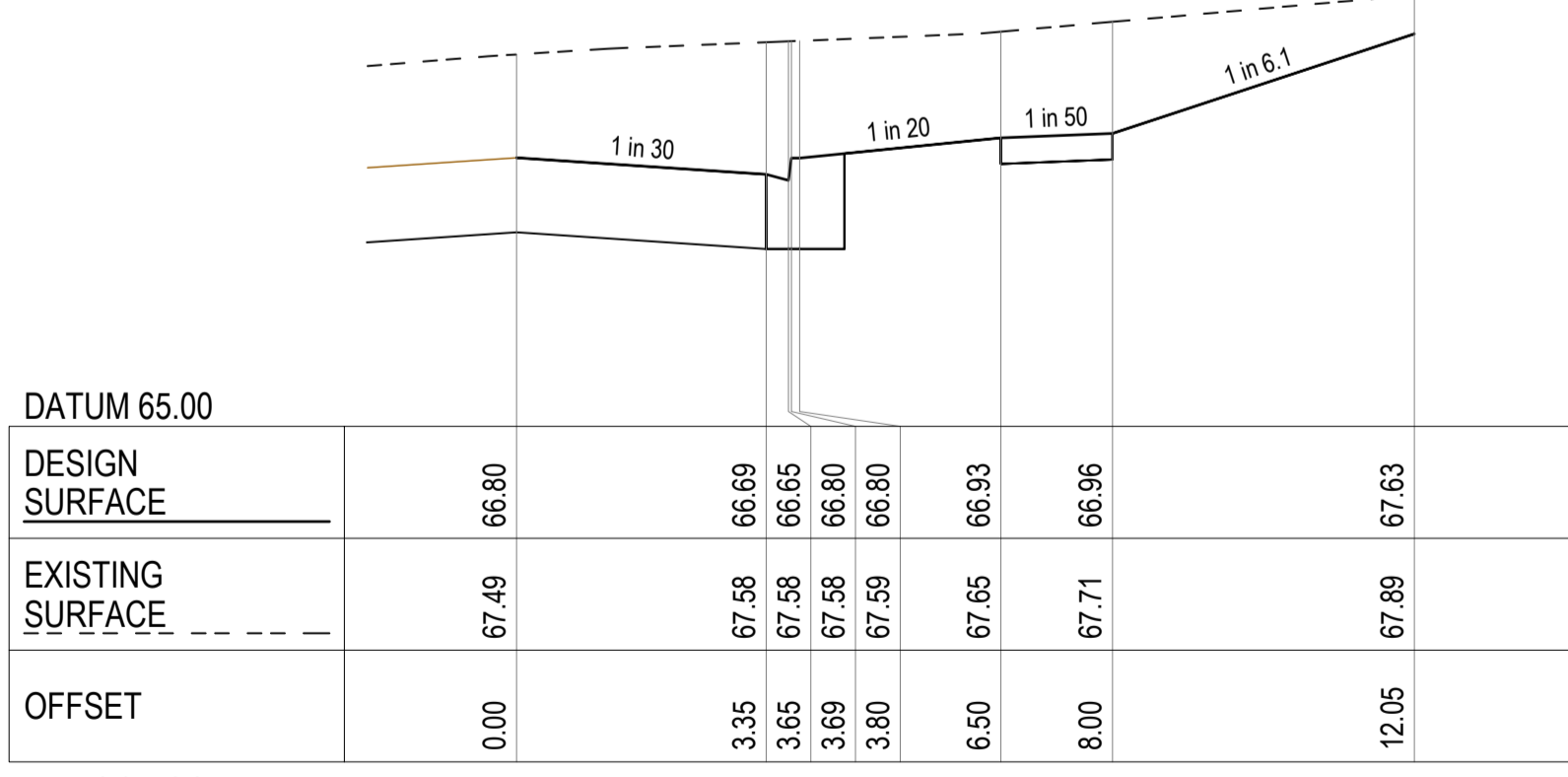
BANROCK COURT CH. 298.29



BANROCK COURT CH. 280.26



BANROCK COURT CH. 259.58



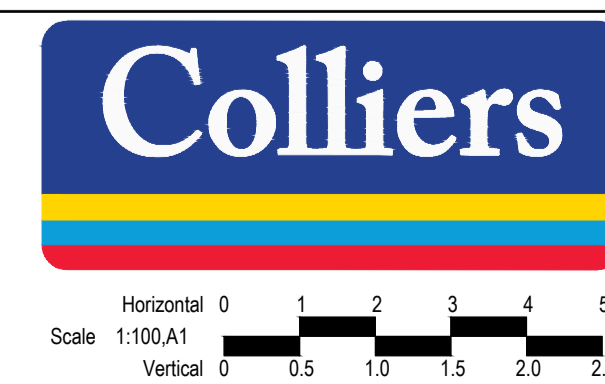
BANROCK COURT CH. 328.56

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

**LEGEND:**

- DESIGN CL SURFACE LEVEL
- - - - EXISTING SURFACE
- ▭ ROAD BOXING
- ▨ SELECT COMPACTED FILL UNDER FOOTPATHS IN FILL ZONES WHERE EXISTING SURFACE LOWER THAN BOXING

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1226\_workspace\delaware\delaware\121-0347-01\_1226\1226\_design\121-0347-01-RD4-XS.dwg LAYOUT: RD4-03 PLOTTED BY: Tarabata, Max PLOT DATE: 12/2023 4:02 PM

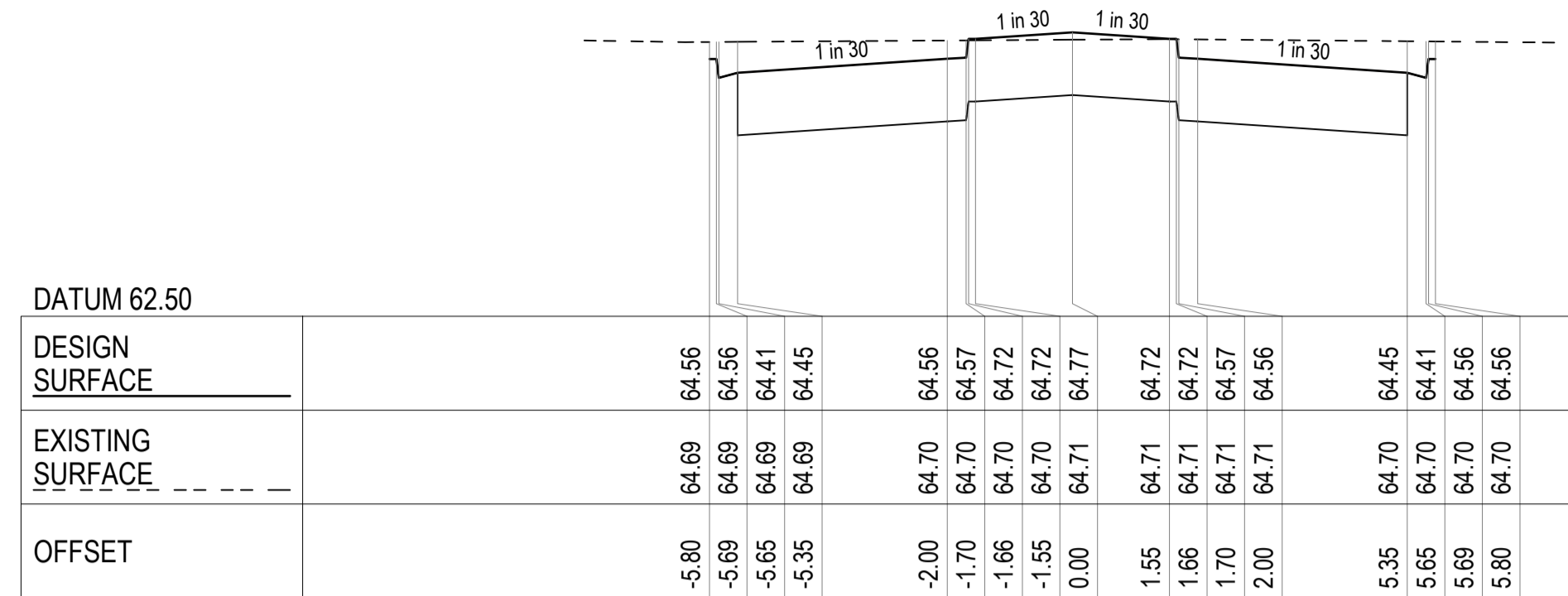


PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAYS	Melway Ref
POS No.	PS905325B
STATUS:	

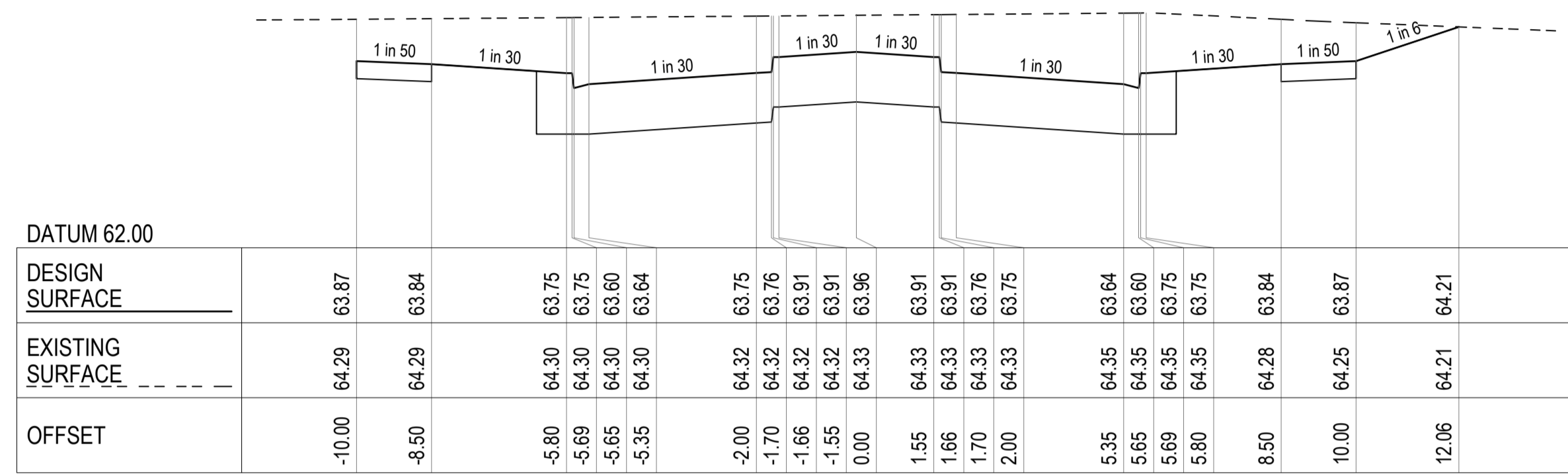
**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**ROAD CROSS SECTIONS - 3**

Scale: 1:100, A1  
 Horizontal 0 1 2 3 4 5  
 Vertical 0 0.5 1.0 1.5 2.0 2.5

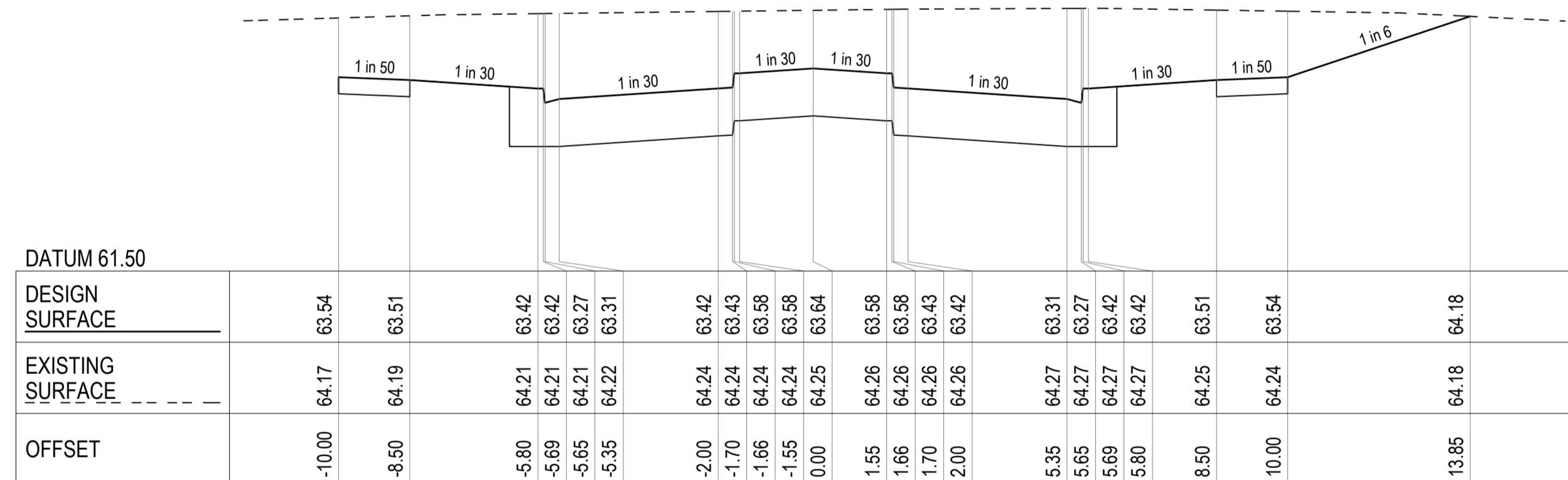
CONSTRUCTION 21-0347-01RD11 REV. 1



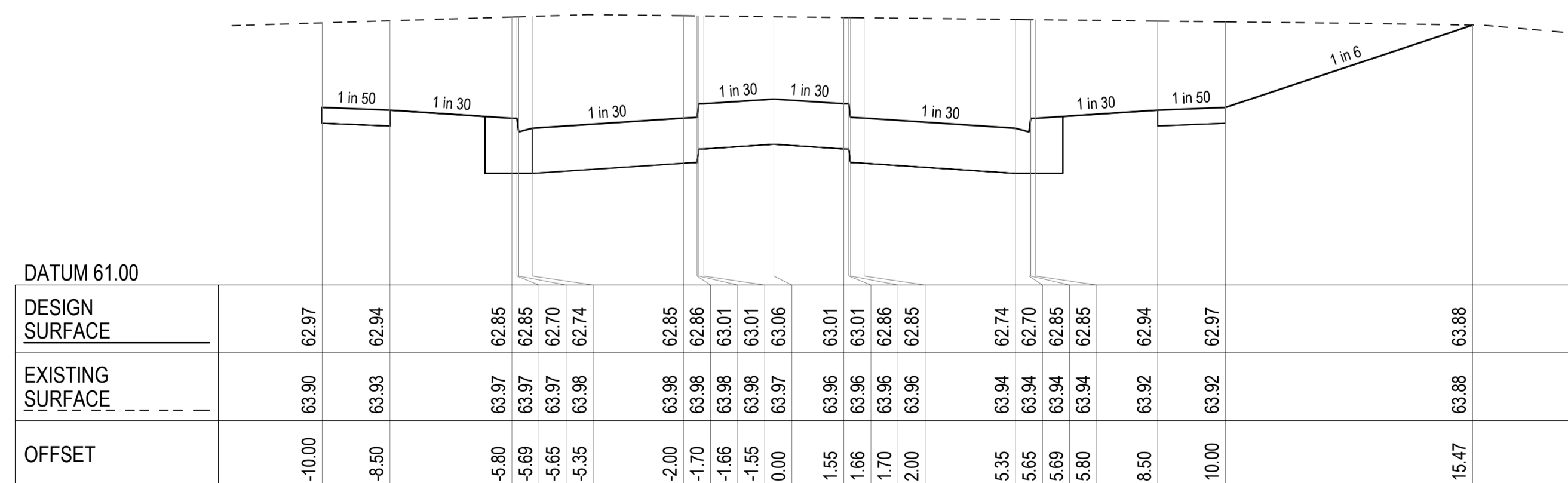
MAREEBA CRESCENT (NORTH OF ROUNDABOUT) CH. 64.55



MAREEBA CRESCENT (NORTH OF ROUNDABOUT) CH. 45.00



MAREEBA CRESCENT (NORTH OF ROUNDABOUT) CH. 36.00



MAREEBA CRESCENT (NORTH OF ROUNDABOUT) CH. 19.97

1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022
REV.	AMENDMENTS	APP'D	DATE

**LEGEND:**

- DESIGN CL SURFACE LEVEL
- - - EXISTING SURFACE
- ▭ ROAD BOXING
- ▨ SELECT COMPACTED FILL UNDER FOOTPATHS IN FILL ZONES WHERE EXISTING SURFACE LOWER THAN BOXING

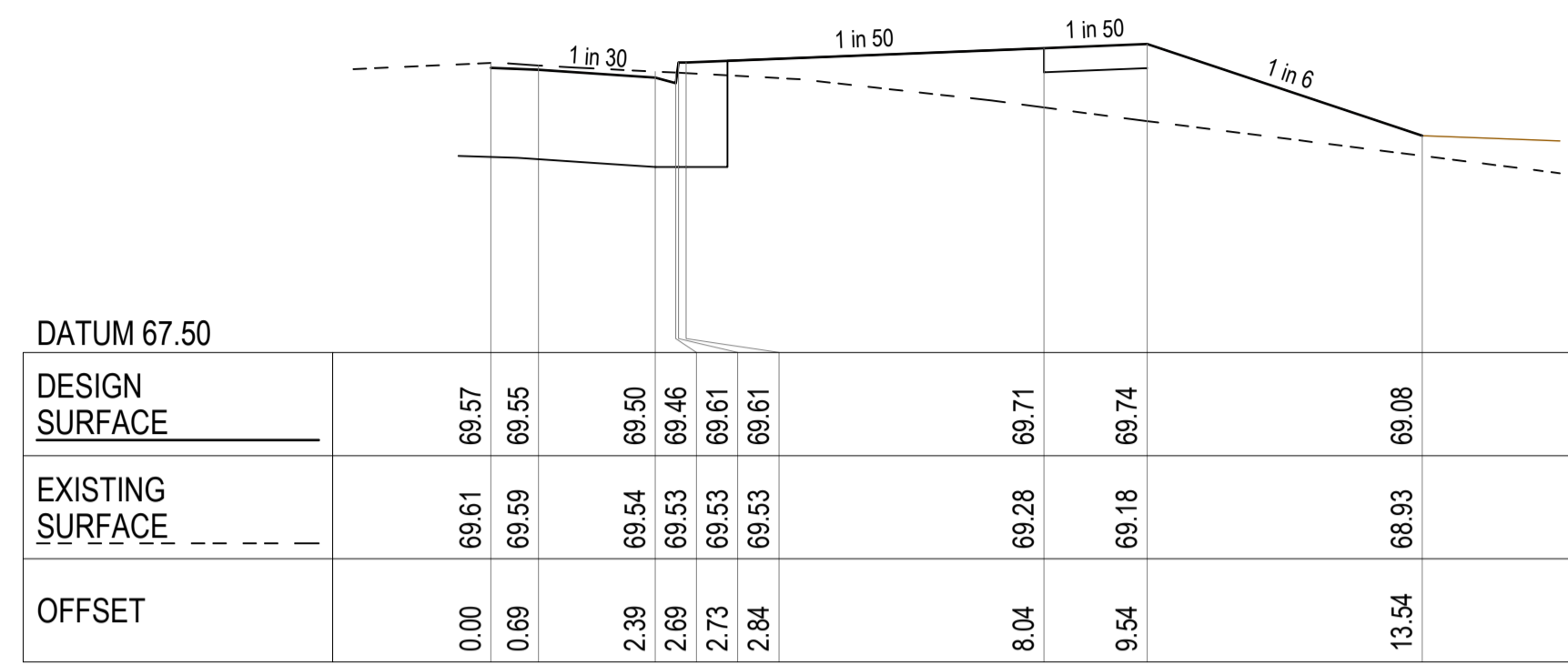
© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J1126a\_workspacedata\mareebag01\21-0347-01\_192\plan02\_design\01\_design\ACAD\21-0347-01-RD4-XS.dwg LAYOUT: RD4-04 PLOTTED BY: Tarabata\_Max PLOT DATE: 12/2023 4:02 PM

Scale 1:100.A1  
 Horizontal 0 1 2 3 4 5  
 Vertical 0 0.5 1.0 1.5 2.0 2.5

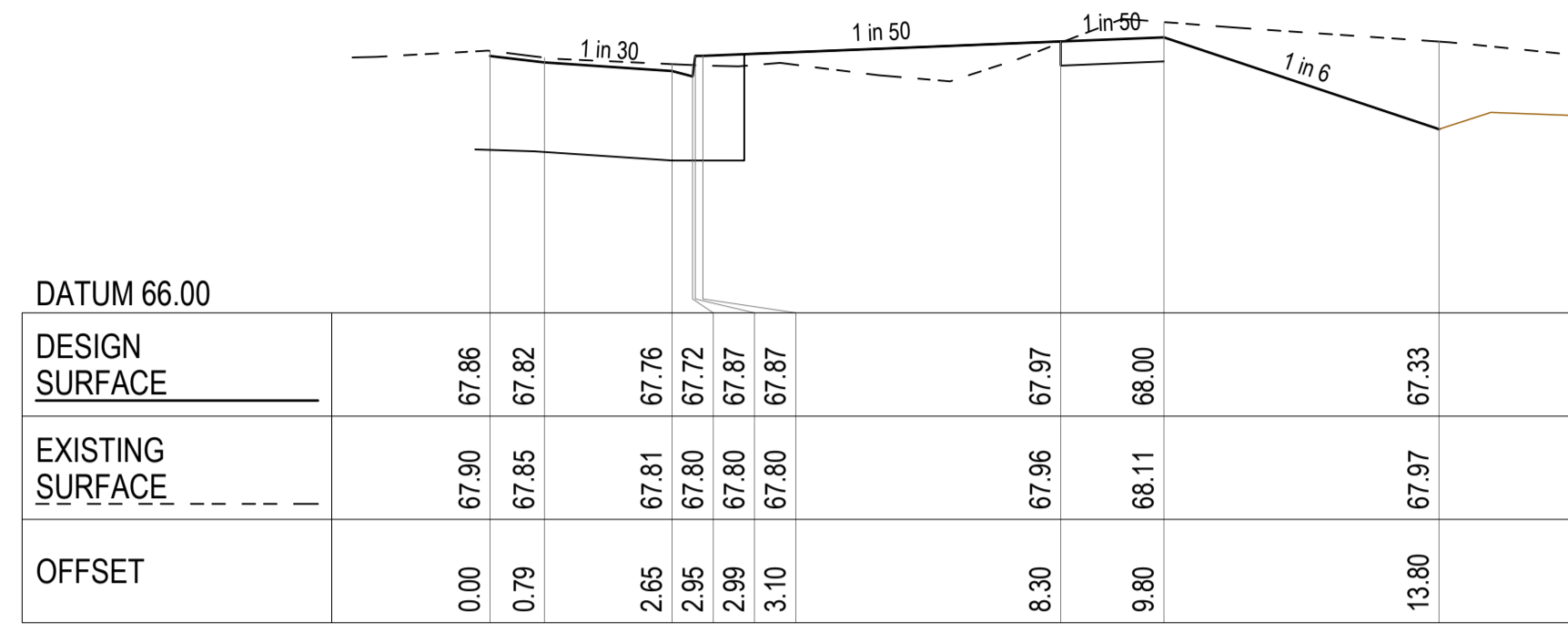
PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOR	
AUTHORISED	17.05.2022
T.BARBOR	
MELWAYS	Melway Ref
POST NO.	PS905325B
STATUS:	CONSTRUCTION

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**ROAD CROSS SECTIONS - 4**

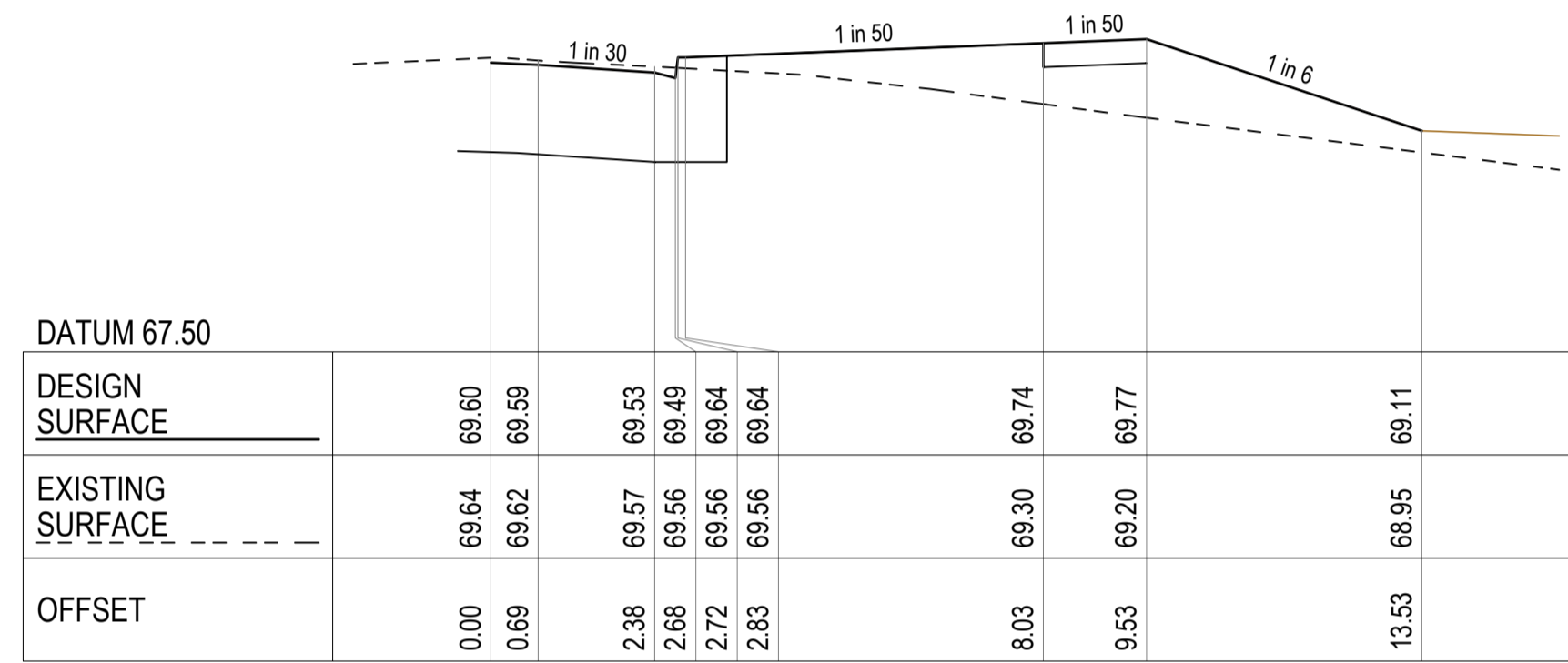
21-0347-01RD12  
 REV. 1



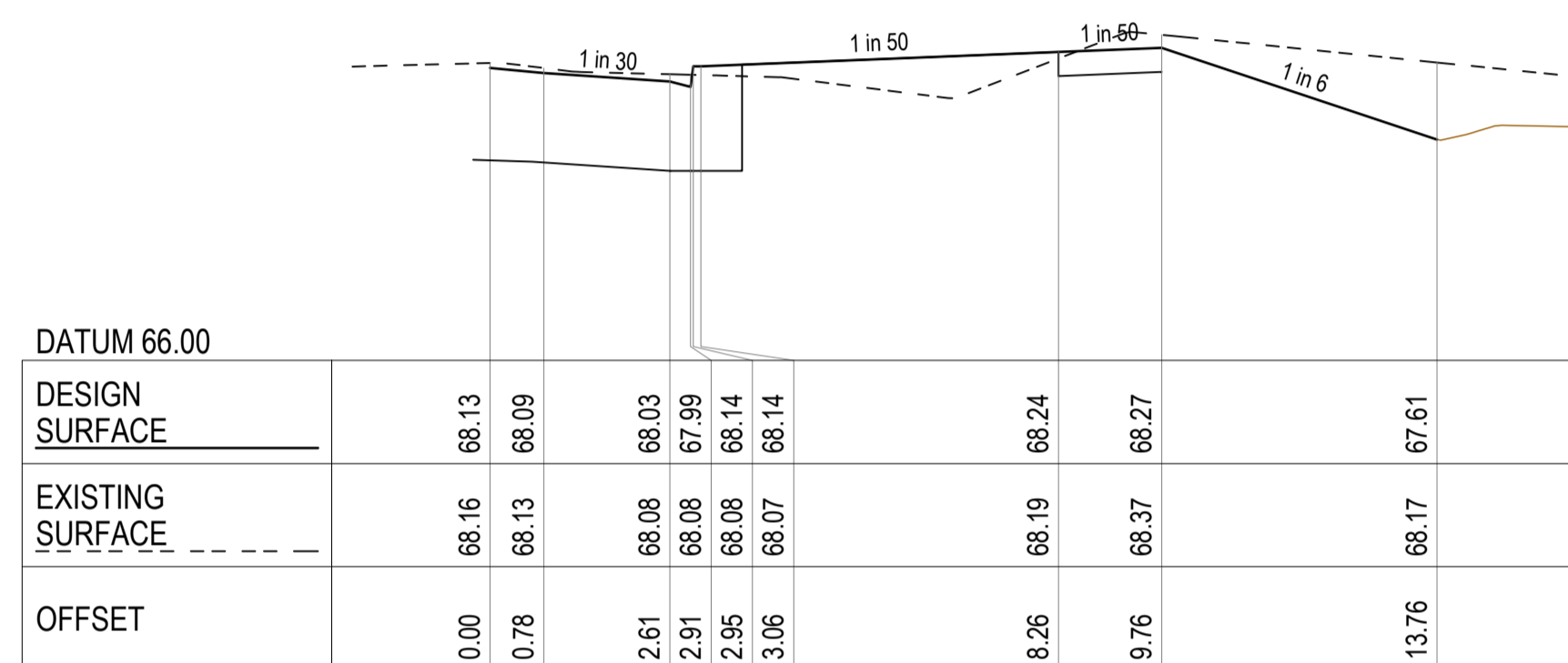
HAMS ROAD CH. 63.20



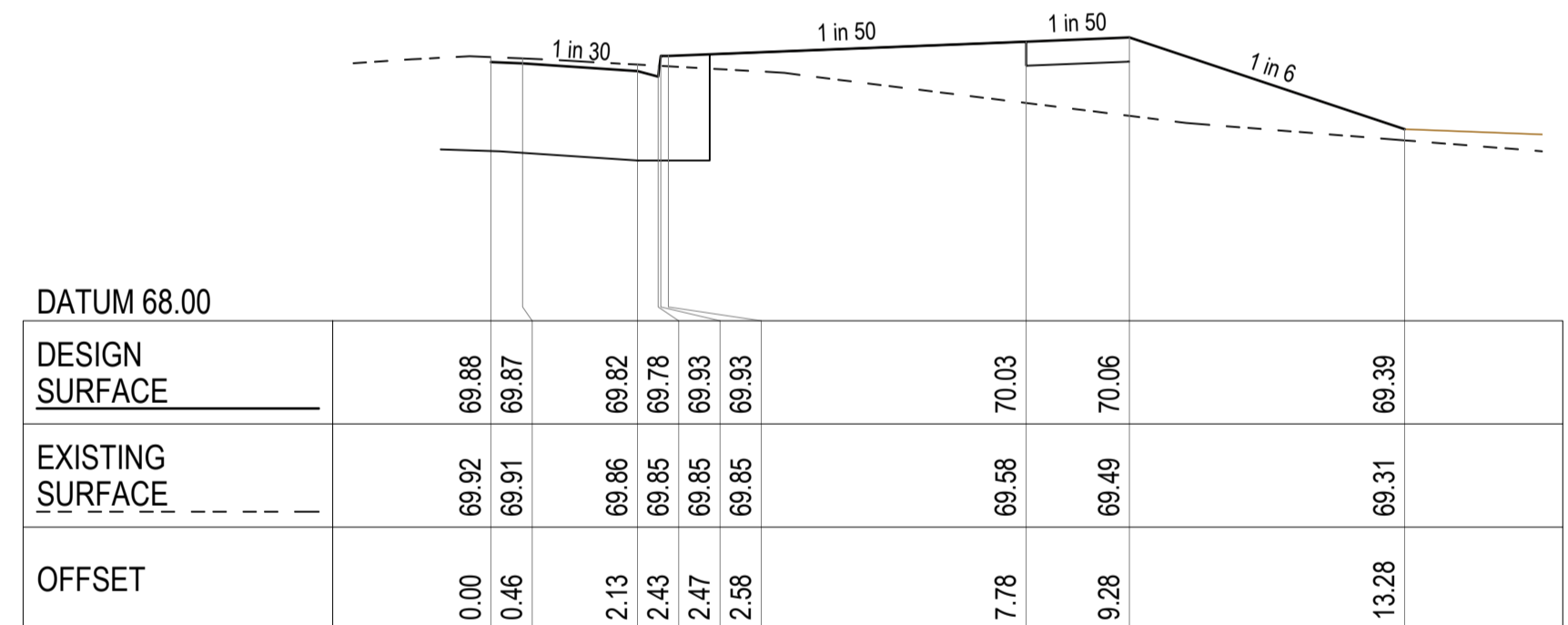
HAMS ROAD CH. 146.96



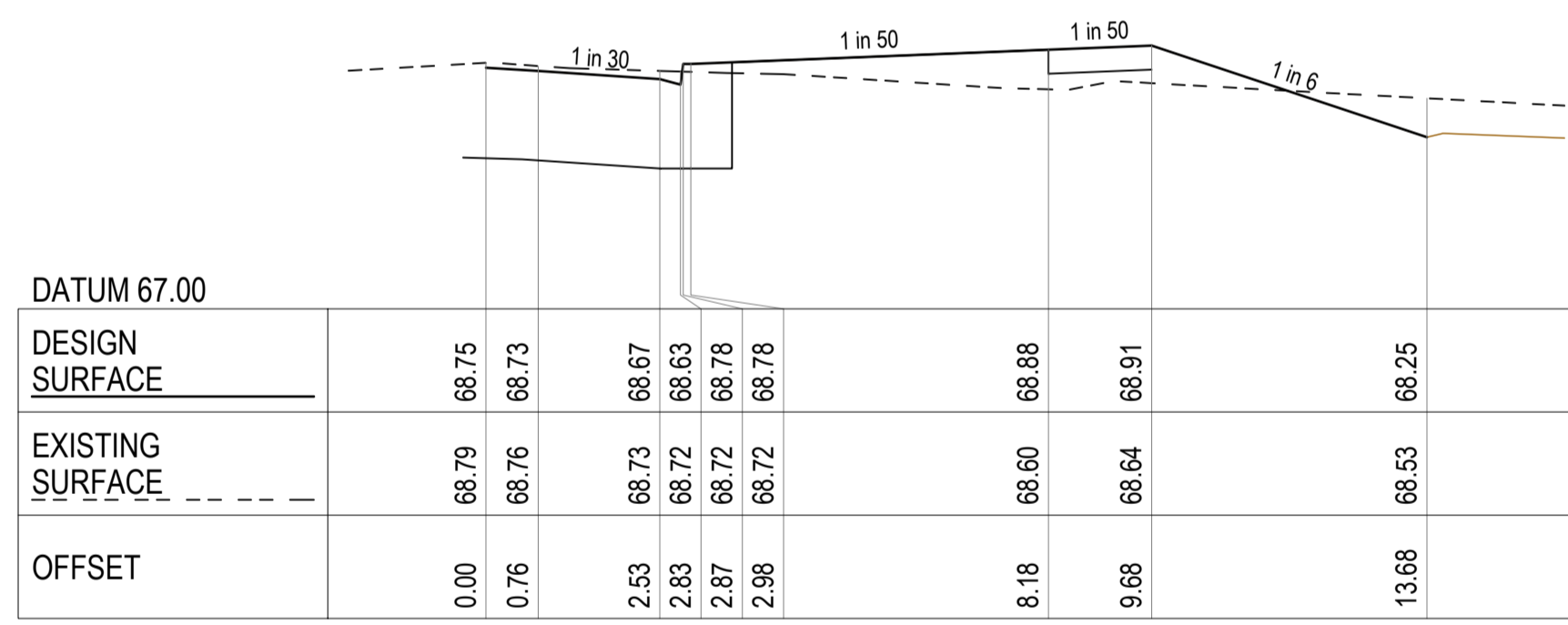
HAMS ROAD CH. 60.00



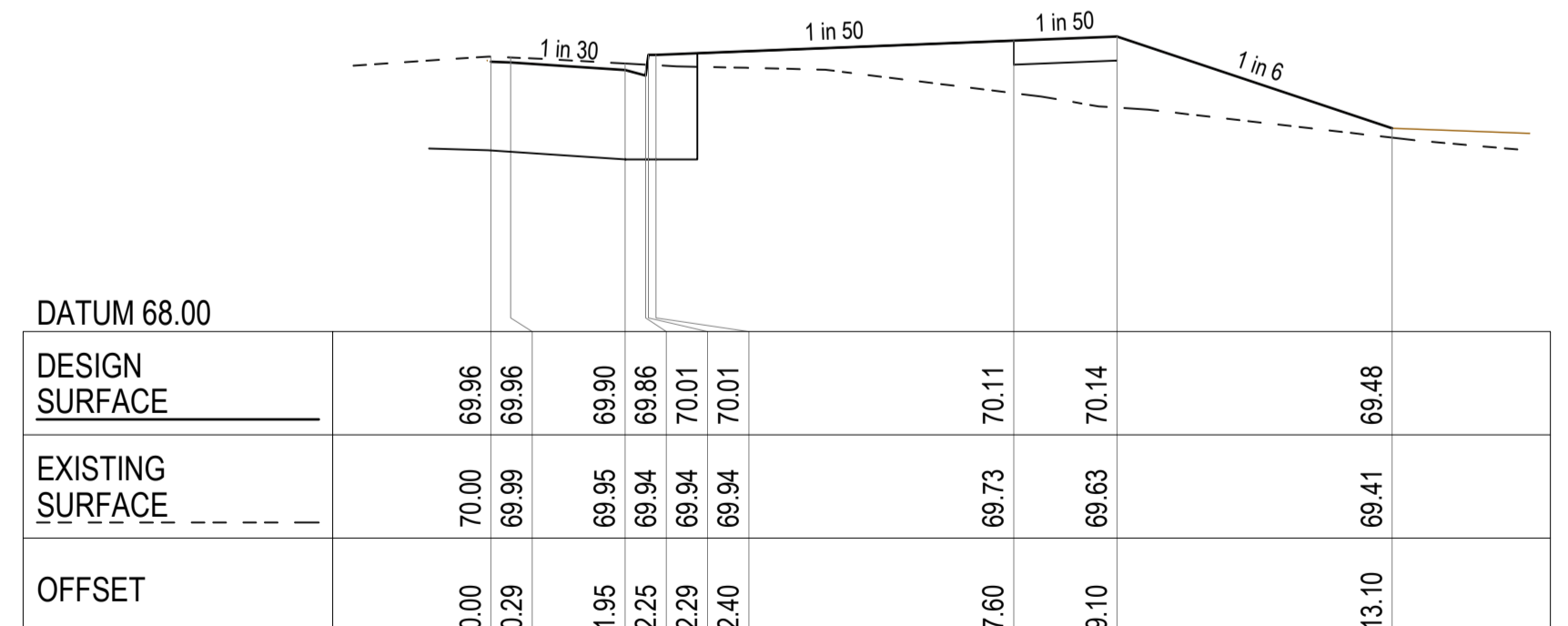
HAMS ROAD CH. 140.00



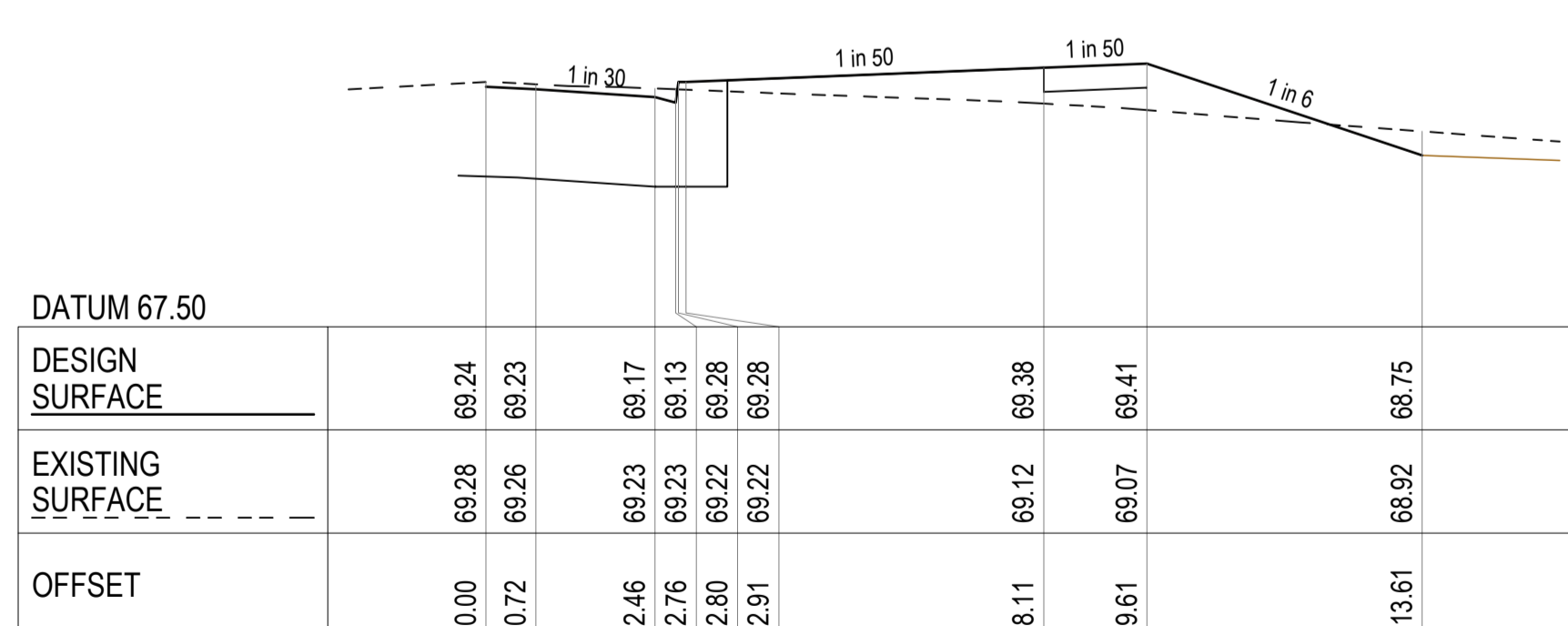
HAMS ROAD CH. 40.00



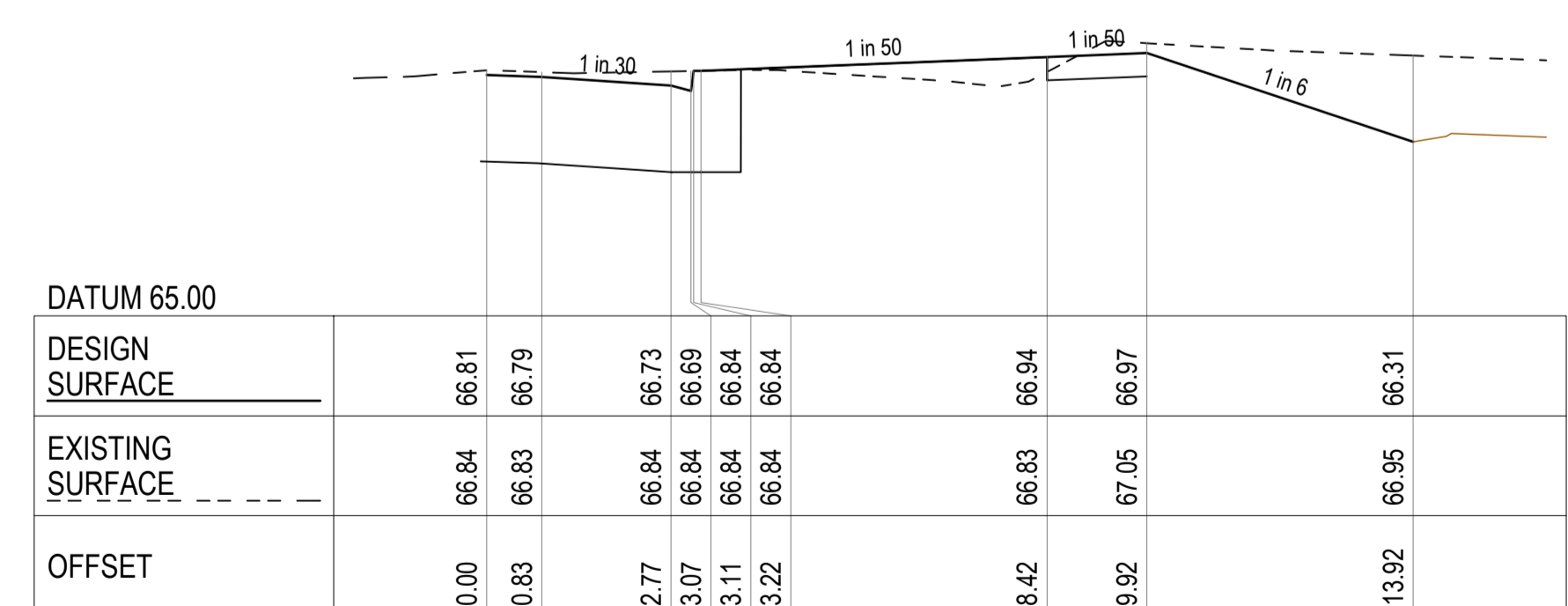
HAMS ROAD CH. 119.20



HAMS ROAD CH. 34.91



HAMS ROAD CH. 91.37



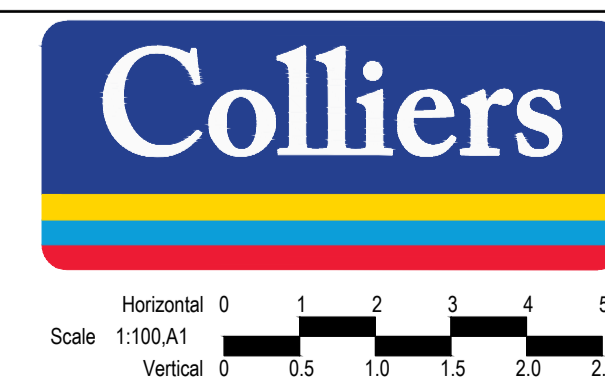
HAMS ROAD CH. 175.14

1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022
REV.	AMENDMENTS	APP'D	DATE

**LEGEND:**

- DESIGN CL SURFACE LEVEL
- EXISTING SURFACE
- ROAD BOXING
- SELECT COMPACTED FILL UNDER FOOTPATHS IN FILL ZONES WHERE EXISTING SURFACE LOWER THAN BOXING

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1226\_workspace\rd04\hamsrd\01-0347-01\_102\gen02\_design\01\_design\ACAD\21-0347-01-RD4-XS.dwg LAYOUT: RD4-05 PLOTTED BY: Tarabata\_Max PLOT DATE: 12/2023 4:02 PM



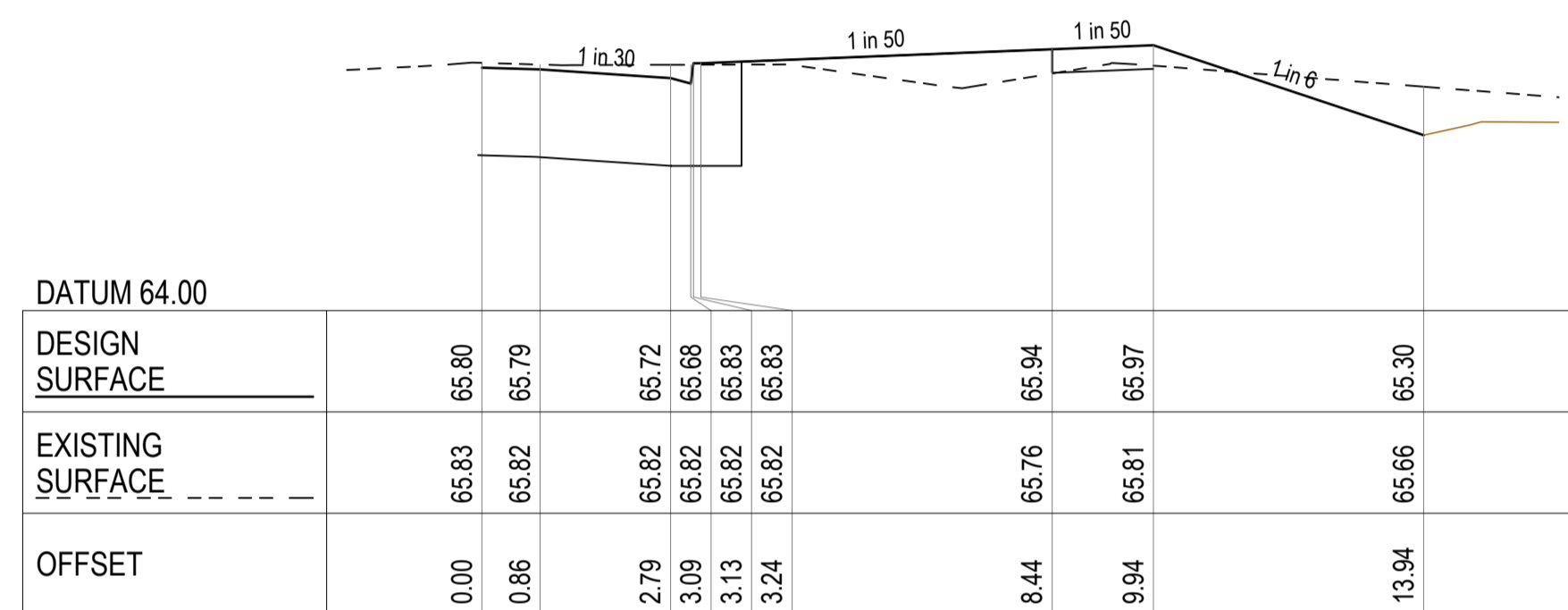
PM	A.CHUDLEIGH
DESIGNED	17.05.2022
DESIGNED BY	S.FALKENSTEIN
CHECKED	17.05.2022
CHECKED BY	T.BARBOR
AUTHORISED	17.05.2022
AUTHORISED BY	T.BARBOR
MELWAYS	Melway Ref
POST NO.	PS905325B
STATUS	

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**ROAD CROSS SECTIONS - 5**

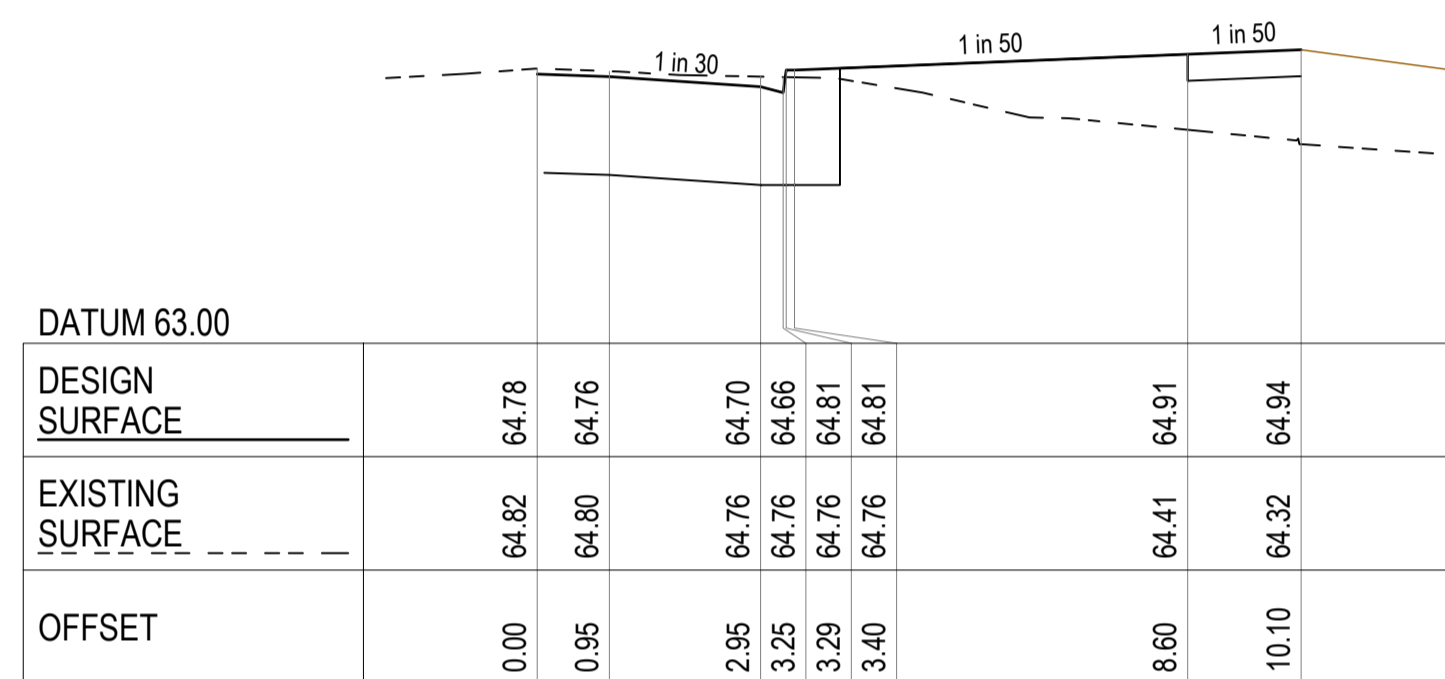
Scale: 1:100 A1  
 Horizontal 0 1 2 3 4 5  
 Vertical 0 0.5 1.0 1.5 2.0 2.5

CONSTRUCTION 21-0347-01RD13

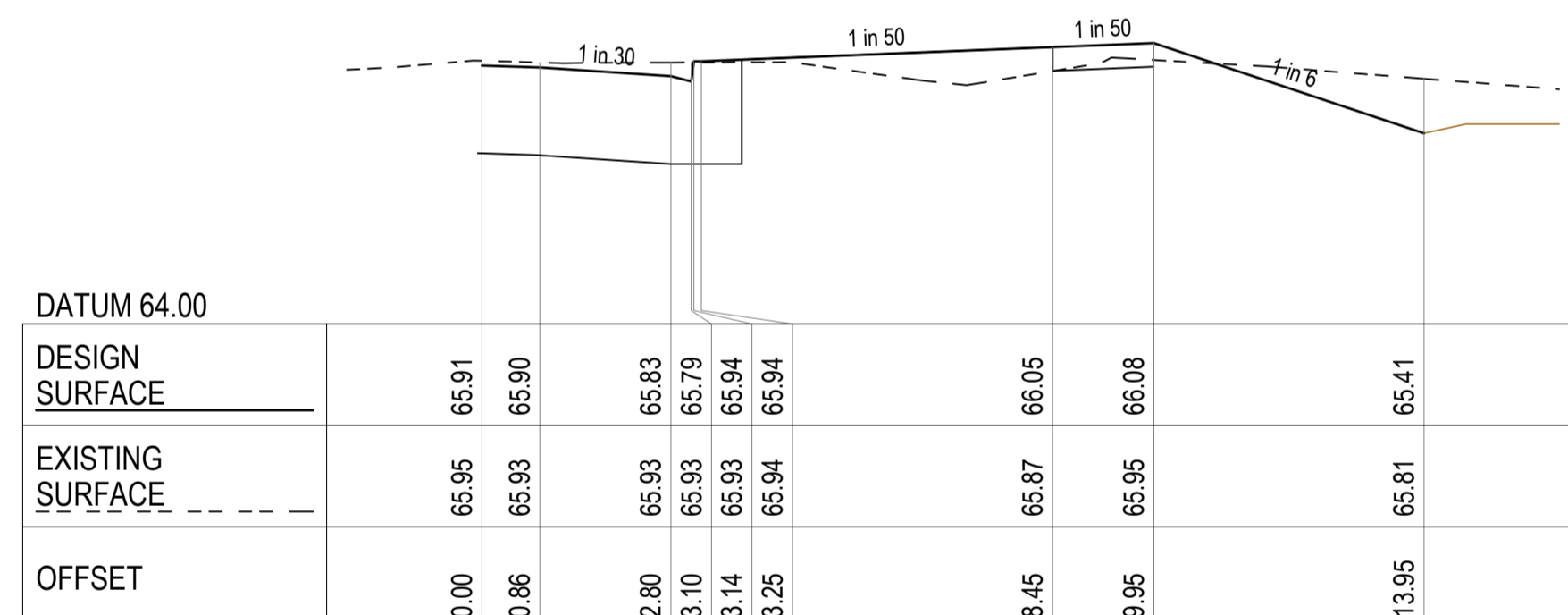
SHEET No. 13 OF 26  
 REV. 1



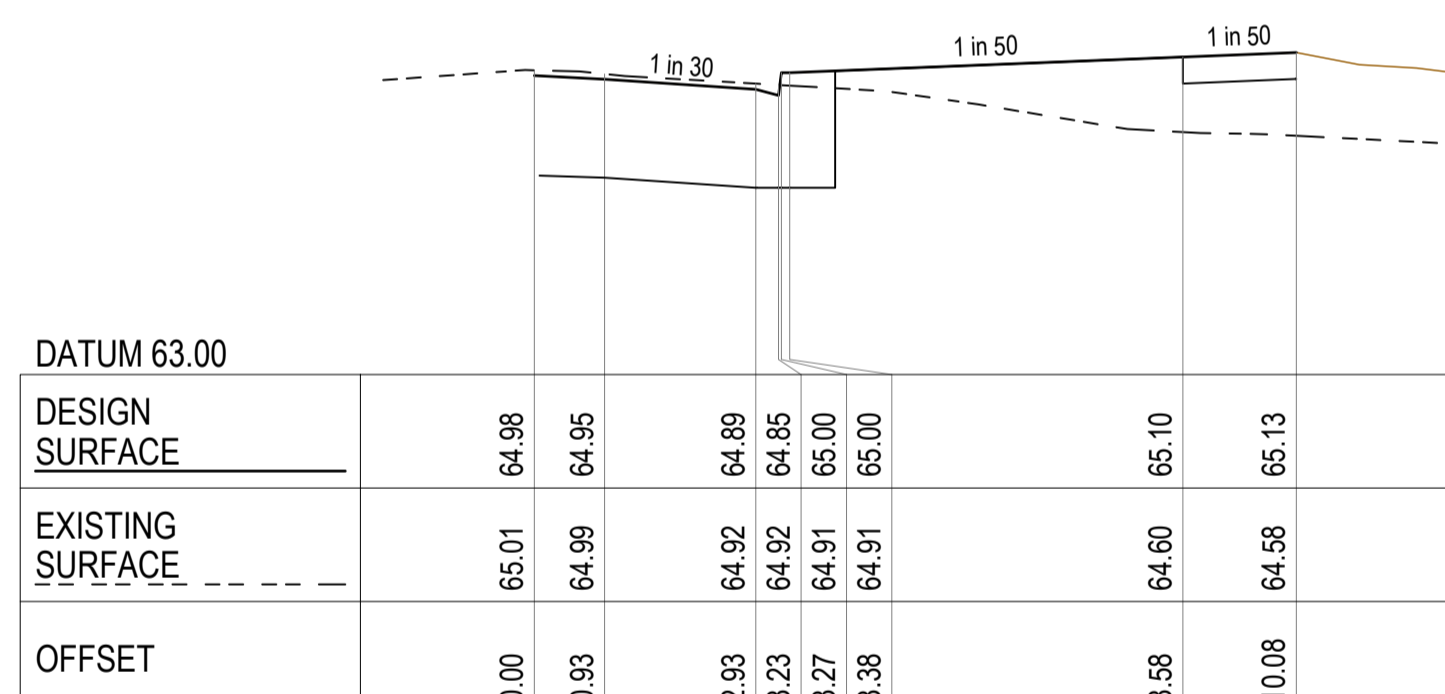
HAMS ROAD CH. 203.14



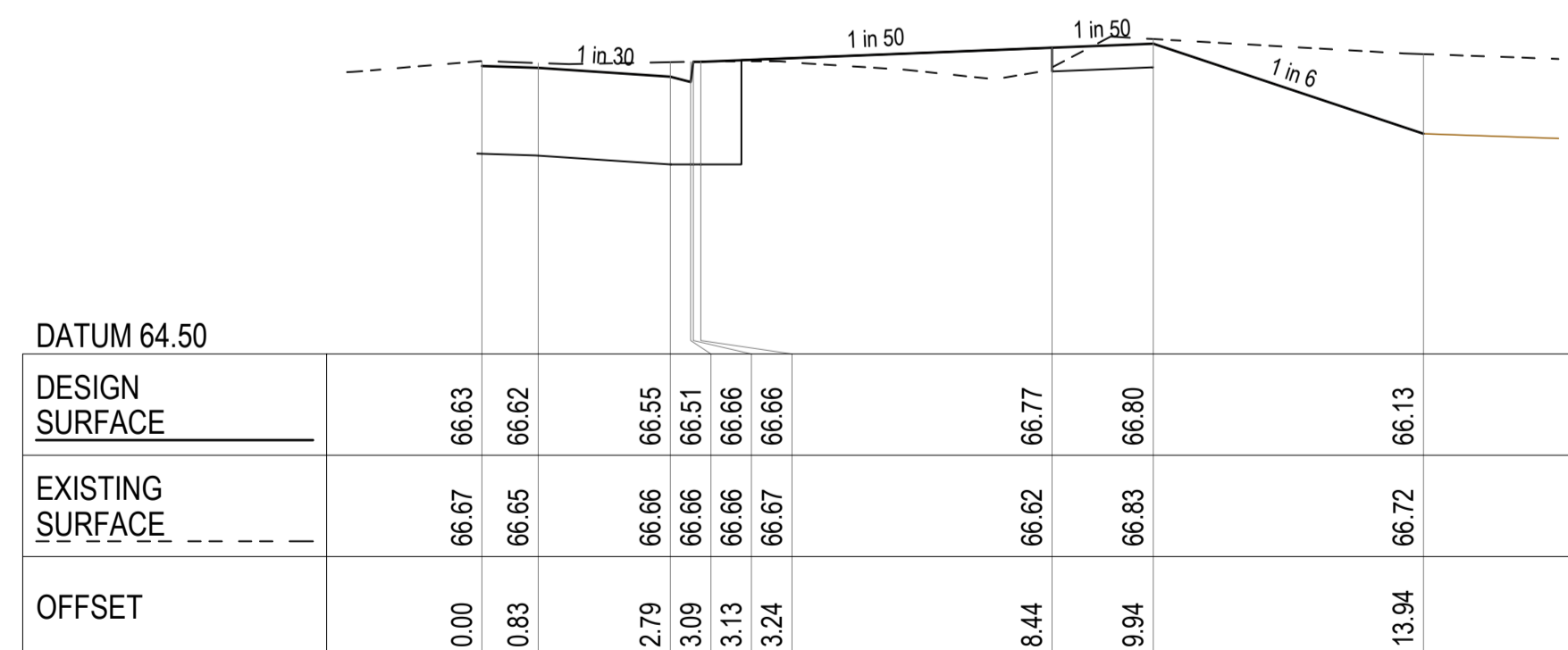
HAMS ROAD CH. 280.00



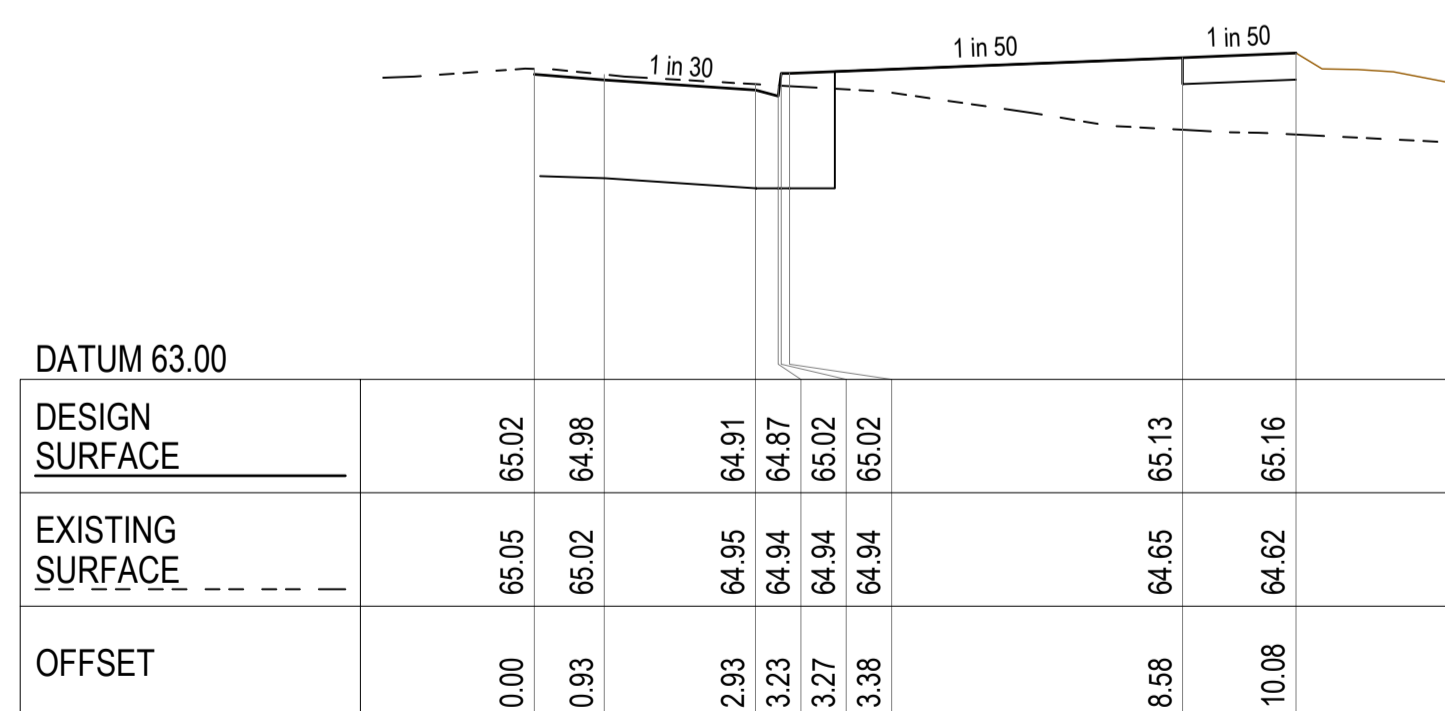
HAMS ROAD CH. 200.00



HAMS ROAD CH. 260.00



HAMS ROAD CH. 180.00



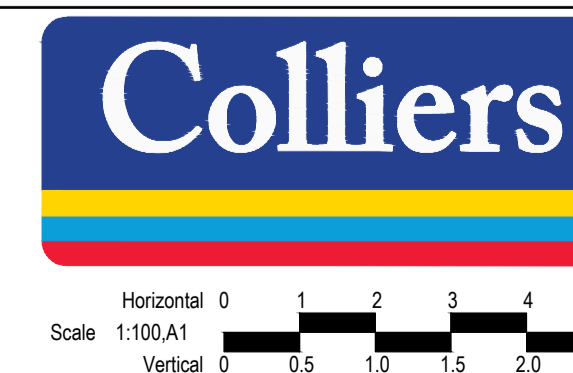
HAMS ROAD CH. 257.05

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

**LEGEND:**

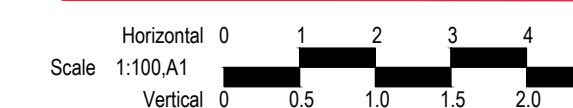
- DESIGN CL SURFACE LEVEL
- EXISTING SURFACE
- ROAD BOXING
- SELECT COMPACTED FILL UNDER FOOTPATHS IN FILL ZONES WHERE EXISTING SURFACE LOWER THAN BOXING

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1226\_workspace\delia\_kameth@121-0347-01\_1924gen02\_design\01\_design\ACAD21-0347-01-RD4-XS.dwg LAYOUT: RD4-06 PLOTTED BY: Tarabata\_Max PLOT DATE: 12/2023 4:02 PM

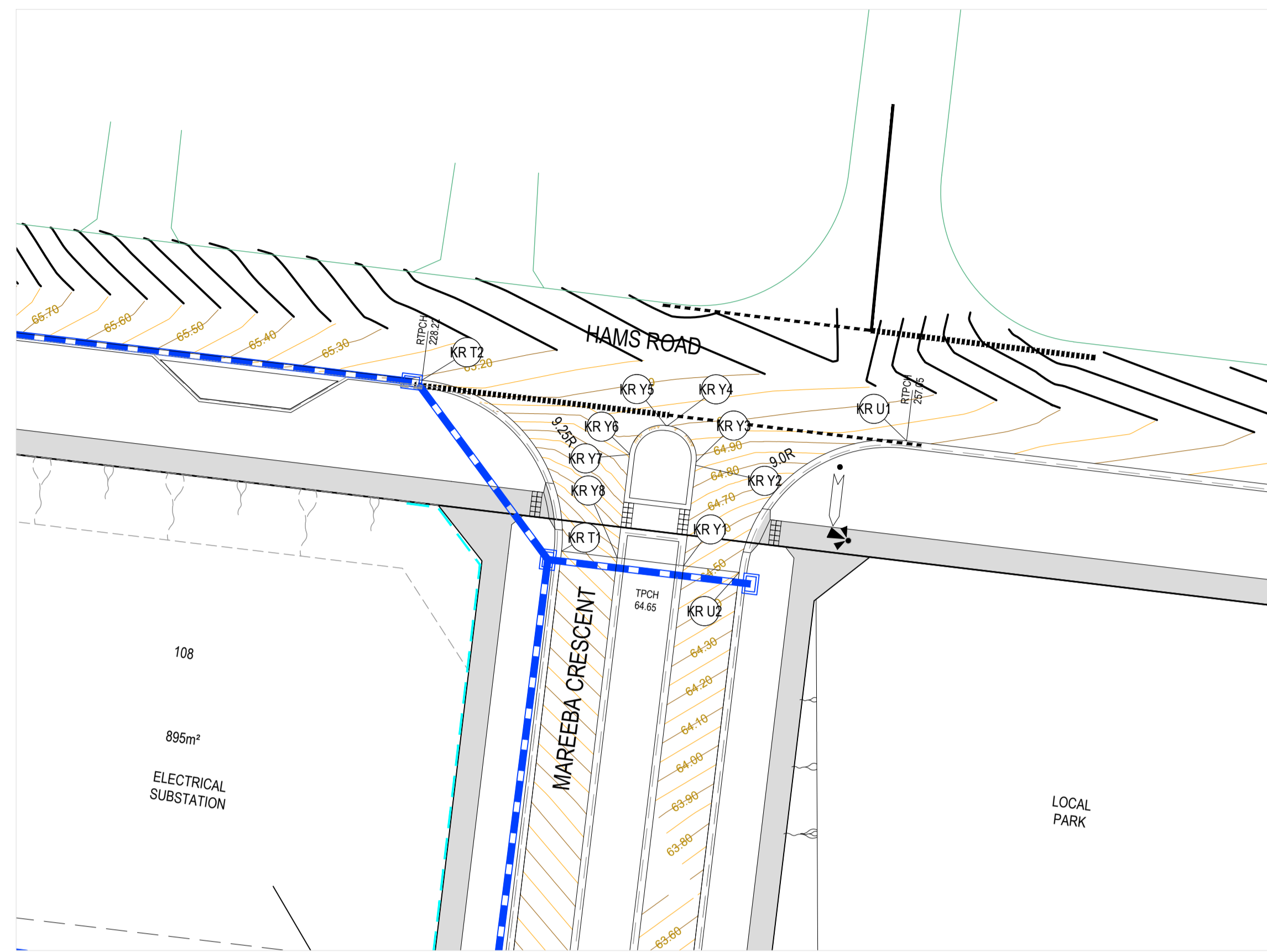


PM	A.CHUDLEIGH
DESIGNED	17.05.2022
CHECKED	17.05.2022
AUTHORISED	T.BARBOUR
MELWAYS	Melway Ref
STATUS	PS905325B

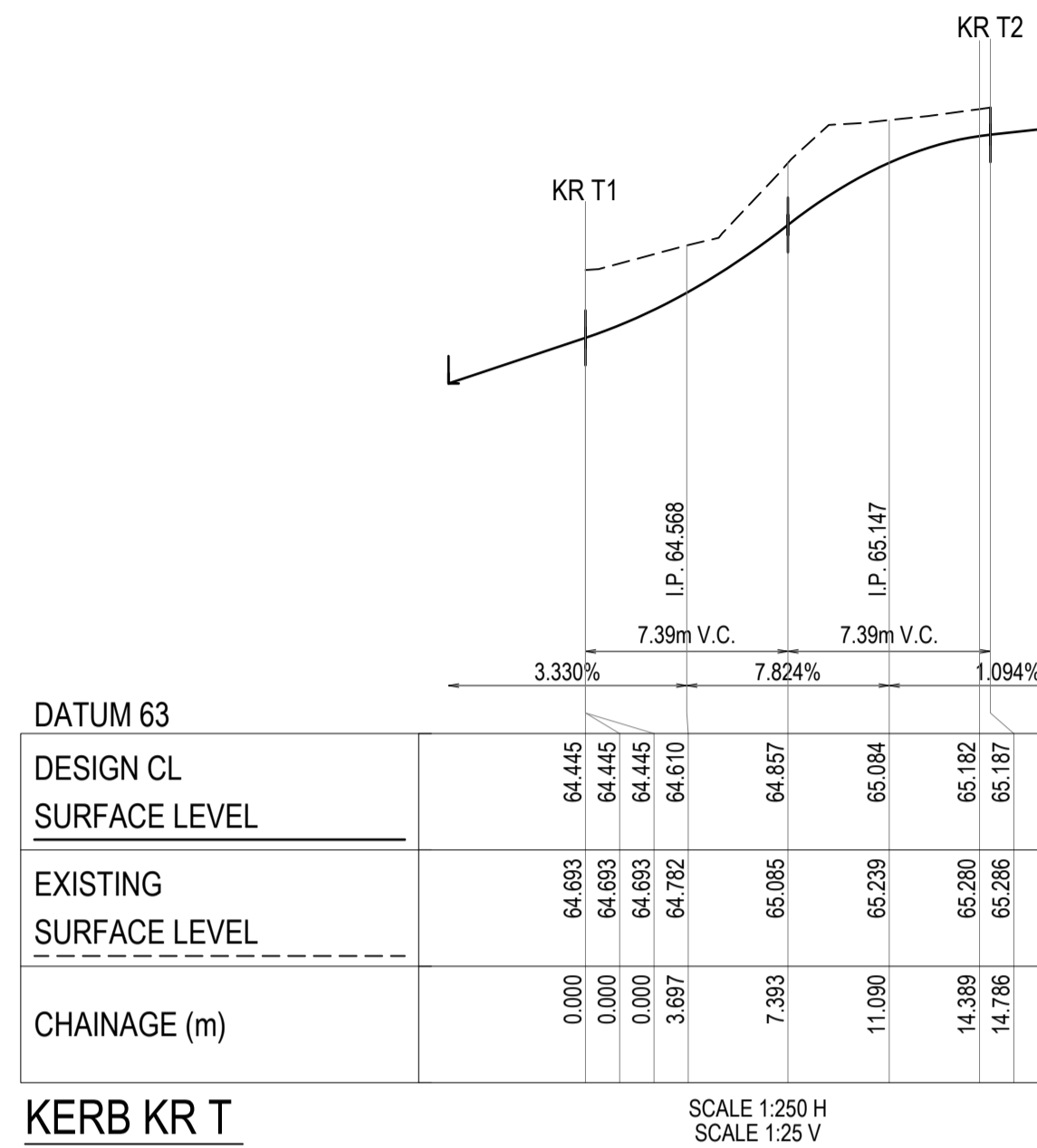
**69-93 Hams Rd**  
 STAGE 1  
 City of Greater Geelong  
 ROAD CROSS SECTIONS - 6



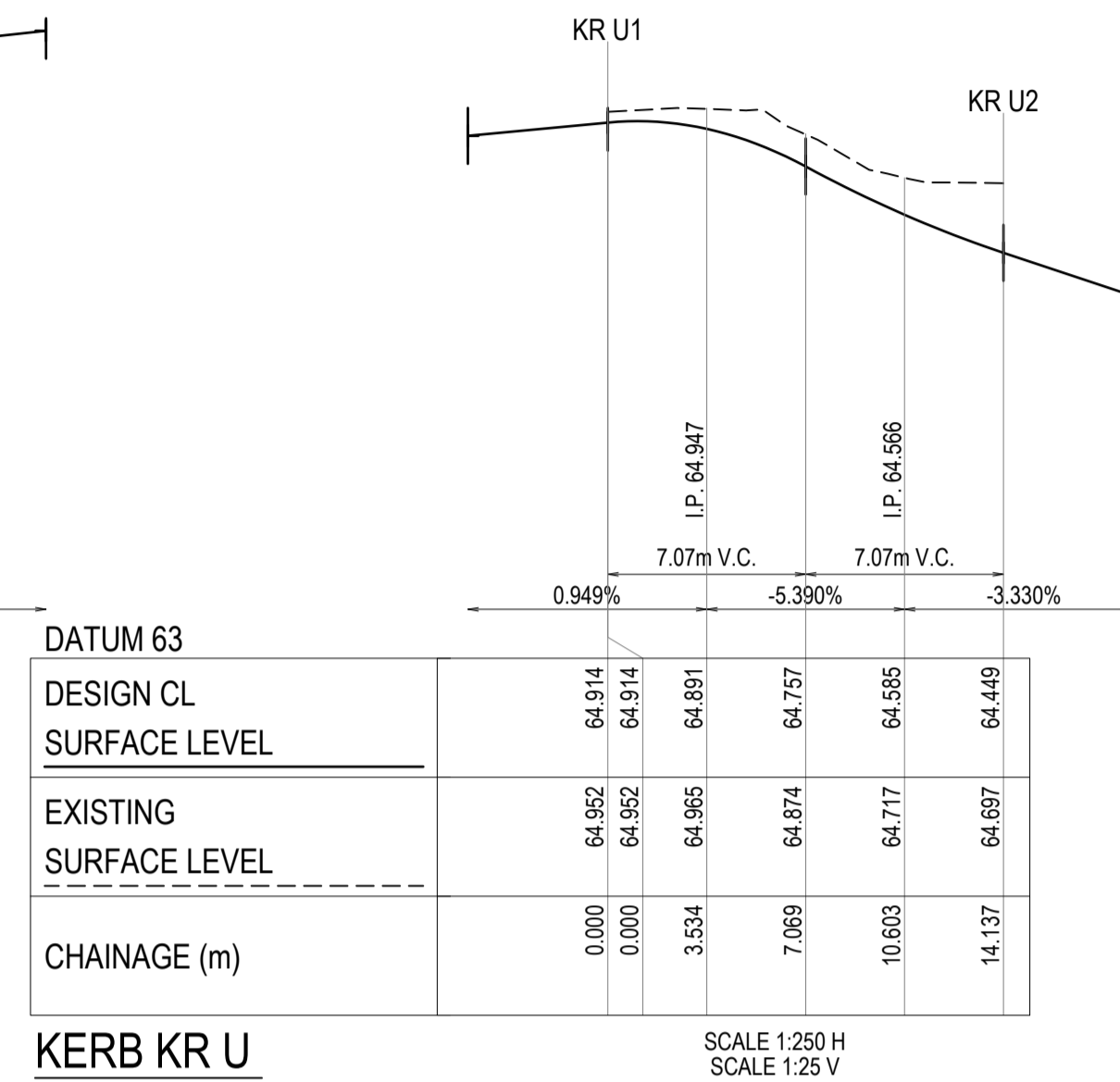
CONSTRUCTION	21-0347-01RD14	SHEET No. 14 OF 26
REV.	1	



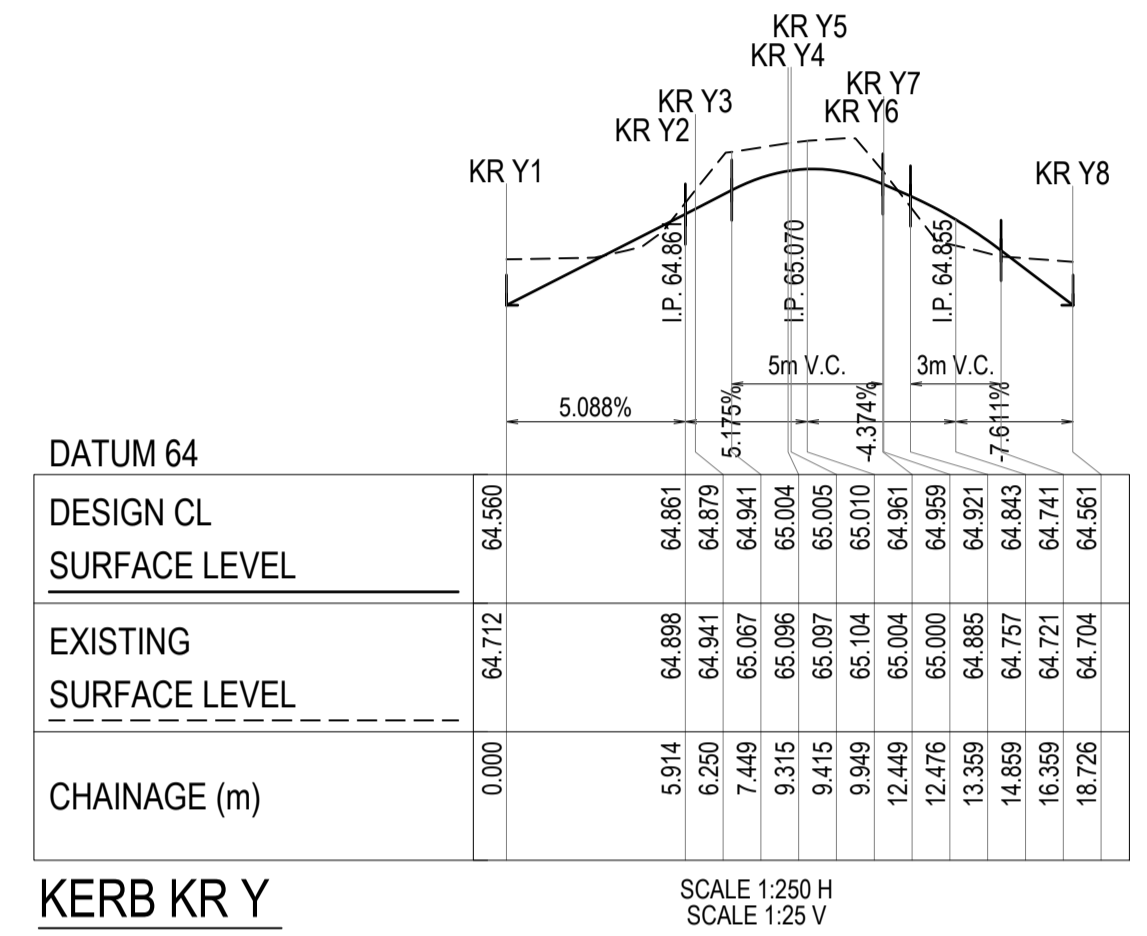
**INTERSECTION DETAIL**  
HAMS RD & MAREEBA CRESCENT



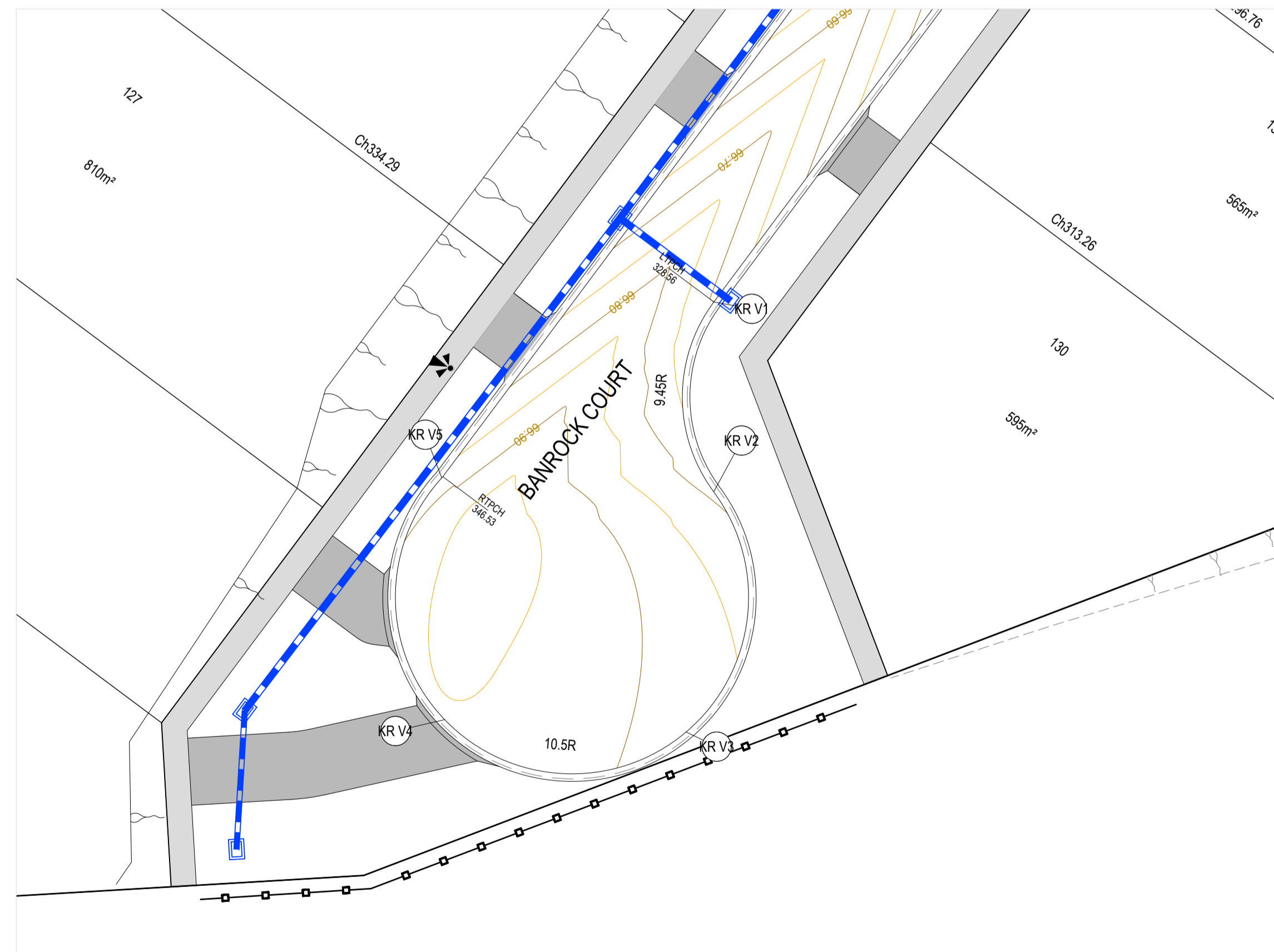
**KERB KR T**



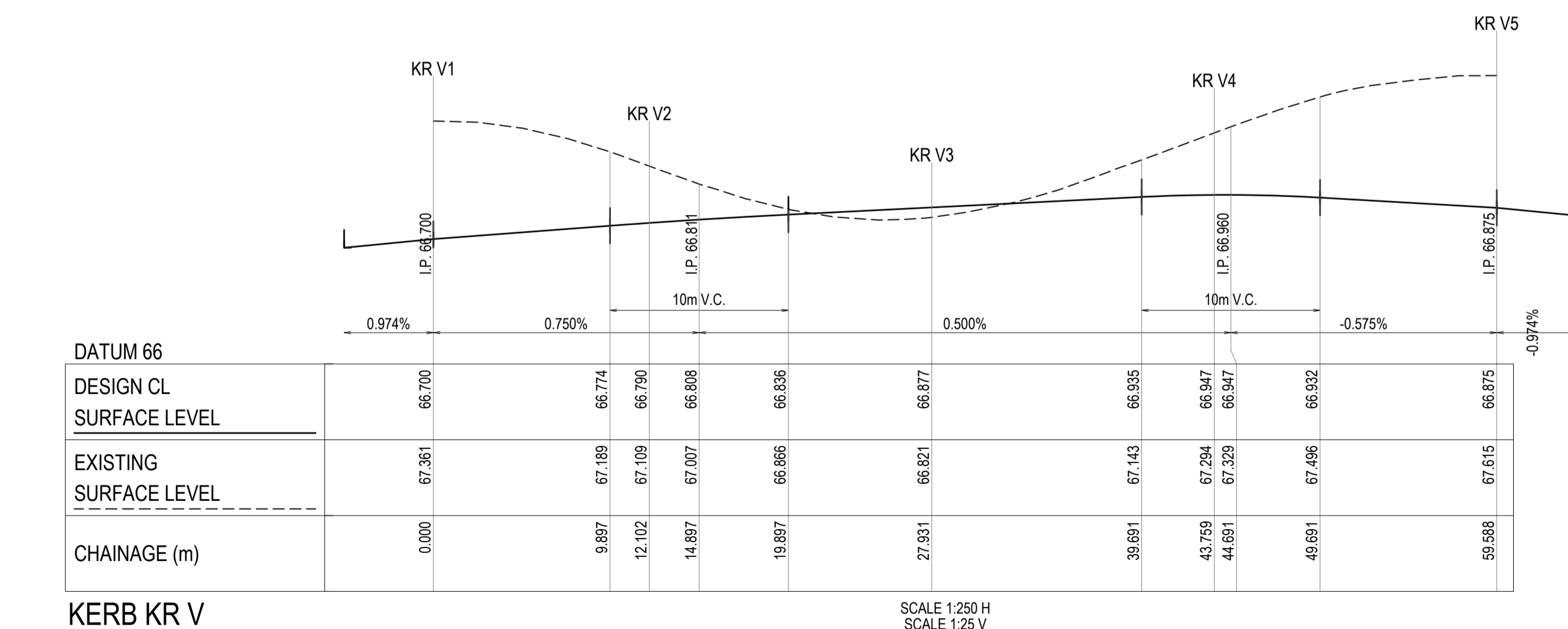
**KERB KR U**



**KERB KR Y**



**INTERSECTION DETAIL**  
BANROCK COURT



**KERB KR V**

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J1120a\_workspace\detail\sumtbl\01-2347-01\_1024pm02\_design\01\_design\ACAD\21-0347-01-RD5-N.dwg LAYOUT: RD5-01 PLOTTED BY: Tanjula Max PLOT DATE: 1/2/2023 4:02 PM



PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	17.05.2022
CHECKED	17.05.2022
T.BARBOUR	17.05.2022
AUTHORISED	17.05.2022
T.BARBOUR	17.05.2022
MELWAYS	Melway Ref
POS No.	F5905325B
STATUS:	

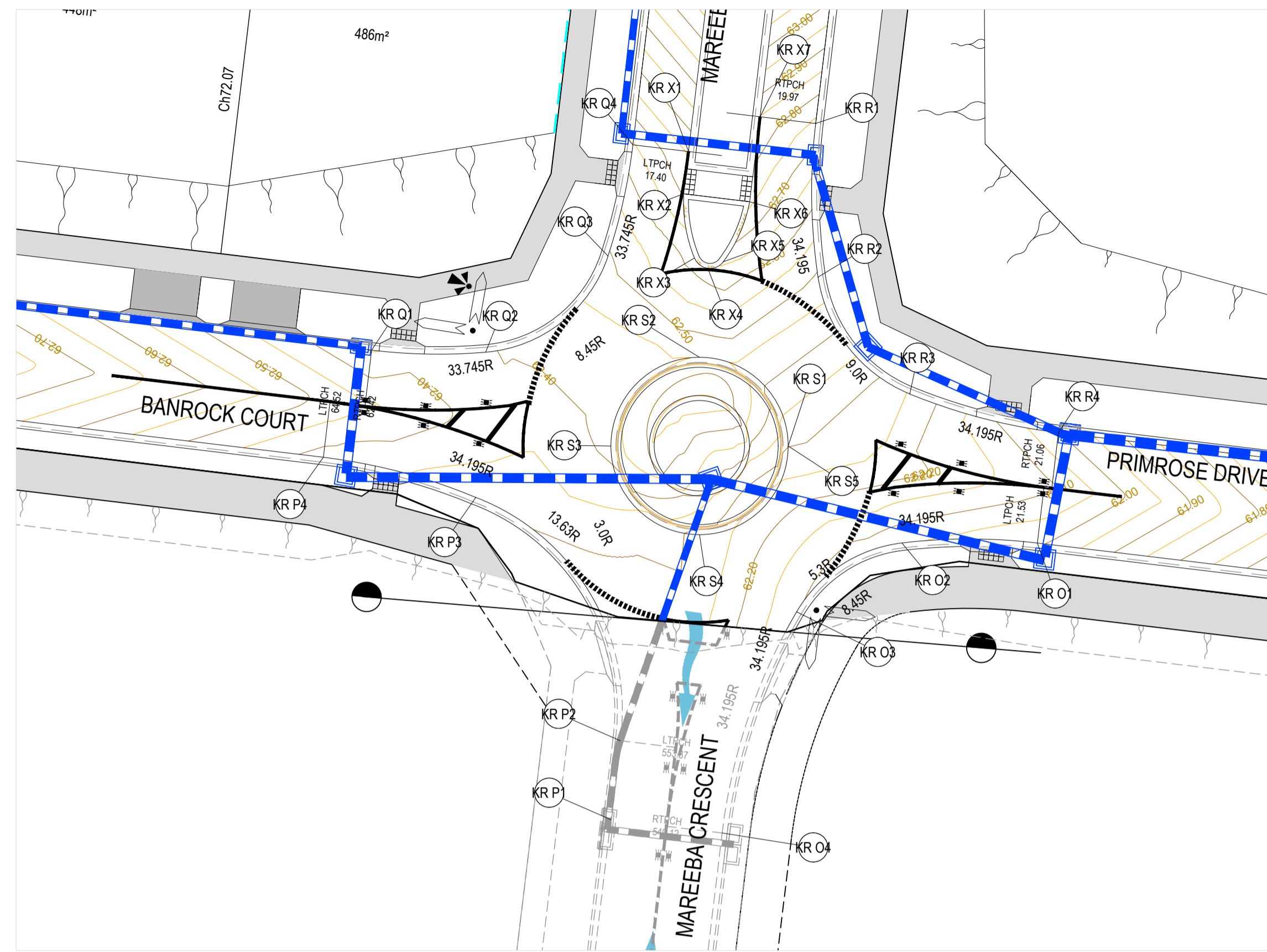
**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**INTERSECTION DETAILS - 1**



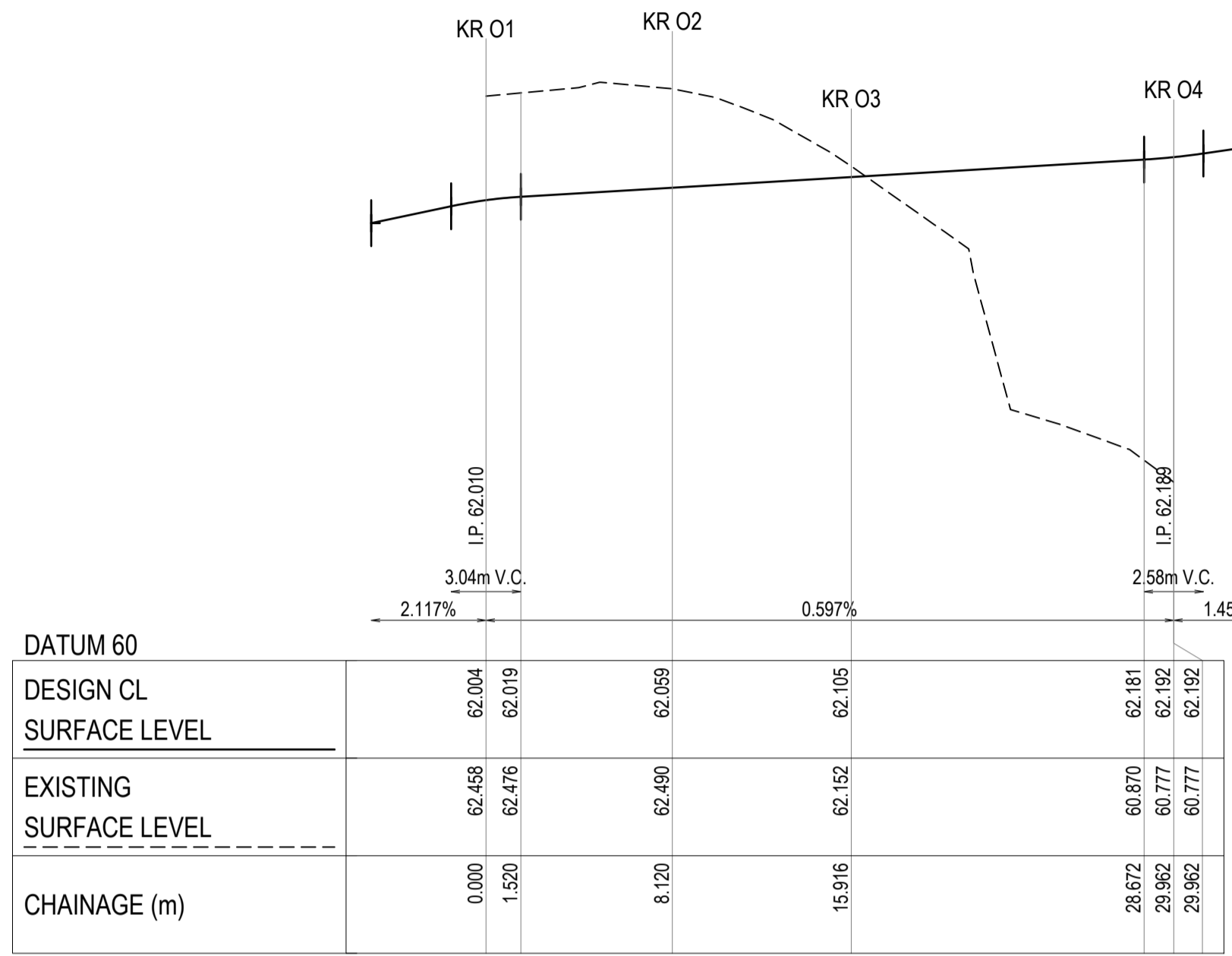
CONSTRUCTION

21-0347-01RD15

SHEET No. 15 OF 26  
 REV. 1

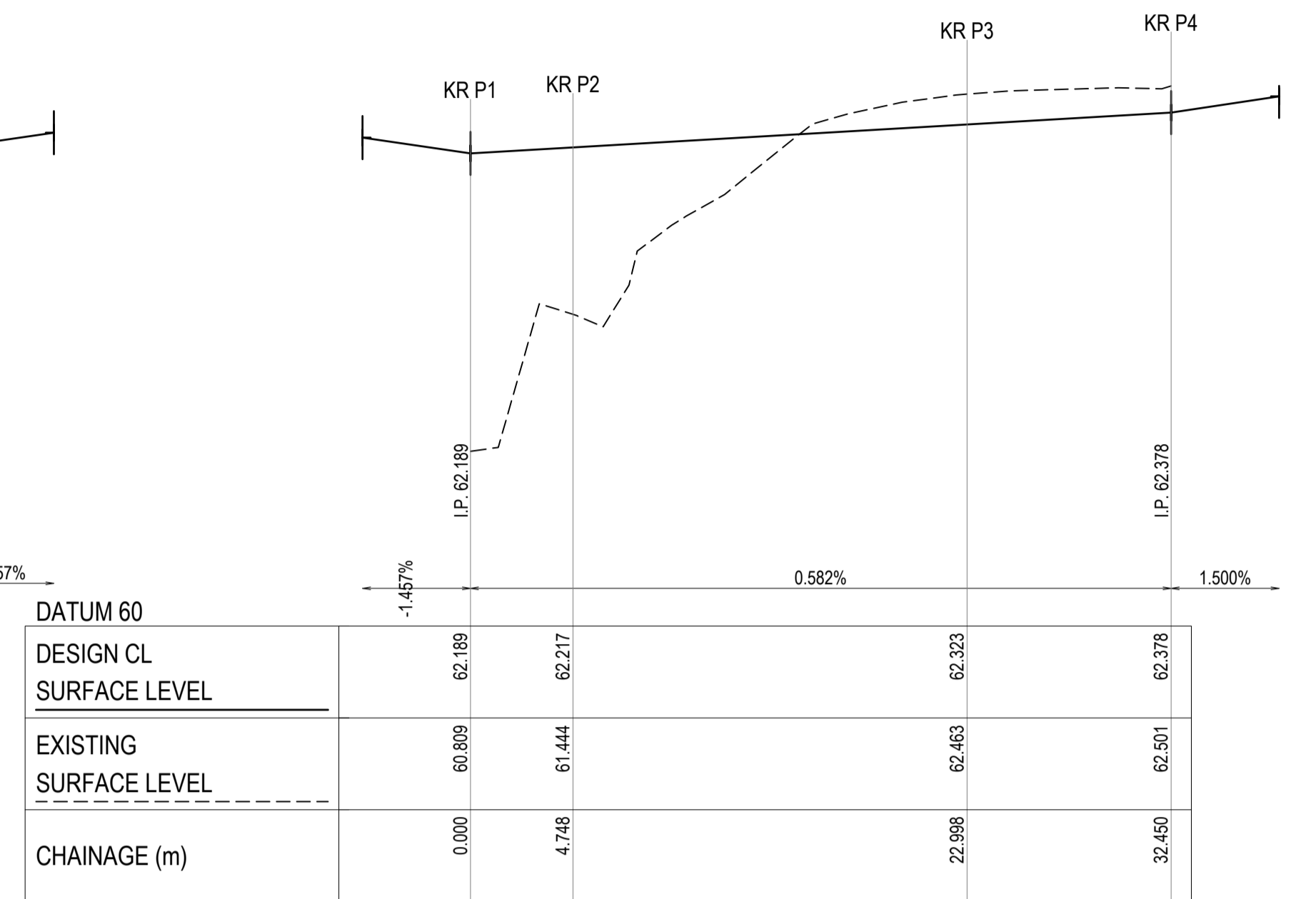


**INTERSECTION DETAIL**  
MAREEBA CRESCENT, BANROCK COURT AND PRIMROSE DRIVE



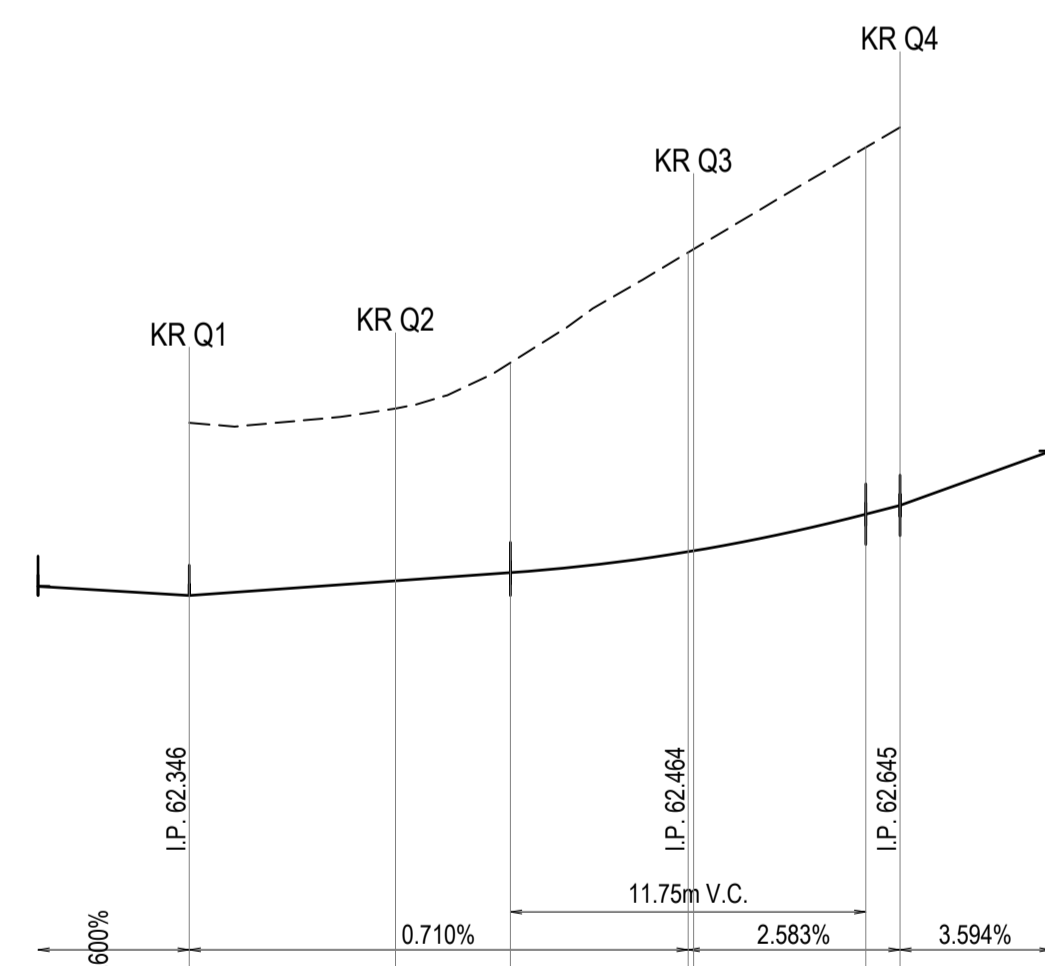
**KERB KR O**

SCALE 1:250 H  
SCALE 1:25 V



**KERB KR P**

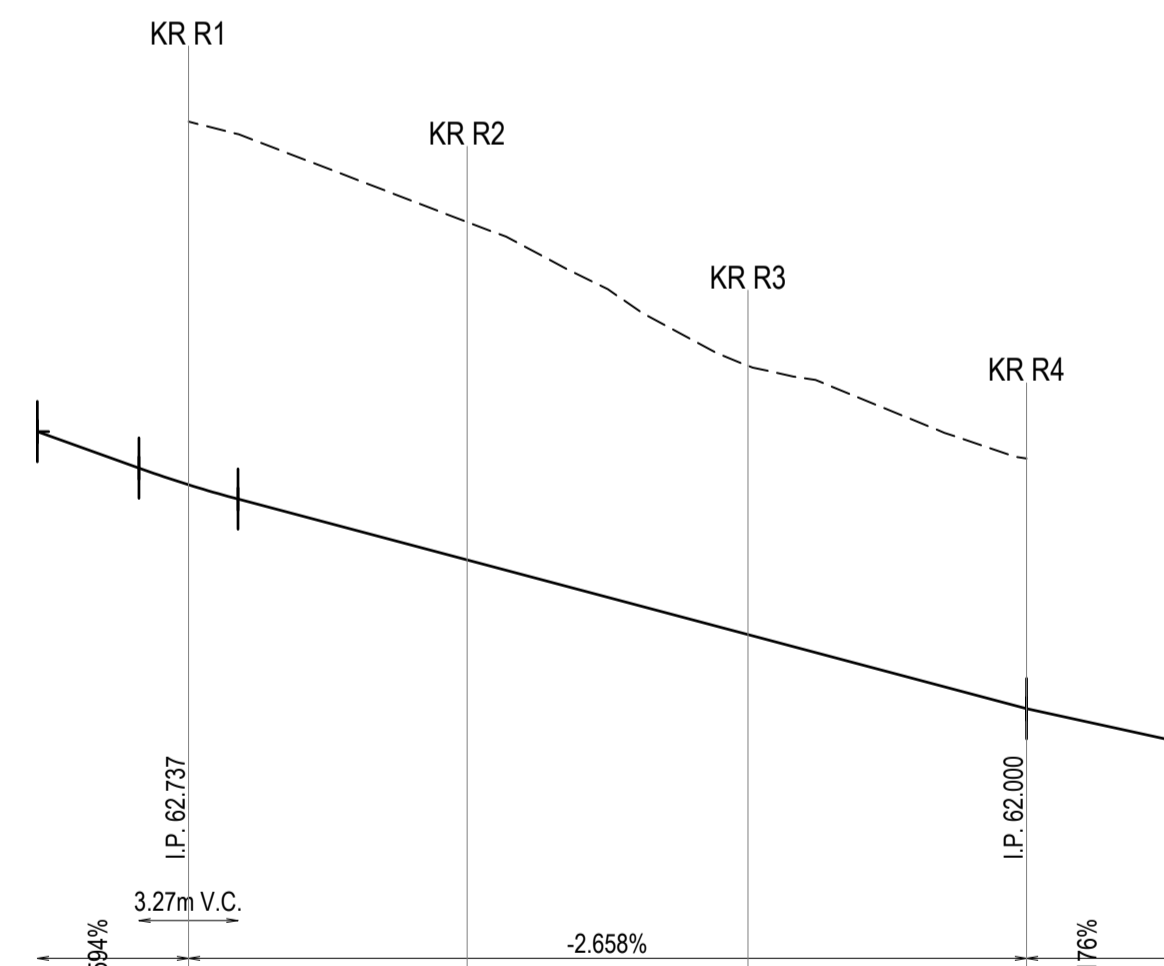
SCALE 1:250 H  
SCALE 1:25 V



DATUM 61	CHAINAGE (m)	DESIGN CL SURFACE LEVEL	EXISTING SURFACE LEVEL
	0.000	62.346	62.917
	6.824	62.395	62.985
	10.623	62.422	63.113
	16.499	62.491	63.481
	16.680	62.494	63.391
	22.375	62.615	63.829
	23.505	62.645	63.894

**KERB KR Q**

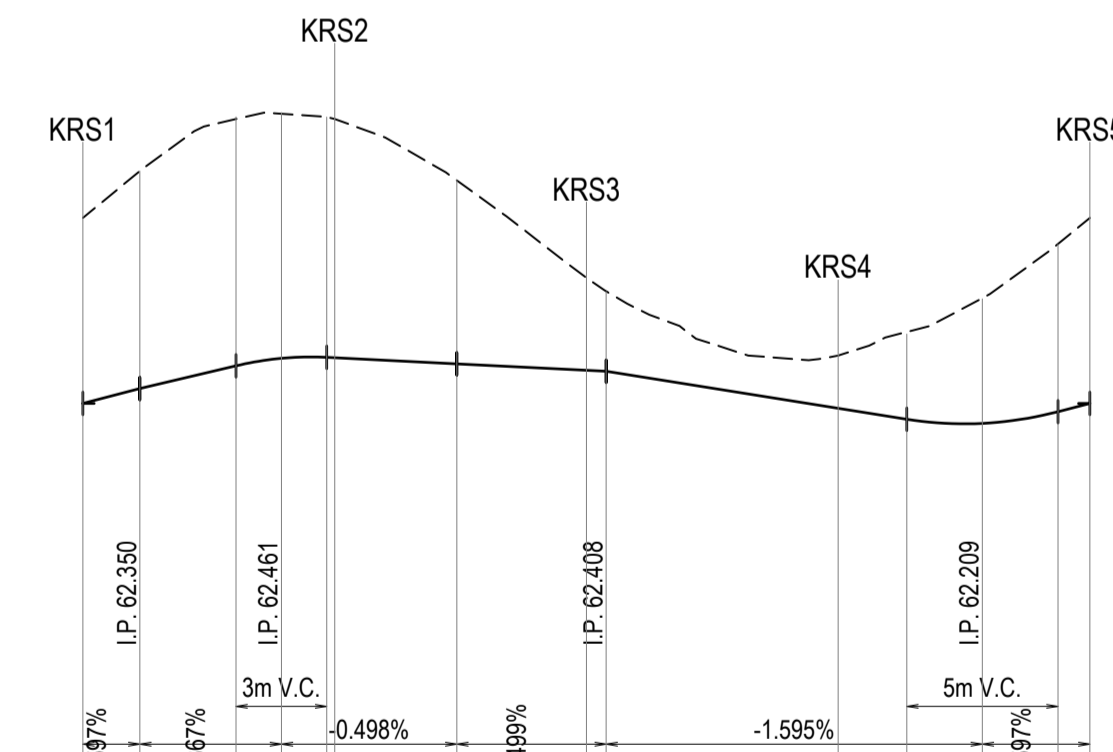
SCALE 1:250 H  
SCALE 1:25 V



DATUM 61	CHAINAGE (m)	DESIGN CL SURFACE LEVEL	EXISTING SURFACE LEVEL
	0.000	62.741	63.941
	9.213	62.492	63.609
	18.301	62.245	63.134
	27.713	62.000	62.827

**KERB KR R**

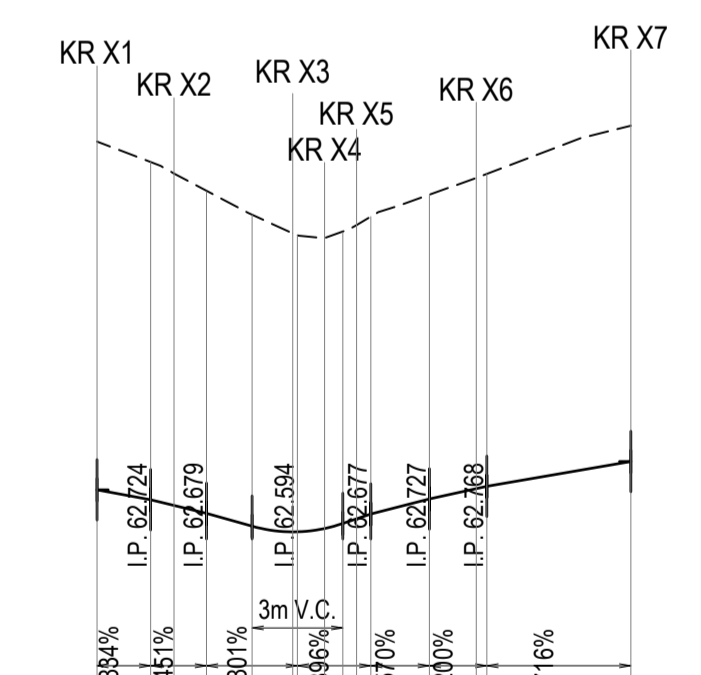
SCALE 1:250 H  
SCALE 1:25 V



DATUM 61	CHAINAGE (m)	DESIGN CL SURFACE LEVEL	EXISTING SURFACE LEVEL
	0.000	62.302	62.915
	1.880	62.350	63.070
	5.064	62.426	63.249
	6.564	62.451	63.265
	8.864	62.454	63.218
	8.325	62.453	63.242
	12.366	62.432	63.041
	16.650	62.411	62.717
	17.304	62.408	62.671
	24.976	62.285	62.460
	27.244	62.249	62.531
	29.744	62.236	62.647
	32.244	62.274	62.828
	33.301	62.302	62.915

**KERB KR S**

SCALE 1:250 H  
SCALE 1:25 V



DATUM 62	CHAINAGE (m)	DESIGN CL SURFACE LEVEL	EXISTING SURFACE LEVEL
	0.000	62.756	63.908
	1.772	62.724	63.840
	2.544	62.705	63.802
	3.619	62.679	63.743
	5.126	62.636	63.666
	6.471	62.617	63.604
	7.525	62.629	63.598
	8.126	62.645	63.608
	8.590	62.661	63.632
	9.053	62.677	63.660
	10.991	62.727	63.731
	12.538	62.761	63.788
	12.888	62.768	63.801
	17.651	62.850	63.960

**KERB KR X**

SCALE 1:250 H  
SCALE 1:25 V

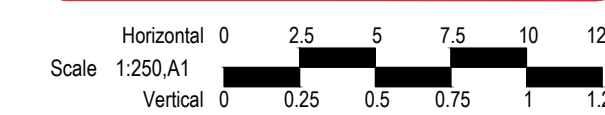
REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1226\_workspace\detail\sum\m2\01-0347-01\_1024pm\02\_design\01\_acad\01-0347-01-RD5-N.dwg LAYOUT: RD5-02 PLOTTED BY: Tanabata Max PLOT DATE: 1/2/2023 4:02 PM

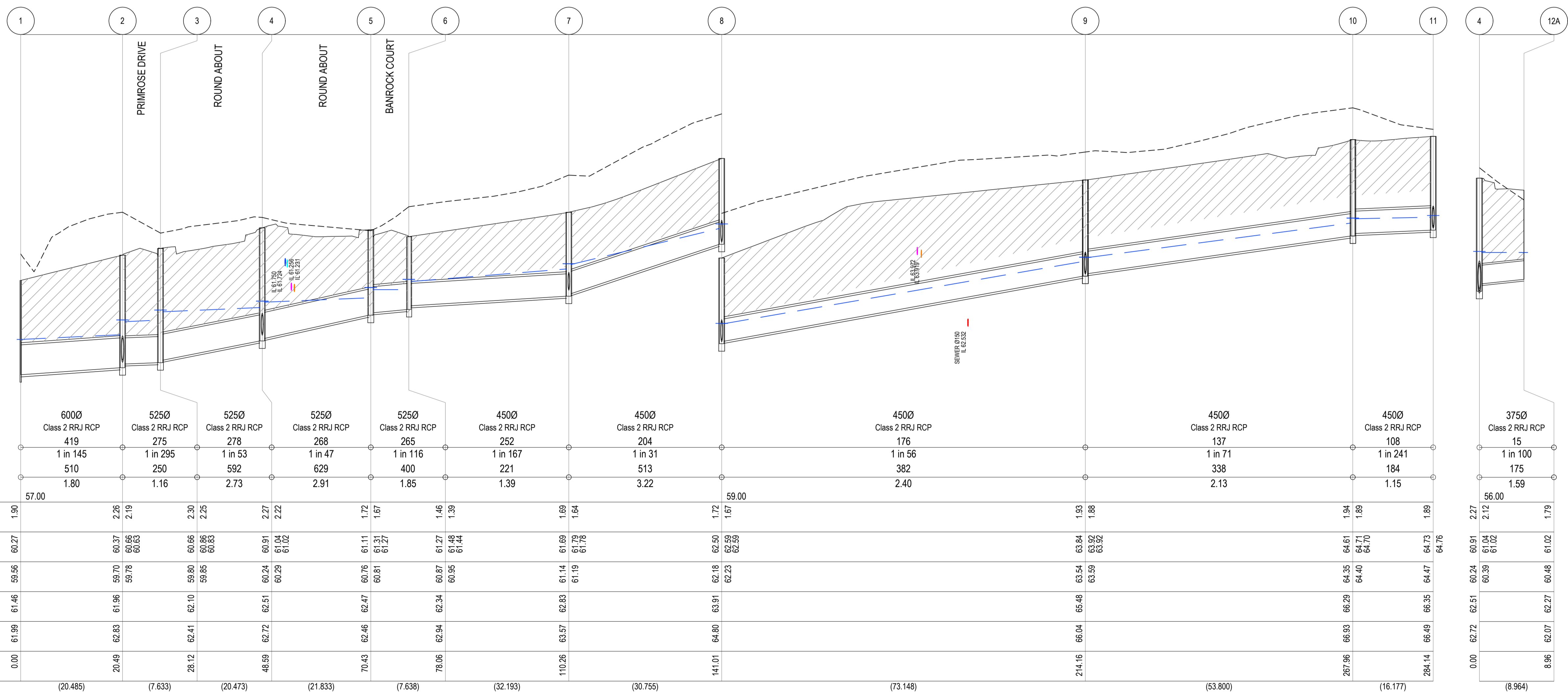


PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAY	Melway Ref
POS No:	FS905325B
STATUS:	

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**INTERSECTION DETAILS - 2**





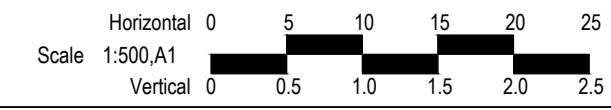


PIPE DIAMETER & TYPE	6000 Class 2 RRJ RCP 419	5250 Class 2 RRJ RCP 275	5250 Class 2 RRJ RCP 278	5250 Class 2 RRJ RCP 268	5250 Class 2 RRJ RCP 265	4500 Class 2 RRJ RCP 252	4500 Class 2 RRJ RCP 204	4500 Class 2 RRJ RCP 176	4500 Class 2 RRJ RCP 137	4500 Class 2 RRJ RCP 108	3750 Class 2 RRJ RCP 15
DESIGN DISCHARGE (l/sec)	419	275	278	268	265	252	204	176	137	108	15
GRADE	1 in 145	1 in 295	1 in 53	1 in 47	1 in 116	1 in 167	1 in 31	1 in 56	1 in 71	1 in 241	1 in 100
PIPE CAPACITY (l/sec)	510	250	592	629	400	221	513	382	338	184	175
VELOCITY (m/sec)	1.80	1.16	2.73	2.91	1.85	1.39	3.22	2.40	2.13	1.15	1.59
DATUM LEVEL	57.00							59.00			
DEPTH TO INVERT BELOW FINISHED SURFACE	1.90	2.26	2.30	2.27	1.72	1.67	1.46	1.93	1.88	1.94	2.27
HYDRAULIC GRADE LINE	60.27	60.37	60.66	60.91	60.76	61.11	61.27	62.50	63.64	64.61	60.91
DESIGN INVERT LEVEL	59.56	59.70	59.80	60.24	60.81	60.87	60.95	62.23	63.54	64.35	60.24
FINISHED SURFACE LEVEL	61.46	61.96	62.10	62.51	62.47	62.34	62.83	63.91	65.48	66.29	62.51
EXISTING SURFACE LEVEL	61.99	62.83	62.41	62.72	62.46	62.94	63.57	64.80	66.04	66.83	62.72
CHAINAGE	0.00	20.49	28.12	48.69	70.43	78.06	110.26	141.01	214.16	267.96	284.14
	(20.485)	(7.633)	(20.473)	(21.833)	(7.638)	(32.193)	(30.755)	(73.148)	(53.800)	(16.177)	(8.964)

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

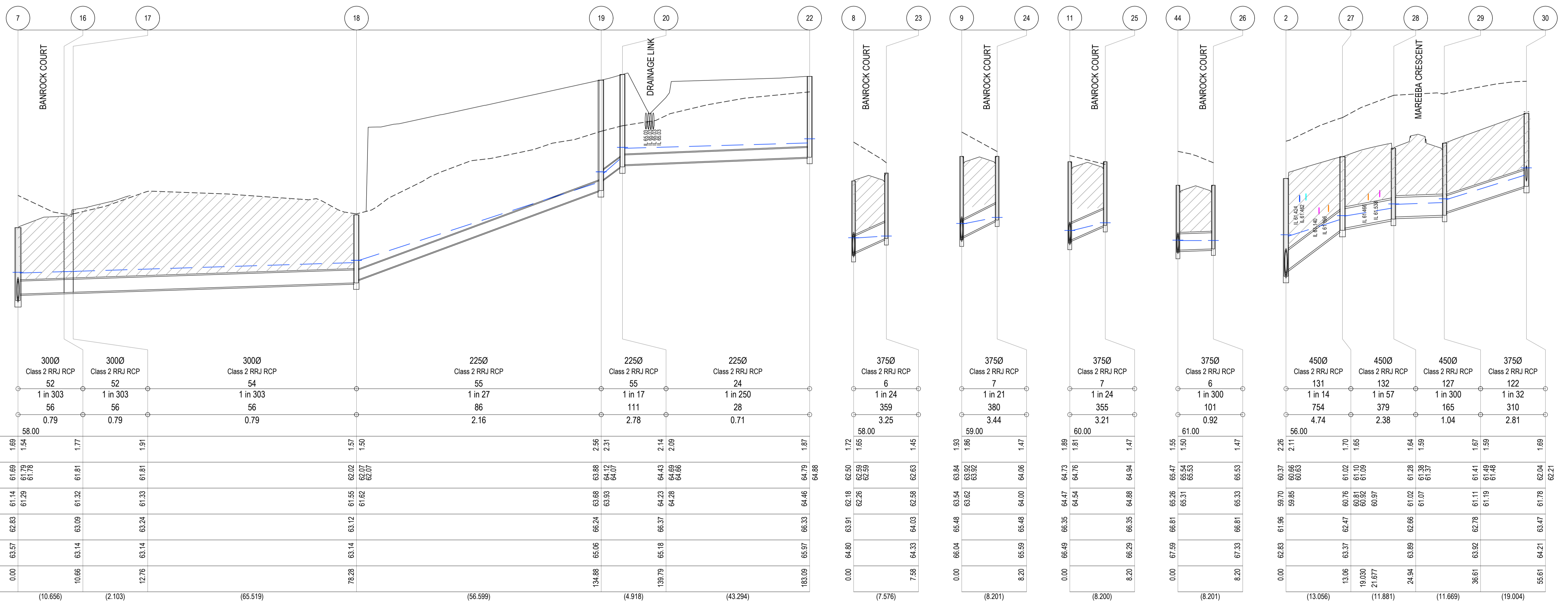
**LEGEND:**  
 CRUSHED ROCK BACKFILL

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1126\workspace\data\hamsrd\01-21-0347-01\_1024\pm02\design\p01\design\ACAD\21-0347-01-RD6-DR.dwg LAYOUT: RD6-01 PLOTTED BY: Tanabata, Max PLOT DATE: 12/2023 4:03 PM



PM: A.CHUDLEIGH  
 DESIGNED: 17.05.2022  
 S.FALKENSTEIN  
 CHECKED: 17.05.2022  
 T.BARBOR  
 AUTHORIZED: 17.05.2022  
 T.BARBOR  
 MELWAY: Melway Ref  
 POS No.: F5905325B  
 STATUS:

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**DRAINAGE LONGITUDINAL SECTIONS - 1**



PIPE DIAMETER & TYPE	3000 Class 2 RRJ RCP 52	3000 Class 2 RRJ RCP 52	3000 Class 2 RRJ RCP 54	2250 Class 2 RRJ RCP 55	2250 Class 2 RRJ RCP 55	2250 Class 2 RRJ RCP 24	3750 Class 2 RRJ RCP 6	3750 Class 2 RRJ RCP 7	3750 Class 2 RRJ RCP 7	3750 Class 2 RRJ RCP 6	4500 Class 2 RRJ RCP 131	4500 Class 2 RRJ RCP 132	4500 Class 2 RRJ RCP 127	3750 Class 2 RRJ RCP 122
DESIGN DISCHARGE (l/sec)	56	56	56	86	111	28	359	380	355	101	754	379	165	310
GRADE	1 in 303	1 in 303	1 in 303	1 in 27	1 in 17	1 in 250	1 in 24	1 in 21	1 in 24	1 in 300	1 in 14	1 in 57	1 in 300	1 in 32
PIPE CAPACITY (l/sec)	0.79	0.79	0.79	2.16	2.78	0.71	3.25	3.44	3.21	0.92	4.74	2.38	1.04	2.81
VELOCITY (m/sec)														
DATUM LEVEL	58.00						58.00	59.00	60.00	61.00	56.00			
DEPTH TO INVERT BELOW FINISHED SURFACE	1.69	1.54	1.77	1.57	1.50	2.56	1.72	1.66	1.89	1.55	2.26	2.11	1.64	1.69
HYDRAULIC GRADE LINE	61.69	61.79	61.81	62.02	62.07	63.88	62.50	62.50	64.73	65.47	60.95	61.02	61.28	61.41
DESIGN INVERT LEVEL	61.14	61.29	61.32	61.55	61.62	63.68	62.26	63.02	64.54	65.31	59.85	60.76	61.07	61.11
FINISHED SURFACE LEVEL	62.83	62.83	63.09	63.12	63.33	64.43	63.91	63.54	64.47	66.81	61.96	62.47	62.66	62.76
EXISTING SURFACE LEVEL	63.57	63.14	63.09	63.14	63.24	64.28	64.80	65.04	66.49	67.29	62.83	63.37	63.89	63.92
CHAINAGE	0.00	10.66	12.76	78.28	134.88	139.79	183.09	0.00	0.00	8.20	0.00	13.06	24.94	36.61
	(10.656)	(2.103)	(65.519)	(56.599)	(4.918)	(43.294)	(7.576)	(8.201)	(8.200)	(8.201)	(13.056)	(11.881)	(11.669)	(19.004)

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

**LEGEND:**  
 CRUSHED ROCK BACKFILL

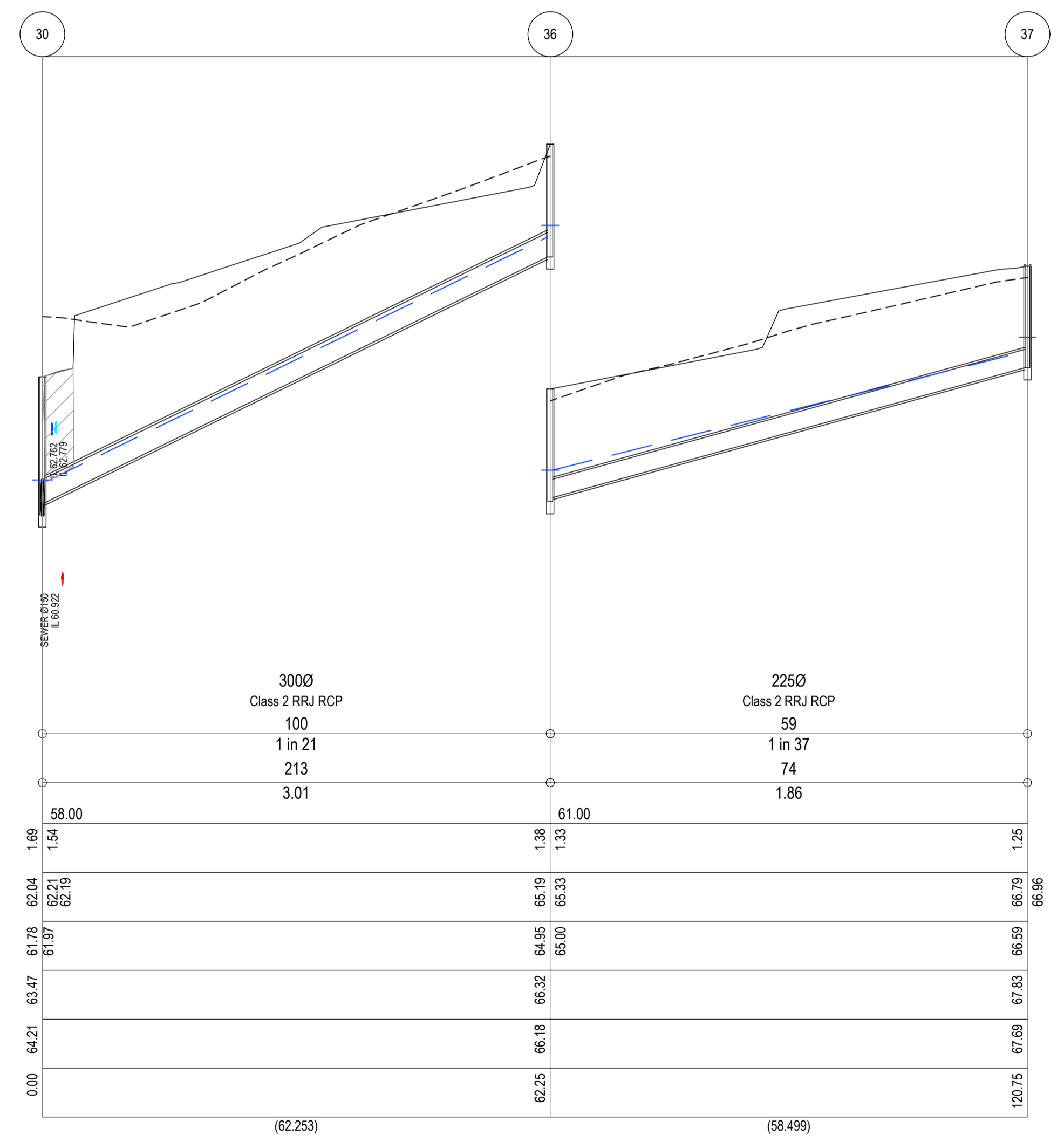
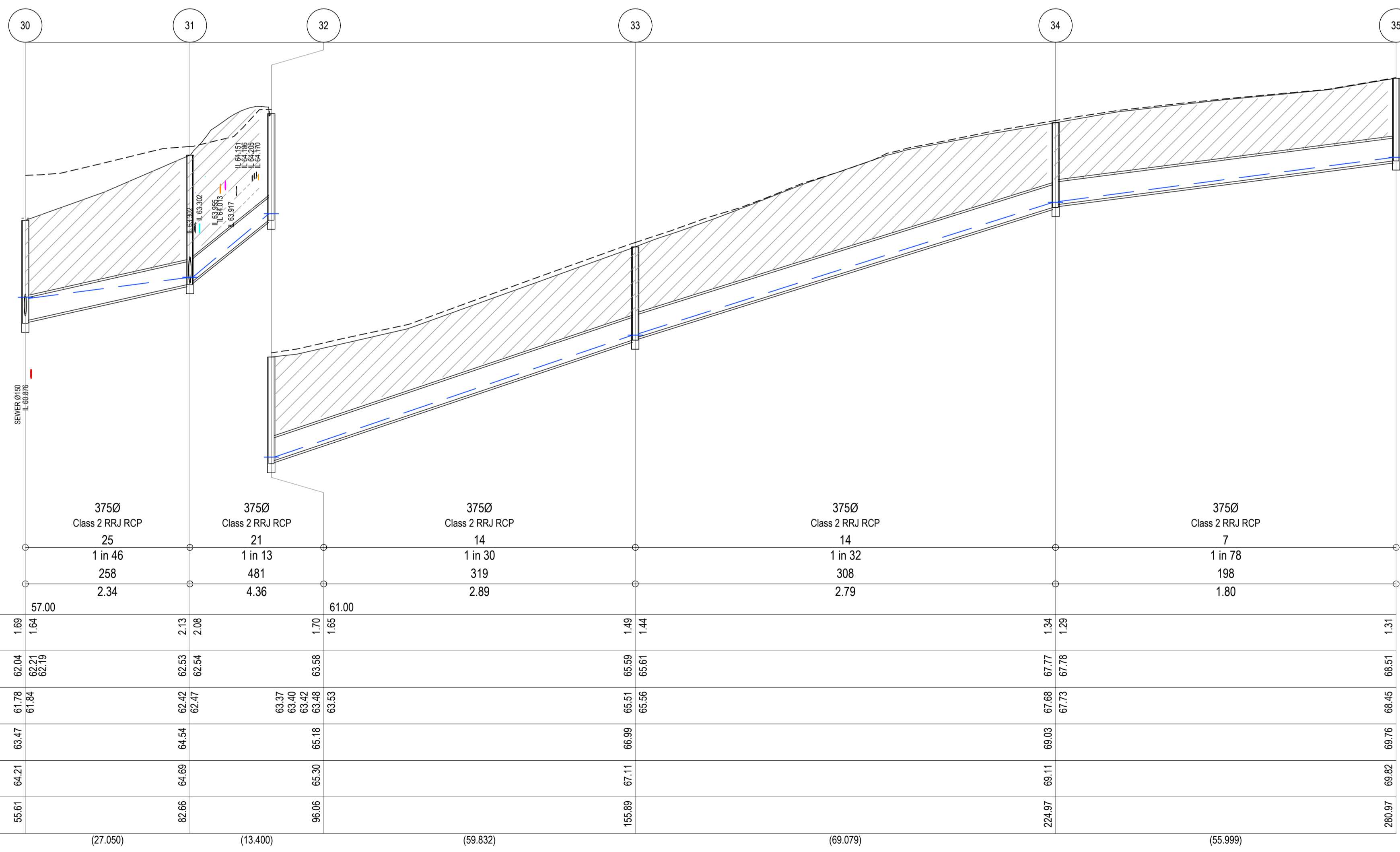
© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J112ds\_workspace\cd\data\amend\01-21-23\47-01\_1024pm\02\_desig\p101\_design\ACAD\21-0347-01-RD6-DR.dwg LAYOUT: RD6-02 PLOTTED BY: Tanabata, Max PLOT DATE: 12/2023 4:03 PM

Horizontal 0 5 10 15 20 25  
 Scale 1:500 A1  
 Vertical 0 0.5 1.0 1.5 2.0 2.5

PM A.CHUDJLEIGH  
 DESIGNED 17.05.2022  
 S.FALKENSTEIN  
 CHECKED 17.05.2022  
 T.BARBOUR  
 AUTHORIZED 17.05.2022  
 T.BARBOUR  
 MELWAYS Melway Ref  
 POS No: F5905325B  
 STATUS: CONSTRUCTION

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**DRAINAGE LONGITUDINAL SECTIONS - 2**

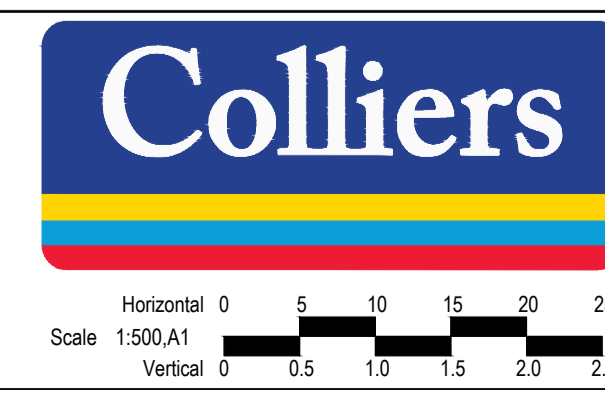
21-0347-01RD18  
 SHEET No: 18 OF 26  
 REV. 1



REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOR	17.05.2022

**LEGEND:**  
 CRUSHED ROCK BACKFILL

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: j112ds\_workspace\delat\sum\delat\21-0347-01\_1024pm102\_desig\p101\_design\ACAD\21-0347-01-RD6-DR.dwg LAYOUT: RD6-03 PLOTTED BY: Tanabata\_Max PLOT DATE: 12/2023 4:03 PM

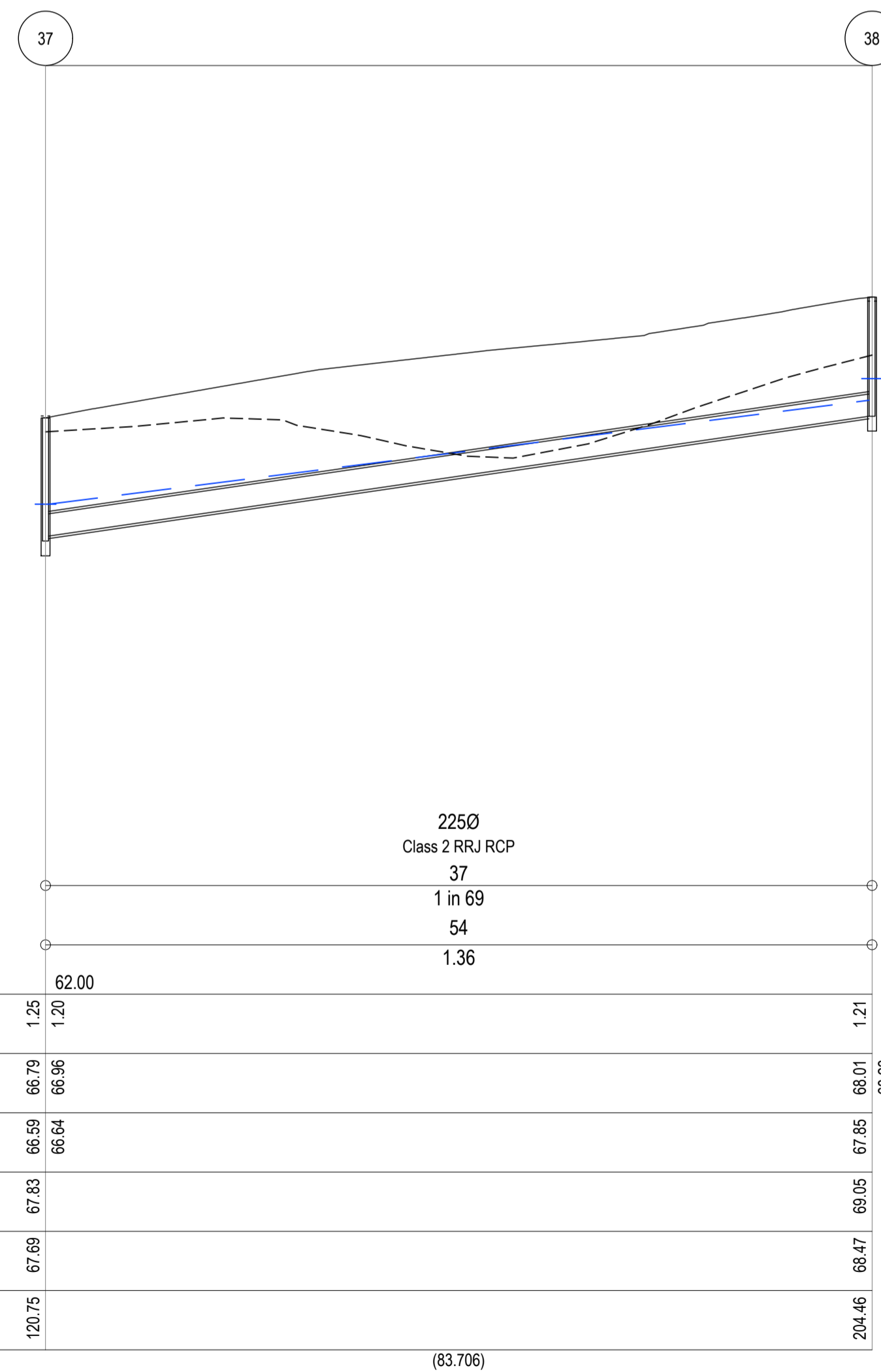


PM A.CHUDLEIGH  
 DESIGNED 17.05.2022  
 S.FALKENSTEIN  
 CHECKED 17.05.2022  
 T.BARBOR  
 AUTHORIZED 17.05.2022  
 T.BARBOR  
 MELBAYS Melway Ref  
 POS No: F5905325B  
 STATUS:

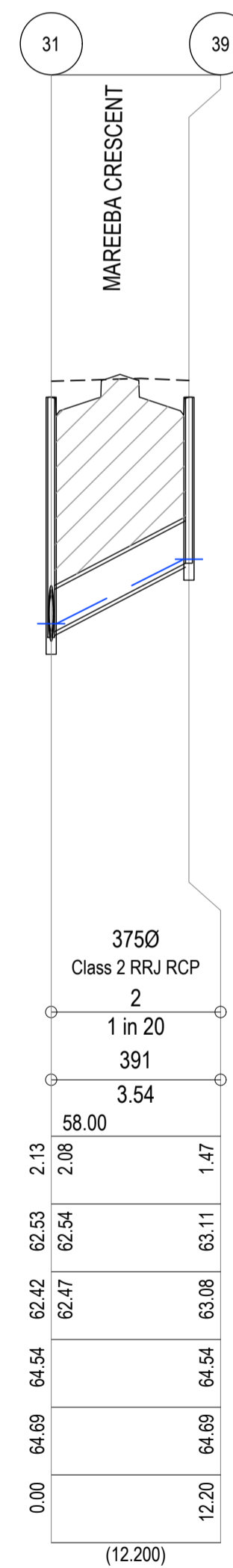
**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**DRAINAGE LONGITUDINAL SECTIONS - 3**



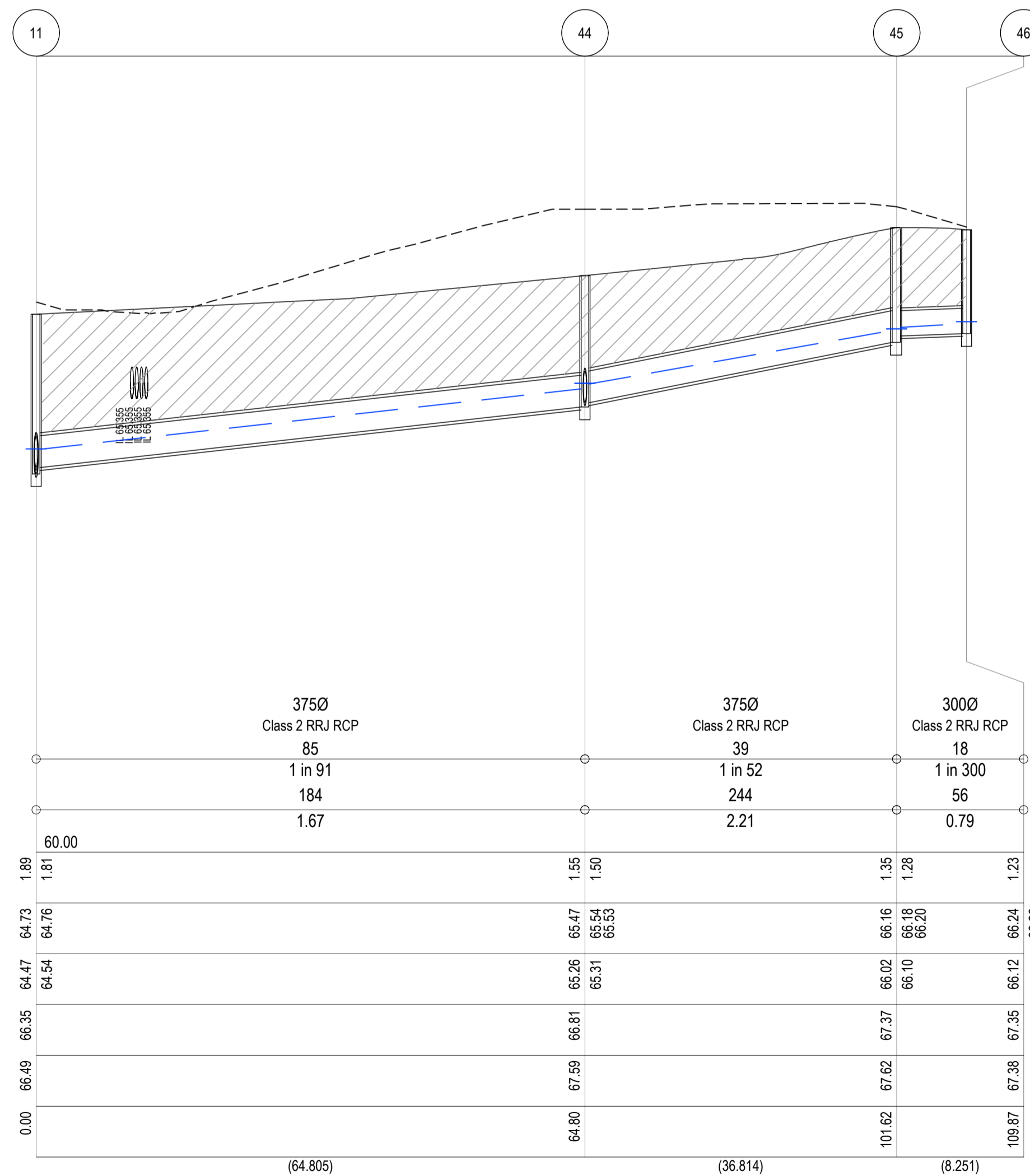
CONSTRUCTION 21-0347-01RD19 SHEET No. 19 OF 26  
 REV. 1



(83.706)



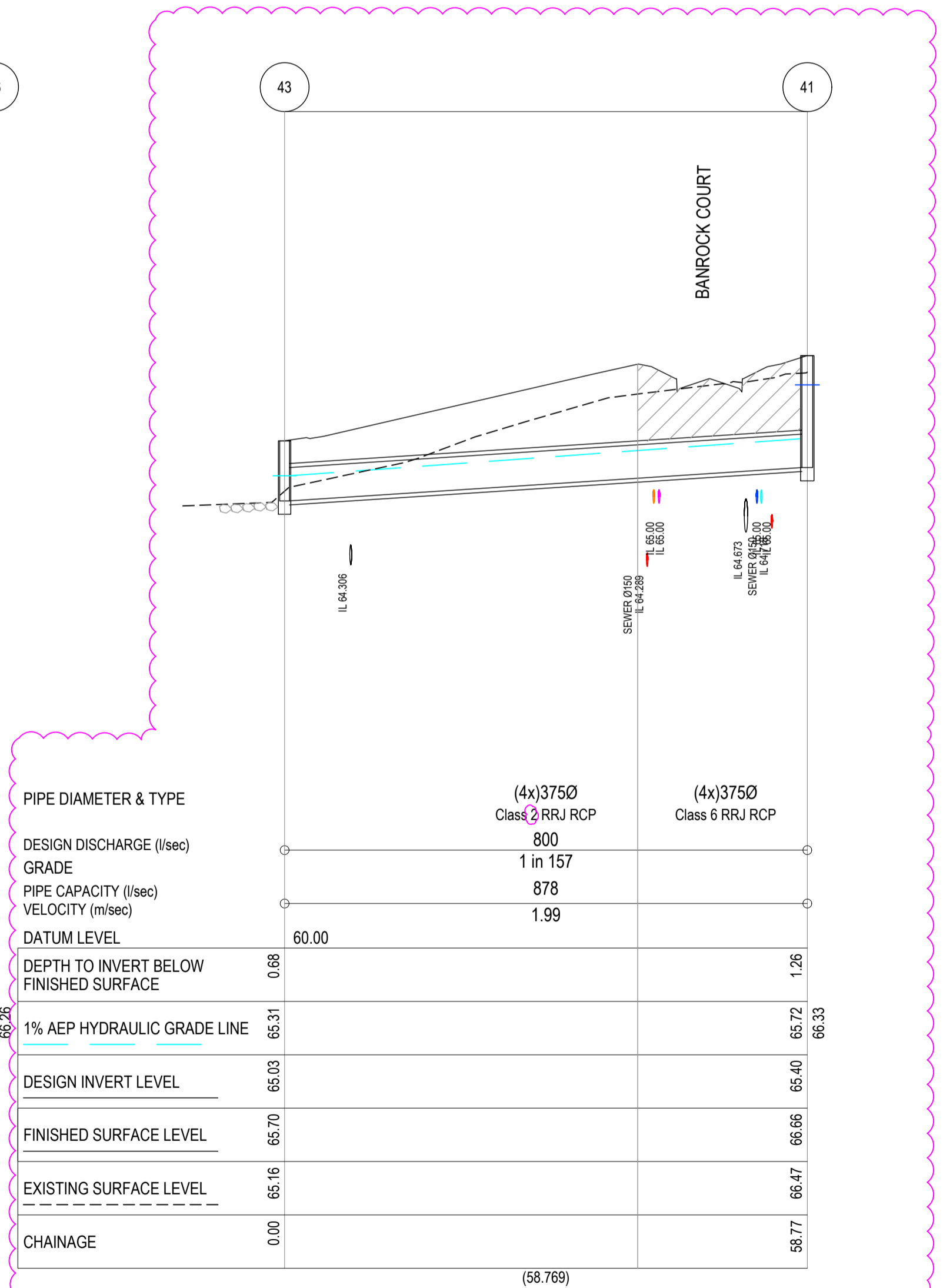
(12.200)



(64.805)

(36.814)

(8.251)



(58.769)

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

LEGEND:



CRUSHED ROCK BACKFILL

© 2023 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: j112ds\_workspace\cddata\melp01\21-0347-01\_1024pm\02\_desig\p01\_design\ACAD\21-0347-01-R06-DR.dwg LAYOUT: R06-04 PLOTTED BY: Tanabata, Max PLOT DATE: 12/2023 4:03 PM



Scale: Horizontal 0 5 10 15 20 25  
 Vertical 0 0.5 1.0 1.5 2.0 2.5

PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAY	Melway Ref
POS No.	PS905325B
STATUS:	

69-93 Hams Rd  
 STAGE 1  
 City of Greater Geelong  
 DRAINAGE LONGITUDINAL SECTIONS - 4

CONSTRUCTION 21-0347-01RD20 SHEET No. 20 OF 26 REV. 1

DRAINAGE PIT SCHEDULE

No.	PIT TYPE	SET OUT CO-ORDINATES		INTERNAL DIMENSIONS		INLET		OUTLET		PIT		REMARKS
		EASTING	NORTHING	WIDTH	LENGTH	DIA	INV LEVEL	DIA	INV LEVEL	FS LEVEL	DEPTH	
1	END PIPE	263283.68	5766847			600	59.56			61.456	1.896	CONNECT TO EXISTING SD475
2	GRATED SIDE ENTRY PIT INLET	263263.32	5766849.4	0.9	0.9	525	59.776	600	59.701	61.964	2.263	
3	SIDE ENTRY PIT	263261.85	5766841.8	0.9	0.9	450	59.851					SD430
4	JUNCTION PIT	263241.93	5766846.6	0.9	0.9	525	59.852	525	59.802	62.098	2.296	
5	SIDE ENTRY PIT	263220.07	5766846.8	0.9	0.9	525	60.289					SD425
6	GRATED SIDE ENTRY PIT INLET	263220.98	5766854.5	0.6	0.9	375	60.389	525	60.239	62.514	2.274	
7	GRATED SIDE ENTRY PIT INLET	263189.02	5766858.4	0.6	0.9	450	60.806	450	60.756	62.473	1.717	SD430
8	GRATED SIDE ENTRY PIT INLET	263158.48	5766862	0.6	0.9	450	60.947	450	60.872	62.336	1.465	
9	SIDE ENTRY PIT	263085.93	5766871.3	0.6	0.9	450	61.19			62.828	1.688	SD475
10	JUNCTION PIT	263032.45	5766877.2	0.6	0.9	300	61.29	450	62.183	63.908	1.725	
11	SIDE ENTRY PIT	263022.3	5766864.6	0.6	0.9	450	62.233	450	62.183	63.908	1.725	SD475
12A	TP	263238.97	5766838.1			375	62.258					
16	TP	263179.69	5766853.2			300	63.593	450	63.543	65.477	1.934	SD430
17	TP	263177.78	5766852.3			300	63.618					
18	JUNCTION PIT	263116.55	5766829	0.6	0.9	450	64.4	450	64.35	66.289	1.939	SD425
19	JUNCTION PIT	263060.24	5766834.6	0.6	0.9	375	64.542	450	64.467	66.352	1.885	
20	JUNCTION PIT	263056.1	5766832	0.6	0.9	375	64.542					SD430
22	JUNCTION PIT	263029.05	5766798.2	0.6	0.9	375	64.542					
23	SIDE ENTRY PIT	263157.59	5766854.5	0.6	0.9							SD430
24	SIDE ENTRY PIT	263084.96	5766863.2	0.6	0.9							
25	SIDE ENTRY PIT	263028.87	5766859.7	0.6	0.9							SD430
26	SIDE ENTRY PIT	262990.1	5766807.7	0.6	0.9							
27	JUNCTION PIT	263251.3	5766854.5	0.9	0.9	450	60.814	450	60.764	62.468	1.703	SD425
28	GRATED SIDE ENTRY PIT INLET	263248.15	5766866	0.6	0.9	450	61.074	450	61.024	62.664	1.64	
29	SIDE ENTRY PIT	263236.56	5766867.3	0.6	0.9	375	61.188	450	61.113	62.782	1.669	SD430
30	JUNCTION PIT	263238.67	5766866.2	0.6	0.9	375	61.832	375	61.782	63.474	1.692	
31	SIDE ENTRY PIT	263242.05	5766913	0.6	0.9	300	61.932					SD430
32	GRATED SIDE ENTRY PIT INLET	263233.9	5766923.6	0.6	0.9	375	62.468	375	62.418	64.545	2.126	
33	GRATED SIDE ENTRY PIT INLET	263174.49	5766930.7	0.6	0.9	375	63.526	375	63.476	65.18	1.75	SD475
34	GRATED SIDE ENTRY PIT INLET	263105.92	5766939.1	0.6	0.9	375	65.555	375	65.505	66.99	1.49	
35	GRATED SIDE ENTRY PIT INLET	263050.33	5766945.8	0.6	0.9	375	67.335	375	67.685	69.03	1.34	SD475
36	JUNCTION PIT	263176.99	5766894.6	0.6	0.9	225	64.995	300	64.945	66.325	1.38	
37	JUNCTION PIT	263118.9	5766901.5	0.6	0.9	225	66.637	225	66.587	67.833	1.246	SD425
38	JUNCTION PIT	263039.97	5766911	0.6	0.9							
39	SIDE ENTRY PIT	263254.16	5766911.5	0.6	0.9							SD425
41	GRATED PIT	263009.49	5766858.9	2.5	1.2							
43	HEADWALL	263056.59	5766823.8			(4x)375	65.025	(4x)375	65.4	66.658	1.258	MW7251/08/423 1%AEP PIT SD498
44	SIDE ENTRY PIT	262983.53	5766812.6	0.6	0.9	375	65.307			66.809	1.552	
45	JUNCTION PIT	262961.21	5766783.4	0.6	0.9	300	66.095	375	66.02	67.375	1.355	SD425
46	JUNCTION PIT	262960.72	5766775.1	0.6	0.9	300	66.095	300	66.123	67.35	1.227	

- NOTE:  
 1. xy setout to pit centre  
 2. setout level to pit cover level

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

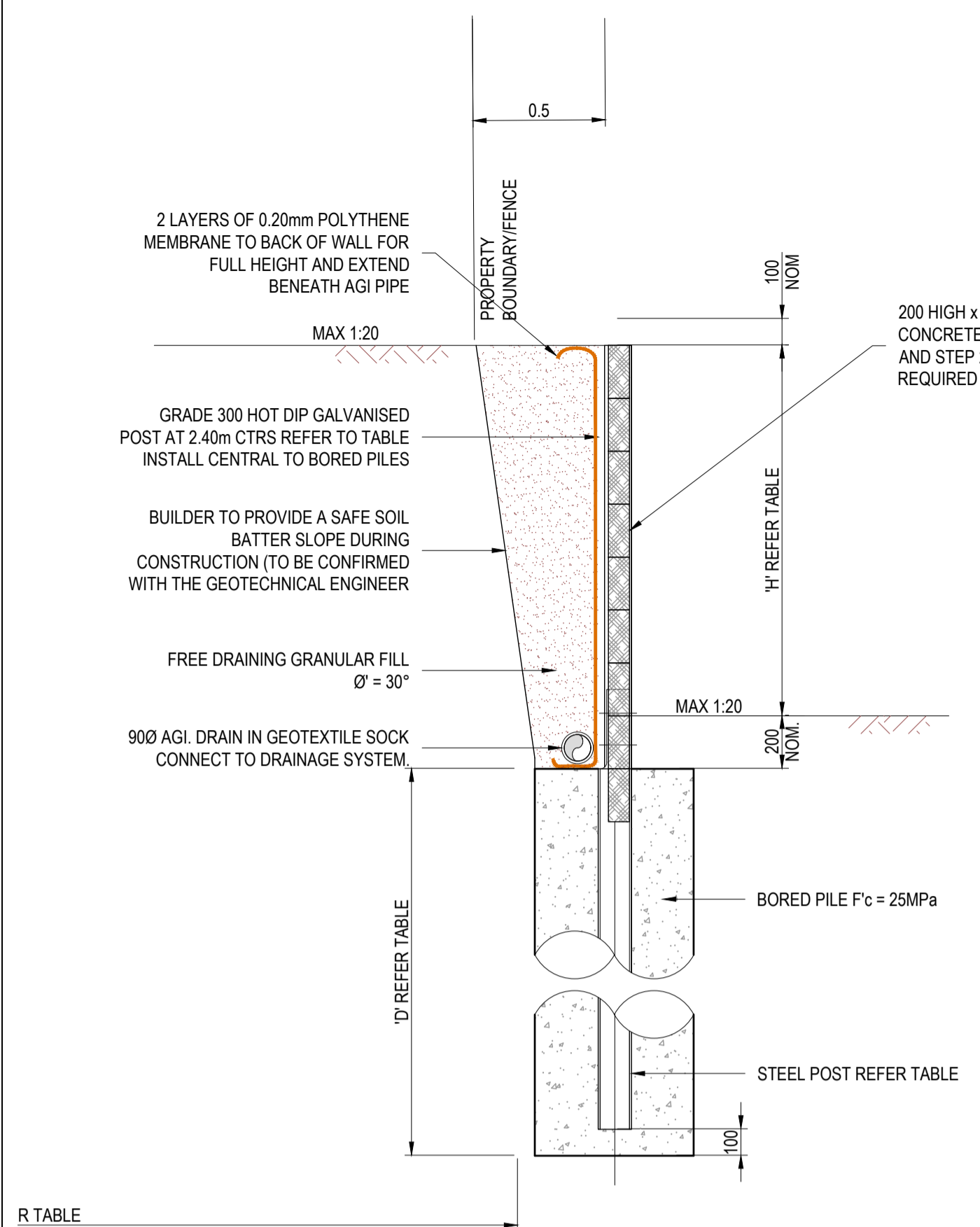
LEGEND:  
 CRUSHED ROCK BACKFILL



Scale AS SHOWN

PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAYS	Melway Ref
POS No.	PS905325B
STATUS:	

69-93 Hams Rd  
 STAGE 1  
 City of Greater Geelong  
 DRAINAGE PIT SCHEDULE

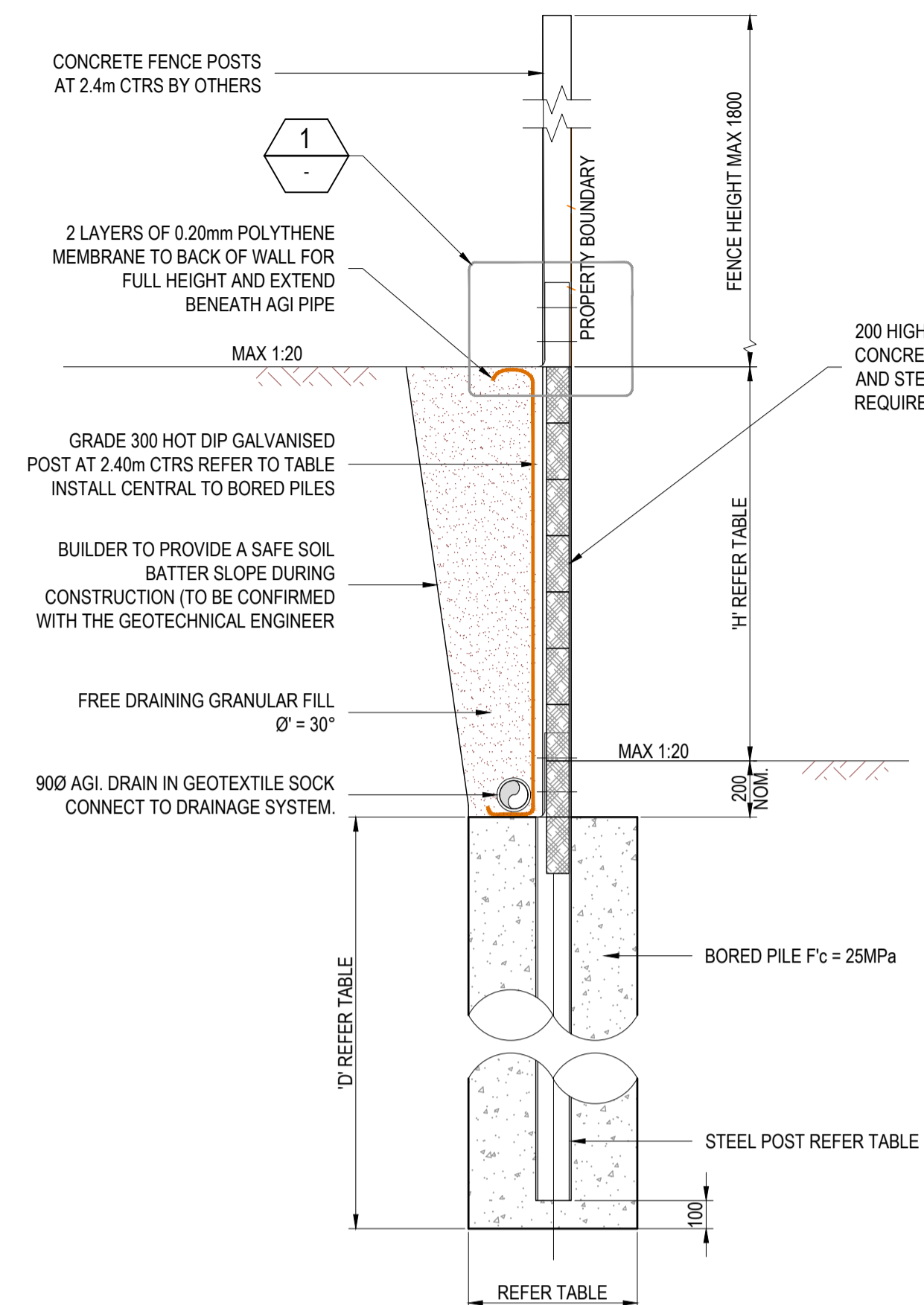


**CONCRETE SLEEPER RETAINING WALL**

TOE BATTER LEVEL (WITH FENCE) - TYPE 2  
SCALE 1 : 20

DESIGN FOR 5kPa  
SURCHARGE PRESSURE

ASSUMED GROUND CONDITIONS  
 $\lambda = 20 \text{ kN/m}^2$   
 $\phi' = 25^\circ$   
 $C = 5 \text{ kPa}$



**CONCRETE SLEEPER RETAINING WALL**

TOE BATTER LEVEL (WITH FENCE) - TYPE 2  
SCALE 1 : 20

DESIGN FOR 5kPa  
SURCHARGE PRESSURE

ASSUMED GROUND CONDITIONS  
 $\lambda = 20 \text{ kN/m}^2$   
 $\phi' = 25^\circ$   
 $C = 5 \text{ kPa}$

**SLEEPER RETAINING WALL POST AND FOOTING SCHEDULE**

TOE OF BATTER LEVEL (WITH FENCE) TYPE 2

WALL HEIGHT (m) 'H'	BORED PIER DIAMETER (mm)	BORED PIER DEPTH (m) 'D'	MIN POST SIZE	CONCRETE SLEEPERS SIZE	MIN POST SIZE FOR SLEEPERS ONE SIDE ONLY
0.0 - 0.45	450	1200 INTO SILTY CLAY	100 UC 15	200x100 (2.4m length)	125 PFC
0.45 - 0.85	450	1500 INTO SILTY CLAY	100 UC 15	200x100 (2.4m length)	125 PFC
0.85 - 1.25	450	1900 INTO SILTY CLAY	150 UC 24	200x100 (2.4m length)	150 PFC
1.25 - 1.65	450	2400 INTO SILTY CLAY	150 UC 24	200x100 (2.4m length)	150 PFC
1.65 - 2.05	600	3000 INTO SILTY CLAY	150 UC 30	200x100 (2.4m length)	180 PFC
2.05 - 2.45	600	3200 INTO SILTY CLAY	150 UC 37	200x100 (2.4m length)	180 PFC

ALL EXPOSED STEELWORK TO BE HOT DIPPED GALVANISED.

**STANDARD NOTES:**

**GENERAL**

- G1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCIES SHALL BE REFERRED TO THE SUPERINTENDENT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G2 ALL DIMENSIONS AND LEVELS RELEVANT TO SETTING OUT AND OFF SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. DO NOT SCALE THE DRAWINGS.
- G3 DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVERSTRESSED UNDER CONSTRUCTION ACTIVITIES. ALL TEMPORARY PROPPING AND BRACING NECESSARY SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- G4 WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT S.A.A. CODES INCLUDING ALL AMENDMENTS AND THE BUILDING CODE OF AUSTRALIA.
- G5 THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE SUPERINTENDENT BUT IS NOT AN AUTHORISATION FOR A COST VARIATION. ALL COST VARIATIONS INVOLVED MUST BE AGREED WITH THE SUPERINTENDENT BEFORE THE WORK COMMENCES.
- G6 UNLESS STATED OTHERWISE:  
ALL DIMENSIONS ARE IN MILLIMETRES.  
ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM.

**CONCRETE**

- C1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 S.A.A. CONCRETE STRUCTURES.
  - C2 CONCRETE SLUMP SHALL BE 80mm UNLESS STATED OTHERWISE.
  - C3 CONCRETE TESTING SHALL BE IN ACCORDANCE WITH AS1379.
- STRUCTURAL STEELWORK**
- S1 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100 S.A.A. STEEL STRUCTURES.
  - S2 WELDING SHALL BE PERFORMED BY A QUALIFIED OPERATOR IN ACCORDANCE WITH AS1554.
  - S3 BOLTS DESIGNATED 4.6/S SHALL BE COMMERCIAL BOLTS TO AS1111 AND AS1112 TIGHTENED TO A SNUG TIGHT FIT. BOLTS DESIGNATED 8.8/S SHALL BE HIGH STRENGTH STEEL BOLTS TO AS1252 TIGHTENED TO A SNUG TIGHT FIT. BOLTS DESIGNATED 8.8/TF OR 8.8/TB SHALL BE HIGH STRENGTH STEEL BOLTS TO AS1252, FULLY TENSIONED IN ACCORDANCE WITH AS4100.
  - S4 THE ENDS OF ALL HOLLOW SECTIONS SHALL BE SEALED WITH 6MM THICK PLATE AND CONTINUOUS FILLET WELD UNLESS STATED OTHERWISE.
  - S5 BEFORE FABRICATION IS COMMENCED THE CONTRACTOR SHALL SUBMIT COPIES OF THE SHOP DRAWINGS TO THE SUPERINTENDENT FOR REVIEW IN ACCORDANCE WITH THE SPECIFICATION. REVIEW DOES NOT INCLUDE CHECKING OF DIMENSIONS.

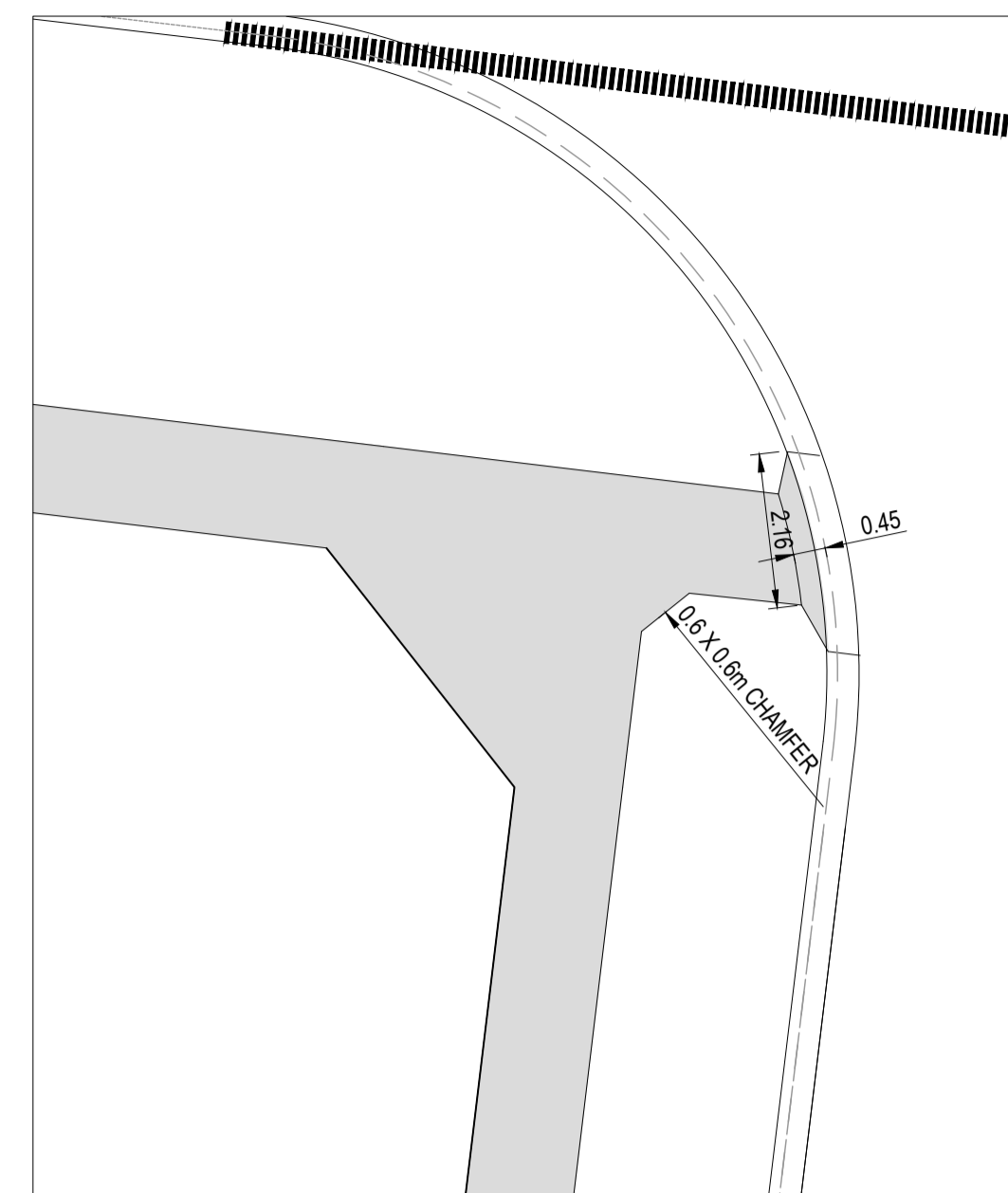
**SLEEPER RETAINING WALL POST AND FOOTING SCHEDULE**

TOE OF BATTER LEVEL (WITH FENCE) TYPE 2

WALL HEIGHT (m) 'H'	BORED PIER DIAMETER (mm)	BORED PIER DEPTH (m) 'D'	MIN POST SIZE	CONCRETE SLEEPERS SIZE	MIN POST SIZE FOR SLEEPERS ONE SIDE ONLY
0.0 - 0.45	450	1200 INTO SILTY CLAY	100 UC 15	200x100 (2.4m length)	125 PFC
0.45 - 0.85	450	1500 INTO SILTY CLAY	100 UC 15	200x100 (2.4m length)	125 PFC
0.85 - 1.25	450	1900 INTO SILTY CLAY	150 UC 24	200x100 (2.4m length)	150 PFC
1.25 - 1.65	450	2400 INTO SILTY CLAY	150 UC 24	200x100 (2.4m length)	150 PFC
1.65 - 2.05	600	3000 INTO SILTY CLAY	150 UC 30	200x100 (2.4m length)	180 PFC
2.05 - 2.45	600	3200 INTO SILTY CLAY	150 UC 37	200x100 (2.4m length)	180 PFC

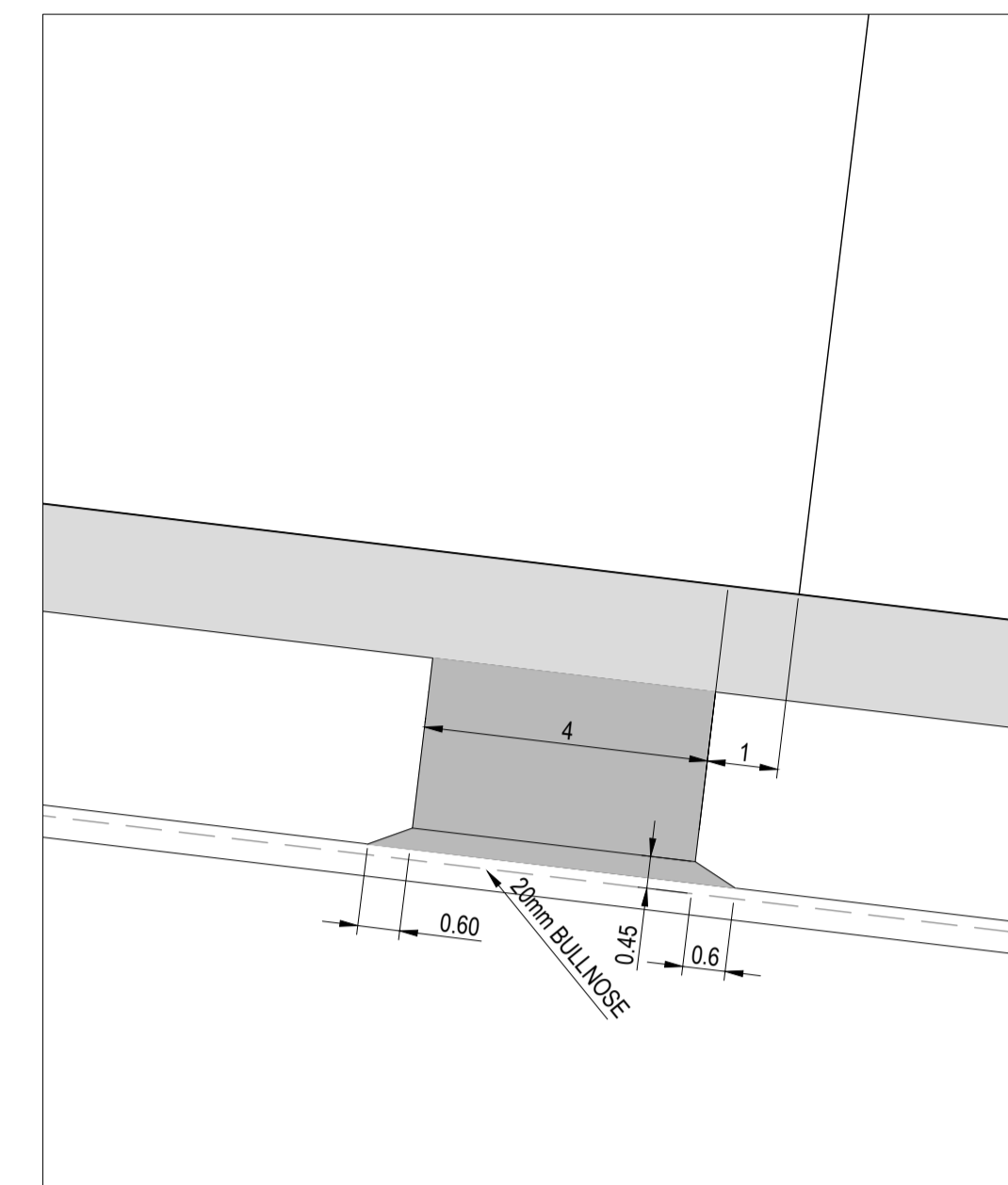
ALL EXPOSED STEELWORK TO BE HOT DIPPED GALVANISED.

SECTION	GRADE (MPa)
HOT ROLLED SECTIONS	300
WELDED BEAM & COLUMN SECTIONS	300
CIRCULAR HOLLOW SECTIONS	250
SQUARE & RECTANGULAR HOLLOW SECTIONS	350



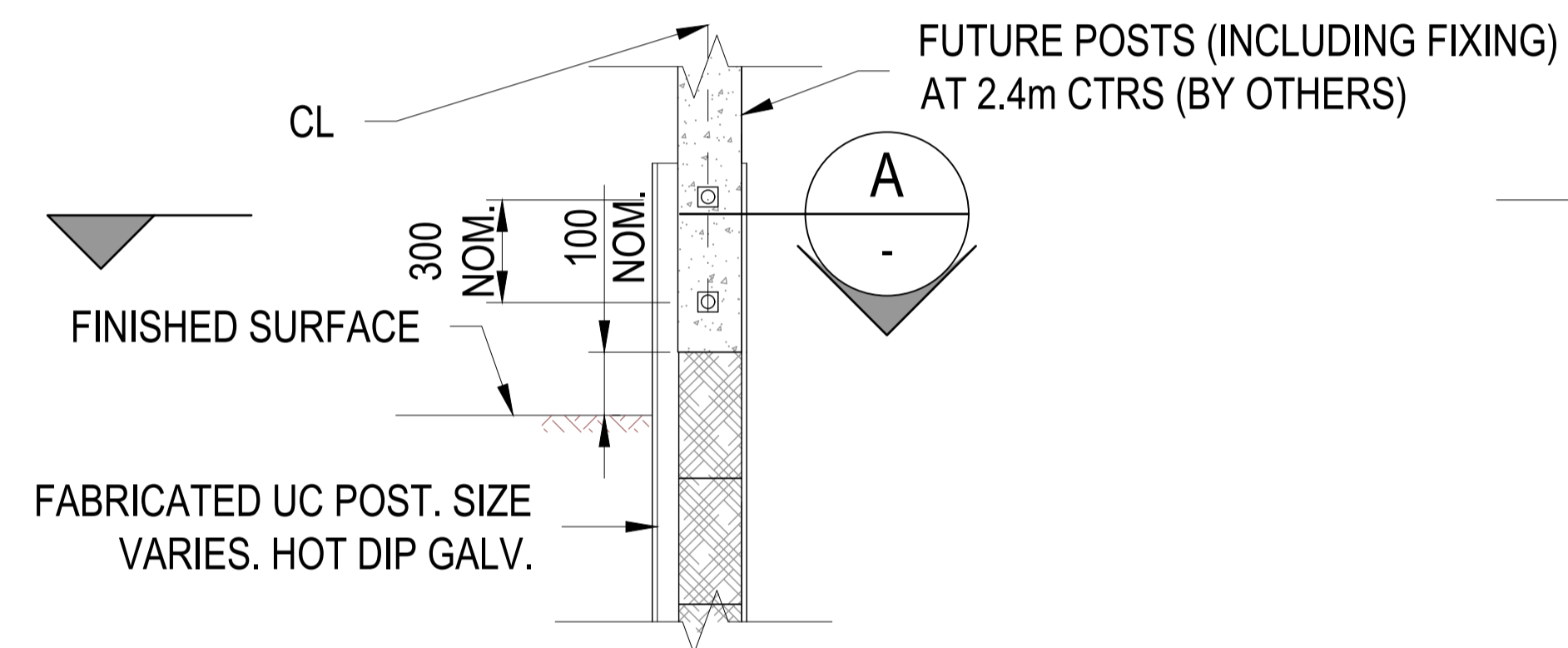
**TYPICAL PRAM CROSSING**

SCALE 1:100 @A1



**TYPICAL VEHICLE CROSSING**

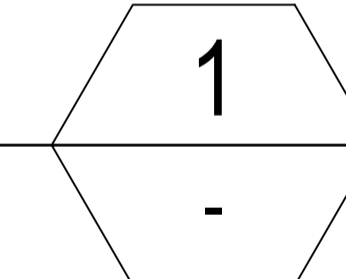
SCALE 1:100 @A1



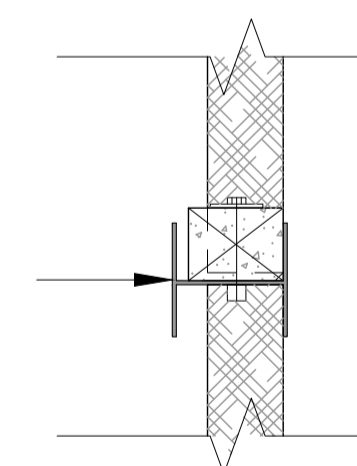
**FENCE TO SLEEPER RETAINING WALL CONNECTION**

**DETAIL**

SCALE 1 : 10m



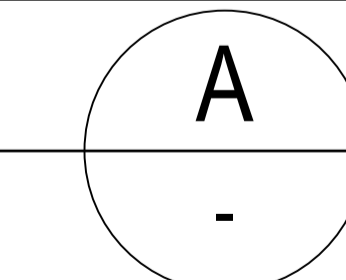
CHAMFER POST  
CORNER TO SUIT UC



**FENCE TO SLEEPER RETAINING WALL CONNECTION**

**SECTION**

SCALE 1 : 10



REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBUR	17.05.2022

© 2022 Colliers International Engineering & Design (VIC) Pty Ltd  
FILE: J1126a\_workspace\detail\asme\01-0347-01\_1024\012\design\01\_design\ACAD21-0347-01-RD7-SD.dwg LAYOUT: RD7-00 PLOTTED BY: Tarabata\_Max PLOT DATE: 12/22/23 4:03 PM

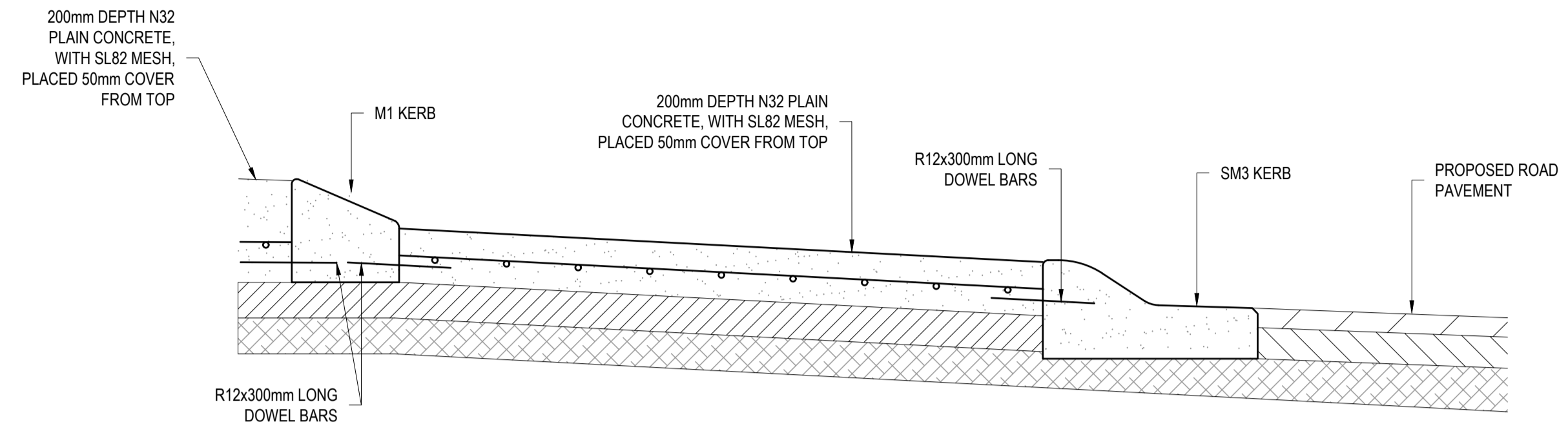


Scale AS SHOWN

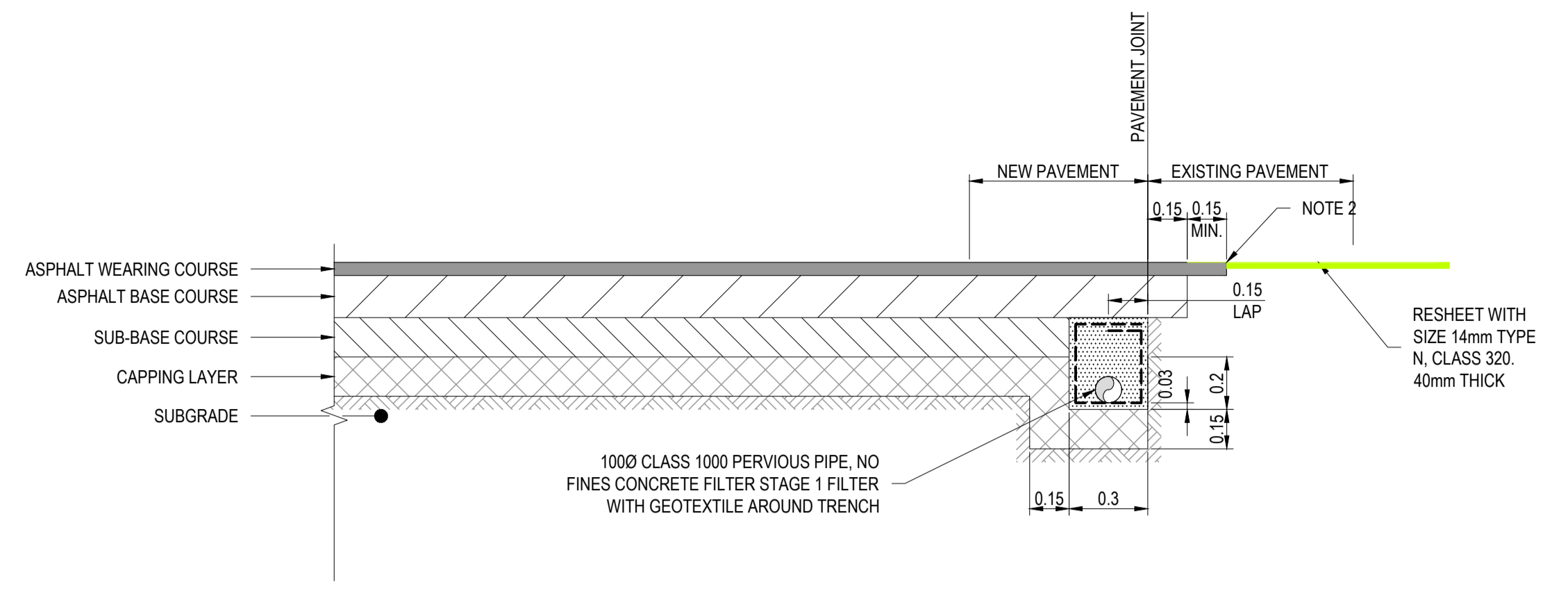
PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBUR	
AUTHORISED	17.05.2022
T.BARBUR	
MELWAYS	Melway Ref
POST NO.	PS905325B
STATUS:	

69-93 Hams Rd  
STAGE 1  
City of Greater Geelong  
STANDARD DETAILS - 1

CONSTRUCTION	21-0347-01RD22	SHEET NO. 22 OF 26
REV.	1	



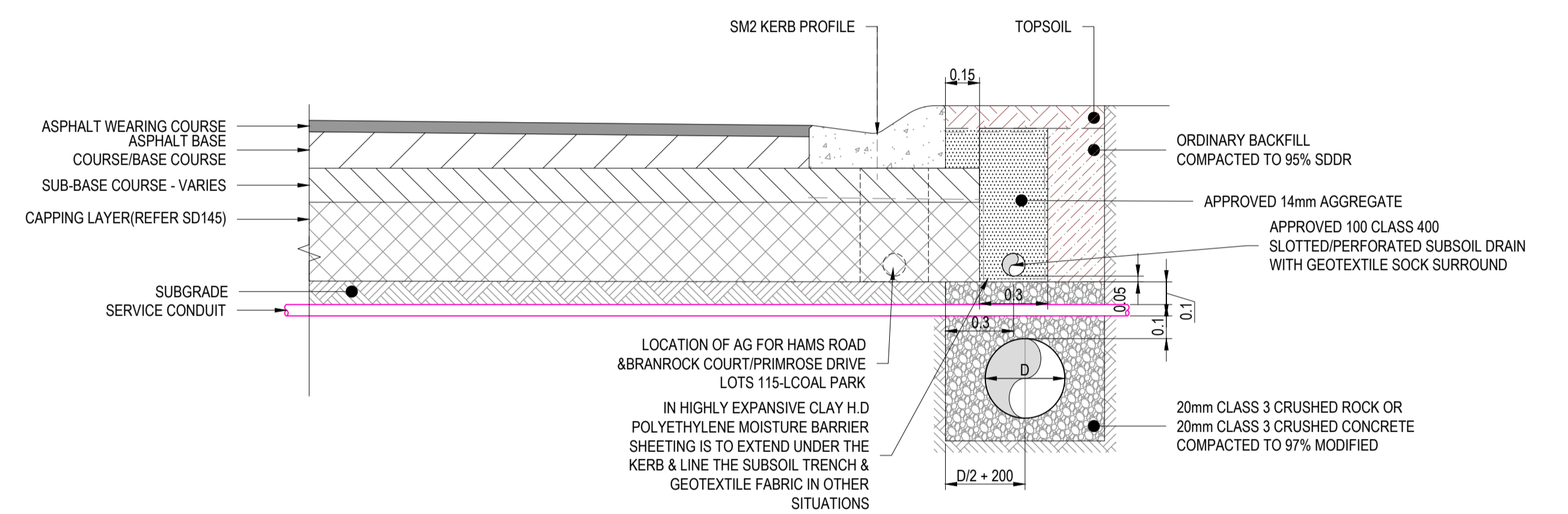
**ROUNDABOUT CENTRAL ISLAND DETAIL**  
N.T.S.



**PAVEMENT TYPE EXPANSIVE SUB-GRADE**  
SCALE 1 : 20

**NOTES:**

1. FOR EXPANSIVE SUBGRADE, SAW CUT EXISTING ASPHALT. REFER TO SPECIFICATION SECTION 407.17 FOR JOINT DETAIL. APPLY PRIME AND SAMI TO EXISTING PAVEMENT.
2. FOR NON EXPANSIVE SUBGRADE, SAW CUT EXISTING ASPHALT. REFER TO SPECIFICATION SECTION 407.17 FOR JOINT DETAIL. PLACE 600mm MIN WIDE STRESS ABSORBING MEMBRANE. GEOTEXTILE TO BE LOCATED CENTRALLY OVER PAVEMENT JOINT.
3. SUBSURFACE DRAINS TO BE PROVIDED BEFORE THE CONSTRUCTION OF THE PAVEMENT.
4. CONDUITS FOR GAS, WATER, ELECTRICITY AND TELECOM SERVICES TO BE LOCATED CLEAR OF PAVEMENT AND THE SUBSURFACE DRAIN.
5. THE JOINT BETWEEN NEW AND OLD WEARING COURSE TO BE CRACK SEALED.
6. THE JOINT BETWEEN NEW AND OLD WEARING COURSE MUST BE CONSTRUCTED AT A LOCATION OUTSIDE THE WHEEL PATH ZONE.



**PAVEMENT TYPE EXPANSIVE SUB-GRADE**  
SCALE 1 : 20



**PAVEMENT TYPE PLAN**  
N.T.S.

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)
		<b>TYPE 1</b>
ASPHALT WEARING COURSE	SIZE 14mm TYPE N, CLASS 320	40
ASPHALT BASE COURSE	SIZE 10mm TYPE N, CLASS 170 WITH PRIME	0
BASE COURSE	VICROADS CLASS 2 SIZE 20mm FCR	150
UPPER PAVEMENT TOTAL		190
SUBBASE	VICROADS CLASS 3, FCR (20mm)	100
LOWER SUBBASE	-	0
LOWER PAVEMENT TOTAL		100
INSITU STABILISATION	LIME AND CEMENT STABILISATION (CBR>15), PRELIMINARY MIX PORTIONS OF 5% - 6% LIME AND 2% - 3% CEMENT IS RECOMMENDED.	350
	<b>TOTAL PAVEMENT DEPTH</b>	<b>640</b>
SERVICE CONDUITS COVER UNDER ROAD PAVEMENT		<b>740</b>

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm)
		<b>TYPE 3</b>
ASPHALT WEARING COURSE	SIZE 14mm TYPE N, CLASS 320	40
ASPHALT BASE COURSE	SIZE 10mm TYPE N, CLASS 170 WITH PRIME	0
BASE COURSE	VICROADS CLASS 2 FCR SIZE 20mm PLACED IN 2 LAYERS	200
UPPER PAVEMENT TOTAL		240
SUBBASE	VICROADS CLASS 3 FCR 20MM PLACED IN 2 LAYERS	160
LOWER SUBBASE	-	0
LOWER PAVEMENT TOTAL		160
CAPPING LAYER	VicRoads Type A Capping OR APPROVED ALTERNATIVE (CBR>10)	200
	<b>TOTAL PAVEMENT DEPTH</b>	<b>600</b>
SERVICE CONDUITS COVER UNDER ROAD PAVEMENT		<b>700</b>

**PAVEMENT NOTES:**

1. REFER TO REPORT G4396.1AA REV 1 BY GROUND SCIENCE FOR GEOTECHNICAL INFORMATION AND ADVICE.
2. PAVEMENT BASE AND SUBBASE COURSES ARE TO BE COMPACTED TO A DRY DENSITY RATIO OF NOT LESS THAN 95% AND 98% MODIFIED, RESPECTIVELY, AND MOISTURE CONDITIONED TO WITHIN ±3% OF MODIFIED OPTIMUM MOISTURE CONTENT (MOMC). THE CAPPING LAYER AND TOP 300MM OF THE SUBGRADE MUST BE COMPACTED TO ACHIEVE NOT LESS THAN 98% STANDARD COMPACTION AND MOISTURE CONDITIONED TO WITHIN ±3% OF STANDARD OPTIMUM MOISTURE CONTENT.
3. CONDUITS FOR GAS, WATER, ELECTRICITY AND TELECOM SERVICES TO BE LOCATED CLEAR OF PAVEMENT AND THE SUBSURFACE DRAIN.

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

© 2022 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J1126a\_workspace\detail\saumebg\01-0347-01\_1024pm02\_design\01 design\ACAD21-0347-01-RD7-SD.dwg LAYOUT: RD7-01 PLOTTED BY: Tarabata\_Max PLOT DATE: 1/2/2023 4:03 PM

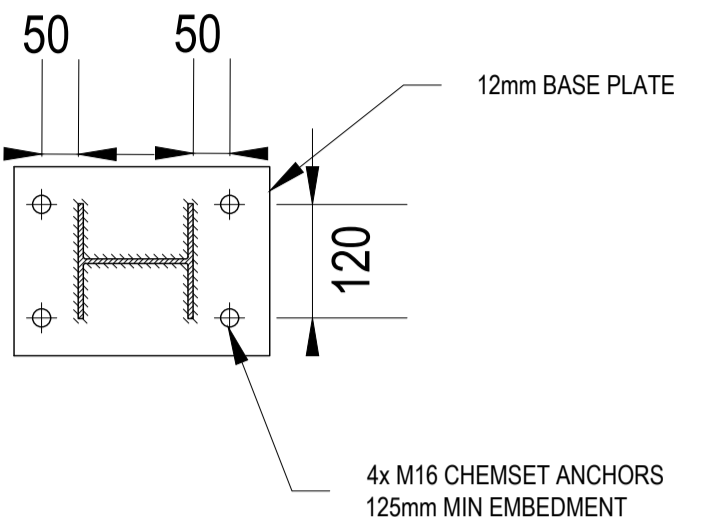
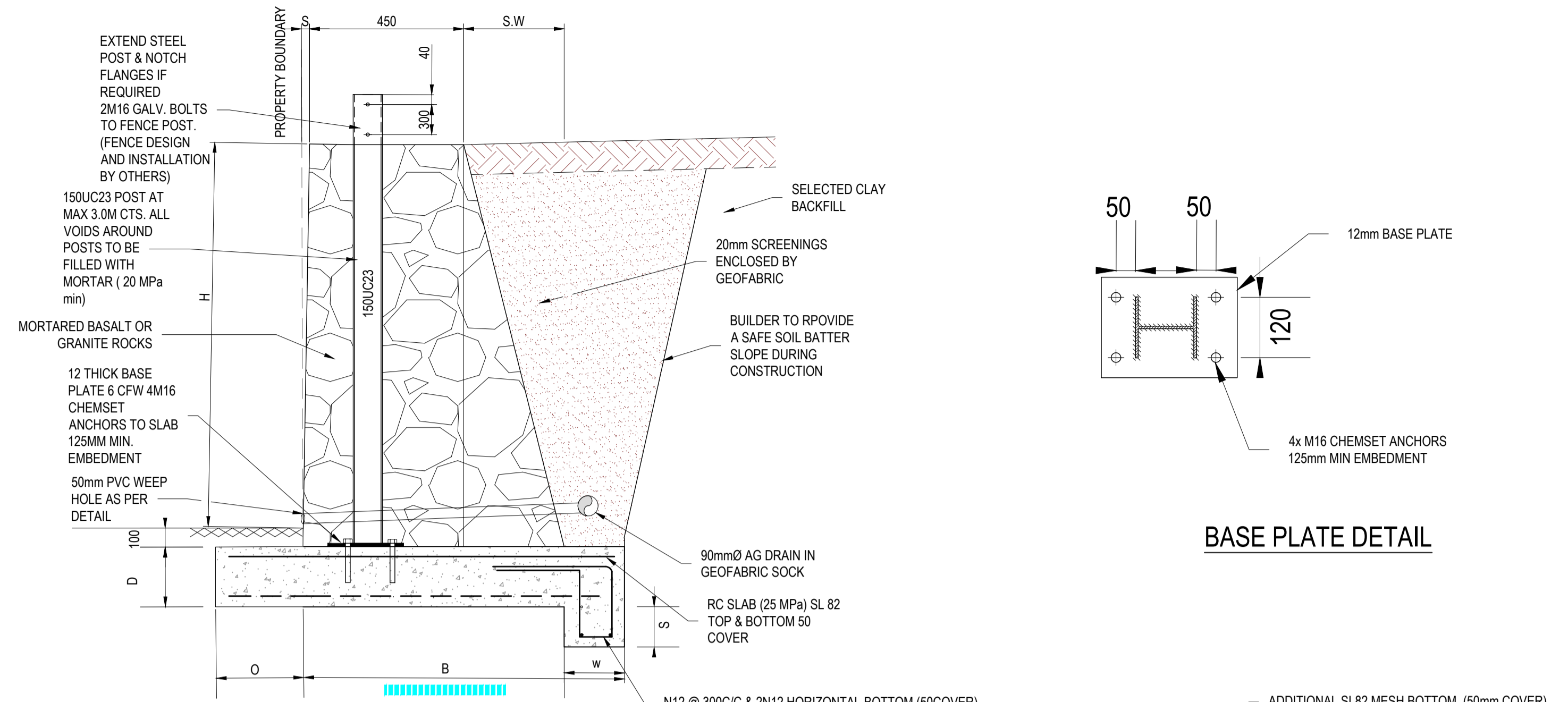


Scale AS SHOWN

PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAYS	Melway Ref
POS No:	PS905325B
STATUS:	

**69-93 Hams Rd**  
STAGE 1  
City of Greater Geelong  
STANDARD DETAILS - 2

CONSTRUCTION	21-0347-01RD23	SHEET No: 23 OF 26
REV.	1	



**BASE PLATE DETAIL**

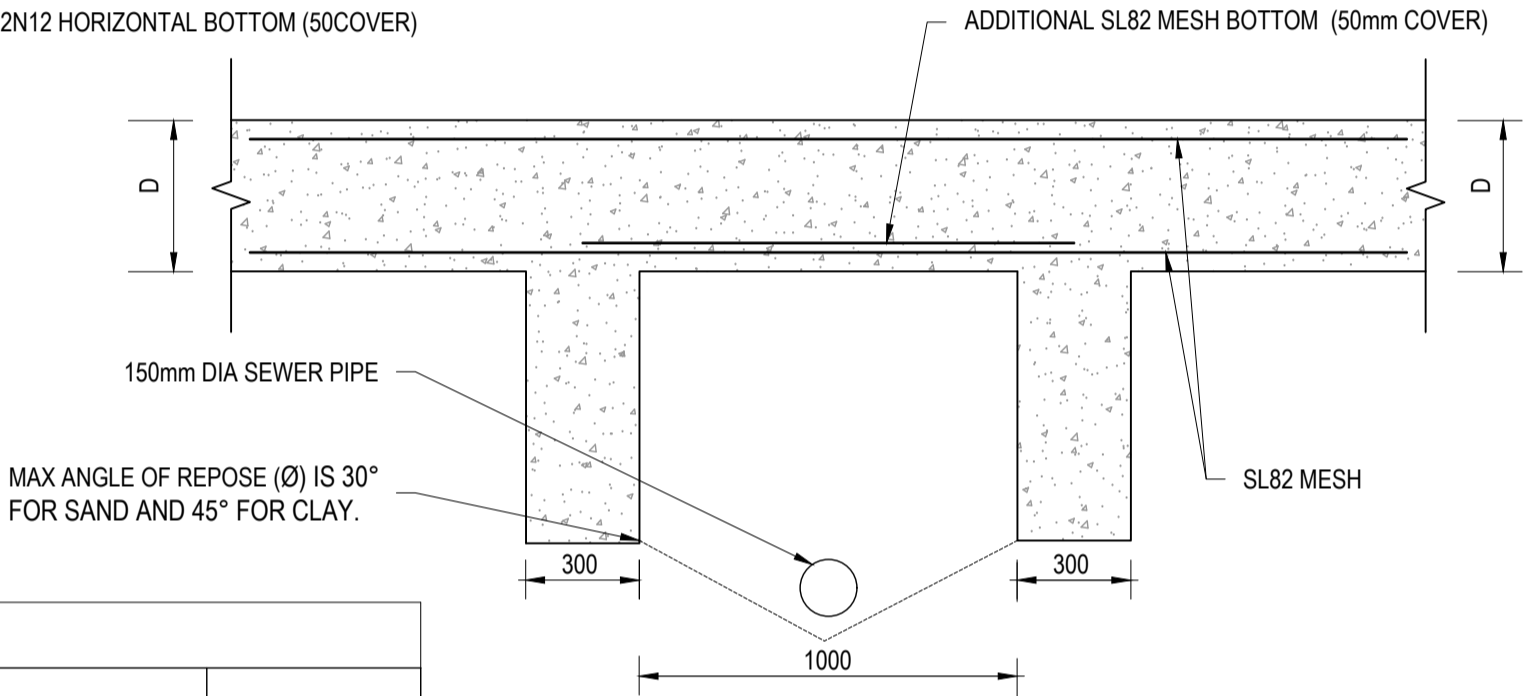
**MASS ROCK RETAINING WALL WITH FENCE**

ALL STEELWORK TO BE HOT DIPPED GALVANISED AFTER FABRICATION

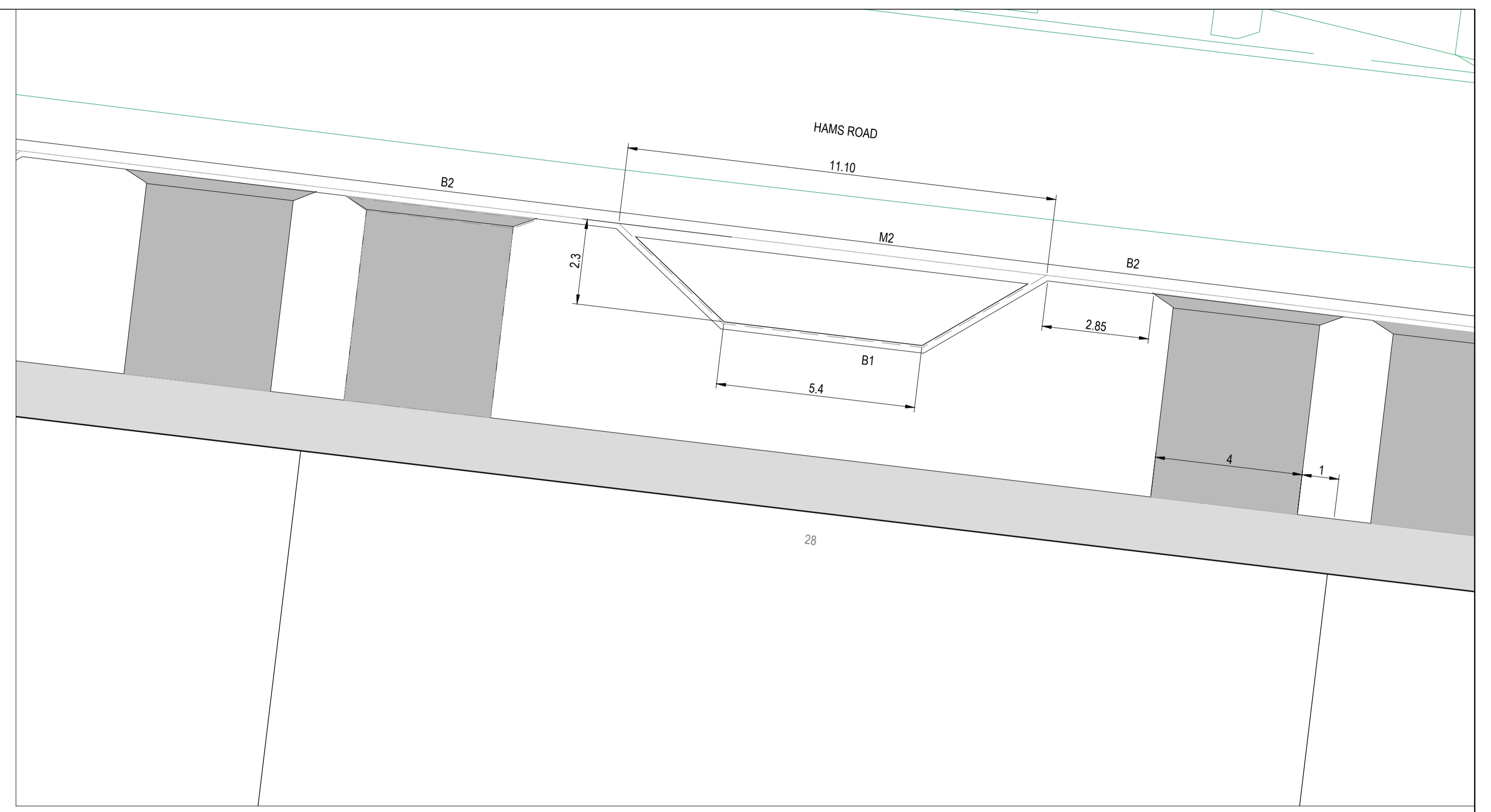
BASED ON 100KPA SAFE BEARING PRESSURE & TO BE CONFIRMED BY A QUALIFIED GEOTECHNICAL ENGINEER

REFER TO THE SCHEDULE BELOW FOR WALL DIMENSIONS

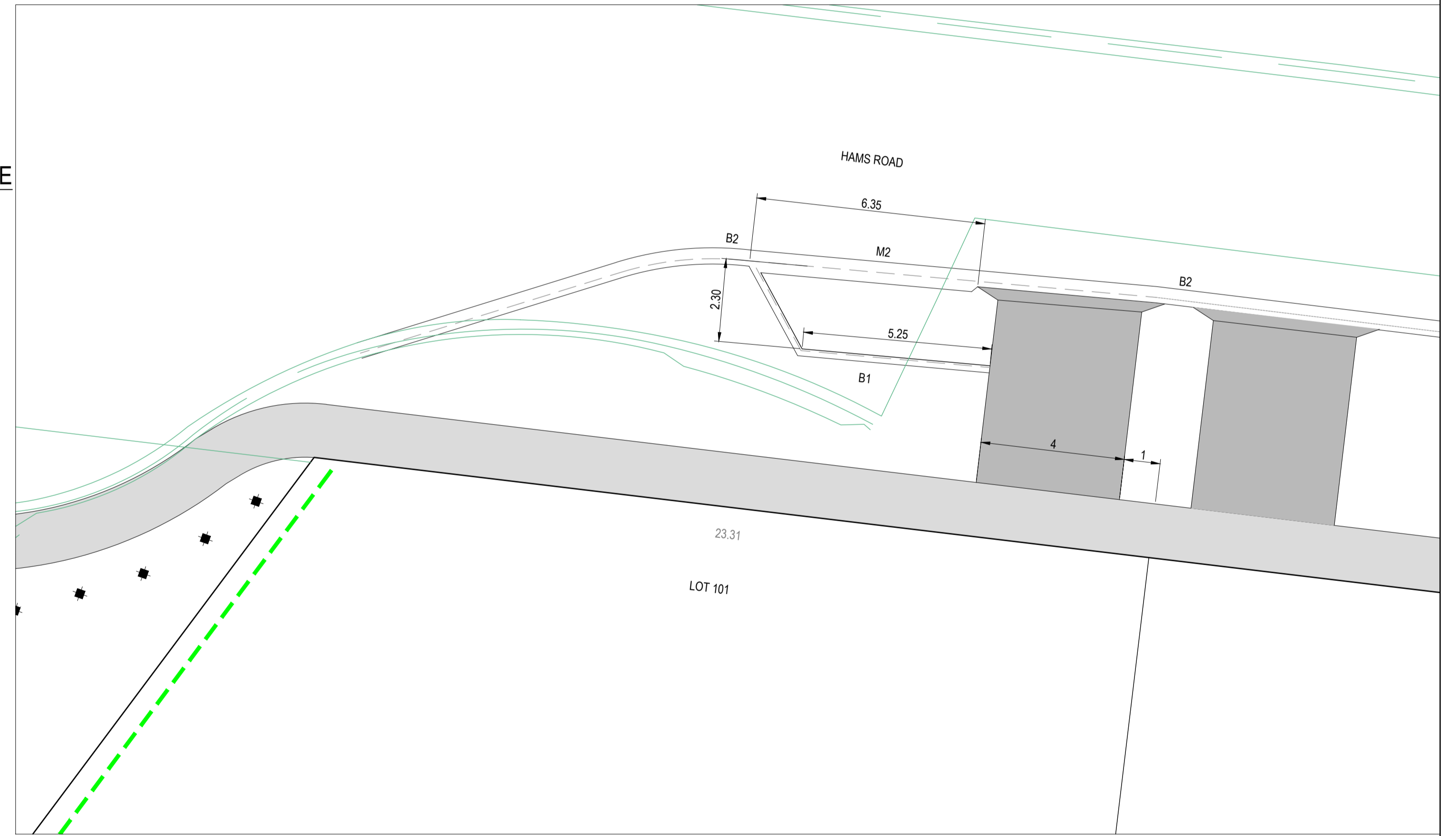
KEY DEPTH (SxW) mm	FOOTING DEPTH (D) mm	SLOPE WIDTH (S.W) mm	HEIGHT (H) mm	BASE WIDTH (B) mm	FRONT FACE SETBACK (S) mm	OVERHANG (O) mm
-	200	50	500	500	15	-
-	200	200	1000	850	30	-
-	400	400	1500	1600	45	200
400 x 400	400	600	2100	1600	60	200



**ADDITIONAL DEEPEN FOOTING ANGLE OF REPOSE DETAIL @ PROPOSED SEWER PIPE CROSSING LOCATION N.T.S.**



**TYPICAL INDENTED PARKING HAMS ROAD**  
SCALE 1:100 @A1



**INDENTED PARKING LOT 101 HAMS ROAD**  
SCALE 1:100 @A1

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

© 2022 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\120s\_workspace\detail\summit\01-0347-01\_1024pm02\_design\01\_design\ACAD21-0347-01-RD7-SD.dwg LAYOUT: RD7-02 PLOTTED BY: Tarabata\_Max PLOT DATE: 12/2023 4:03 PM



Scale AS SHOWN

PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAYS	Melway Ref
POS No:	PS905325B
STATUS:	

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
 STANDARD DETAILS - 3

CONSTRUCTION	21-0347-01RD24	SHEET No. 24 OF 26
REV.	1	



**LEGEND:**

LINE MARKING AND RRPMS TO AS 1742.1 2014 AND 1742.2 2009. LINE MARKING TO BE INITIALLY (PRIOR TO WEARING COURSE ASPHALT) INSTALLED USING STANDARD THERMOPLASTIC PAINT.

- SINGLE BARRIER CENTRELINE
- GIVEWAY LINE
- CONTINUITY LINE
- TWO WAY YELLOW RRPm (6m SPACING)
- PAVEMENT MARKINGS

R1-2A QUANTITY=2

R1-3A QUANTITY=4

R2-3 QUANTITY=1

D4-V105A QUANTITY=1

R5-35-1(LR) QUANTITY=8

R5-35-1(R) QUANTITY=3

R5-35-1(L) QUANTITY=4

G19-18A QUANTITY=1

T2-4 ROAD CLOSED QUANTITY=1

D4-5 OBSTRUCTION MARKER QUANTITY=1

BANROCK QUANTITY=1

A MAREEBA QUANTITY=1

B QUANTITY=3

C QUANTITY=1

QUANTITY=2

QUANTITY=1

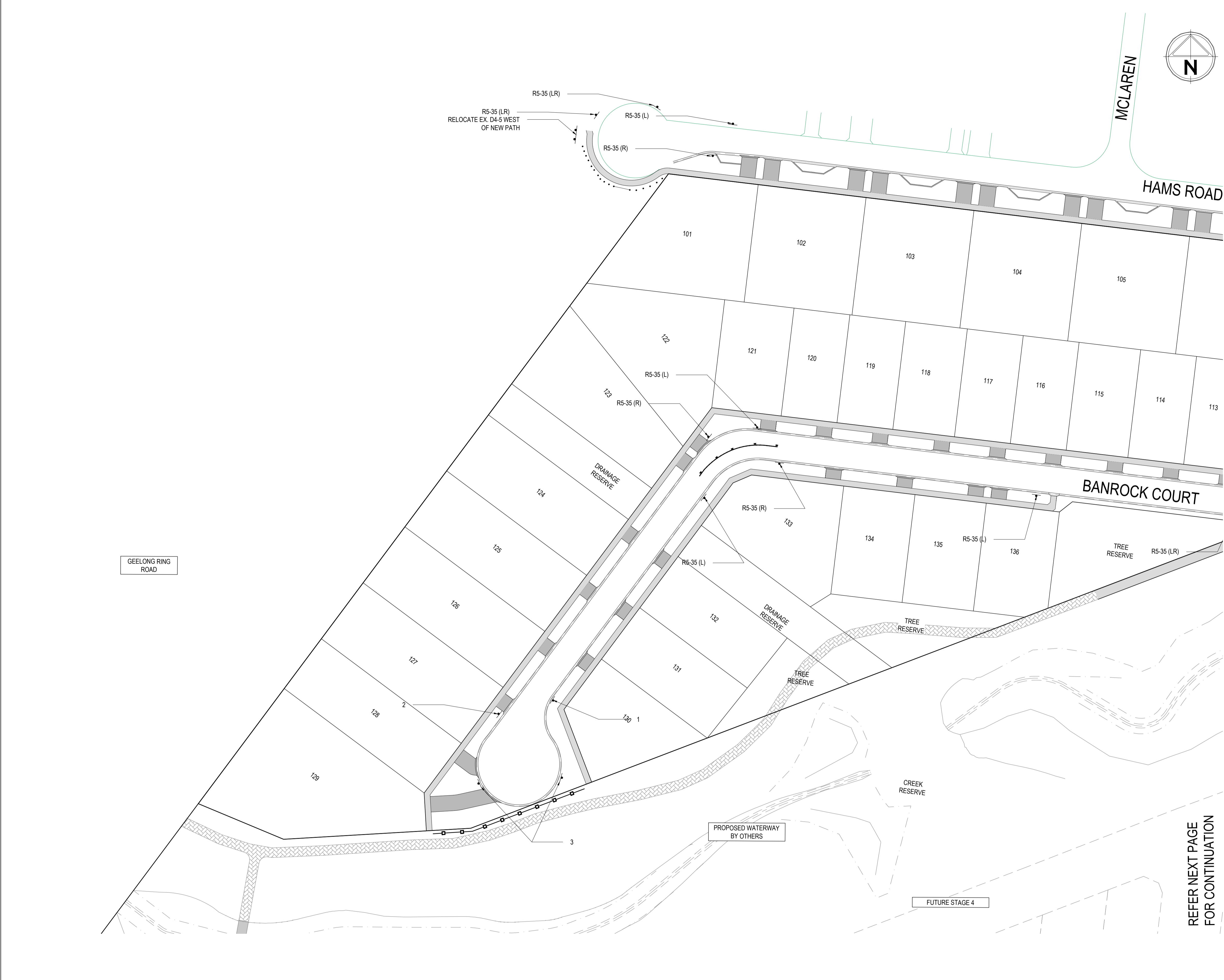
QUANTITY=1

PROPOSED LOW POST & RAIL FENCE

STREET SIGNS AS PER COUNCIL STANDARDS

SIGN & POST (SINGLE/DOUBLE POST)

1. 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6M SPACING.
2. RRPMS TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2
3. ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS1742
4. ALL SIGNS & LINEMARKING TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOLUME 2-SIGNS & MARKINGS
5. ALL SIGN POSTS TO BE SLEEVED IN ACCORDANCE WITH COGG SDCGG710-SIGN POSTS
6. ALL LINEMARKING TO BE THERMOPLASTIC PERMANENT PAINT
7. ALL STREET HYDRANTS TO BE IDENTIFIED IN ACCORDANCE WITH C.F.A DOCUMENT- IDENTIFICATION OF STREET HYDRANTS FOR FIRE FIGHTING PURPOSES, PUBLISHED JULY 2019 INCLUDING INSTALLATION OF BLUE RAISED REFLECTIVE PAVEMENT MARKERS & PAINTED WHITE REFLECTIVE TRIANGLES
8. DO NOT PLACE RRPMS IN LINE WITH PRAM CROSSINGS. ALL RRPMS TO BE YELLOW.



REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

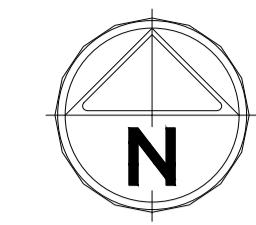
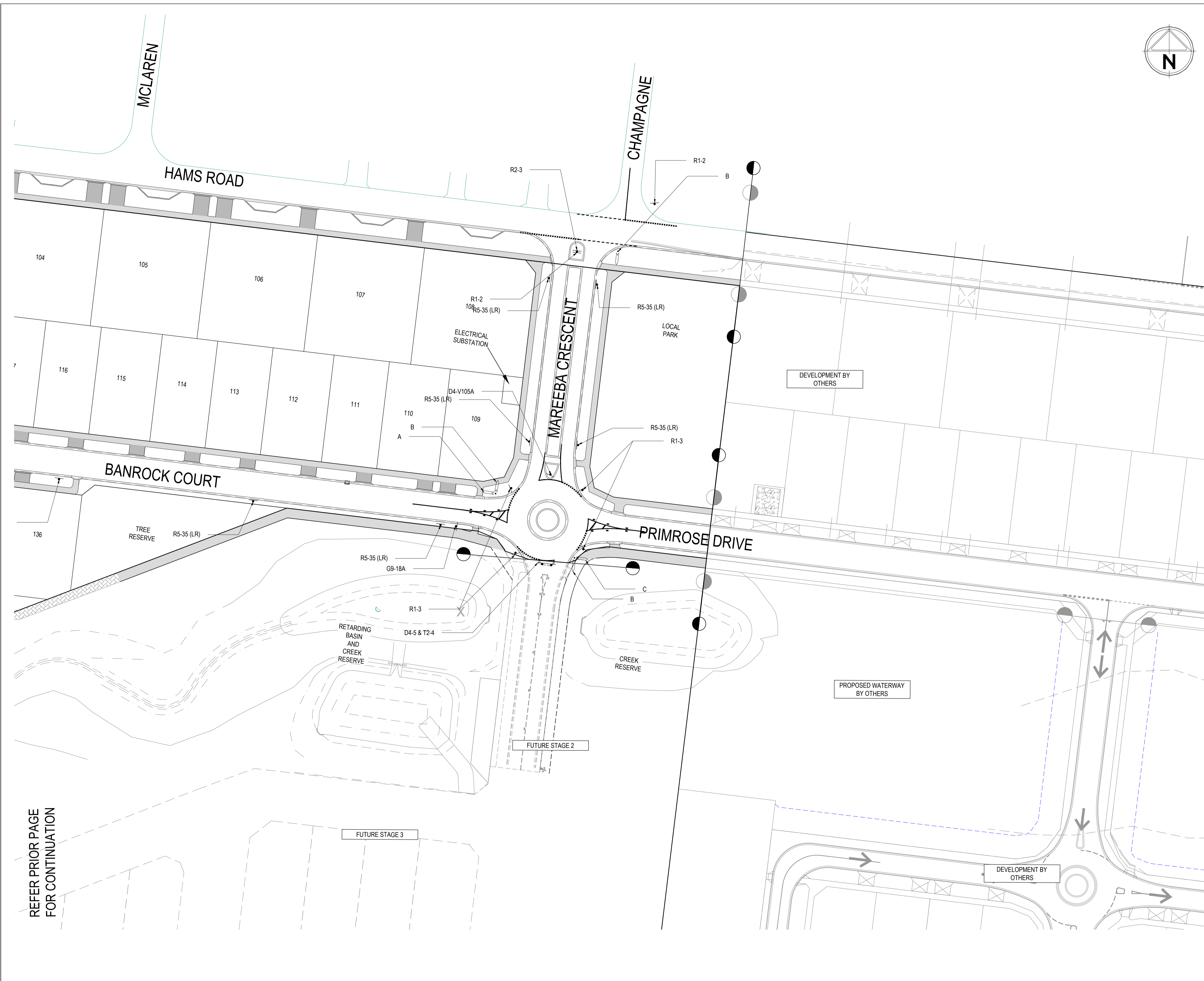
© 2022 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J:\1226\_ workspace\del\kaumebg\01-21-0347-01\_1024pm02 design\01 design\ACAD\21-0347-01-RD8-LM.dwg LAYOUT: RD8-01 PLOTTED BY: Tarabata\_Max PLOT DATE: 1/2/2023 4:03 PM



PM	A.CHUDLEIGH
DESIGNED	17.05.2022
S.FALKENSTEIN	
CHECKED	17.05.2022
T.BARBOUR	
AUTHORISED	17.05.2022
T.BARBOUR	
MELWAYS	Melway Ref
POST No.	PS905325B
STATUS:	

**69-93 Hams Rd**  
**STAGE 1**  
 City of Greater Geelong  
**SIGNAGE & LINEMARKING - 1**





- LEGEND:**
- LINE MARKING AND RRPMS TO AS 1742.1 2014 AND 1742.2 2009. LINE MARKING TO BE INITIALLY (PRIOR TO WEARING COURSE ASPHALT) INSTALLED USING STANDARD THERMOPLASTIC PAINT.
- SINGLE BARRIER CENTRELINE
  - GIVEWAY LINE
  - CONTINUITY LINE
  - TWO WAY YELLOW RRPm (6m SPACING)
  - PAVEMENT MARKINGS
  - R1-2A QUANTITY=2
  - R1-3A QUANTITY=4
  - R2-3 QUANTITY=1
  - D4-V105A QUANTITY=1
  - R5-35-1(LR) QUANTITY=8
  - R5-35-1(R) QUANTITY=3
  - R5-35-1(L) QUANTITY=4
  - G19-18A QUANTITY=1
  - ROAD CLOSED QUANTITY=1
  - T2-4 ROAD CLOSED D4-5 OBSTRUCTION MARKER QUANTITY=1
  - BANROCK QUANTITY=1
  - MAREEBA QUANTITY=3
  - PRIMROSE QUANTITY=1
  - QUANTITY=2
  - QUANTITY=1
  - QUANTITY=1
  - PROPOSED LOW POST & RAIL FENCE
  - STREET SIGNS AS PER COUNCIL STANDARDS
  - SIGN & POST (SINGLE/DOUBLE POST)
1. 90° BENDS TO HAVE CENTRELINE MARKING WITH RRPMS AT MAX 6M SPACING.
  2. RRPMS TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOL 2
  3. ALL LINEMARKING & SIGNAGE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS1742
  4. ALL SIGNS & LINEMARKING TO BE IN ACCORDANCE WITH VICROADS TRAFFIC ENGINEERING MANUAL VOLUME 2-SIGNS & MARKINGS
  5. ALL SIGN POSTS TO BE SLEEVED IN ACCORDANCE WITH COGG SDCG710-SIGN POSTS
  6. ALL LINEMARKING TO BE THERMOPLASTIC PERMANENT PAINT
  7. ALL STREET HYDRANTS TO BE IDENTIFIED IN ACCORDANCE WITH C.F.A DOCUMENT- IDENTIFICATION OF STREET HYDRANTS FOR FIRE FIGHTING PURPOSES, PUBLISHED JULY 2019 INCLUDING INSTALLATION OF BLUE RAISED REFLECTIVE PAVEMENT MARKERS & PAINTED WHITE REFLECTIVE TRIANGLES
  8. DO NOT PLACE RRPMS IN LINE WITH PRAM CROSSINGS. ALL RRPMS TO BE YELLOW.

REFER PRIOR PAGE FOR CONTINUATION

REV.	AMENDMENTS	APP'D	DATE
1	PAVEMENT TYPE UPDATED AND CULVERT EXTENDED	T.BARBOUR	01.02.2023
0	ISSUED FOR CONSTRUCTION	T.BARBOUR	12.01.2023
E	RETAINING WALL DETAILS UPDATED	T.BARBOUR	06.09.2022
D	ISSUED FOR APPROVAL	T.BARBOUR	29.08.2022
C	ISSUED FOR APPROVAL	T.BARBOUR	10.08.2022
B	ISSUED FOR APPROVAL	T.BARBOUR	04.07.2022
A	ISSUED FOR APPROVAL	T.BARBOUR	17.05.2022

© 2022 Colliers International Engineering & Design (VIC) Pty Ltd  
 FILE: J1126a\_workspace\del\alum\del\01-23\47-01\_102\pm02\_design\del\design\ACAD21-0347-01-RD8-LM.dwg LAYOUT: RD8-02 PLOTTED BY: Tarabata\_Max PLOT DATE: 1/2/2023 4:03 PM



Scale: 1:500 A1  
 Horizontal 0 5 10 15 20 25  
 Vertical 0 5 10 15 20 25

PM: A.CHUDLEIGH DESIGNED: 17.05.2022 S.FALKENSTEIN CHECKED: 17.05.2022 T.BARBOUR AUTHORIZED: 17.05.2022 T.BARBOUR MELBURN: Melway Ref POST No.: PS905325B STATUS:	<b>69-93 Hams Rd</b> <b>STAGE 1</b> City of Greater Geelong <b>SIGNAGE &amp; LINEMARKING - 2</b>	<b>CONSTRUCTION</b> 21-0347-01RD26 REV. 1	SHEET No: 26 OF 26 REV. 1
--	---	---	------------------------------